ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM
BOARD OF RETIREMENT
2223 E. WELLINGTON AVENUE, SUITE 100
SANTA ANA, CALIFORNIA

REGULAR MEETING
Monday, June 17, 2019
9:00 a.m.

AGENDA

The Orange County Board of Retirement welcomes you to this meeting. This agenda contains a brief general description of each item to be considered. The Board of Retirement may take action on any item included in the following agenda; however, except as otherwise provided by law, no action shall be taken on any item not appearing on the agenda. The Board of Retirement may consider matters included on the agenda in any order, and not necessarily in the order listed.

PLEDGE OF ALLEGIANCE

PUBLIC COMMENTS

At this time, members of the public may comment on (1) matters not included on the agenda, provided that the matter is within the subject matter jurisdiction of the Board; and (2) any matter appearing on the Consent Agenda**. Persons wishing to provide public comment at this time should fill out a speaker card located on the counter at the back of the room and deposit it in the Recording Secretary's inbox on the wall near the middle of the room.** When addressing the Board, please state your name for the record prior to providing your comments. Speakers will be limited to three (3) minutes.

In addition, public comment on matters listed on this agenda will be taken at the time the item is addressed.

CONSENT AGENDA

All matters on the Consent Agenda are to be approved by one action unless a Board Member requests separate action on a specific item.

BENEFITS

C-1 OPTION 4 RETIREMENT ELECTION

Recommendation: Grant election of retirement benefit payment, Option 4, based on Segal Consulting's actuarial report.
(1) Allan Jagger
(2) Irene Marcote
(3) Henry Molinar

ADMINISTRATION

C-2 BOARD MEETINGS AND COMMITTEE MEETINGS

Regular Board Meeting Minutes May 20, 2019

Recommendation: Approve minutes.

DISABILITY/MEMBER BENEFITS AGENDA
9:00 AM

NOTE: WHEN CONSIDERING DISABILITY RETIREMENT APPLICATIONS OR MEMBER APPEALS OF BENEFIT OR DISABILITY RETIREMENT DETERMINATIONS, THE BOARD MAY ADJOURN TO CLOSED SESSION TO DISCUSS MATTERS RELATING TO THE MEMBER'S APPLICATION OR APPEAL, PURSUANT TO GOVERNMENT CODE SECTIONS 54957 OR 54956.9. IF THE MATTER IS A DISABILITY APPLICATION UNDER SECTION 54957, THE MEMBER MAY REQUEST THAT THE DISCUSSION BE IN PUBLIC.

OPEN SESSION

CONSENT AGENDA

All matters on the Consent Agenda are to be approved by one action unless a Board member requires separate action on a specific item. If separate action is requested, the item will be discussed during agenda item DA-1.

DC-1: Cory Bartholomew
Maintenance Crew Supervisor II, Orange County Public Works

Recommendation: The Disability Committee recommends that the Board grant service connected disability retirement with an effective date of May 12, 2017. (General Member)

DC-2: Jaswinder Dullat
Coach Operator, Orange County Transportation Authority

Recommendation: The Disability Committee recommends that the Board grant service connected disability retirement with an effective date of January 11, 2015. (General Member)

DC-3: Nellie Le Gaspe
Eligibility Technician, Social Services Agency

Recommendation: The Disability Committee recommends that the Board deny service and non-service connected disability retirement due to the member's failure to cooperate. (General Member)

DC-4: Evan Sornborger
Fire Captain/Paramedic, Orange County Fire Authority

Recommendation: The Disability Committee recommends that the Board grant service connected disability retirement with an effective date of the day after the last day of regular compensation. (Safety Member)

DC-5: Robert Willis
Certified Journeyman Mechanic II, Orange County Transportation Authority

Recommendation: The Disability Committee recommends that the Board grant service connected disability retirement with an effective date of October 20, 2017. (General Member)

CLOSED SESSION
(Government Code sections 54957 and 54956.9)

The Board will adjourn to Closed Session pursuant to Government Code sections 54957 or 54956.9 to discuss matters relating to member applications or appeals. The member may request that the discussion relating to his or her application or appeal take place in Open Session.

ACTION ITEMS

DA-1: INDIVIDUAL ACTION ON ANY ITEM TRAILED FROM THE CONSENT AGENDA

DISABILITY/MEMBER BENEFITS AGENDA

DA-2: DISABILITY APPEAL – CAROL L. THOMPSON
Institutional Cook, Orange County Sheriff's Department

Recommendation: Staff recommends that the Board approve and adopt the Factual Findings, Legal Conclusions and Recommendations of the Referee as set forth in the Proposed Decision dated April 8, 2019 (Proposed Decision), and grant Applicant's application for service-connected disability retirement on the orthopedic condition with an effective date of July 7, 2006, the date administratively determined by OCERS, and *deny* service-connected disability retirement on the Applicant's psychiatric condition.

DA-3: DISABILITY APPEAL – JACKI L. LIVINGSTON
Eligibility Technician, Orange County Social Services Agency

Recommendation: Staff recommends that the Board dismiss without prejudice the appeal by Jacki L. Livingston of OCERS' denial of her application for service and non-service connected disability retirement pursuant to Rule 23 of OCERS Administrative Hearing Procedures (Version Adopted 12/14/2015).

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ACTION ITEMS

NOTE: Public comment on matters listed in this agenda will be taken at the time the item is addressed, prior to the Board's discussion of the item. **Persons wishing to provide public comment at this time should fill out a speaker card located on the counter at the back of the room and deposit it in the Recording Secretary's inbox on the wall near the middle of the room.**

A-1 INDIVIDUAL ACTION ON ANY ITEM TRAILED FROM THE CONSENT AGENDA

A-2 DECEMBER 31, 2018 ACTUARIAL VALUATION
Presentation by Andy Yeung, Segal Consulting

Recommendation: Approve the Actuarial Valuation and Review as of December 31, 2018 and adopt contribution rates for Fiscal Year 2020 – 2021 as recommended by Segal Consulting.

A-3 REQUEST FROM CITY OF SAN JUAN CAPISTRANO REGARDING RATE GROUP POOLING
Presentation by Steve Delaney, Chief Executive Officer, OCERS, Paul Angelo, Senior Vice President, Actuary, Segal Consulting

Recommendation:
1. That the Board determine that if the City San Juan Capistrano transfers its Water Department employees to a separate special district, then the Board would find that a triggering event will have occurred under the Policy; and
2. That the Board find that exigent circumstances exist under the Policy such that the City may remain pooled in Rate Group 2, provided that the City makes an additional payment of $6.5 million in a lump sum or level dollar installments.

A-4 2018 AUDITED FINANCIAL STATEMENTS AND COMPREHENSIVE ANNUAL FINANCIAL REPORTS
Presentation by Brenda Shott, Assistant Chief Executive Officer, Internal Operations, and Tracy Bowman, Director of Finance, OCERS

Recommendation: Approve the following recommendations presented to the Audit Committee during a meeting held on June 6, 2019:
1. Approve OCERS' audited financial statements for the year ended December 31, 2018.
2. Direct staff to finalize OCERS' 2018 Comprehensive Annual Financial Report (CAFR)
3. Approve the Governmental Accounting Standards Board (GASB) Statement 67 Actuarial Valuation as of December 31, 2018.
4. Receive and file Macias, Gini & O'Connell LLP's (MGO) "OCERS' Report to the Audit Committee for the Year Ended December 31, 2018" and their "Independent Auditor's Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards*."

A-5 GASB 68 VALUATION AND AUDIT REPORT

Presentation by Brenda Shott, Assistant Chief Executive Officer, Internal Operations, and Tracy Bowman, Director of Finance, OCERS

Recommendation: Approve the following recommendations from the Audit Committee during a meeting held on June 6, 2019:

1. Approve OCERS' audited Schedule of Allocated Pension Amounts by Employer as of and for the Year Ended December 31, 2018.
2. Approve the Governmental Accounting Standards Board (GASB) Statement 68 Actuarial Valuation as of December 31, 2018 for distribution to employers.

A-6 BOARD APPROVAL OF SELECTION AND ENGAGEMENT OF HEARING OFFICERS

Presentation by Gina Ratto, General Counsel, OCERS

Recommendation: On behalf of the Hearing Officer Selection Panel, staff recommends the Board approve the appointment of and the award of a contract (subject to negotiation of satisfactory contract terms) with, the following individuals to serve as OCERS hearing officers for a term of seven years:

- Duane Bennett
- James Cloninger
- Robert Klepa

A-7 GOVERNANCE COMMITTEE OUTCOMES FROM MAY 21, 2019 COMMITTEE MEETING - MASTER FINAL AVERAGE SALARY PROJECT

Presentation by Suzanne Jenike, Assistant Chief Executive Officer, External Operations, OCERS

Recommendation: The Governance Committee recommends that the Board of Retirement:

Approve the Master Final Average List of pay items, including pensionable pay attribute determinations, for Legacy and PEPRA members.

A-8 GOVERNANCE COMMITTEE OUTCOMES FROM MAY 21, 2019 COMMITTEE MEETING

Presentation by Gina Ratto, General Counsel, OCERS

Recommendation: The Governance Committee recommends that the Board of Retirement:

(1) Approve revisions to the ***Committee Chair Charter*** as presented by staff; and
(2) Approve revisions to the ***Indemnity and Defense Policy*** as presented by staff.

INFORMATION ITEMS

I-1 MEMBER MATERIALS DISTRIBUTED

Written Report

Application Notices	June 17, 2019
Death Notices	June 17, 2019

I-2 COMMITTEE MEETING MINUTES

Written Report – Audit Committee Minutes March 26, 2019
Written Report – Personnel Committee Minutes May 20, 2019

I-3 CEO FUTURE AGENDAS AND 2019 OCERS BOARD WORK PLAN

Written Report

I-4 QUIET PERIOD – NON-INVESTMENT CONTRACTS

Written Report

I-5 LEGISLATIVE UPDATE

Written Report

I-6 BOARD COMMUNICATION

Written Report

I-7 TRAVEL REPORT – MILKEN INSTITUTE GLOBAL CONFERENCE 2019

Written Report

I-8 2019 STRATEGIC PLANNING WORKSHOP – PROPOSED AGENDA TOPICS

Written Report

I-9 2019 ANNUAL BUSINESS PLAN PROGRESS – MID YEAR REIVEW

Written Report

I-10 OCERS 2019-2021 STRATEGIC PLAN PROGRESS – MID YEAR REVIEW

Written Report

I-11 DISCUSSION OF SENSITIVITY ANALYSIS OF ALTERNATIVE ECONOMIC ASSUMPTIONS

Presentation by Andy Yeung, Segal Consulting

I-12 OCERS BOARD AND COMMITTEE MEETING MINUTES STANDARDS

Presentation by Gina Ratto, General Counsel, OCERS

I-13 PUBLIC IDENTIFICATION OF REAL PROPERTY SUBJECT TO NEGOTIATIONS AND PERSONS WITH WHOM OCERS NEGOTIATOR MAY NEGOTIATE

Presentation by Brenda Shott, Asst. Chief Executive Officer, Internal Operations, OCERS

CLOSED SESSION ITEMS

E-1 CONFERENCE WITH REAL PROPERTY NEGOTIATORS
(GOVERNMENT CODE SECTION 54956.8)

Adjourn to closed session pursuant to Government Code Section 54956.8
Property: 1200 Tustin Avenue, Santa Ana, CA
Agency Negotiator: Brenda Shott, OCERS Asst. Chief Executive Officer, Internal Operations

Negotiating Parties: Brian Booth, Cushman & Wakefield
Under Negotiation: Price and terms of payment

Recommendation: Take appropriate action.

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BOARD MEMBER COMMENTS

CHIEF EXECUTIVE OFFICER/STAFF COMMENTS

COUNSEL COMMENTS

****

ADJOURNMENT: (IN MEMORY OF THE ACTIVE MEMBERS, RETIRED MEMBERS, AND SURVIVING SPOUSES WHO PASSED AWAY THIS PAST MONTH)

NOTICE OF NEXT MEETINGS

PERSONNEL COMMITTEE MEETING
June 17, 2019
11:00 A.M. OR UPON ADJOURNMENT OF THE REGULAR BOARD MEETING, WHICHEVER IS LATER

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM
2223 E. WELLINGTON AVENUE, SUITE 100
SANTA ANA, CA 92701

INVESTMENT COMMITTEE MEETING
June 26, 2019
9:00 A.M.

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM
2223 E. WELLINGTON AVENUE, SUITE 100
SANTA ANA, CA 92701

INVESTMENT MANAGER MONITORING SUBCOMMITTEE MEETING
June 26, 2019
1:00 P.M.

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM
2223 E. WELLINGTON AVENUE, SUITE 100
SANTA ANA, CA 92701

DISABILITY COMMITTEE MEETING

July 2, 2019
10:00 A.M.

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM
2223 E. WELLINGTON AVENUE, SUITE 100
SANTA ANA, CA 92701

REGULAR BOARD MEETING
July 11, 2019
9:00 A.M.

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM
2223 E. WELLINGTON AVENUE, SUITE 100
SANTA ANA, CA 92701

All supporting documentation is available for public review in the retirement office during regular business hours, 8:00 a.m. – 5:00 p.m., Monday through Thursday and 8:00 a.m. – 4:30 p.m. on Friday.

It is OCERS' intention to comply with the Americans with Disabilities Act ("ADA") in all respects. If, as an attendee or participant at this meeting, you will need any special assistance beyond that normally provided, OCERS will attempt to accommodate your needs in a reasonable manner. Please contact OCERS via email at adminsupport@ocers.org or call 714-558-6200 as soon as possible prior to the meeting to tell us about your needs and to determine if accommodation is feasible. We would appreciate at least 48 hours' notice, if possible. Please also advise us if you plan to attend meetings on a regular basis.

C-1

Memorandum

DATE: June 17, 2019

TO: Members of the Board of Retirement

FROM: Adina Bercaru, Member Services Manager

SUBJECT: **OPTION 4 RETIREMENT ELECTION – ALLAN JAGGER**

Recommendation

Grant election of retirement benefit payment, Option 4, based on Segal Consulting's actuarial report.

Background/Discussion

This member has requested Option 4 as the benefit payment option for his service retirement allowance effective January 1, 2008. The Orange County Employees Retirement System (OCERS) was joined in the member's dissolution of marriage and under the terms of the Domestic Relations Order (DRO), the member's ex-spouse was awarded a lifetime continuance as a percentage of the member's allowance. The member added his current spouse as a beneficiary under Option 4.

The approval of Option 4 will not increase OCERS liability because the cost of this Option 4 benefit is proportional to the cost of the other benefit plans. Segal Consulting has calculated the member's monthly allowance as indicated in the attached letter as well as the allowance payable to the member's ex-spouse.

Submitted by:

____________A. B. – APPROVED

Adina Bercaru
Member Services Manager

Segal Consulting

180 Howard Street, Suite 1100 San Francisco, CA 94105-6147
T 415 263 8283 www.segalco.com

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

PERSONAL AND CONFIDENTIAL

May 31, 2019

Ms. Adina Bercaru
Member Services Manager
Orange County Employees Retirement System
2223 Wellington Avenue
Santa Ana, CA 92701-3101

RECEIVED
MAY 31 2019
Orange County Employees Retirement System

Re: Orange County Employees Retirement System
Option 4 Calculation for Allan Jagger – Scenario 7

Dear Adina:

Pursuant to your request, we have revised our calculation of the Option 4 benefits payable to Allan Jagger, his ex-spouse and his current spouse in our letter dated May 30, 2019 to reflect an updated ex-spouse's share of the member's unmodified benefit. We have been directed by OCERS to re-calculate the Option 4 benefits based on Scenario 7 as outlined on page 2 of this letter.

The monthly benefits payable to the member, the ex-spouse, the current spouse and the data we used for our calculations are as follows:

Member's Date of Birth	
Ex-Spouse's Date of Birth	
Date of Retirement	January 20, 2008
Plan of Membership	General Plan A
Monthly Unmodified Benefit	$5,720.78
Ex-Spouse's Share of Monthly Unmodified Benefit	9.03%
Retirement Type	Service Retirement
Current Spouse's Date of Birth	
Continuance Payable to Current Spouse	Alternative A: 6.00% Alternative B: 7.00% Alternative C: 8.00%

Cost to Provide Continuance Benefit to Ex-Spouse

We have been requested to calculate the Option 4 benefit payable to ex-spouse based on the following scenario:

Scenario 7: The member bears the cost of Option 4 reduction for the Domestic Relations Order (DRO) benefit

We have determined the Option 4 benefits using a two-part process. In Part One, we first calculated the adjustment to the member's unmodified benefit to provide a 9.03% continuance to the ex-spouse. In Part Two, we further adjusted the member's benefit in Part One so that a continuance benefit of 6.00%, 7.00% or 8.00% can be paid to the current spouse under Alternative A, Alternative B and Alternative C, respectively.

Scenario 6: The Member Bears the Cost of Option 4 Reduction for the DRO Benefit

Part One – Before Adjustment for Continuance to Current Spouse

	Payable while the Member is Alive	Payable After the Member's Death
Monthly benefit payable to member		
Annuity	$663.49	
Pension	4,470.26	
Total	$5,133.75	$0
Monthly benefit payable to ex-spouse (or to the estate of the ex-spouse if the ex-spouse pre-deceases the member)	$516.59	$516.59

*Note: The member's benefit payable is equal to 90.97% (i.e., 100.00% - 9.03%) of the total unmodified benefit (i.e., 90.97% * 5,720.78) adjusted by $70.44 to provide a benefit payable over the ex-spouse's lifetime. The ex-spouse benefit payable is equal to 9.03% of the member's unmodified benefit (i.e., 9.03% * $5,720.78).*

Part Two - After Adjustment for Continuance Benefit Payable to Current Spouse

Alternative A: 6.00% Continuance

	Payable while the Member is Alive	Payable After the Member's Death
Monthly benefit payable to member		
Annuity	$656.39	
Pension	4,422.39	
Total	$5,078.78	$0
Monthly benefit payable to current spouse	$0	$304.73
Monthly benefit payable to ex-spouse (or to the estate of the ex-spouse if the ex-spouse pre-deceases the member)	$516.59	$516.59

Alternative B: 7.00% Continuance

	Payable while the Member is Alive	Payable After the Member's Death
Monthly benefit payable to member		
Annuity	$655.22	
Pension	4,414.52	
Total	$5,069.74	$0
Monthly benefit payable to current spouse	$0	$354.88
Monthly benefit payable to ex-spouse (or to the estate of the ex-spouse if the ex-spouse pre-deceases the member)	$516.59	$516.59

Alternative C: 8.00% Continuance

	Payable while the Member is Alive	Payable After the Member's Death
Monthly benefit payable to member		
Annuity	$654.05	
Pension	4,406.67	
Total	$5,060.72	$0
Monthly benefit payable to current spouse	$0	$404.86
Monthly benefit payable to ex-spouse (or to the estate of the ex-spouse if the ex-spouse pre-deceases the member)	$516.59	$516.59

ACTUARIAL ASSUMPTIONS[1]

Effective interest rate of 7.75% per year, which is calculated using an investment return assumption of 7.75% per year together with a cost-of-living adjustment assumption of 0.00% per year.

1994 Group Annuity Mortality Table set forward one year weighted 40% male and 60% female for members.

1994 Group Annuity Mortality Table set forward one year weighted 60% male and 40% female for beneficiaries.

The actuarial calculations contained in this letter were performed under my supervision. I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions herein.

[1] Note that the Board's current policy is to include the value of the COLA benefits to be paid by OCERS in determining the benefit amount under Option 4; however, since the original Option 4 calculation was prepared before the current policy became effective, we have not taken the value of the COLA benefits into account (i.e., by assuming a 0% COLA in this calculation).

Please let us know if you have any comments or questions. As in all matters pertaining to the interpretation and application of the law, Plan, or individual Option 4 Calculation provisions, you should be guided by the advice of the Plan's Legal Counsel.

Sincerely,

Andy Yeung

Andy Yeung

AW/bqb

5583879v1/05794.001

ORANGE COUNTY

OCERS

EMPLOYEES RETIREMENT SYSTEM

OCERS Retirement Benefit Payment Option Election

Please verify the information below, check the box(es), then sign and date.

☒ I, Allan Jagger, acknowledge that I am required to elect Option 4, under the terms of my Domestic Relations Order (DRO), in order to provide a lifetime benefit to Catherine Jagger, former spouse.

☒ I also elect to take a benefit reduction under Option 4, in order to provide a future 6.00% continuance to my current spouse, Rochelle Jagger.

☒ I understand that my retirement option is irrevocable and I will not be able to change my beneficiary election in the future for continuance benefit purposes.

Allan J. Jagger
Member Signature

June 06, 2019
Date

2223 E. Wellington Avenue, Suite 100, Santa Ana, CA 92701 • Telephone (714) 558-6200 • Fax (714) 558-6234 • ocers.org

"We provide secure retirement and disability benefits with the highest standards of excellence."

Memorandum

DATE: June 17, 2019

TO: Members of the Board of Retirement

FROM: Adina Bercaru, Member Services Manager

SUBJECT: **OPTION 4 RETIREMENT ELECTION – IRENE MARCOTE**

Recommendation

Grant election of retirement benefit payment, Option 4, based on Segal Consulting's actuarial report.

Background/Discussion

This member has requested Option 4 as the benefit payment option for his service retirement allowance effective May 10, 2019. The Orange County Employees Retirement System (OCERS) was joined in the member's dissolution of marriage and under the terms of the Domestic Relations Order (DRO), the member's ex-spouse was awarded a lifetime continuance as a percentage of the member's allowance.

The approval of Option 4 will not increase OCERS liability because the cost of this Option 4 benefit is proportional to the cost of the other benefit plans. Segal Consulting has calculated the member's monthly allowance as indicated in the attached letter as well as the allowance payable to the member's ex-spouse.

Submitted by:

A. B. – APPROVED
Adina Bercaru
Member Services Manager

Segal Consulting

180 Howard Street Suite 1100 San Francisco, CA 94105-6147
T 415.263.8200 www.segalco.com

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

PERSONAL AND CONFIDENTIAL

VIA EMAIL AND USPS

June 4, 2019

RECEIVED

JUN 04 2019

Orange County Employees Retirement System

Ms. Adina Bercaru
Member Services Manager
Orange County Employees Retirement System
2223 Wellington Avenue
Santa Ana, CA 92701-3101

Re: Orange County Employees Retirement System
Option 4 Calculation for Irene Marcote

Dear Adina:

Pursuant to your request, we have determined the Option 4 benefits payable to Irene Marcote and her ex-spouse based on the unmodified benefit and other information provided in the System's request dated May 30, 2019.

The monthly benefits payable to the member and the ex-spouse and the data we used for our calculations are as follows:

Member's Date of Birth	
Ex-Spouse's Date of Birth	
Date of Retirement	May 10, 2019
Plan of Membership	General Plan J
Monthly Unmodified Benefit	$4,804.95
Ex-Spouse's Share of Monthly Unmodified Benefit	22.36%
Retirement Type	Service Retirement

Option 4 Benefit

The member and the ex-spouse bear the cost of Option 4 reduction equally for the DRO benefit	**Payable while the Member is Alive**	**Payable After the Member's Death**
Monthly benefit payable to member		
Annuity	$1,789.51	
Pension	1,876.17	
Total	$3,665.68	$0
Monthly benefit payable to ex-spouse (or to the estate of the ex-spouse if the ex-spouse pre-deceases the member)	$1,009.51	$1,009.51

Note: *The member's benefit payable is equal to 77.64% (i.e., 100.00% - 22.36%) of the total unmodified benefit (i.e., 77.64% * $4,804.95) adjusted by $64.88 to provide a benefit payable over the ex-spouse's lifetime or to the estate of the ex-spouse if the ex-spouse pre-deceases the member. The ex-spouse's benefit payable is equal to 22.36% of the total unmodified benefit (i.e., 22.36% * $4,804.95) adjusted by $64.88 to provide a benefit payable over the ex-spouse's lifetime or to the estate of the ex-spouse if the ex-spouse pre-deceases the member.*

ACTUARIAL ASSUMPTIONS

Effective interest rate of 4.126214% per year, which is calculated using an investment return assumption of 7.25% per year together with a cost-of-living adjustment assumption of 3.00% per year.

RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020 weighted 40% male and 60% female for members.

RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020 weighted 60% male and 40% female for beneficiaries.

The actuarial calculations contained in this letter were performed under my supervision. I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions herein.

Please let us know if you have any comments or questions. As in all matters pertaining to the interpretation and application of the law, Plan, or individual Option 4 Calculation provisions, you should be guided by the advice of the Plan's Legal Counsel.

Sincerely,

Andy Yeung

Andy Yeung

AW/bbf

5584562v1/05794.001

ORANGE COUNTY
OCERS
EMPLOYEES RETIREMENT SYSTEM

June 5, 2019

Irene Marcote

Re: Retirement Election Confirmation – Option 4

Dear Ms. MARCOTE:

You have elected Option 4 as your retirement option. This option will provide a 22.36% of your monthly benefit, for the life of the benefit, to:

ROLAND MARCOTE

This designation is irrevocable; you will not be allowed to change your retirement option or designated beneficiary.

Please complete this form and return to OCERS as soon as possible.

☑ I understand that my retirement option is irrevocable; by choosing Option 4 I will take a monthly reduction in order to provide a 22.36% continuance to ROLAND MARCOTE.

Irene Marcote
Member Signature/Date

Sincerely,

ABercaru

Adina Bercaru
Member Services Manager

RECEIVED
JUN 05 2019
Orange County Employees
Retirement System

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM 2223 E. Wellington Avenue, Suite 100, Santa Ana, CA 92701
Telephone (714) 558-6200 Fax (714) 558-6234 www.ocers.org

Memorandum

DATE: June 17, 2019

TO: Members of the Board of Retirement

FROM: Adina Bercaru, Member Services Manager

SUBJECT: **OPTION 4 RETIREMENT ELECTION – HENRY MOLINAR**

Recommendation

Grant election of retirement benefit payment, Option 4, based on Segal Consulting's actuarial report.

Background/Discussion

This member has requested Option 4 as the benefit payment option for his service retirement allowance effective March 30, 2019. The Orange County Employees Retirement System (OCERS) was joined in the member's dissolution of marriage and under the terms of the Domestic Relations Order (DRO), the member's ex-spouse was awarded a lifetime continuance as a percentage of the member's allowance.

The approval of Option 4 will not increase OCERS liability because the cost of this Option 4 benefit is proportional to the cost of the other benefit plans. Segal Consulting has calculated the member's monthly allowance as indicated in the attached letter as well as the allowance payable to the member's ex-spouse.

Submitted by:

A. B. – APPROVED
Adina Bercaru
Member Services Manager

Segal Consulting

180 Howard Street Suite 1100 San Francisco, CA 94105-6147
T 415.263.8200 www.segalco.com

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

PERSONAL AND CONFIDENTIAL

VIA EMAIL AND USPS

June 4, 2019

RECEIVED
JUN 04 2019
Orange County Employees Retirement System

Ms. Adina Bercaru
Member Services Manager
Orange County Employees Retirement System
2223 Wellington Avenue
Santa Ana, CA 92701-3101

Re: Orange County Employees Retirement System
Option 4 Calculation for Henry L. Molinar

Dear Adina:

Pursuant to your request, we have determined the Option 4 benefits payable to Henry L. Molinar and his ex-spouse based on the unmodified benefit and other information provided in the System's request dated May 30, 2019.

The monthly benefits payable to the member and the ex-spouse and the data we used for our calculations are as follows:

Member's Date of Birth	
Ex-Spouse's Date of Birth	
Date of Retirement	March 30, 2019
Plan of Membership	Safety Plan F
Monthly Unmodified Benefit[1]	$1,164.01
Ex-Spouse's Share of Monthly Unmodified Benefit	50.00%
Retirement Type	Service Retirement

[1] In preparing this calculation, we have made the assumption that the member has satisfied the age and service requirements to receive a service retirement benefit.

Option 4 Benefit

The ex-spouse bears the cost of Option 4 reduction for the DRO benefit	**Payable while the Member is Alive**	**Payable After the Member's Death**
Monthly benefit payable to member		
Annuity	$81.11	
Pension	500.90	
Total	$582.01	$0
Monthly benefit payable to ex-spouse (or to the estate of the ex-spouse if the ex-spouse pre-deceases the member)	$519.72*	$519.72

* *This is equal to 50.00% of the member's unmodified benefit (i.e., 50.00% * $1,164.01 or $582.01) adjusted further to provide a benefit payable over the ex-spouse's lifetime or to the estate of the ex-spouse if the ex-spouse pre-deceases the member.*

ACTUARIAL ASSUMPTIONS

Effective interest rate of 4.126214% per year, which is calculated using an investment return assumption of 7.25% per year together with a cost-of-living adjustment assumption of 3.00% per year.

RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020 set back two years weighted 80% male and 20% female for members.

RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020 weighted 20% male and 80% female for beneficiaries.

The actuarial calculations contained in this letter were performed under my supervision. I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions herein.

Please let us know if you have any comments or questions. As in all matters pertaining to the interpretation and application of the law, Plan, or individual Option 4 Calculation provisions, you should be guided by the advice of the Plan's Legal Counsel.

Sincerely,

Andy Yeung

Andy Yeung

AW/bbf

5584564v1/05794.001

ORANGE COUNTY
OCERS
EMPLOYEES RETIREMENT SYSTEM

June 5, 2019

Henry L. Molinar

Re: Retirement Election Confirmation – Option 4

Dear Mr. MOLINAR:

You have elected Option 4 as your retirement option. This option will provide a 50% of your monthly benefit, for the life of the benefit, to:

YVONNE VERDUGO

This designation is irrevocable; you will not be allowed to change your retirement option or designated beneficiary.

Please complete this form and return to OCERS as soon as possible.

(✓) I understand that my retirement option is irrevocable; by choosing Option 4 I will take a monthly reduction in order to provide a 50% continuance to YVONNE VERDUGO.

6/5/19
Member Signature/Date

Sincerely,

Adina Bercaru
Member Services Manager

RECEIVED
JUN 05 2019
Orange County Employees Retirement System

C-2

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM
BOARD OF RETIREMENT
2223 E. WELLINGTON AVENUE, SUITE 100
SANTA ANA, CALIFORNIA

REGULAR MEETING
Monday, May 20, 2019
9:00 a.m.

MINUTES

Chair Hilton called the meeting to order at 9:02 A.M.

Attendance was as follows:

Present: Roger Hilton, Chair; Chris Prevatt; Shawn Dewane; Frank Eley; Russell Baldwin, Wayne Lindholm, Jeremy Vallone; and David Ball

Absent: Charles Packard, Shari Freidenrich

Also Present: Steve Delaney, Chief Executive Officer; Suzanne Jenike, Assistant CEO, External Operations; David Kim, Director of Internal Audit; Molly Murphy, CIO; Brenda Shott, Assistant CEO, Internal Operations; Gina Ratto, General Counsel; Javier Lara, Visual Technician; Cammy Torres; Recording Secretary, and Nichol Forbes; Temporary Assistant Recording Secretary.

Guests: Harvey Leiderman

Mr. Dewane led the Pledge of Allegiance.

CONSENT AGENDA

All matters on the Consent Agenda are to be approved by one action unless a Board Member requests separate action on a specific item.

A **motion** was made by Mr. Dewane, **seconded** by Mr. Eley, to approve the consent agenda.

Motion passed **unanimously** with Ms. Freidenrich and Mr. Packard absent.

BENEFITS

C-1 OPTION 4 RETIREMENT ELECTION

Recommendation: Grant election of retirement benefit payment, Option 4, based on Segal Consulting's actuarial report.
(1) John Golden

(2) Mark Esquer
(3) Stephen Hatch
(4) Karl Dieckman
(5) Richard Edmond

ADMINISTRATION

C-2 BOARD MEETING MINUTES

Regular Board Meeting Minutes April 15, 2019

Recommendation: Approve minutes.

ACTION ITEMS

NOTE: Public comment on matters listed in this agenda will be taken at the time the item is addressed, prior to the Board's discussion of the item. Persons wishing to address items on the agenda should provide written notice to the Secretary of the Board prior to the Board's discussion on the item by signing in on the Public Comment Sign-In Sheet located at the back of the room.

A-1 INDIVIDUAL ACTION ON ANY ITEM TRAILED FROM THE CONSENT AGENDA

A-2 REQUEST FROM CITY OF SAN JUAN CAPISTRANO REGARDING RATE GROUP POOLING
Presentation by *Steve Delaney, Chief Executive Officer, OCERS, Paul Angelo, Senior Vice President, Actuary, Segal Consulting*

Recommendation: That the Board determine (1) whether the City of San Juan Capistrano's (City) proposed transfer of the City's Water Department would be considered a triggering event under the Declining Employer Payroll Policy (Policy); and (2) whether application of the Policy to the City should be modified to reflect the City's unique or exigent circumstances.

Chair Hilton stated for the record that Mr. Frank Kim, County CEO, sent a letter to the appointed members of the Board and carbon copied the Treasurer, Shari Freidenrich.

Mr. Steve Delaney addressed the board and clarified the request coming from the City of San Juan does not actually request the Board make a decision at this time, they wish to know what the Board would do if the issue being discussed were to take place. Working with Segal, OCERS has determined that this event would involve a decline in their payroll. Mr. Delaney stated that current policy seem to indicate the City of San Juan Capistrano be depooled from Rate Group 2. Mr. Delaney reviewed the recommendations presented to the Board.

Mr. Hilton stated that for this meeting he would like to hear from all parties and then make a decision at a later time.

Mr. Ken Al-Iman, CFO for the City of San Juan Capistrano presented the transfer of the City of San Juan Capistrano's water and sewer utilities to the Santa Margarita Water District. He requested the Board consider Alternative 1.

Mr. Dewane stated for clarification for the record that item alternative 1 and alternative 2 as identified by Mr. Al-Iman of the City of San Juan Capistrano are the same as alternative 1 and 2 identified by Mr. Angelo of Segal Consulting.

Mr. Angelo, with Segal Consulting addressed the rate group pooling issue and presented alternative options to the board.

> Alternative 1: San Juan Capistrano remains in pool in Rate Group 2 and all employers share the change in UAAL rate
> Alternative 2: San Juan Capistrano remains in pool in Rate Group 2 and only San Juan Capistrano pays for change in UAAL rate

Additional discussion took place.

Mr. Vallone excused himself at 12:13 p.m.

Mr. Dewane excused himself at 12:14 p.m.

Mr. Dewane reentered at 12:16 p.m.

Mr. Vallone reentered at 12:16 p.m.

Mr. Ball excused himself at 12:17 p.m.

Mr. Vallone reentered at 12:19 p.m.

Mr. Dewane excused himself at 12:26 p.m.

Mr. Dewane reentered at 12:31 p.m.

Ms. Michelle Aguirre, CFO for the County of Orange, addressed the Board regarding the rate group pooling issue and the impact it would have on the County. She indicated the county supported depooling San Juan Capistrano if the utility workers were transferred.

Mr. Hilton stated that he would want to table the issue and have further discussion at the next meeting. He did state he would like to remove alternative #1 and in the next month have more discussion with the planned sponsors that are affected.

Additional discussion took place.

A **motion** was made by Mr. Hilton, **seconded** by Mr. Ball to remove alternative 1 and bring depooling and alternative 2 back before the Board for the June board meeting for further discussion.

Additional discussion took place.

Motion passed **unanimously** with Mr. Packard and Ms. Freidenrich absent.

INFORMATION ITEMS

I-1 MEMBER MATERIALS DISTRIBUTED
Written Report

Application Notices	May 20, 2019
Death Notices	May 20, 2019

I-2 COMMITTEE MEETING MINUTES
None

I-3 CEO FUTURE AGENDAS AND 2019 OCERS BOARD WORK PLAN
Written Report

I-4 QUIET PERIOD – NON-INVESTMENT CONTRACTS
Written Report

I-5 LEGISLATIVE UPDATE
Written Report

I-6 BOARD COMMUNICATIONS
Written Report

I-7 2019 FIRST QUARTER BUDGET TO ACTUAL REPORT
Written Report

I-8 2019 FIRST QUARTER PRELIMINARY FINANCIAL STATEMENTS
Written Report

I-9 TRAVEL REPORT – PROFESSIONAL VISIT TO LACERA
Written Report

I-10 TRAVEL REPORT – CALIFORNIA RETIRED COUNTY EMPLOYEES ASSOCIATION (CRCEA)
Written Report

I-11 MEKETA PERFORMANCE SURVEY RESULTS
Written Report

I-12 PRELIMINARY DECEMBER 31, 2018 ACTUARIAL VALUATION
Presentation by Paul Angelo, Senior Vice President, Actuary, Segal Consulting

Mr. Paul Angelo presented the Preliminary December 31, 2018 Actuarial Valuation to the Board, discussion regarding assets took place.

The Board recessed for break at 9:36 a.m.

The Board reconvened from break at 10:06 a.m.

I-13 PUBLIC IDENTIFICATION OF REAL PROPERTY SUBJECT TO NEGOTIATIONS AND PERSONS WITH WHOM OCERS NEGOTIATOR MAY NEGOTIATE
Presentation by Brenda Shott, Asst. Chief Executive Officer, Internal Operations

Ms. Gina Ratto presented to the Board that the Brown Act allows the Board to hold a closed session to grant authority to its negotiator regarding the price and terms of payment for the sale of real property by the board. There is a closed session agenized as Item E-1. The Brown Act also requires that prior to going into closed session, a public session must be held to identify the property being discussed and the person with whom the negotiator may negotiate with. Ms. Ratto stated for the record the property being discussed is 2223 East Wellington Avenue, Santa Ana, CA and the entity with whom negotiations will take place is Legacy Partners, LLC.

The Board adjourned to closed session at 10:09 a.m. for item E-1.

*******END OF INFORMATION ITEMS AGENDA*******

DISABILITY APPLICATIONS/MEMBER APPEALS AGENDA

11:00 A.M.

NOTE: WHEN CONSIDERING DISABILITY RETIREMENT APPLICATIONS OR MEMBER APPEALS OF BENEFIT OR DISABILITY RETIREMENT DETERMINATIONS, THE BOARD MAY ADJOURN TO CLOSED SESSION TO DISCUSS MATTERS RELATING TO THE MEMBER'S APPLICATION OR APPEAL, PURSUANT TO GOVERNMENT CODE SECTIONS 54957 OR 54956.9. IF THE MATTER IS A DISABILITY APPLICATION UNDER SECTION 54957, THE MEMBER MAY REQUEST THAT THE DISCUSSION BE IN PUBLIC.

****

A **motion** was made by Mr. Ball, **seconded** by Mr. Dewane, to approve consent agenda.

Motion passed **unanimously** with Mr. Packard and Ms. Freidenrich absent.

OPEN SESSION

CONSENT AGENDA

All matters on the Consent Agenda are to be approved by one action unless a Board member requires separate action on a specific item. If separate action is requested, the item will be discussed during agenda item DA-1.

DC-1: Jesse Oller
Deputy Sheriff II, Orange County Sheriff's Department

<u>Recommendation:</u> **The Disability Committee recommends that the Board deny service and non-service connected disability retirement due to insufficient evidence of permanent incapacity. (Safety Member)**

DC-2: Kelly Rehnberg
Deputy Public Guardian II, Health Care Agency

<u>Recommendation:</u> **The Disability Committee recommends that the Board deny service connected disability retirement due to insufficient evidence of permanent incapacity. (General Member)**

DC-3: Darrin Wheaton
Senior Social Worker, Social Services Agency

<u>Recommendation:</u> **The Disability Committee recommends that the Board deny service connected disability retirement due to insufficient evidence of job causation. (General Member)**

DC-4: Vanessa Callins
Coach Operator, Orange County Transportation Authority

<u>Recommendation:</u> **The Disability Committee recommends that the Board grant non-service connected disability retirement with an effective date of June 27, 2018. (General Member)**

DC-5: Alberto Gomez
Coach Operator, Orange County Transportation Authority

<u>Recommendation:</u> **The Disability Committee recommends that the Board grant service connected disability retirement with an effective date of October 4, 2015. (General Member)**

DC-6: Arthur Lopez-Hidalgo
Fire Captain, Orange County Fire Authority

<u>Recommendation:</u> **The Disability Committee recommends that the Board grant service connected disability retirement with an effective date of November 24, 2017. (Safety Member)**

DC-7: Tracy Hohne
Paralegal, Orange County Public Defender

<u>Recommendation:</u> **The Disability Committee recommends that the Board grant service connected disability retirement with an effective date of February 3, 2017. (General Member)**

DC-8: Richard Regambal
Coach Operator, Orange County Transportation Authority

Recommendation: The Disability Committee recommends that the Board grant service connected disability retirement with an effective date of March 30, 2018. (General Member)

DC-9: Jean Yu
Administrative Manager III, Orange County Information Technology

Recommendation: The Disability Committee recommends that the Board grant non-service connected disability retirement with an effective date of August 5, 2016. (General Member)

CLOSED SESSION
(Government Code sections 54957 and 54956.9)

The Board will adjourn to Closed Session pursuant to Government Code sections 54957 or 54956.9 to discuss matters relating to member applications or appeals. The member may request that the discussion relating to his or her application or appeal take place in Open Session.

ACTION ITEMS

DA-1: INDIVIDUAL ACTION ON ANY ITEM TRAILED FROM THE CONSENT AGENDA

DISABILITY/MEMBER BENEFITS AGENDA

DA-2: DISABILITY APPEAL – MELISSA T. RAMIREZ
Eligibility Supervisor, Orange County Social Services Agency

Recommendation: Staff recommends that the Board approve and adopt the findings and recommendations of the Referee as set forth in the Summary of Evidence, Findings of Fact, Conclusions of Law, and Recommendations dated March 11, 2019 (Recommendations), and grant service connected disability retirement with an effective date of October 4, 2012.

A **motion** was made by Mr. Lindholm, **seconded** by Mr. Dewane, to approve and adopt the findings and recommendations of the Referee as set forth in the Summary of Evidence, Findings of Fact, Conclusions of Law, and Recommendations dated March 11, 2019 (Recommendations), and grant service connected disability retirement with an effective date of October 4, 2012.

Motion passed **unanimously** with Mr. Packard and Ms. Freidenrich absent.

CLOSED SESSION ITEMS

E-1 CONFERENCE WITH REAL PROPERTY NEGOTIATORS
(GOVERNMENT CODE SECTION 54956.8)
Adjourn to closed session pursuant to Government Code Section 54956.8

Property: 2223 E. Wellington Avenue, Santa Ana, California
Agency Negotiator: Brenda Shott, OCERS Asst. Chief Executive Officer, Internal Operations
Negotiating Parties: Legacy Partners Residential LLC
Under Negotiation: Price and terms of payment

Recommendation: Take appropriate action.

Mr. Dewane excused himself at 10:33 a.m.

The Board reconvened from closed session at 10:34 a.m.

Mr. Dewane reentered at 10:35 a.m.

No reportable action taken.

E-2 CONFERENCE REGARDING LITIGATION THAT HAS BEEN INITIATED
(Government Code section 54956.9(d)(1).)
Jeffrey Gross v. OCERS; County of Orange; et al., CA Superior Court, County of Orange (Case No. 30-2017-00944959)
Adjourn to closed session pursuant to Government Code section 54956.9(d)(1).

Recommendation: Take appropriate action.

The Board adjourned to closed session at 10:41 a.m.

Mr. Eley excused himself at 11:21 a.m.

The Board reconvened from closed session at 11:22 a.m.

Mr. Eley reentered at 11:23 a.m.

No reportable action taken.

****

BOARD MEMBER COMMENTS

None

CHIEF EXECUTIVE OFFICER/STAFF COMMENTS

Ms. Suzanne Jenike informed the Board that the OCERS website will be launching Wednesday, May 22, 2019. The team worked closely with active members, retiree focus groups and employers in order to get feedback for better usability.

Ms. Jenike also stated that the Governance Committee meeting would be taking place the following day and they will bring forward the Master Pay Items List of about 570 pay items with the configurations. It will list every pay item associated to every plan sponsor and how it is configured.

Mr. Steve Delaney reviewed that registration is open for the upcoming CALAPRS Principles of Pension Governance training class.

COUNSEL COMMENTS

Mr. Dewane left at 12:55 p.m.

****

ADJOURNMENT: (IN MEMORY OF THE ACTIVE MEMBERS, RETIRED MEMBERS, AND SURVIVING SPOUSES WHO PASSED AWAY THIS PAST MONTH)

Active Members
Box, Thomas
Camarena, Ruth
Crow, James
Danielson, Mark
Delaney, Jewel
Evans, Jim
Gates, Jeannine
Johnson, Patricia
Jones, Norma
Kuhter, James
Lopez, Raul
Nash, Charlene
Nichols, Elizabeth
Phillips, Carol
Sanneman, Larry
Tagliapietra, Cary
Washington, James
Watkins, Adrienne
Winninghoff, Janet

Surviving Spouses
Guth, Rachael
Mayer, Leonore
Sims, Helen

Meeting adjourned at 12:57 P.M.

There being no further business to bring before the Board, the meeting adjourned at 12:57 P.M.

Submitted by: Approved by:

___________________________ ______________________________

Steve Delaney
Secretary to the Board

Chuck E. Packard
Chairman

A-2

Memorandum

DATE: June 17, 2019

TO: Members of the Board of Retirement

FROM: Brenda Shott, Assistant CEO, Finance and Internal Operations

SUBJECT: **DECEMBER 31, 2018 ACTUARIAL VALUATION**

Recommendation

Approve the Actuarial Valuation and Review as of December 31, 2018 and adopt contribution rates for Fiscal Year 2020 – 2021 as recommended by Segal Consulting.

Background/Discussion

In May the OCERS Board of Retirement considered the preliminary results of the December 31, 2018 Actuarial Valuation in PowerPoint format with Mr. Paul Angelo from Segal Consulting.

On June 17, Mr. Andy Yeung will present the complete Actuarial Valuation and Review as of December 31, 2018, which contains detail, and the Board will be requested to formally adopt that report and the contribution rates that will go into effect in Fiscal Year 2020-2021.

The Board considers the Actuarial Valuation report in this two-step process (a process shared by only two other Segal public pension clients) as a courtesy to our many stakeholders, allowing them an opportunity to consider the initial data and provide comment prior to a formal adoption. To-date we have received no comments or concerns regarding the Actuarial Valuation as of December 31, 2018.

Submitted by:

Brenda M Shott

Brenda Shott
Assistant CEO, Finance and Internal Operations

Approved by:

Steve Delaney

Steve Delaney
Chief Executive Officer

Orange County Employees Retirement System

Actuarial Valuation and Review as of December 31, 2018

Segal Consulting

Segal Consulting
180 Howard Street Suite 1100 San Francisco, CA 94105-6147
T 415.263.8200 www.segalco.com

June 6, 2019

Board of Retirement
Orange County Employees Retirement System
2223 Wellington Avenue
Santa Ana, CA 92701

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of December 31, 2018. It summarizes the actuarial data used in the valuation, analyzes the preceding year's experience, and establishes the funding requirements for fiscal year 2020-2021.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the Retirement System. The census information and financial information on which our calculations were based was prepared by the staff of the System. That assistance is gratefully acknowledged.

The actuarial calculations were directed under the supervision of Andy Yeung, ASA, MAAA, FCA and Enrolled Actuary. We are members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board are reasonably related to the experience of and the expectations for the System.

We look forward to reviewing this report at your next meeting and to answering any questions.

Sincerely,

Segal Consulting, a Member of The Segal Group, Inc.

By:

Paul Angelo, FSA, EA, MAAA, FCA
Senior Vice President and Actuary

Andy Yeung, ASA, EA, MAAA, FCA
Vice President and Actuary

AW/jl

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Table of Contents

Orange County Employees Retirement System Actuarial Valuation and Review as of December 31, 2018

Section 1: Actuarial Valuation Summary

Purpose and Basis

This report was prepared by Segal Consulting ("Segal") to present a valuation of the Orange County Employees Retirement System ("OCERS" or "the System") as of December 31, 2018. The valuation was performed to determine whether the assets and contribution rates are sufficient to provide the prescribed benefits. The measurements shown in this actuarial valuation may not be applicable for other purposes. In particular, the measures herein are not necessarily appropriate for assessing the sufficiency of current Plan assets to cover the estimated cost of settling the Plan's accrued benefit obligations.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and changes in plan provisions or applicable law.

The contribution requirements presented in this report are based on:

- The benefit provisions of the pension plan, as administered by the Board of Retirement;
- The characteristics of covered active members, inactive vested members, and retired members and beneficiaries as of December 31, 2018, provided by OCERS;
- The assets of the Plan as of December 31, 2018, provided by OCERS;
- Economic assumptions regarding future salary increases and investment earnings;
- Other actuarial assumptions regarding employee terminations, retirement, death, etc. and
- The funding policy adopted by the Board of Retirement.

One of the general goals of an actuarial valuation is to establish contributions which fully fund the System's liabilities, and which, as a percentage of payroll, remain as level as possible for each generation of active members. Annual actuarial valuations measure the progress toward this goal, as well as test the adequacy of the contribution rates.

In preparing this valuation, we have employed generally accepted actuarial methods and assumptions to evaluate the System's liabilities and future contribution requirements. Our calculations are based upon member data and financial information provided to us by the System's staff. This information has not been audited by us, but it has been reviewed and found to be consistent, both internally and with prior year's information.

The contribution requirements are determined as a percentage of payroll. The System's employer rates provide for both Normal Cost and a contribution to amortize any unfunded or overfunded actuarial accrued liabilities. In this valuation, we have applied the funding policy adopted by the Board in 2014 (and reaffirmed in 2018). Details of the funding policy are provided in *Section 4, Exhibit I on page 109*.

A schedule of current amortization balances and payments may be found in *Section 3, Exhibit H beginning on page 81*. A graphical projection of the Unfunded Actuarial Accrued Liability (UAAL) amortization balances and payments has been included in *Section 3, Exhibit I on pages 93 and 94*.

The rates calculated in this report may be adopted by the Board for the fiscal year that extends from July 1, 2020 through June 30, 2021.

Significant Issues

Ref: Pg. 48

1. The ratio of the Valuation Value of Assets to Actuarial Accrued Liabilities increased from 72.3% to 72.4%. The funded ratio measured on a market value basis decreased from 74.6% to 69.3%. The UAAL increased from $5,438.3 million as of December 31, 2017 to $5,708.9 million as of December 31, 2018. The increase in UAAL is primarily due to the investment return (after "smoothing") lower than the 7.00% return assumption and actual contributions less than expected. A complete reconciliation of the System's UAAL is provided in *Section 2, Subsection E*. A schedule of the current UAAL amortization amounts is provided in *Section 3, Exhibit H*. A graphical projection of the UAAL amortization bases and payments is provided in *Section 3, Exhibit I*.

Ref: Pg. 27
Ref: Pgs. 81-92
Ref: Pgs. 93-94

Ref: Pg. 29

2. The aggregate employer contribution rate calculated in this valuation increased from 37.66% of payroll to 40.02% of payroll. This change was primarily due to the second year of the three-year phase-in of the UAAL cost impact due to assumption changes in the December 31, 2017 valuation and the investment return (after "smoothing") lower than the 7.00% return assumption. A complete reconciliation of the System's aggregate employer rate is provided in *Section 2, Subsection F*.

   The Board approved a three-year phase-in of the UAAL employer cost impact due to assumption changes in the December 31, 2017 valuation. The employer contribution rates as of December 31, 2018 and December 31, 2017 shown in this report have been adjusted to reflect two-thirds and one-third, respectively, of the UAAL cost impact.

3. The employer rates in this report do not include the amounts required to be paid by O.C. Vector Control and Cypress Recreation and Parks that are subject to the Board's Withdrawing Employer Policy. The employer rates also do not include the amounts required to be paid by U.C.I. and Department of Education that are subject to the Board's Declining Employer Payroll Policy. The contribution rates for these employers will be provided in separate side letters following the administrative practice established by OCERS in the prior valuations.

   Ref: Pg. 31

   We have included a footnote to the detailed recommended employer contribution rate exhibit to show what the UAAL contribution rates would be for the other active employers in Rate Group #1 (i.e., the County and O.C. IHSS Public Authority) after adjustments to reflect the UAAL paid by O.C. Vector Control, Cypress Recreation and Parks, U.C.I. and Department of Education.

Ref: Pg. 30

4. The aggregate member rate calculated in this valuation has increased from 12.46% of payroll to 12.47% of payroll. This change was due to the demographic changes. A complete reconciliation of the System's average member rate is provided in *Section 2, Subsection F*.

   Starting with this valuation, we no longer include the entry age based Safety Plan E (i.e., Tier 1) member rates in *Section 4, Exhibit III* as there are no active employees enrolled in that Plan in the Probation, Law and Fire Rate Groups.

Ref: Pg. 19

5. As indicated in *Section 2, Subsection B* of this report, the total unrecognized investment loss as of December 31, 2018 was $644.7 million (as compared to an unrecognized gain of $455.4 million in the December 31, 2017 valuation). This investment loss will be recognized in the determination of the Actuarial Value of Assets for funding purposes over the next few years, and will offset a portion of any investment gains that may occur after December 31, 2018. This implies that earning the assumed rate of investment return of 7.00% per year (net of expenses) on a market value basis will result in investment losses on the Actuarial Value of Assets in the next few years. Therefore, if the actual market return is equal to the assumed 7.00% rate and all other actuarial assumptions are met, the employer contribution requirements would generally increase over the next few years. The potential impact associated with the net deferred investment loss may be illustrated as follows:

   a. If the net deferred losses in this year's valuation were recognized immediately and entirely in the Valuation Value of Assets, the funded ratio would decrease from 72.4% to 69.3%.

      For comparison purposes, if all the net deferred gains in the December 31, 2017 valuation had been recognized immediately in the December 31, 2017 valuation, the funded ratio in last year's valuation would have increased from 72.3% to 74.6%.

   b. If the net deferred losses in this year's valuation were recognized immediately and entirely in the Valuation Value of Assets, the aggregate employer contribution rate would increase from 40.02 to 42.5% of payroll.

      For comparison purposes, if all the net deferred gains in the December 31, 2017 valuation had been recognized immediately in the December 31, 2017 valuation, the aggregate employer contribution rate in last year's valuation would have decreased from 37.97% to 36.2% of payroll.

6. The actuarial valuation report as of December 31, 2018 is based on financial information as of that date. Changes in the value of assets subsequent to that date are not reflected. Declines in asset values will increase the actuarial cost of the plan, while increases will decrease the actuarial cost of the plan.

7. The balance in the O.C. Sanitation District UAAL Deferred Account as of December 31, 2018 before any transfer to offset their UAAL was $14.6 million. As of December 31, 2018, a transfer of the remaining $14.6 balance was required from this account to partially offset the actuarial losses (primarily from investment returns after smoothing) during 2018.

8. This report reflects the $23.4 million additional contributions made by OCFA towards their UAAL. The $23.4 million[1] of additional contributions made by OCFA has been amortized as a level percent of pay over a period of twenty years effective on December 31, 2018 and used to reduce their UAAL rates for fiscal year 2020-2021.

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[1] $23.4 million in additional contributions were made by OCFA continuously throughout the year. After adjusting with interest, those contributions have a value of $23.6 million as of December 31, 2018.

9. The Actuarial Standards Board approved a new Actuarial Standard of Practice No. 51 (ASOP 51) regarding risk assessment. ASOP 51 is effective with OCERS' December 31, 2018 actuarial valuation. ASOP 51 requires actuaries to identify risks that "may reasonably be anticipated to significantly affect the plan's future financial condition". Investment risk, asset/liability mismatch risk, interest rate risk, longevity and other demographic risks and contribution risk are also cited as examples in ASOP 51. The standard does not require the actuary to evaluate the likelihood of contributing entities to make contributions when due, nor does it require the actuary to assess the likelihood or consequences of future changes in applicable law.

   The actuary's assessment can be qualitative or quantitative (e.g., based on numerical demonstrations). The actuary may use non-numerical methods for assessing risks that might take the form of commentary about potential adverse experience and the likely effect on future results. While the standard does not require that every valuation include a quantitative risk assessment, the actuary may recommend that a more detailed risk assessment be performed. When making that decision, the actuary will take into account such factors as the Plan's design, maturity, size, funded status, asset allocation, cash flow, possible insolvency and current market conditions.

   A copy of the risk assessment report including the analysis recommended by Segal in consultation with OCERS staff will be available later in 2019.

Summary of Key Valuation Results

	December 31, 2018 Total Rate[1]	December 31, 2018 Estimated Annual Dollar Amount[2] ($ in '000s)	December 31, 2017 Total Rate[1],[3],[4]	December 31, 2017 Estimated Annual Dollar Amount[2] ($ in '000s)
Aggregate Employer Contribution Rates:				
• Rate Group #1 – Plans A, B and U (non-OCTA, non-OCSD)	18.89%	$16,654	18.23%	$16,072
• Rate Group #2 – Plans I, J, O, P, S, T, U and W (County et al.)	37.36%	421,384	35.00%	394,740
• Rate Group #3 – Plans B, G, H and U (OCSD)	12.98%	9,549	12.27%	9,029
• Rate Group #5 – Plans A, B and U (OCTA)	30.53%	32,153	27.93%	29,413
• Rate Group #9 – Plans M, N and U (TCA)	27.57%	1,947	24.36%	1,720
• Rate Group #10 – Plans I, J, M, N and U (OCFA)	28.00%	7,623	28.86%	7,857
• Rate Group #11 – Plans M and N, future service, and U (Cemetery)	12.11%	199	12.49%	205
• Rate Group #12 – Plans G, H, future service, and U (Law Library)	15.29%	168	13.33%	146
• Rate Group #6 – Plans E, F and V (Probation)	55.37%	35,563	52.07%	33,442
• Rate Group #7 – Plans E, F, Q, R and V (Law Enforcement)	65.24%	160,943	62.01%	152,974
• Rate Group #8 – Plans E, F, Q, R and V (OCFA)	48.60%	64,346	45.81%	60,644
All Categories Combined	40.02%	$750,529	37.66%	$706,242
Average Member Contribution Rates:				
• Rate Group #1 – Plans A, B and U (non-OCTA, non-OCSD)	9.63%	$8,491	9.62%	$8,483
• Rate Group #2 – Plans I, J, O, P, S, T, U and W (County et al.)	11.27%	127,120	11.26%	127,007
• Rate Group #3 – Plans B, G, H and U (OCSD)	11.81%	8,688	11.83%	8,703
• Rate Group #5 – Plans A, B and U (OCTA)	10.16%	10,701	10.16%	10,701
• Rate Group #9 – Plans M, N and U (TCA)	10.95%	773	10.85%	766
• Rate Group #10 – Plans I, J, M, N and U (OCFA)	11.64%	3,169	11.67%	3,177
• Rate Group #11 – Plans M and N, future service, and U (Cemetery)	10.02%	165	9.86%	162
• Rate Group #12 – Plans G, H, future service, and U (Law Library)	13.31%	146	13.42%	147
• Rate Group #6 – Plans E, F and V (Probation)	16.66%	10,701	16.61%	10,669
• Rate Group #7 – Plans E, F, Q, R and V (Law Enforcement)	17.22%	42,483	17.23%	42,508
• Rate Group #8 – Plans E, F, Q, R and V (OCFA)	16.14%	21,368	16.16%	21,395
All Categories Combined	12.47%	$233,805	12.46%	$233,718

(1) These rates reflect the 2/3 and 1/3 phase-ins of changes in actuarial assumptions in the December 31, 2018 and 2017 valuations, respectively.

(2) Based on December 31, 2018 projected annual compensation.

(3) For those Rate Groups with plan specific contribution rates, the total rates shown above have been recalculated by applying the plan specific contribution rates determined in the December 31, 2017 valuation to the corresponding projected payrolls reported as of December 31, 2018.

(4) Average December 31, 2017 member contribution rates have been recalculated by applying the individual entry age based rates determined in the December 31, 2017 valuation to the System membership as of December 31, 2018.

Summary of Key Valuation Results (continued)

		December 31, 2018 ($ in '000s)	December 31, 2017 ($ in '000s)
Actuarial Accrued Liability as of December 31:	• Retired members and beneficiaries	$11,569,064	$10,633,213
	• Inactive vested members(1)	449,290	488,752
	• Active members	8,684,995	8,513,462
	• Total Actuarial Accrued Liability	20,703,349	19,635,427
	• Normal Cost for plan year beginning December 31	516,408	508,328
Assets as of December 31:	• Market Value of Assets (MVA)(2),(3)	$14,349,705	$14,652,521
	• Valuation Value of Assets (VVA)(2)	14,994,420	14,197,125
Funded status as of December 31:	• Unfunded Actuarial Accrued Liability on Market Value of Assets basis	$6,353,644	$4,982,906
	• Funded percentage on MVA basis	69.31%	74.62%
	• Unfunded Actuarial Accrued Liability on Valuation Value of Assets basis	$5,708,929	$5,438,302
	• Funded percentage on VVA basis	72.43%	72.30%
Key assumptions:	• Net investment return	7.00%	7.00%
	• Price Inflation	2.75%	2.75%
	• Payroll growth increase	3.25%	3.25%

(1) Includes members who chose to leave their contributions on deposit even though they have less than five years of service.

(2) Excludes County Investment Account (funded by pension obligation bond proceeds held by OCERS), prepaid employer contributions account, O.C. Sanitation District UAAL Deferred Account (after transfer) and non-valuation reserves.

(3) Based on the preliminary unaudited financial statement provided by OCERS for this valuation.

Summary of Key Valuation Results (continued)

		December 31, 2018	December 31, 2017	Change From Prior Year
Demographic data as of December 31:	**Active Members:**			
	• Number of members	21,929	21,721	1.0%
	• Average age	45.1	45.3	-0.2
	• Average service	12.8	12.9	-0.1
	• Total projected compensation	$1,875,371,661	$1,811,879,510	3.5%
	• Average projected compensation	$85,520	$83,416	2.5%
	Retired Members and Beneficiaries:			
	• Number of members:			
	– Service retired	13,827	13,240	4.4%
	– Disability retired	1,482	1,446	2.5%
	– Beneficiaries	2,365	2,261	4.6%
	– Total	17,674	16,947	4.3%
	• Average age	70.0	69.8	0.2
	• Average monthly benefit(1)	$3,913	$3,745	4.5%
	Inactive Vested Members:			
	• Number of members(2)	6,026	5,803	3.8%
	• Average Age	44.9	44.8	0.1
	Total Members:	45,629	44,471	2.6%

(1) Excludes monthly benefits payable from the STAR COLA.

(2) Includes members who chose to leave their contributions on deposit even though they have less than five years of service.

Important Information About Actuarial Valuations

An actuarial valuation is a budgeting tool with respect to the financing of future projected obligations of a pension plan. It is an estimated forecast – the actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.

In order to prepare a valuation, Segal Consulting ("Segal") relies on a number of input items. These include:

Plan of benefits	Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. Even where they appear precise, outside factors may change how they operate. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan summary included in our report to confirm that Segal has correctly interpreted the plan of benefits.
Participant data	An actuarial valuation for a plan is based on data provided to the actuary by the System. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
Assets	The valuation is based on the Market Value of Assets as of the valuation date, as provided by the System. The System uses a "Valuation Value of Assets" that differs from market value to gradually reflect year-to-year changes in the Market Value of Assets in determining the contribution requirements.
Actuarial assumptions	In preparing an actuarial valuation, Segal projects the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This projection requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of each participant for each year. In addition, the benefits projected to be paid for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments. The projected benefits are then discounted to a present value, based on the assumed rate of return that is expected to be achieved on the plan's assets. There is a reasonable range for each assumption used in the projection and the results may vary materially based on which assumptions are selected. It is important for any user of an actuarial valuation to understand this concept. Actuarial assumptions are periodically reviewed to ensure that future valuations reflect emerging plan experience. While future changes in actuarial assumptions may have a significant impact on the reported results, that does not mean that the previous assumptions were unreasonable.

The user of Segal's actuarial valuation (or other actuarial calculations) should keep the following in mind:

- The actuarial valuation is prepared at the request of the System. Segal is not responsible for the use or misuse of its report, particularly by any other party.
- An actuarial valuation is a measurement of the plan's assets and liabilities at a specific date. Accordingly, except where otherwise noted, Segal did not perform an analysis of the potential range of future financial measures. The actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan. Future contribution requirements may differ from those determined in the valuation because of:
  - Differences between actual experience and anticipated experience;
  - Changes in actuarial assumptions or methods;
  - Changes in statutory provisions; and
  - Differences between the contribution rates determined by the valuation and those adopted by the Board.
- If the System is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.
- Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. The System should look to their other advisors for expertise in these areas.

As Segal Consulting has no discretionary authority with respect to the management or assets of the Plan, it is not a fiduciary in its capacity as actuaries and consultants with respect to the Plan.

Section 2: Actuarial Valuation Results

A. Member Data

The Actuarial Valuation and Review considers the number and demographic characteristics of covered members, including active members, inactive vested members, retired members and beneficiaries.

This section presents a summary of significant statistical data on these member groups.

More detailed information for this valuation year and the preceding valuation can be found in *Section 3, Exhibits A, B, and C.*

MEMBER POPULATION: 2009 – 2018

Year Ended December 31	Active Members	Inactive Vested Members[1]	Retired Members and Beneficiaries	Total Non-Actives	Ratio of Non-Actives to Actives	Ratio of Retired Members and Beneficiaries to Actives
2009	22,633	4,094	12,243	16,337	0.72	0.54
2010	21,742	4,308	12,762	17,070	0.79	0.59
2011	21,421	4,406	13,289	17,695	0.83	0.62
2012	21,256	4,415	13,947	18,362	0.86	0.66
2013	21,368	4,613	14,505	19,118	0.89	0.68
2014	21,459	4,789	15,169	19,958	0.93	0.71
2015	21,525	5,091	15,810	20,901	0.97	0.73
2016	21,746	5,370	16,369	21,739	1.00	0.75
2017	21,721	5,803	16,947	22,750	1.05	0.78
2018	21,929	6,026	17,674	23,700	1.08	0.81

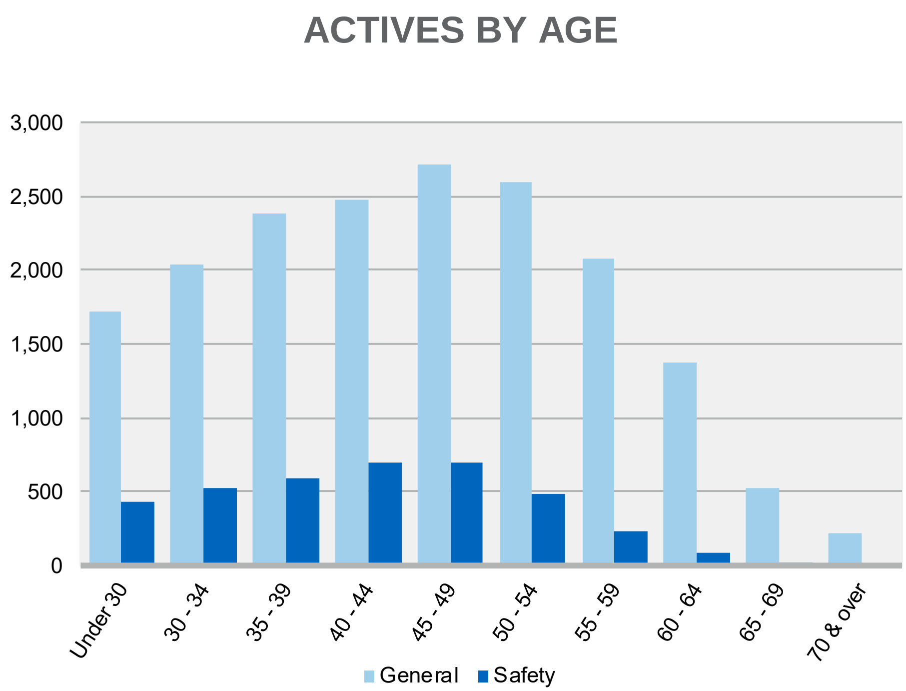
(1) Includes members who chose to leave their contributions on deposit even though they have less than five years of service.

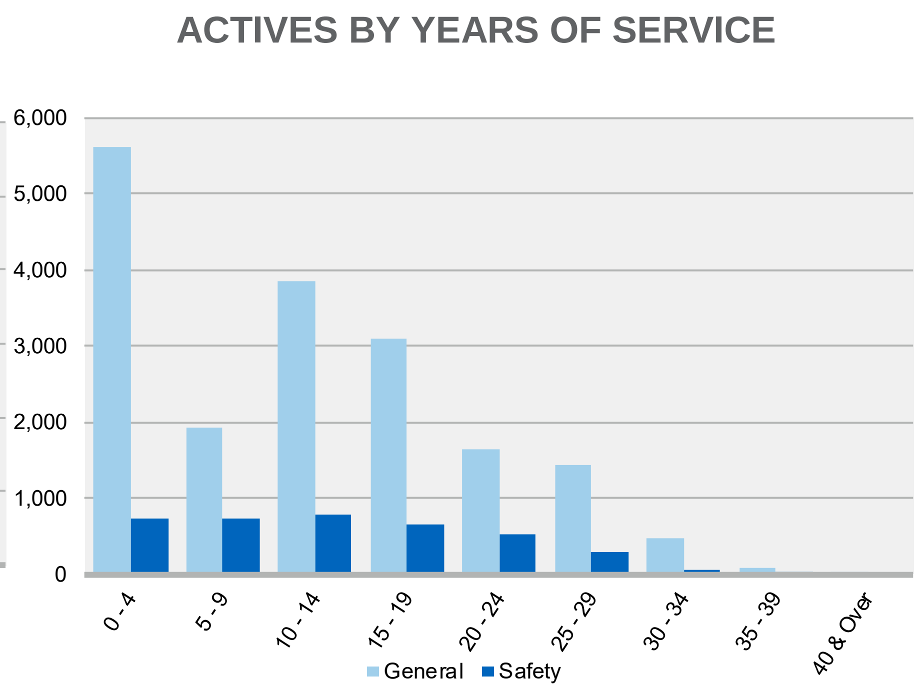
Active Members

Plan costs are affected by the age, years of service and compensation of active members. In this year's valuation, there were 21,929 active members with an average age of 45.1, average years of service of 12.8 years and average compensation of $85,520. The 21,721 active members in the prior valuation had an average age of 45.3, average service of 12.9 years and average compensation of $83,416.

Among the active members, there were none with unknown age information.

Distribution of Active Participants as of December 31, 2018





Inactive Members

In this year's valuation, there were 6,026 members with a vested right to a deferred or immediate vested benefit or entitled to a return of their member contributions versus 5,803 in the prior valuation.

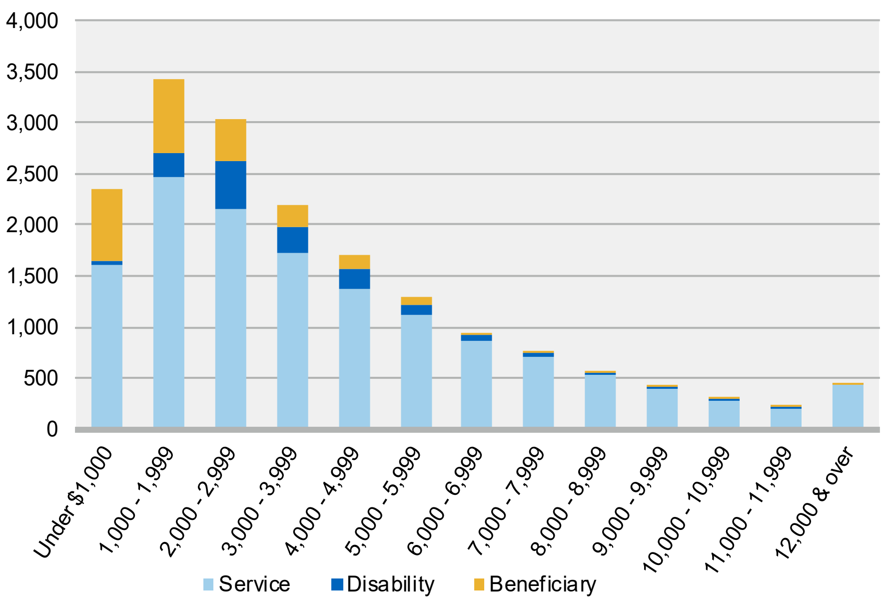
Retired Members and Beneficiaries

As of December 31, 2018, 15,309 retired members and 2,365 beneficiaries were receiving total monthly benefits of $69,152,036. For comparison, in the previous valuation, there were 14,686 retired members and 2,261 beneficiaries receiving monthly benefits of $63,464,718. These monthly benefits exclude benefits payable from the Supplemental Targeted Adjustment for Retirees Cost of Living Adjustment (STAR COLA).

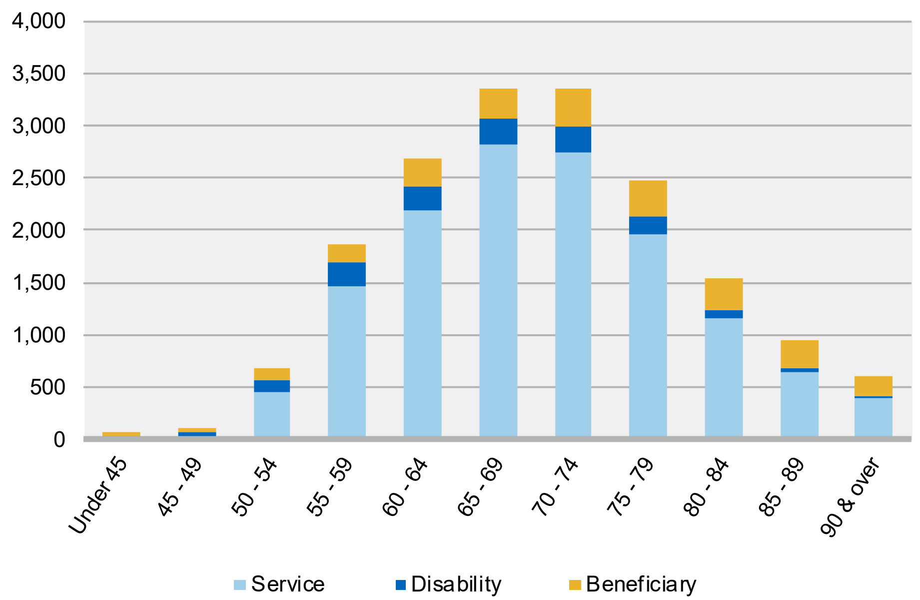
As of December 31, 2018, the average monthly benefit for retired members and beneficiaries is $3,913, compared to $3,745 in the previous valuation. The average age for retired members and beneficiaries is 70.0 in the current valuation, compared with 69.8 in the prior valuation.

Distribution of Retired Members and Beneficiaries as of December 31, 2018

RETIRED MEMBERS AND BENEFICIARIES BY TYPE AND MONTHLY AMOUNT



RETIRED MEMBERS AND BENEFICIARIES BY TYPE AND AGE



Historical Plan Population

The chart below demonstrates the stability of the active population over the last ten years. The chart also shows the growth among the retired population over the same time period.

MEMBER STATISTICS: 2009 – 2018

	Active Participants			Retired Members and Beneficiaries		
Year Ended December 31	Count	Average Age	Average Service	Count	Average Age	Average Monthly Amount
2009	22,633	44.6	11.9	12,243	68.7	2,854
2010	21,742	45.1	12.6	12,762	68.8	2,988
2011	21,421	45.4	13.0	13,289	69.0	3,099
2012	21,256	45.5	13.1	13,947	69.0	3,247
2013	21,368	45.6	13.2	14,505	69.2	3,366
2014	21,459	45.6	13.2	15,169	69.4	3,455
2015	21,525	45.5	13.1	15,810	69.5	3,560
2016	21,746	45.4	12.9	16,369	69.7	3,637
2017	21,721	45.3	12.9	16,947	69.8	3,745
2018	21,929	45.1	12.8	17,674	70.0	3,913

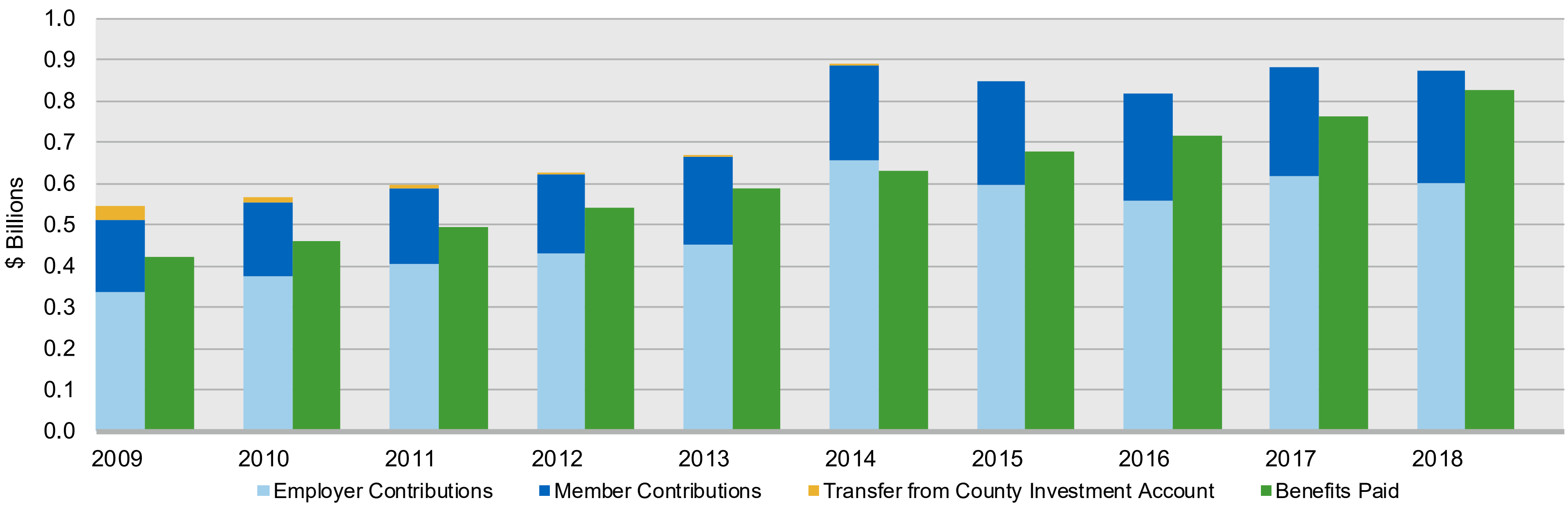
B. Financial Information

Retirement plan funding anticipates that, over the long term, both contributions and investment earnings (less investment fees and administrative expenses) will be needed to cover benefit payments. Retirement plan assets change as a result of the net impact of these income and expense components.

Additional financial information, including a summary of transactions for the valuation year, is presented in *Section 3, Exhibits D, E, F and G*.

It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the valuation asset value and hence the plan costs are more stable. The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

COMPARISON OF CONTRIBUTIONS WITH BENEFITS AND EXPENSES FOR YEARS ENDED DECEMBER 31, 2009 – 2018



DETERMINATION OF ACTUARIAL VALUE OF ASSETS

		Actual Return	Expected Return	Investment Gain / (Loss)	Percent Deferred	Unrecognized Amount
1	Market Value of Assets[(1),(2)]					$14,349,790,000
2	Calculation of unrecognized return					
a)	Year ended December 31, 2014	$487,104,000	$780,627,000	$(293,523,000)	0%	$0
b)	Year ended December 31, 2015	(51,601,000)	833,757,000	(885,358,000)	20	(177,072,000)
c)	Year ended December 31, 2016	1,010,548,000	840,469,000	170,079,000	40	68,032,000
d)	Year ended December 31, 2017	1,878,172,000	920,426,000	957,746,000	60	574,648,000
e)	Year ended December 31, 2018	(361,321,000)	1,026,583,000	(1,387,904,000)	80	(1,110,323,000)
f)	Total unrecognized return[(3)]					$(644,715,000)
3	Actuarial Value of Assets 1 – 2f					$14,994,505,000
4	Actuarial Value of Assets as a percentage of Market Value of Assets 3 / 1					104.5%
5	Non-valuation reserves:					
a)	Unclaimed member deposit					$0
b)	Medicare medical insurance reserve					85,000
c)	Subtotal					$85,000
6	Valuation Value of Assets 3 – 5c					$14,994,420,000

(1) Excludes $131,890,000 in County Investment Account (funded by pension obligation bond proceeds held by OCERS) and $246,133,000 in Prepaid Employer Contributions.

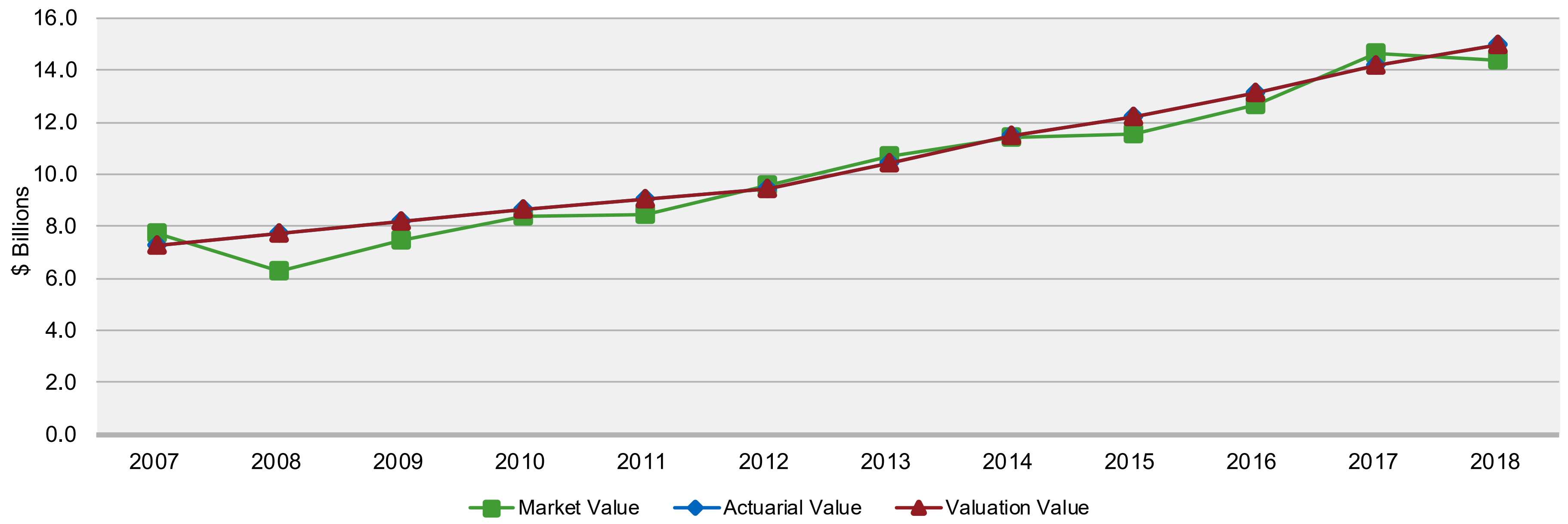
(2) Based on the preliminary unaudited financial statement provided by OCERS for this valuation.

(3) Deferred return as of December 31, 2018 recognized in each of the next four years:

(a) Amount recognized on December 31, 2019	$(229,086,000)
(b) Amount recognized on December 31, 2020	(52,016,000)
(c) Amount recognized on December 31, 2021	(86,032,000)
(d) Amount recognized on December 31, 2022	(277,581,000)
(f) Subtotal	$(644,715,000)

The Market Value, Actuarial Value and Valuation Value of Assets are representations of the Plan's financial status. As investment gains and losses are gradually taken into account, the Actuarial Value of Assets tracks the Market Value of Assets. The Valuation Value of Assets is the actuarial value, excluding any non-valuation reserves. The Valuation Value of Assets is significant because the Plan's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the Unfunded Actuarial Accrued Liability is an important element in determining the contribution requirement.

MARKET VALUE, ACTUARIAL VALUE, AND VALUATION VALUE OF ASSETS AS OF DECEMBER 31, 2007 – 2018



C. Actuarial Experience

To calculate any actuarially determined contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the actuarially determined contribution will decrease from the previous year. On the other hand, the actuarially determined contribution will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years. There are no assumption changes reflected in this report.

The total loss is $351.5 million, which includes $255.9 million from investment losses, a net loss of $78.7 million from contribution experience (including a gain of $27.7 million from additional UAAL payments from Cypress Parks and Recreation and OCFA and anticipated payments from DOE and U.C.I.[2], a gain of $14.6 million from transfer from O.C. Sanitation UAAL Deferred Account and a loss of $120.9 million from all other contribution experience) and $16.9 million in losses from all other sources. The net experience variation from individual sources other than investments and contributions was 0.1% of the Actuarial Accrued Liability. A discussion of the major components of the actuarial experience is on the following pages.

ACTUARIAL EXPERIENCE FOR YEAR ENDED DECEMBER 31, 2018

1	Net loss from investments(1)	$(255,908,000)
2	Net loss from contribution experience(2)	(78,676,000)
3	Net loss from other experience(2)	(16,867,000)
4	Net experience loss: 1 + 2 + 3	$(351,451,000)

(1) Details on next page.

(2) See *Subsection E* for further details. Does not include the effect of plan or assumption changes, if any.

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2 Segal provided separate letters for DOE and UCI with regard to their required UAAL contributions based on the Board's withdrawing employer policy. These contributions have not been reflected in the valuation.

Investment Experience

A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on the Plan's investment policy. The rate of return on the Market Value of Assets was -2.46% for the year ended December 31, 2018.

For valuation purposes, the assumed rate of return on the Valuation Value of Assets is 7.00%. The actual rate of return on a valuation basis for the 2018 plan year was 5.20%. Since the actual return for the year was less than the assumed return, the Plan experienced an actuarial loss during the year ended December 31, 2018 with regard to its investments.

INVESTMENT EXPERIENCE FOR YEAR ENDED DECEMBER 31, 2018

		Market Value	Actuarial Value	Valuation Value
1	Net investment income	$(361,321,000)	$738,790,000	$738,791,000
2	Average value of assets	14,665,473,000[(1)]	14,210,077,000	14,209,991,000
3	Rate of return: 1 ÷ 2	-2.46%[(1)]	5.20%	5.20%
4	Assumed rate of return	7.00%	7.00%	7.00%
5	Expected investment income: 2 x 4	$1,026,583,000	$994,705,000	$994,699,000
6	Actuarial gain/(loss): 1 – 5	$(1,387,904,000)	$(255,915,000)	$(255,908,000)

(1) Return on market value was calculated using a modified dollar-weighted approach based on pension plan assets net of accounting liabilities. Actual investment loss on net pension plan assets was $361,321,000 during 2018 after including both the administrative expenses and discount for prepaid contributions while excluding the losses credited to County Investment Account and O.C. Sanitation District UAAL Deferred Account. Without these adjustments, the actual investment loss was $324,628,000.

Because actuarial planning is long term, it is useful to see how the assumed investment rate of return has followed actual experience over time. The chart below shows the rate of return on an actuarial and valuation basis compared to the actual market value investment return for the last ten years, including averages over select time periods.

INVESTMENT RETURN – MARKET VALUE, ACTUARIAL VALUE AND VALUATION VALUE: 2009 - 2018

Year Ended December 31	Market Value Investment Return(1)		Actuarial Value Investment Return(1)		Valuation Value Investment Return(1)	
	Amount(2)	Percent	Amount(2)	Percent	Amount(2)	Percent
2009	$1,092,660,000	17.32%	$281,360,000	3.60%	$282,764,000	3.62%
2010	787,215,000	10.47%	411,960,000	5.02%	412,046,000	5.02%
2011	3,236,000	0.04%	286,585,000	3.28%	287,241,000	3.29%
2012	1,014,471,000	11.92%	318,033,000	3.49%	318,043,000	3.49%
2013	1,031,118,000	10.73%	866,402,000	9.11%	866,402,000	9.11%
2014	487,104,000	4.52%	771,049,000	7.34%	771,174,000	7.34%
2015	(51,601,000)	-0.45%	606,190,000	5.26%	606,191,000	5.26%
2016	1,010,548,000	8.72%	776,627,000	6.33%	776,628,000	6.33%
2017	1,878,172,000	14.79%	977,128,000	7.44%	977,130,000	7.44%
2018	(361,321,000)	-2.46%	738,790,000	5.20%	738,791,000	5.20%
Most recent five-year geometric average return		4.84%		6.31%		6.31%
Most recent ten-year geometric average return		7.36%		5.59%		5.59%

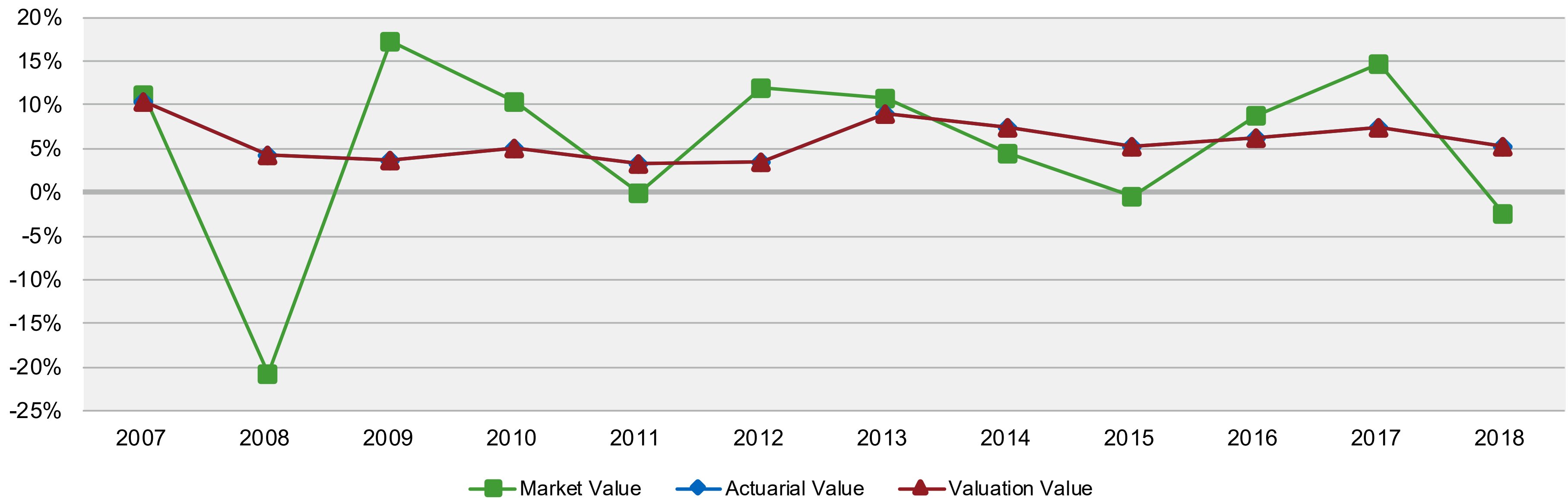
Note: Return on market value was calculated using a modified dollar-weighted approach based on pension plan assets net of accounting liabilities. Each year's yield is weighted by the average asset value in that year.

(1) Net of administrative and investment expenses.

(2) The dollar amount of return on market value is net of the return on the County Investment Account (funded by pension obligation bond proceeds held by OCERS), prepaid employer contributions account and O.C. Sanitation District UAAL Deferred Account (after transfer), if any.

Subsection B described the actuarial asset valuation method that gradually recognizes fluctuations in the market value rate of return. The goal of this is to stabilize the actuarial rate of return and to produce more level pension plan costs.

MARKET, ACTUARIAL AND VALUATION RATES OF RETURN FOR YEARS ENDING DECEMBER 31, 2007 – 2018



Contributions

Contributions for the year ended December 31, 2018 totaled $886.8 million (including the $14.6 million transfer from O.C. Sanitation District UAAL Deferred Account), compared to the projected amount of $961.7 million. This resulted in a net loss of $78.7 million from contribution experience for the year, when adjusted for timing.

Other Experience

There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation. These include:

- the extent of turnover among participants,
- retirement experience (earlier or later than projected),
- mortality (more or fewer deaths than projected),
- the number of disability retirements (more or fewer than projected),
- salary increases (greater or smaller than projected), and
- cost-of-living adjustments (COLAs) higher or lower than anticipated.

The net loss from this other experience for the year ended December 31, 2018 amounted to $16.9 million, which is 0.1% of the Actuarial Accrued Liability. See *Subsection E* for a detailed development of the Unfunded Actuarial Accrued Liability.

D. Other Changes in the Actuarial Accrued Liability

The Actuarial Accrued Liability as of December 31, 2018 is 20.7 billion, an increase of $1.1 billion, or 5.4%, from the Actuarial Accrued Liability as of the prior valuation date. The liability is expected to grow each year with Normal Cost and interest, and to decline due to benefit payments made. Additional fluctuations can occur due to actual experience that differs from expected (as discussed in the previous subsection).

Actuarial Assumptions

- There are no assumption changes reflected in this report.
- Details on actuarial assumptions and methods are in *Section 4, Exhibit I*.

Plan Provisions

- There were no changes in plan provisions since the prior valuation.
- A summary of plan provisions is in *Section 4, Exhibit II*.

E. Development of Unfunded Actuarial Accrued Liability

DEVELOPMENT FOR YEAR ENDED DECEMBER 31, 2018

1	Unfunded Actuarial Accrued Liability at beginning of year		$5,438,302,000
2	Total Normal Cost at middle of year		508,322,000
3	Expected employer and member contributions		(961,688,000)
4	Interest		372,542,000
5	Expected Unfunded Actuarial Accrued Liability at end of year		$5,357,478,000
6	Changes due to:		
	a) Investment losses (on smoothed value of assets)	$255,908,000	
	b) Difference in actual versus expected contributions (including loss from phase-in)	120,939,000[1]	
	c) Additional UAAL payments from Cypress Parks and Recreation and OCFA and anticipated payments[2] from DOE and U.C.I.	(27,674,000)	
	d) Transfer from O.C. Sanitation District UAAL Deferred Account	(14,589,000)	
	e) Difference in actual versus expected salary increases	(71,908,000)	
	f) Difference in actual versus expected COLA increases	24,279,000	
	g) Other experience loss	64,496,000	
	Total changes		$351,451,000
7	Unfunded Actuarial Accrued Liability at end of year		$5,708,929,000

Note: The sum of items 6b, 6c and 6d equals the "Net loss from contribution experience" shown in Subsection C.

The sum of items 6e, 6f and 6g equals the "Net loss from other experience" shown in Subsection C.

(1) Includes $46 million contribution loss from the phase-in of the UAAL cost impact due to changes in actuarial assumptions in 2017.

(2) Segal provided separate letters for DOE and UCI with regard to their required UAAL contributions based on the Board's withdrawing employer policy. These contributions have not been anticipated in the valuation.

F. Recommended Contribution

The recommended contribution is equal to the employer Normal Cost payment and a payment on the Unfunded Actuarial Accrued Liability. As of December 31, 2018, the average recommended employer contribution is 40.02% of compensation.

The Board sets the funding policy used to calculate the recommended contribution based on layered amortization periods. See *Section 4, Exhibit I* for further details on the funding policy.

The contribution requirement as of December 31, 2018 is based on the data previously described, the actuarial assumptions and Plan provisions described in *Section 4*, including all changes affecting future costs adopted at the time of the actuarial valuation, actuarial gains and losses, and changes in the actuarial assumptions.

AVERAGE RECOMMENDED EMPLOYER CONTRIBUTION FOR YEAR ENDING DECEMBER 31

	All Tiers Combined	December 31, 2018		December 31, 2017	
		Amount ($ in '000s)	% of Projected Compensation	Amount ($ in '000s)	% of Projected Compensation
1	Total Normal Cost	$516,408	27.54%	$508,328	28.05%
2	Expected member Normal Cost contributions	(233,805)	(12.47%)	(228,888)	(12.63%)
3	Employer Normal Cost: 1 + 2	$282,603	15.07%	$279,440	15.42%
4	Actuarial Accrued Liability	20,703,349		19,635,427	
5	Valuation Value of Assets	14,994,420		14,197,125	
6	Unfunded Actuarial Accrued Liability (UAAL): 4 – 5	$5,708,929		$5,438,302	
7	Payment on UAAL(1)	$467,926	24.95%	$408,555	22.55%
8	Total average recommended employer contribution: 3 + 7	$750,529	40.02%	$687,995	37.97%
9	Projected compensation	$1,875,370		$1,811,877	

Note: Contributions are assumed to be paid at the middle of the year.

(1) These rates reflect the 2/3 and 1/3 phase-ins of changes in actuarial assumptions in the December 31, 2018 and December 31, 2017 valuations, respectively.

Reconciliation of Average Recommended Employer Contribution Rate

The chart below details the changes in the average recommended employer contribution from the prior valuation to the current year's valuation.

RECONCILIATION OF AVERAGE RECOMMENDED EMPLOYER CONTRIBUTION RATE FROM DECEMBER 31, 2017 TO DECEMBER 31, 2018

	Contribution Rate	Estimated Annual Dollar Amount[1] ($ in '000s)
Average Recommended Employer Contribution as of December 31, 2017 (before adjustments for phase-in)	40.13%	$752,555
• Effect of three-year phase-in of UAAL cost impact due to changes in actuarial assumptions	(2.47%)	(46,313)
Average Recommended Employer Contribution as of December 31, 2017 (after adjustments for phase-in)	37.66%	$706,242
• Effect of investment loss (after smoothing)	0.97%	18,191
• Effect of additional UAAL contributions from Cypress Parks and Recreation and OCFA and anticipated payments from DOE and UCI	(0.11%)	(2,063)
• Effect of $14.6 million asset transfer from O.C. Sanitation District UAAL Deferred Account	(0.06%)	(1,125)
• Effect of difference in actual versus expected contributions (including loss from phase-in)	0.46%[2]	8,627
• Effect of difference in actual versus expected COLA increases	0.09%	1,688
• Effect of difference in actual versus expected salary increases	(0.27%)	(5,063)
• Effect of growth in total payroll greater than expected	(0.04%)	(750)
• Effect of other experience loss	0.08%[3]	1,631
• Effect of three-year phase-in of UAAL cost impact due to changes in actuarial assumptions	1.24%	23,151
Total change	2.36%	$44,287
Average Recommended Employer Contribution as of December 31, 2018	40.02%	$750,529

(1) Based on December 31, 2018 projected annual compensation of $1,875,370,000.
(2) Includes 0.18% of pay contribution loss from the phase-in of the UAAL cost impact due to changes in actuarial assumptions in 2017.
(3) Net of an adjustment of -0.12% to reflect a change in 18-month delay between date of valuation and date of rate implementation for all actuarial experience.

Reconciliation of Average Recommended Member Contribution Rate

The chart below details the changes in the average recommended member contribution from the prior valuation to the current year's valuation.

RECONCILIATION OF AVERAGE RECOMMENDED MEMBER CONTRIBUTION RATE FROM DECEMBER 31, 2017 TO DECEMBER 31, 2018

	Contribution Rate	Estimated Annual Dollar Amount[1] ($ in '000s)
Average Recommended Member Contribution as of December 31, 2017[2]	12.46%	$233,718
• Effect of changes in member demographics	0.01%	87
Total change	0.01%	$87
Average Recommended Member Contribution as of December 31, 2018	12.47%	$233,805

(1) Based on December 31, 2018 projected annual compensation of $1,875,370,000.

(2) Rates have been recalculated by applying the individual entry age based rates determined in the December 31, 2017 valuation to the System membership as of December 31, 2018.

Recommended Employer Contribution Rates

General Employers	December 31, 2018 Actuarial Valuation Contribution Rate[1]	December 31, 2018 Actuarial Valuation Estimated Annual Dollar Amount[2] ($ in '000s)	December 31, 2017 Actuarial Valuation Contribution Rate[1]	December 31, 2017 Actuarial Valuation Estimated Annual Dollar Amount[2] ($ in '000s)
Rate Group #1 – Plans A and B (2.0% @ 57 and 1.6667% @ 57.5 – non-OCTA, non-OCSD)				
Normal Cost	10.73%	$4,822	10.73%	$4,822
UAAL[3],[4],[5]	8.55%	3,843	7.89%	3,546
Total Contributions	19.28%	$8,665	18.62%	$8,368
Rate Group #1 – Plan U (2.5% @ 67 PEPRA)[6]				
Normal Cost	9.93%	$4,293	9.93%	$4,293
UAAL[3],[4],[5]	8.55%	3,696	7.89%	3,411
Total Contributions	18.48%	$7,989	17.82%	$7,704
Rate Group #1 – Plans A, B and U Combined				
Normal Cost	10.34%	$9,115	10.34%	$9,115
UAAL[3],[4],[5]	8.55%	7,539	7.89%	6,957
Total Contributions	18.89%	$16,654	18.23%	$16,072

(1) These rates reflect the 2/3 and 1/3 phase-ins of changes in actuarial assumptions in the December 31, 2018 and December 31, 2017 valuations, respectively.

(2) Amounts are based on December 31, 2018 projected compensation as shown on the page 43.

(3) UAAL rate has been adjusted to reflect 18-month delay between date of valuation and date of rate implementation.

(4) The net UAAL contribution rates for County and IHSS Public Authority when calculated after excluding the UAAL for U.C.I., Department of Education and Cypress Recreation and Parks is 5.06% for the December 31, 2018 valuation.

(5) The net UAAL contribution rates for County and IHSS Public Authority when calculated after excluding the UAAL for U.C.I., Department of Education and Cypress Recreation and Parks is 4.61% for the December 31, 2017 valuation.

(6) Applicable for members hired on or after January 1, 2013.

Recommended Employer Contribution Rates (continued)

General Employers	December 31, 2018 Actuarial Valuation Contribution Rate[1]	December 31, 2018 Actuarial Valuation Estimated Annual Dollar Amount[2] ($ in '000s)	December 31, 2017 Actuarial Valuation Contribution Rate[1]	December 31, 2017 Actuarial Valuation Estimated Annual Dollar Amount[2] ($ in '000s)
Rate Group #2 – Plans I and J (2.7% @ 55 – non-OCFA, non-Children and Families Commission)				
Normal Cost	14.36%	$115,805	14.39%	$116,047
UAAL[3]	25.05%	202,014	22.67%	182,821
Total Contributions	39.41%	$317,819	37.06%	$298,868
Rate Group #2 – Plans I and J (2.7% @ 55 – non-OCFA, Children and Families Commission)				
Normal Cost	14.36%	$78	14.39%	$79
UAAL[3],[4]	3.26%	18	1.04%	6
Total Contributions	17.62%	$96	15.43%	$85
Rate Group #2 – Plans O and P (1.62% @ 65)				
Normal Cost	6.23%	$938	6.21%	$935
UAAL[3]	25.05%	3,770	22.67%	3,412
Total Contributions	31.28%	$4,708	28.88%	$4,347
Rate Group #2 – Plan S (2.0% @ 57)				
Normal Cost[5]	12.13%	$249	11.51%	$236
UAAL[3]	25.05%	513	22.67%	465
Total Contributions	37.18%	$762	34.18%	$701
Rate Group #2 – Plan T (1.62% @ 65 PEPRA)[6]				
Normal Cost	7.12%	$20,038	7.11%	$20,009
UAAL[3]	25.05%	70,497	22.67%	63,799
Total Contributions	32.17%	$90,535	29.78%	$83,808

(1) These rates reflect the 2/3 and 1/3 phase-ins of changes in actuarial assumptions in the December 31, 2018 and December 31, 2017 valuations, respectively.

(2) Amounts are based on December 31, 2018 projected compensation as shown on the page 43.

(3) UAAL rate has been adjusted to reflect 18-month delay between date of valuation and date of rate implementation.

(4) UAAL rate has been adjusted to reflect future service only benefit improvement under 2.7% @ 55.

(5) The increase in the employer Normal Cost rate from last year to this year is primarily due to the change in the average entry age from 31.9 (for 17 members) to 32.8 for (for 16 members).

(6) Applicable for members hired on or after January 1, 2013 except for County Attorneys, San Juan Capistrano members, OCERS management members and Children and Families members.

Note: For Orange County Employees Retirement System (the employer) with future service only benefit improvements under 2.7% @ 55, refer to the employer rates on page 44. For Local Agency Formation Commission (LAFCO), there is no adjustment in their December 31, 2018 UAAL rate for future service only benefit improvements under 2.7% @ 55. This is as a result of a data correction made by OCERS to reflect that the sole active employee covered under 2.7% @ 55 and assumed in our prior valuations to receive future service only improvement should instead be values as an all service improvement because the member has paid some contributions to upgrade the past service.

Recommended Employer Contribution Rates (continued)

General Employers	December 31, 2018 Actuarial Valuation Contribution Rate[1]	December 31, 2018 Actuarial Valuation Estimated Annual Dollar Amount[2] ($ in '000s)	December 31, 2017 Actuarial Valuation Contribution Rate[1]	December 31, 2017 Actuarial Valuation Estimated Annual Dollar Amount[2] ($ in '000s)
Rate Group #2 – Plan U (2.5% @ 67 PEPRA, non-Children and Families Commission)[5]				
Normal Cost	8.78%	$1,906	8.78%	$1,906
UAAL[3]	25.05%	5,438	22.67%	4,921
Total Contributions	33.83%	$7,344	31.45%	$6,827
Rate Group #2 – Plan U (2.5% @ 67 PEPRA, Children and Families Commission)[5]				
Normal Cost	8.78%	$51	8.78%	$51
UAAL[3],[4]	3.26%	19	1.04%	6
Total Contributions	12.04%	$70	9.82%	$57
Rate Group #2 – Plan W (1.62% @ 65 PEPRA)[6]				
Normal Cost	8.73%	$13	8.56%	$13
UAAL[3]	25.05%	37	22.67%	34
Total Contributions	33.78%	$50	31.23%	$47
Rate Group #2 – Plans I, J, O, P, S, T, U and W Combined				
Normal Cost	12.33%	$139,078	12.35%	$139,276
UAAL[3]	25.03%	282,306	22.65%	255,464
Total Contributions	37.36%	$421,384	35.00%	$394,740

(1) These rates reflect the 2/3 and 1/3 phase-ins of changes in actuarial assumptions in the December 31, 2018 and December 31, 2017 valuations, respectively.
(2) Amounts are based on December 31, 2018 projected compensation as shown on the page 43.
(3) UAAL rate has been adjusted to reflect 18-month delay between date of valuation and date of rate implementation.
(4) UAAL rate has been adjusted to reflect future service only benefit improvement under 2.7% @ 55.
(5) Applicable for County Attorneys, San Juan Capistrano members, OCERS management members and Children and Families members hired on or after January 1, 2013.
(6) Applicable for San Juan Capistrano members hired on or after January 1, 2016 if they elect to be covered under Plan W (1.62% @ 65 formula).

Note: For Orange County Employees Retirement System (the employer) with future service only benefit improvements under 2.7% @ 55, refer to the employer rates on page 44. For Local Agency Formation Commission (LAFCO), there is no adjustment in their December 31, 2018 UAAL rate for future service only benefit improvements under 2.7% @ 55. This is as a result of a data correction made by OCERS to reflect that the sole active employee covered under 2.7% @ 55 and assumed in our prior valuations to receive future service only improvement should instead be values as an all service improvement because the member has paid some contributions to upgrade the past service.

Recommended Employer Contribution Rates (continued)

General Employers	December 31, 2018 Actuarial Valuation Contribution Rate(1)	December 31, 2018 Actuarial Valuation Estimated Annual Dollar Amount(3) ($ in '000s)	December 31, 2017 Actuarial Valuation Contribution Rate(2)	December 31, 2017 Actuarial Valuation Estimated Annual Dollar Amount(3) ($ in '000s)
Rate Group #3 – Plans G and H (2.5% @ 55 – OCSD)				
Normal Cost	13.24%	$6,073	13.30%	$6,101
UAAL(4)	0.86%	394	0.00%	0
Total Contributions	14.10%	$6,467	13.30%	$6,101
Rate Group #3 – Plan B (1.64% @ 57 – OCSD)				
Normal Cost	11.11%	$701	11.25%	$710
UAAL(4)	0.86%	54	0.00%	0
Total Contributions	11.97%	$755	11.25%	$710
Rate Group #3 – Plan U (2.5% @ 67 PEPRA)(5)				
Normal Cost	10.02%	$2,143	10.37%	$2,218
UAAL(4)	0.86%	184	0.00%	0
Total Contributions	10.88%	$2,327	10.37%	$2,218
Rate Group #3 – Plans B, G, H and U Combined				
Normal Cost	12.12%	$8,917	12.27%	$9,029
UAAL(4)	0.86%	632	0.00%	0
Total Contributions	12.98%	$9,549	12.27%	$9,029

(1) These rates are after adjustment for $14,589,000 asset transfer from O.C. Sanitation District UAAL Deferred Account.
(2) These rates are after adjustment for $24,042,000 asset transfer from O.C. Sanitation District UAAL Deferred Account.
(3) Amounts are based on December 31, 2018 projected compensation as shown on the page 43.
(4) UAAL rate has been adjusted to reflect 18-month delay between date of valuation and date of rate implementation.
(5) Applicable for members hired on or after January 1, 2013.

Recommended Employer Contribution Rates (continued)

General Employers	December 31, 2018 Actuarial Valuation		December 31, 2017 Actuarial Valuation	
	Contribution Rate[(1)]	Estimated Annual Dollar Amount[(2)] ($ in '000s)	Contribution Rate[(1)]	Estimated Annual Dollar Amount[(2)] ($ in '000s)
Rate Group #5 – Plans A and B (2.0% @ 57 and 1.6667% @ 57.5 – OCTA)				
Normal Cost	12.03%	$10,813	12.10%	$10,875
UAAL[(3)]	18.60%	16,718	15.94%	14,327
Total Contributions	30.63%	$27,531	28.04%	$25,202
Rate Group #5 – Plan U (2.5% @ 67 PEPRA)[(4)]				
Normal Cost	11.32%	$1,749	11.32%	$1,749
UAAL[(3)]	18.60%	2,873	15.94%	2,462
Total Contributions	29.92%	$4,622	27.26%	$4,211
Rate Group #5 – Plans A, B and U Combined				
Normal Cost	11.93%	$12,562	11.99%	$12,624
UAAL[(3)]	18.60%	19,591	15.94%	16,789
Total Contributions	30.53%	$32,153	27.93%	$29,413

(1) These rates reflect the 2/3 and 1/3 phase-ins of changes in actuarial assumptions in the December 31, 2018 and December 31, 2017 valuations, respectively.

(2) Amounts are based on December 31, 2018 projected compensation as shown on the page 43.

(3) UAAL rate has been adjusted to reflect 18-month delay between date of valuation and date of rate implementation.

(4) Applicable for members hired on or after January 1, 2015.

Recommended Employer Contribution Rates (continued)

General Employers	December 31, 2018 Actuarial Valuation Contribution Rate[1]	December 31, 2018 Actuarial Valuation Estimated Annual Dollar Amount[2] ($ in '000s)	December 31, 2017 Actuarial Valuation Contribution Rate[1]	December 31, 2017 Actuarial Valuation Estimated Annual Dollar Amount[2] ($ in '000s)
Rate Group #9 – Plans M and N (2.0% @ 55 – TCA)				
Normal Cost	14.51%	$543	14.51%	$543
UAAL[3]	14.66%	549	11.49%	430
Total Contributions	29.17%	$1,092	26.00%	$973
Rate Group #9 – Plan U (2.5% @ 67 PEPRA)[4]				
Normal Cost	11.13%	$369	11.02%	$366
UAAL[3]	14.66%	486	11.49%	381
Total Contributions	25.79%	$855	22.51%	$747
Rate Group #9 – Plans M, N and U Combined				
Normal Cost	12.91%	$912	12.87%	$909
UAAL[3]	14.66%	1,035	11.49%	811
Total Contributions	27.57%	$1,947	24.36%	$1,720

(1) These rates reflect the 2/3 and 1/3 phase-ins of changes in actuarial assumptions in the December 31, 2018 and December 31, 2017 valuations, respectively.

(2) Amounts are based on December 31, 2018 projected compensation as shown on the page 43.

(3) UAAL rate has been adjusted to reflect 18-month delay between date of valuation and date of rate implementation.

(4) Applicable for members hired on or after January 1, 2013.

Recommended Employer Contribution Rates (continued)

General Employers	December 31, 2018 Actuarial Valuation Contribution Rate[1]	December 31, 2018 Actuarial Valuation Estimated Annual Dollar Amount[2] ($ in '000s)	December 31, 2017 Actuarial Valuation Contribution Rate[1]	December 31, 2017 Actuarial Valuation Estimated Annual Dollar Amount[2] ($ in '000s)
Rate Group #10 – Plans I and J (2.7% @ 55 – OCFA)				
Normal Cost	14.71%	$2,092	14.72%	$2,093
UAAL[3]	14.96%	2,127	15.74%	2,238
Total Contributions	29.67%	$4,219	30.46%	$4,331
Rate Group #10 – Plans M and N (2.0% @ 55 – OCFA)				
Normal Cost	13.50%	$558	13.46%	$556
UAAL[3]	14.96%	618	15.74%	651
Total Contributions	28.46%	$1,176	29.20%	$1,207
Rate Group #10 – Plan U (2.5% @ 67 PEPRA)[4]				
Normal Cost	10.16%	$901	10.41%	$923
UAAL[3]	14.96%	1,327	15.74%	1,396
Total Contributions	25.12%	$2,228	26.15%	$2,319
Rate Group #10 – Plans I, J, M, N and U Combined				
Normal Cost	13.04%	$3,551	13.12%	$3,572
UAAL[3]	14.96%	4,072	15.74%	4,285
Total Contributions	28.00%	$7,623	28.86%	$7,857

(1) These rates reflect the 2/3 and 1/3 phase-ins of changes in actuarial assumptions in the December 31, 2018 and December 31, 2017 valuations, respectively.
(2) Amounts are based on December 31, 2018 projected compensation as shown on the page 43.
(3) UAAL rate has been adjusted to reflect 18-month delay between date of valuation and date of rate implementation.
(4) Applicable for members hired on or after January 1, 2013.

Recommended Employer Contribution Rates (continued)

General Employers	December 31, 2018 Actuarial Valuation Contribution Rate[1]	December 31, 2018 Actuarial Valuation Estimated Annual Dollar Amount[2] ($ in '000s)	December 31, 2017 Actuarial Valuation Contribution Rate[1]	December 31, 2017 Actuarial Valuation Estimated Annual Dollar Amount[2] ($ in '000s)
Rate Group #11 – Plans M and N, future service (2.0% @ 55 – Cemetery)				
Normal Cost	12.05%	$155	11.98%	$154
UAAL[3],[4]	0.00%	0	0.48%	6
Total Contributions	12.05%	$155	12.46%	$160
Rate Group #11 – Plan U (2.5% @ 67 PEPRA)[5]				
Normal Cost	12.33%	$44	12.03%	$43
UAAL[3],[4]	0.00%	0	0.48%	2
Total Contributions	12.33%	$44	12.51%	$45
Rate Group #11 – Plans M, N and U Combined				
Normal Cost	12.11%	$199	11.99%	$197
UAAL[3],[4]	0.00%	0	0.48%	8
Total Contributions	12.11%	$199	12.47%	$205

(1) These rates reflect the 2/3 and 1/3 phase-ins of changes in actuarial assumptions in the December 31, 2018 and December 31, 2017 valuations, respectively.

(2) Amounts are based on December 31, 2018 projected compensation as shown on the page 43.

(3) UAAL rate has been adjusted to reflect 18-month delay between date of valuation and date of rate implementation.

(4) December 31, 2018 UAAL rates after the phase-in is negative. Under CalPEPRA, the employer's contribution rate cannot be less than the Normal Cost unless the funded ratio is over 120% and other conditions in CalPEPRA are met.

(5) Applicable for members hired on or after January 1, 2013.

Recommended Employer Contribution Rates (continued)

General Employers	December 31, 2018 Actuarial Valuation Contribution Rate	December 31, 2018 Actuarial Valuation Estimated Annual Dollar Amount[1] ($ in '000s)	December 31, 2017 Actuarial Valuation Contribution Rate	December 31, 2017 Actuarial Valuation Estimated Annual Dollar Amount[1] ($ in '000s)
Rate Group #12 – Plans G and H, future service (2.5% @ 55 – Law Library)				
Normal Cost	14.28%	$128	14.11%	$127
UAAL[2],[3]	1.77%	16	0.00%	0
Total Contributions	16.05%	$144	14.11%	$127
Rate Group #12 – Plan U (2.5% @ 67 PEPRA)[4]				
Normal Cost[5]	10.32%	$20	9.36%	$19
UAAL[2],[3]	1.77%	4	0.00%	0
Total Contributions	12.09%	$24	9.36%	$19
Rate Group #12 – Plans G, H, future service, and U Combined				
Normal Cost	13.52%	$148	13.33%	$146
UAAL[2],[3]	1.77%	20	0.00%	0
Total Contributions	15.29%	$168	13.33%	$146

(1) Amounts are based on December 31, 2018 projected compensation as shown on the page 43.

(2) UAAL rate has been adjusted to reflect 18-month delay between date of valuation and date of rate implementation.

(3) UAAL rate has been adjusted to reflect future service only benefit improvement under 2.7% @ 55.

(4) Applicable for members hired on or after January 1, 2013.

(5) There are two active members in Plan U this year instead of one active member last year. The increase in the employer Normal Cost rate from last year to this year is primarily due to change in the average entry age from 32.5 (for 1 member) to 39.4 (for 2 members).

Recommended Employer Contribution Rates (continued)

Safety Employers	December 31, 2018 Actuarial Valuation Contribution Rate[1]	December 31, 2018 Actuarial Valuation Estimated Annual Dollar Amount[2] ($ in '000s)	December 31, 2017 Actuarial Valuation Contribution Rate[1]	December 31, 2017 Actuarial Valuation Estimated Annual Dollar Amount[2] ($ in '000s)
Rate Group #6 – Plans E and F (3% @ 50 – Probation)				
Normal Cost	23.45%	$14,246	23.71%	$14,404
UAAL[3]	32.28%	19,611	28.74%	17,460
Total Contributions	55.73%	$33,857	52.45%	$31,864
Rate Group #6 – Plan V (2.7% @ 57 PEPRA)[4]				
Normal Cost	16.76%	$583	16.63%	$578
UAAL[3]	32.28%	1,123	28.74%	1,000
Total Contributions	49.04%	$1,706	45.37%	$1,578
Rate Group #6 – Plans E, F and V Combined				
Normal Cost	23.09%	$14,829	23.33%	$14,982
UAAL[3]	32.28%	20,734	28.74%	18,460
Total Contributions	55.37%	$35,563	52.07%	$33,442

(1) These rates reflect the 2/3 and 1/3 phase-ins of changes in actuarial assumptions in the December 31, 2018 and December 31, 2017 valuations, respectively.

(2) Amounts are based on December 31, 2018 projected compensation as shown on the page 43.

(3) UAAL rate has been adjusted to reflect 18-month delay between date of valuation and date of rate implementation.

(4) Applicable for members hired on or after January 1, 2013.

Recommended Employer Contribution Rates (continued)

Safety Employers	December 31, 2018 Actuarial Valuation Contribution Rate[1]	December 31, 2018 Actuarial Valuation Estimated Annual Dollar Amount[2] ($ in '000s)	December 31, 2017 Actuarial Valuation Contribution Rate[1]	December 31, 2017 Actuarial Valuation Estimated Annual Dollar Amount[2] ($ in '000s)
Rate Group #7 – Plans E and F (3% @ 50 – Law Enforcement)				
Normal Cost	26.64%	$40,447	26.69%	$40,523
UAAL[3]	40.71%	61,809	37.36%	56,723
Total Contributions	67.35%	$102,256	64.05%	$97,246
Rate Group #7 – Plans Q and R (3% @ 55 – Law Enforcement)				
Normal Cost	23.48%	$10,560	23.69%	$10,654
UAAL[3]	40.71%	18,309	37.36%	16,802
Total Contributions	64.19%	$28,869	61.05%	$27,456
Rate Group #7 – Plan V (2.7% @ 57 PEPRA)[4]				
Normal Cost	19.04%	$9,502	19.29%	$9,627
UAAL[3]	40.71%	20,316	37.36%	18,645
Total Contributions	59.75%	$29,818	56.65%	$28,272
Rate Group #7 – Plans E, F, Q, R and V Combined				
Normal Cost	24.53%	$60,509	24.65%	$60,804
UAAL[3]	40.71%	100,434	37.36%	92,170
Total Contributions	65.24%	$160,943	62.01%	$152,974

(1) These rates reflect the 2/3 and 1/3 phase-ins of changes in actuarial assumptions in the December 31, 2018 and December 31, 2017 valuations, respectively.

(2) Amounts are based on December 31, 2018 projected compensation as shown on the page 43.

(3) UAAL rate has been adjusted to reflect 18-month delay between date of valuation and date of rate implementation.

(4) Applicable for members hired on or after January 1, 2013.

Recommended Employer Contribution Rates (continued)

Safety Employers	December 31, 2018 Actuarial Valuation Contribution Rate[(1)]	December 31, 2018 Actuarial Valuation Estimated Annual Dollar Amount[(2)] ($ in '000s)	December 31, 2017 Actuarial Valuation Contribution Rate[(1)]	December 31, 2017 Actuarial Valuation Estimated Annual Dollar Amount[(2)] ($ in '000s)
Rate Group #8 – Plans E and F (3% @ 50 – OCFA)				
Normal Cost	26.97%	$27,220	27.24%	$27,492
UAAL[(3)]	23.84%	24,061	20.80%	20,993
Total Contributions	50.81%	$51,281	48.04%	$48,485
Rate Group #8 – Plans Q and R (3% @ 55 – OCFA)				
Normal Cost	21.83%	$2,523	21.97%	$2,540
UAAL[(3)]	23.84%	2,756	20.80%	2,404
Total Contributions	45.67%	$5,279	42.77%	$4,944
Rate Group #8 – Plan V (2.7% @ 57 PEPRA)[(4)]				
Normal Cost	15.27%	$3,040	15.44%	$3,074
UAAL[(3)]	23.84%	4,746	20.80%	4,141
Total Contributions	39.11%	$7,786	36.24%	$7,215
Rate Group #8 – Plans E, F, Q, R and V Combined				
Normal Cost	24.76%	$32,783	25.01%	$33,106
UAAL[(3)]	23.84%	31,563	20.80%	27,538
Total Contributions	48.60%	$64,346	45.81%	$60,644

(1) These rates reflect the 2/3 and 1/3 phase-ins of changes in actuarial assumptions in the December 31, 2018 and December 31, 2017 valuations, respectively.
(2) Amounts are based on December 31, 2018 projected compensation as shown on the page 43.
(3) UAAL rate has been adjusted to reflect 18-month delay between date of valuation and date of rate implementation.
(4) Applicable for members hired on or after January 1, 2013.

Recommended Employer Contribution Rates (continued)

General and Safety Combined	December 31, 2018 Actuarial Valuation Contribution Rate[1]	December 31, 2018 Actuarial Valuation Estimated Annual Dollar Amount[2] ($ in '000s)	December 31, 2017 Actuarial Valuation Contribution Rate[1]	December 31, 2017 Actuarial Valuation Estimated Annual Dollar Amount[2] ($ in '000s)
Rate Groups #1 – #12				
Normal Cost	15.07%	$282,603	15.13%	$283,760
UAAL[3]	24.95%	467,926	22.53%	422,482
Total Contributions	40.02%	$750,529	37.66%	$706,242

(1) These rates reflect the 2/3 and 1/3 phase-ins of changes in actuarial assumptions in the December 31, 2018 and December 31, 2017 valuations, respectively.

(2) Amounts are based on December 31, 2018 projected compensation ($ in '000s):

General Employers		**General Employers**		**Safety Employers**	
Rate Group #1 – Plans A and B	$44,944	Rate Group #3 – Plans G and H	$45,869	Rate Group #6 – Plans E and F	$60,752
Rate Group #1 – Plan U	43,232	Rate Group #3 – Plan B	6,310	Rate Group #6 – Plan V	3,478
Rate Group #2 – Plans I and J non-Children and Families Commission	806,444	Rate Group #3 – Plan U	21,384	Rate Group #7 – Plans E and F	151,828
		Rate Group #5 – Plans A and B	89,880	Rate Group #7 – Plans Q and R	44,974
Rate Group #2 – Plans I and J Children and Families Commission	546	Rate Group #5 – Plan U	15,447	Rate Group #7 – Plan V	49,905
		Rate Group #9 – Plans M and N	3,744	Rate Group #8 – Plans E and F	100,926
Rate Group #2 – Plans O and P	15,050	Rate Group #9 – Plan U	3,318	Rate Group #8 – Plans Q and R	11,559
Rate Group #2 – Plan S	2,049	Rate Group #10 – Plans I and J	14,220	Rate Group #8 – Plan V	19,909
Rate Group #2 – Plan T	281,426	Rate Group #10 – Plans M and N	4,134		
Rate Group #2 – Plan U non-Children and Families Commission	21,708	Rate Group #10 – Plan U	8,868		
		Rate Group #11 – Plans M and N	1,286		
Rate Group #2 – Plan U Children and Families Commission	579	Rate Group #11 – Plan U	357		
		Rate Group #12 – Plans G and H	897		
Rate Group #2 – Plan W	149	Rate Group #12 – Plan U	198		
				Total Combined	$1,875,370

(3) UAAL rate has been adjusted to reflect 18-month delay between date of valuation and date of rate implementation.

Recommended Employer Contribution Rates (continued)

General Employers - Orange County Employees Retirement System	December 31, 2018 Actuarial Valuation		December 31, 2017 Actuarial Valuation	
	Contribution Rate(1),(2)	Contribution Rate(1),(3)	Contribution Rate(1),(2)	Contribution Rate(1),(3)
Rate Group #2 – Plans I and J (2.7% @ 55 – non-OCFA)				
Normal Cost	14.36%	14.36%	14.39%	14.39%
UAAL(4)	23.91%	25.05%	21.06%	22.67%
Total Contributions	38.27%	39.41%	35.45%	37.06%
Rate Group #2 – Plan U (2.5% @ 67 PEPRA)(5)				
Normal Cost	8.78%	8.78%	8.78%	8.78%
UAAL(4)	23.91%	25.05%	21.06%	22.67%
Total Contributions	32.69%	33.83%	29.84%	31.45%

(1) These rates reflect the 2/3 and 1/3 phase-ins of changes in actuarial assumptions in the December 31, 2018 and December 31, 2017 valuations, respectively.

(2) These rates are after reflecting future service only benefit improvements under 2.7% @ 55.

(3) These rates are before reflecting future service only benefit improvements under 2.7% @ 55.

(4) UAAL rate has been adjusted to reflect 18-month delay between date of valuation and date of rate implementation.

(5) Applicable for Orange County Employees Retirement System members hired on or after January 1, 2013.

Note: For Local Agency Formation Commission (LAFCO), there is no adjustment in their December 31, 2018 UAAL rate for future service only benefit improvements under 2.7% @ 55. This is as a result of a data correction made by OCERS to reflect that the sole active employee covered under 2.7% @ 55 and assumed in our prior valuations to receive future service only improvement should instead be values as an all service improvement because the member has paid some contributions to upgrade the past service.

"Pick-Up" Discount Percentages for Non-PEPRA Tier Members

For every dollar of member contribution "picked up" by the employer for non-PEPRA tier members and not deposited in the member's contribution account, the employer can contribute less than a dollar. This is because the "pick-up" amount is not deposited in the member's contribution account and so is not payable to a member who withdraws his or her contributions following termination of employment, and is not payable as an additional death benefit. The contribution discount percentages are as follows:

	December 31, 2018 Pick-Up Percentage		December 31, 2017 Pick-Up Percentage	
General Members				
Rate Group #1 Plan A/B (non-OCTA, non-OCSD)	Plan A: 100.00%	Plan B: 98.28%	Plan A: 100.00%	Plan B: 98.16%
Rate Group #2 (2.7% @ 55 – non-OCFA)	Plan I: 99.38%	Plan J: 98.45%	Plan I: 99.37%	Plan J: 98.38%
Rate Group #2 (1.62% @ 65)	Plan O: N/A	Plan P: 97.56%	Plan O: N/A	Plan P: 97.33%
Rate Group #2 (2.0% @ 57)		Plan S: 97.92%		Plan S: 97.70%
Rate Group #3 (2.5% @ 55 – OCSD)	Plan G: 100.00%	Plan H: 98.61%	Plan G: 100.00%	Plan H: 98.53%
Rate Group #3 (1.64% @ 57 – OCSD)		Plan B: 97.71%		Plan B: 97.48%
Rate Group #5 Plan A/B (OCTA)	Plan A: 100.00%	Plan B: 97.63%	Plan A: 98.82%	Plan B: 97.46%
Rate Group #9 (2.0% @ 55 – TCA)	Plan M: N/A	Plan N: 98.39%	Plan M: N/A	Plan N: 98.34%
Rate Group #10 (2.7% @ 55 – OCFA)	Plan I: N/A	Plan J: 98.62%	Plan I: N/A	Plan J: 98.53%
Rate Group #10 (2.0% @ 55 – OCFA)	Plan M: N/A	Plan N: 97.50%	Plan M: N/A	Plan N: 97.57%
Rate Group #11 (2.0% @ 55 – Cemetery)	Plan M: N/A	Plan N: 98.61%	Plan M: N/A	Plan N: 98.52%
Rate Group #12 (2.5% @ 55 – Law Library)	Plan G: N/A	Plan H: 98.86%	Plan G: N/A	Plan H: 98.82%
Safety Members				
Rate Group #6 (3.0% @ 50 – Probation)	Plan E: N/A	Plan F: 99.47%	Plan E: N/A	Plan F: 99.43%
Rate Group #7 (3.0% @ 50 – Law Enforcement)	Plan E: N/A	Plan F: 99.71%	Plan E: N/A	Plan F: 99.69%
Rate Group #7 (3.0% @ 55 – Law Enforcement)	Plan Q: N/A	Plan R: 99.42%	Plan Q: N/A	Plan R: 99.37%
Rate Group #8 (3.0% @ 50 – OCFA)	Plan E: N/A	Plan F: 99.64%	Plan E: N/A	Plan F: 99.61%
Rate Group #8 (3.0% @ 55 – OCFA)	Plan Q: N/A	Plan R: 99.43%	Plan Q: N/A	Plan R: 99.38%

"Pick-Up" Average Entry Age

The following table provides the average entry age by employer used in determining the "pick-up" contributions under Section 31581.1.

Employer	Code	Average Entry Age for All non-PEPRA Members
General		
Orange County	101	32
Cemetery District	102	30
Law Library	103	41
Retirement System	105	31
OCFA	106	32
Transportation Corridor Agency	109	38
City of San Juan Capistrano	110	33
Sanitation District	111	33
OCTA	112	35
Children & Families Commission	118	27
Local Agency Formation Commission	119	38
Superior Court	121	32
IHSS Public Authority	122	39
Safety		
Probation	101	27
Law Enforcement	101	27
OCFA	106	29

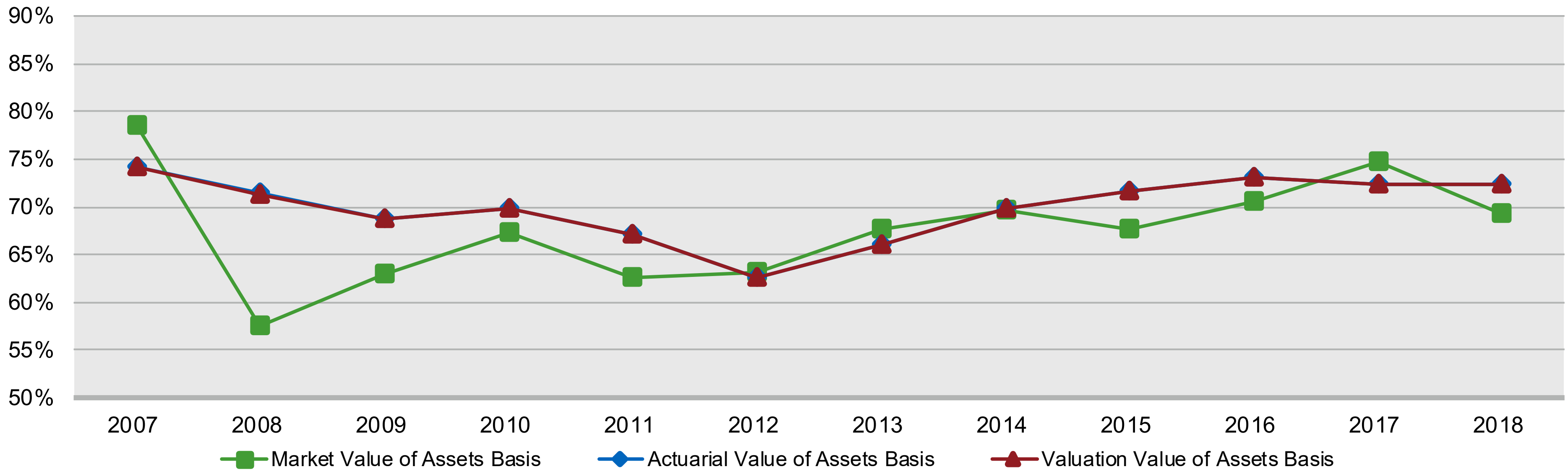
G. Funded Status

A commonly reported piece of information regarding the Plan's financial status is the funded ratio. These ratios compare the Market and Valuation Value of Assets to the Actuarial Accrued Liability of the Plan. High ratios indicate a well-funded plan with assets sufficient to cover the Plan's Actuarial Accrued Liability. Lower ratios may indicate recent changes to benefit structures, funding of the plan below actuarial requirements, poor asset performance, or a variety of other changes.

The chart below depicts a history of the funded ratio for the Plan. The chart on the next page shows the Plan's schedule of funding progress for the last ten years.

The funded status measures shown in this valuation are appropriate for assessing the need for or amount of future contributions. However, they are not necessarily appropriate for assessing the sufficiency of current Plan assets to cover the estimated cost of settling the accrued Plan's benefit obligations. As the chart below shows, the measures are different depending on whether the Market or Valuation Value of Assets is used.

FUNDED RATIO FOR PLAN YEARS ENDING DECEMBER 31, 2007 – 2018



SCHEDULE OF FUNDING PROGRESS
FOR PLAN YEARS ENDING DECEMBER 31, 2009 - 2018

Actuarial Valuation Date as of December 31	Valuation Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded/ (Overfunded) AAL (UAAL) (b) - (a)	Funded Ratio (%) (a) / (b)	Projected Covered Payroll (c)	UAAL as a Percentage of Projected Covered Payroll (%) [(b) - (a)] / (c)
2009	$8,154,687,000	$11,858,578,000	$3,703,891,000	68.77%	$1,618,491,000	228.85%
2010	8,672,592,000	12,425,873,000	3,753,281,000	69.79%	1,579,239,000	237.66%
2011	9,064,355,000	13,522,978,000	4,458,623,000	67.03%	1,619,474,000	275.31%
2012	9,469,208,000	15,144,888,000	5,675,680,000	62.52%	1,609,600,000	352.55%
2013	10,417,125,000	15,785,042,000	5,367,917,000	65.99%	1,604,496,000	334.55%
2014	11,449,911,000	16,413,124,000	4,963,213,000	69.76%	1,648,160,000	301.14%
2015	12,228,009,000	17,050,357,000	4,822,348,000	71.72%	1,633,112,000	295.29%
2016	13,102,978,000	17,933,461,000	4,830,483,000	73.06%	1,759,831,000	274.49%
2017	14,197,125,000	19,635,427,000	5,438,302,000	72.30%	1,811,877,000	300.15%
2018	14,994,420,000	20,703,349,000	5,708,929,000	72.43%	1,875,370,000	304.42%

For informational purposes only, we have also developed the funded ratio determined using the historical market value of assets after adjustment for amounts in the County Investment Account (funded by pension obligation bond proceeds held by OCERS), prepaid employer contributions, O.C. Sanitation District UAAL Deferred Account (after transfer), unclaimed member reserve and Medicare Medical Insurance Reserve.

Actuarial Valuation Date December 31	Funded Ratio Based on Net Market Value of Assets
2009	62.94%
2010	67.25%
2011	62.60%
2012	63.17%
2013	67.65%

Actuarial Valuation Date December 31	Funded Ratio Based on Net Market Value of Assets
2014	69.63%
2015	67.73%
2016	70.58%
2017	74.62%
2018	69.31%

H. Actuarial Balance Sheet

An overview of the Plan's funding is given by an Actuarial Balance Sheet. In this approach, first the amount and timing of all future payments that will be made by the Plan for current participants is determined. Then these payments are discounted at the valuation interest rate to the date of the valuation, thereby determining the present value, referred to as the Actuarial Present Value of Future Benefits of the Plan.

Second, this Actuarial Present Value of Future Benefits is compared to the assets. The "assets" for this purpose include the net amount of assets already accumulated by the Plan, the present value of future member contributions, the present value of future employer Normal Cost contributions, and the present value of future employer amortization payments for the Unfunded Actuarial Accrued Liability.

ACTUARIAL BALANCE SHEET

	Year Ended	
	December 31, 2018 ($ in '000s)	December 31, 2017 ($ in '000s)
Actuarial Present Value of Future Benefits		
• Present value of benefits for retired members and beneficiaries	$11,569,064	$10,633,213
• Present value of benefits for inactive vested members[1]	449,290	488,752
• Present value of benefits for active members	13,159,391	12,923,392
Total Actuarial Present Value of Future Benefits	**$25,177,745**	**$24,045,357**
Current and future assets		
• Total Valuation Value of Assets	$14,994,420	$14,197,125
• Present value of future contributions by members	2,048,080	2,003,365
• Present value of future employer contributions for:		
» Entry age Normal Cost	2,426,316	2,406,565
» Unfunded Actuarial Accrued Liability	5,708,929	5,438,302
Total of current and future assets	**$25,177,745**	**$24,045,357**

(1) This includes members who chose to leave their contributions on deposit even though they have less than five years of service.

I. Volatility Ratios

Retirement plans are subject to volatility in the level of required contributions. This volatility tends to increase as retirement plans become more mature.

The Asset Volatility Ratio (AVR), which is equal to the Market Value of Assets divided by total payroll, provides an indication of the potential contribution volatility for any given level of investment volatility. A higher AVR indicates that the plan is subject to a greater level of contribution volatility. This is a current measurement since it is based on the current level of assets.

The current AVR is about 7.7. This means that a 1% asset gain or loss (relative to the assumed investment return) translates to about 7.7% of one year's payroll. Since actuarial gains and losses are amortized over 20 years, there would be a 0.5% of payroll decrease/(increase) in the required contribution for each 1% asset gain/(loss).

The Liability Volatility Ratio (LVR), which is equal to the Actuarial Accrued Liability divided by payroll, provides an indication of the longer-term potential for contribution volatility for any given level of investment volatility. This is because, over an extended period of time, the plan's assets should track the plan's liabilities.

The LVR also indicates how volatile contributions will be in response to changes in the Actuarial Accrued Liability due to actual experience or to changes in actuarial assumptions. The current total plan LVR is about 11.0, but is 9.8 for General compared to 15.2 for Safety. This means that assumption changes will have a greater impact on employer contribution rates for Safety than for General.

The chart on the next page shows how the asset and liability volatility ratios have varied over time.

VOLATILITY RATIOS FOR YEARS ENDED DECEMBER 31, 2009 – 2018

Year Ended December 31	Asset Volatility Ratio			Liability Volatility Ratio		
	General	Safety	Total	General	Safety	Total
2009	4.2	6.1	4.6	6.6	10.0	7.3
2010	4.7	7.3	5.3	7.0	10.9	7.9
2011	4.7	7.1	5.2	7.6	10.9	8.4
2012	5.3	8.1	5.9	8.6	12.3	9.4
2013	6.0	8.9	6.7	9.0	12.6	9.8
2014	6.2	9.4	6.9	8.9	13.6	10.0
2015	6.3	9.6	7.1	9.3	14.3	10.4
2016	6.4	9.9	7.2	9.0	14.2	10.2
2017	7.2	11.0	8.1	9.6	14.8	10.8
2018	6.8	10.5	7.7	9.8	15.2	11.0

EXHIBIT A – TABLE OF PLAN COVERAGE
TOTAL PLAN

Category	Year Ended December 31 2018	Year Ended December 31 2017	Change From Prior Year
Active members in valuation:			
• Number	21,929	21,721	1.0%
• Average age	45.1	45.3	-0.2
• Average years of service	12.8	12.9	-0.1
• Total projected compensation	$1,875,371,661	$1,811,879,510	3.5%
• Average projected compensation	$85,520	$83,416	2.5%
• Account balances	$2,980,107,630	$2,815,839,196	5.8%
• Total active vested members	15,903	16,040	-0.9%
Inactive vested members:[(1)]			
• Number	6,026	5,803	3.8%
• Average age	44.9	44.8	0.1
Retired members:			
• Number in pay status	13,827	13,240	4.4%
• Average age	70.0	69.8	0.2
• Average monthly benefit[(2)]	$4,237	$4,060	4.4%
Disabled members:			
• Number in pay status	1,482	1,446	2.5%
• Average age	65.5	65.3	0.2
• Average monthly benefit[(2)]	$3,750	$3,540	5.9%
Beneficiaries:			
• Number in pay status	2,365	2,261	4.6%
• Average age	72.9	72.8	0.1
• Average monthly benefit[(2)]	$2,116	$2,032	4.1%

(1) Includes members who chose to leave their contributions on deposit even though they have less than five years of service.

(2) Excludes monthly benefits payable from the STAR COLA.

EXHIBIT A – TABLE OF PLAN COVERAGE (CONTINUED)
RATE GROUP #1 FOR PLANS A, B AND U (NON-OCTA, NON-OCSD)

Category	Year Ended December 31		Change From Prior Year
	2018	2017	
Active members in valuation:			
• Number	1,613	1,555	3.7%
• Average age	43.0	43.1	-0.1
• Average years of service	9.7	9.8	-0.1
• Total projected compensation	$88,176,419	$83,675,611	5.4%
• Average projected compensation	$54,666	$53,811	1.6%
• Account balances	$60,833,185	$55,414,963	9.8%
• Total active vested members	911	817	11.5%
Inactive vested members:[(1)]			
• Number	516	496	4.0%
• Average age	41.8	41.6	0.2
Retired members:			
• Number in pay status	636	627	1.4%
• Average age	75.0	74.9	0.1
• Average monthly benefit[(2)]	$2,709	$2,645	2.4%
Disabled members:			
• Number in pay status	37	37	0.0%
• Average age	67.2	67.6	-0.4
• Average monthly benefit[(2)]	$2,408	$2,337	3.0%
Beneficiaries:			
• Number in pay status	98	96	2.1%
• Average age	76.5	76.7	-0.2
• Average monthly benefit[(2)]	$1,438	$1,360	5.7%

(1) Includes members who chose to leave their contributions on deposit even though they have less than five years of service.

(2) Excludes monthly benefits payable from the STAR COLA.

EXHIBIT A – TABLE OF PLAN COVERAGE (CONTINUED)
RATE GROUP #2 FOR PLANS I, J, O, P, S, T, U AND W

Category	Year Ended December 31 2018	Year Ended December 31 2017	Change From Prior Year
Active members in valuation:			
• Number	14,267	14,097	1.2%
• Average age	45.6	45.7	-0.1
• Average years of service	12.8	12.9	-0.1
• Total projected compensation	$1,127,951,040	$1,093,044,342	3.2%
• Average projected compensation	$79,060	$77,537	2.0%
• Account balances	$2,035,013,710	$1,930,686,878	5.4%
• Total active vested members	10,201	10,337	-1.3%
Inactive vested members:[1]			
• Number	4,078	3,928	3.8%
• Average age	44.9	44.9	0.0
Retired members:			
• Number in pay status	9,432	9,067	4.0%
• Average age	71.0	70.9	0.1
• Average monthly benefit[2]	$3,787	$3,628	4.4%
Disabled members:			
• Number in pay status	575	582	-1.2%
• Average age	67.0	66.8	0.2
• Average monthly benefit[2]	$2,558	$2,477	3.3%
Beneficiaries:			
• Number in pay status	1,489	1,433	3.9%
• Average age	75.0	75.0	0.0
• Average monthly benefit[2]	$1,907	$1,829	4.3%

(1) Includes members who chose to leave their contributions on deposit even though they have less than five years of service.

(2) Excludes monthly benefits payable from the STAR COLA.

EXHIBIT A – TABLE OF PLAN COVERAGE (CONTINUED)
RATE GROUP #3 FOR PLANS B, G, H AND U (OCSD)

Category	Year Ended December 31		Change From Prior Year
	2018	2017	
Active members in valuation:			
• Number	616	592	4.1%
• Average age	47.3	48.0	-0.7
• Average years of service	12.3	12.7	-0.4
• Total projected compensation	$73,563,905	$69,138,987	6.4%
• Average projected compensation	$119,422	$116,789	2.3%
• Account balances	$93,152,393	$89,050,369	4.6%
• Total active vested members	433	438	-1.1%
Inactive vested members:[1]			
• Number	117	112	4.5%
• Average age	47.3	46.8	0.5
Retired members:			
• Number in pay status	390	372	4.8%
• Average age	68.2	67.8	0.4
• Average monthly benefit[2]	$5,575	$5,321	4.8%
Disabled members:			
• Number in pay status	17	15	13.3%
• Average age	65.8	66.6	-0.8
• Average monthly benefit[2]	$3,586	$3,633	-1.3%
Beneficiaries:			
• Number in pay status	79	72	9.7%
• Average age	70.3	69.3	1.0
• Average monthly benefit[2]	$2,406	$2,282	5.4%

(1) Includes members who chose to leave their contributions on deposit even though they have less than five years of service.

(2) Excludes monthly benefits payable from the STAR COLA.

EXHIBIT A – TABLE OF PLAN COVERAGE (CONTINUED)
RATE GROUP #5 FOR PLANS A, B AND U (OCTA)

Category	Year Ended December 31		Change From Prior Year
	2018	2017	
Active members in valuation:			
• Number	1,279	1,313	-2.6%
• Average age	50.1	50.4	-0.3
• Average years of service	13.7	13.8	-0.1
• Total projected compensation	$105,327,147	$102,731,350	2.5%
• Average projected compensation	$82,351	$78,242	5.3%
• Account balances	$130,715,191	$128,751,586	1.5%
• Total active vested members	993	1,021	-2.7%
Inactive vested members:[1]			
• Number	590	584	1.0%
• Average age	49.6	49.6	0.0
Retired members:			
• Number in pay status	965	903	6.9%
• Average age	70.1	69.8	0.3
• Average monthly benefit[2]	$2,568	$2,463	4.3%
Disabled members:			
• Number in pay status	261	258	1.2%
• Average age	66.5	65.9	0.6
• Average monthly benefit[2]	$2,373	$2,304	3.0%
Beneficiaries:			
• Number in pay status	176	167	5.4%
• Average age	71.4	71.2	0.2
• Average monthly benefit[2]	$1,380	$1,349	2.3%

(1) Includes members who chose to leave their contributions on deposit even though they have less than five years of service.

(2) Excludes monthly benefits payable from the STAR COLA.

EXHIBIT A – TABLE OF PLAN COVERAGE (CONTINUED)
RATE GROUP #9 FOR PLANS M, N AND U (TCA)

Category	Year Ended December 31		Change From Prior Year
	2018	2017	
Active members in valuation:			
• Number	62	64	-3.1%
• Average age	48.8	49.2	-0.4
• Average years of service	8.3	8.4	-0.1
• Total projected compensation	$7,061,833	$7,317,008	-3.5%
• Average projected compensation	$113,901	$114,328	-0.4%
• Account balances	$5,011,037	$5,438,441	-7.9%
• Total active vested members	31	34	-8.8%
Inactive vested members:(1)			
• Number	62	61	1.6%
• Average age	44.9	44.5	0.4
Retired members:			
• Number in pay status	50	44	13.6%
• Average age	68.9	68.6	0.3
• Average monthly benefit(2)	$3,073	$2,944	4.4%
Disabled members:			
• Number in pay status	0	0	N/A
• Average age	N/A	N/A	N/A
• Average monthly benefit(2)	N/A	N/A	N/A
Beneficiaries:			
• Number in pay status	4	4	0.0%
• Average age	71.0	70.0	1.0
• Average monthly benefit(2)	$464	$451	2.9%

(1) Includes members who chose to leave their contributions on deposit even though they have less than five years of service.

(2) Excludes monthly benefits payable from the STAR COLA.

EXHIBIT A – TABLE OF PLAN COVERAGE (CONTINUED)
RATE GROUP #10 FOR PLANS I, J, M, N AND U (OCFA)

Category	Year Ended December 31		Change From Prior Year
	2018	2017	
Active members in valuation:			
• Number	274	281	-2.5%
• Average age	45.5	45.5	0.0
• Average years of service[(1)]	11.2	10.8	0.4
• Total projected compensation	$27,222,325	$26,691,539	2.0%
• Average projected compensation	$99,352	$94,988	4.6%
• Account balances	$28,959,317	$27,364,974	5.8%
• Total active vested members	171	176	-2.8%
Inactive vested members:[(2)]			
• Number	178	154	15.6%
• Average age	42.1	41.9	0.2
Retired members:			
• Number in pay status	162	157	3.2%
• Average age	66.0	65.3	0.7
• Average monthly benefit[(3)]	$4,550	$4,424	2.8%
Disabled members:			
• Number in pay status	11	10	10.0%
• Average age	61.2	61.4	-0.2
• Average monthly benefit[(3)]	$2,660	$2,522	5.5%
Beneficiaries:			
• Number in pay status	12	12	0.0%
• Average age	65.7	64.7	1.0
• Average monthly benefit[(3)]	$1,311	$1,273	3.0%

(1) For some former Santa Ana members, service used in calculating the average above is only used for vesting purposes. Benefit service starts to accrue only effective April 2012.

(2) Includes members who chose to leave their contributions on deposit even though they have less than five years of service.

(3) Excludes monthly benefits payable from the STAR COLA.

EXHIBIT A – TABLE OF PLAN COVERAGE (CONTINUED)
RATE GROUP #11 FOR PLANS M AND N, FUTURE SERVICE, AND U (CEMETERY)

Category	Year Ended December 31 2018	Year Ended December 31 2017	Change From Prior Year
Active members in valuation:			
• Number	25	25	0.0%
• Average age	50.3	49.3	1.0
• Average years of service	16.7	15.7	1.0
• Total projected compensation	$1,643,501	$1,637,025	0.4%
• Average projected compensation	$65,740	$65,481	0.4%
• Account balances	$2,483,310	$2,227,789	11.5%
• Total active vested members	18	18	0.0%
Inactive vested members:[1]			
• Number	2	2	0.0%
• Average age	40.1	39.1	1.0
Retired members:			
• Number in pay status	4	5	-20.0%
• Average age	76.2	75.8	0.4
• Average monthly benefit[2]	$2,730	$2,455	11.2%
Disabled members:			
• Number in pay status	0	0	N/A
• Average age	N/A	N/A	N/A
• Average monthly benefit[2]	N/A	N/A	N/A
Beneficiaries:			
• Number in pay status	5	4	25.0%
• Average age	80.2	79.0	1.2
• Average monthly benefit[2]	$1,523	$1,598	-4.7%

[1] Includes members who chose to leave their contributions on deposit even though they have less than five years of service.

[2] Excludes monthly benefits payable from the STAR COLA.

EXHIBIT A – TABLE OF PLAN COVERAGE (CONTINUED)
RATE GROUP #12 FOR PLANS G, H, FUTURE SERVICE, AND U (LAW LIBRARY)

Category	Year Ended December 31		Change From Prior Year
	2018	2017	
Active members in valuation:			
• Number	14	14	0.0%
• Average age	57.2	57.5	-0.3
• Average years of service	16.4	17.5	-1.1
• Total projected compensation	$1,095,420	$1,119,773	-2.2%
• Average projected compensation	$78,244	$79,984	-2.2%
• Account balances	$2,390,529	$2,634,092	-9.2%
• Total active vested members	12	13	-7.7%
Inactive vested members:[1]			
• Number	4	4	0.0%
• Average age	49.6	48.6	1.0
Retired members:			
• Number in pay status	12	11	9.1%
• Average age	72.2	71.8	0.4
• Average monthly benefit[2],[3]	$3,058	$2,200	39.0%
Disabled members:			
• Number in pay status	0	0	N/A
• Average age	N/A	N/A	N/A
• Average monthly benefit[2]	N/A	N/A	N/A
Beneficiaries:			
• Number in pay status	0	0	N/A
• Average age	N/A	N/A	N/A
• Average monthly benefit[2]	N/A	N/A	N/A

(1) Includes members who chose to leave their contributions on deposit even though they have less than five years of service.

(2) Excludes monthly benefits payable from the STAR COLA.

(3) The increase in average monthly benefit is due to the retirement of one member with a substantial amount of benefit based on the member's age and service at OCERS.

EXHIBIT A – TABLE OF PLAN COVERAGE (CONTINUED)
RATE GROUP #6 FOR PLANS E, F AND V (PROBATION)

Category	Year Ended December 31 2018	Year Ended December 31 2017	Change From Prior Year
Active members in valuation:			
• Number	764	763	0.1%
• Average age	44.6	44.6	0.0
• Average years of service	17.1	17.1	0.0
• Total projected compensation	$64,229,791	$64,062,602	0.3%
• Average projected compensation	$84,070	$83,961	0.1%
• Account balances	$145,104,870	$137,781,996	5.3%
• Total active vested members	713	743	-4.0%
Inactive vested members:[1]			
• Number	222	220	0.9%
• Average age	41.9	41.1	0.8
Retired members:			
• Number in pay status	332	306	8.5%
• Average age	66.0	65.9	0.1
• Average monthly benefit[2]	$5,632	$5,444	3.5%
Disabled members:			
• Number in pay status	31	29	6.9%
• Average age	55.9	54.8	1.1
• Average monthly benefit[2]	$2,973	$2,872	3.5%
Beneficiaries:			
• Number in pay status	27	25	8.0%
• Average age	64.9	64.6	0.3
• Average monthly benefit[2]	$2,444	$2,473	-1.2%

(1) Includes members who chose to leave their contributions on deposit even though they have less than five years of service.

(2) Excludes monthly benefits payable from the STAR COLA.

EXHIBIT A – TABLE OF PLAN COVERAGE (CONTINUED)
RATE GROUP #7 FOR PLANS E, F, Q, R AND V (LAW ENFORCEMENT)

Category	Year Ended December 31 2018	Year Ended December 31 2017	Change From Prior Year
Active members in valuation:			
• Number	2,027	2,010	0.8%
• Average age	40.9	41.0	-0.1
• Average years of service	13.1	13.4	-0.3
• Total projected compensation	$246,706,193	$236,373,080	4.4%
• Average projected compensation	$121,710	$117,599	3.5%
• Account balances	$324,646,722	$298,704,270	8.7%
• Total active vested members	1,608	1,607	0.1%
Inactive vested members:[1]			
• Number	179	175	2.3%
• Average age	43.3	43.4	-0.1
Retired members:			
• Number in pay status	1,402	1,333	5.2%
• Average age	64.0	63.9	0.1
• Average monthly benefit[2]	$7,128	$6,876	3.7%
Disabled members:			
• Number in pay status	368	351	4.8%
• Average age	63.4	63.2	0.2
• Average monthly benefit[2]	$5,266	$4,977	5.8%
Beneficiaries:			
• Number in pay status	370	351	5.4%
• Average age	68.1	67.3	0.8
• Average monthly benefit[2]	$3,114	$3,011	3.4%

(1) Includes members who chose to leave their contributions on deposit even though they have less than five years of service.

(2) Excludes monthly benefits payable from the STAR COLA.

EXHIBIT A – TABLE OF PLAN COVERAGE (CONTINUED)
RATE GROUP #8 FOR PLANS E, F, Q, R AND V (OCFA)

Category	Year Ended December 31		Change From Prior Year
	2018	2017	
Active members in valuation:			
• Number	988	1,007	-1.9%
• Average age	43.2	43.3	-0.1
• Average years of service[1]	13.9	13.9	0.0
• Total projected compensation	$132,394,088	$126,088,193	5.0%
• Average projected compensation	$134,002	$125,212	7.0%
• Account balances	$151,797,366	$137,783,839	10.2%
• Total active vested members	812	836	-2.9%
Inactive vested members:[2]			
• Number	78	67	16.4%
• Average age	43.5	43.1	0.4
Retired members:			
• Number in pay status	441	414	6.5%
• Average age	64.9	64.5	0.4
• Average monthly benefit[3]	$8,376	$7,976	5.0%
Disabled members:			
• Number in pay status	182	164	11.0%
• Average age	65.0	65.2	-0.2
• Average monthly benefit[3]	$6,912	$6,628	4.3%
Beneficiaries:			
• Number in pay status	105	97	8.2%
• Average age	62.8	62.8	0.0
• Average monthly benefit[3]	$3,305	$3,206	3.1%

(1) For some former Santa Ana members, service used in calculating the average above is only used for vesting purposes. Benefit service starts to accrue only effective April 2012.

(2) Includes members who chose to leave their contributions on deposit even though they have less than five years of service.

(3) Excludes monthly benefits payable from the STAR COLA.

EXHIBIT B – MEMBERS IN ACTIVE SERVICE AS OF DECEMBER 31, 2018
BY AGE, YEARS OF SERVICE, AND AVERAGE PROJECTED COMPENSATION
TOTAL PLAN

	Years of Service									
Age	Total	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 & over
Under 25	385	382	3	- -	- -	- -	- -	- -	- -	- -
	$58,458	$58,279	$81,206	- -	- -	- -	- -	- -	- -	- -
25 - 29	1,776	1,578	197	1	- -	- -	- -	- -	- -	- -
	64,903	62,325	85,650	$46,204	- -	- -	- -	- -	- -	- -
30 - 34	2,562	1,532	638	390	2	- -	- -	- -	- -	- -
	75,776	69,230	88,732	80,361	$63,093	- -	- -	- -	- -	- -
35 - 39	2,978	940	581	1,200	255	2	- -	- -	- -	- -
	84,273	75,911	91,049	88,265	81,121	$53,218	- -	- -	- -	- -
40 - 44	3,179	603	346	1,050	939	238	3	- -	- -	- -
	88,390	75,989	95,129	91,136	88,611	96,979	$92,075	- -	- -	- -
45 - 49	3,410	439	291	718	949	711	298	4	- -	- -
	93,874	79,734	94,676	90,945	94,126	103,434	97,548	$80,424	- -	- -
50 - 54	3,092	389	231	519	623	523	662	143	2	- -
	94,815	88,812	95,467	87,369	90,720	103,067	100,377	99,298	$75,954	- -
55 - 59	2,319	260	202	393	488	327	410	198	41	- -
	91,884	86,617	104,823	87,401	85,235	97,240	96,094	94,508	86,166	- -
60 - 64	1,458	155	118	243	290	236	241	129	39	7
	84,842	83,960	97,057	81,539	81,071	85,413	84,342	87,614	89,749	$88,950
65 - 69	550	52	46	87	132	89	81	43	15	5
	82,144	92,981	85,583	83,046	80,846	81,169	76,083	83,429	76,307	78,426
70 & over	220	10	14	41	68	34	29	16	4	4
	73,922	52,857	90,442	71,570	77,381	72,112	64,989	84,647	58,878	86,355
Total	**21,929**	**6,340**	**2,667**	**4,642**	**3,746**	**2,160**	**1,724**	**533**	**101**	**16**
	$85,520	**$71,656**	**$92,604**	**$87,885**	**$88,334**	**$98,270**	**$94,877**	**$92,829**	**$84,803**	**$85,012**

EXHIBIT B – MEMBERS IN ACTIVE SERVICE AS OF DECEMBER 31, 2018 (CONTINUED)
BY AGE, YEARS OF SERVICE, AND AVERAGE PROJECTED COMPENSATION
RATE GROUP #1 FOR PLANS A, B AND U (NON-OCTA, NON-OCSD)

		Years of Service								
Age	**Total**	**0 - 4**	**5 - 9**	**10 - 14**	**15 - 19**	**20 - 24**	**25 - 29**	**30 - 34**	**35 - 39**	**40 & over**
Under 25	57	57	- -	- -	- -	- -	- -	- -	- -	- -
	$61,248	$61,248	- -	- -	- -	- -	- -	- -	- -	- -
25 - 29	219	203	16	- -	- -	- -	- -	- -	- -	- -
	51,374	51,113	$54,680	- -	- -	- -	- -	- -	- -	- -
30 - 34	241	173	47	21	- -	- -	- -	- -	- -	- -
	52,171	50,446	56,499	$56,697	- -	- -	- -	- -	- -	- -
35 - 39	226	96	59	51	19	1	- -	- -	- -	- -
	54,189	49,571	56,437	58,765	$58,210	$55,134	- -	- -	- -	- -
40 - 44	190	53	22	53	49	13	- -	- -	- -	- -
	55,196	48,224	57,265	58,338	57,775	57,581	- -	- -	- -	- -
45 - 49	220	43	32	60	43	24	18	- -	- -	- -
	56,262	48,813	56,418	58,702	57,588	59,119	$58,667	- -	- -	- -
50 - 54	143	32	21	28	23	10	27	2	- -	- -
	55,722	47,875	55,751	57,261	58,034	60,052	59,700	$57,510	- -	- -
55 - 59	127	28	24	20	18	8	23	5	1	- -
	55,469	50,255	54,833	57,218	56,853	56,886	58,858	57,564	$57,107	- -
60 - 64	118	18	14	15	16	9	35	8	2	1
	56,471	50,181	55,121	58,807	56,720	56,944	57,952	60,352	60,406	$54,613
65 - 69	50	5	6	9	4	5	17	4	- -	- -
	56,862	49,338	56,951	56,856	56,483	58,103	59,007	55,862	- -	- -
70 & over	22	1	3	3	3	3	8	1	- -	- -
	55,915	33,081	53,582	57,668	54,710	56,276	59,465	54,613	- -	- -
Total	**1,613**	**709**	**244**	**260**	**175**	**73**	**128**	**20**	**3**	**1**
	$54,666	**$50,959**	**$56,091**	**$58,139**	**$57,537**	**$58,219**	**$58,819**	**$58,186**	**$59,306**	**$54,613**

EXHIBIT B – MEMBERS IN ACTIVE SERVICE AS OF DECEMBER 31, 2018 (CONTINUED)
BY AGE, YEARS OF SERVICE, AND AVERAGE PROJECTED COMPENSATION
RATE GROUP #2 FOR PLANS I, J, O, P, S, T, U AND W

		Years of Service								
Age	Total	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 & over
Under 25	224	223	1	- -	- -	- -	- -	- -	- -	- -
	$50,118	$50,029	$69,952	- -	- -	- -	- -	- -	- -	- -
25 - 29	1,088	1,008	79	1	- -	- -	- -	- -	- -	- -
	57,653	57,176	63,886	$46,204	- -	- -	- -	- -	- -	- -
30 - 34	1,638	1,064	321	251	2	- -	- -	- -	- -	- -
	68,446	66,748	75,983	66,046	$63,093	- -	- -	- -	- -	- -
35 - 39	1,906	630	322	785	168	1	- -	- -	- -	- -
	77,559	73,274	83,397	80,011	71,132	$51,302	- -	- -	- -	- -
40 - 44	2,026	450	194	685	563	131	3	- -	- -	- -
	80,906	74,203	85,326	83,869	80,833	81,951	$92,075	- -	- -	- -
45 - 49	2,194	306	161	492	642	405	184	4	- -	- -
	86,505	78,528	86,139	86,247	89,918	89,050	83,401	$80,424	- -	- -
50 - 54	2,057	240	139	367	425	345	435	104	2	- -
	86,870	85,049	85,573	82,965	85,233	94,177	87,605	86,165	$75,954	- -
55 - 59	1,564	166	80	296	337	242	274	139	30	- -
	86,622	86,842	91,218	86,430	83,711	91,307	86,922	84,150	78,670	- -
60 - 64	990	106	55	178	202	182	147	95	20	5
	80,922	84,959	85,113	77,884	77,960	80,028	83,068	84,014	82,752	$80,531
65 - 69	409	37	29	64	109	73	52	31	10	4
	81,713	94,334	83,505	81,699	80,507	83,545	74,339	83,345	64,591	77,611
70 & over	171	7	7	34	58	30	16	12	4	3
	73,974	51,979	92,258	74,030	77,623	71,498	58,909	86,160	58,878	87,926
Total	**14,267**	**4,237**	**1,388**	**3,153**	**2,506**	**1,409**	**1,111**	**385**	**66**	**12**
	$79,060	**$68,700**	**$81,933**	**$81,496**	**$83,309**	**$88,182**	**$85,118**	**$84,620**	**$76,492**	**$81,406**

EXHIBIT B – MEMBERS IN ACTIVE SERVICE AS OF DECEMBER 31, 2018 (CONTINUED)
BY AGE, YEARS OF SERVICE, AND AVERAGE PROJECTED COMPENSATION
RATE GROUP #3 FOR PLANS B, G, H AND U (OCSD)

		Years of Service								
Age	**Total**	**0 - 4**	**5 - 9**	**10 - 14**	**15 - 19**	**20 - 24**	**25 - 29**	**30 - 34**	**35 - 39**	**40 & over**
Under 25	1	1	- -	- -	- -	- -	- -	- -	- -	- -
	$82,293	$82,293	- -	- -	- -	- -	- -	- -	- -	- -
25 - 29	32	29	3	- -	- -	- -	- -	- -	- -	- -
	89,437	89,020	$93,473	- -	- -	- -	- -	- -	- -	- -
30 - 34	57	42	11	4	- -	- -	- -	- -	- -	- -
	100,257	94,804	113,227	$121,848	- -	- -	- -	- -	- -	- -
35 - 39	97	48	22	22	5	- -	- -	- -	- -	- -
	109,621	103,485	110,808	121,774	$109,830	- -	- -	- -	- -	- -
40 - 44	73	23	17	22	11	- -	- -	- -	- -	- -
	113,867	108,461	115,928	117,370	114,978	- -	- -	- -	- -	- -
45 - 49	84	22	17	17	13	5	10	- -	- -	- -
	124,050	116,346	126,188	119,877	132,111	$144,623	$123,692	- -	- -	- -
50 - 54	108	14	8	21	17	13	34	1	- -	- -
	133,498	105,064	132,137	135,199	133,003	149,536	137,647	$165,617	- -	- -
55 - 59	90	12	16	18	11	9	18	6	- -	- -
	129,739	105,061	116,090	112,941	130,622	143,344	164,488	139,615	- -	- -
60 - 64	51	6	7	7	12	11	7	1	- -	- -
	132,041	111,982	124,799	131,290	133,953	141,374	128,604	206,803	- -	- -
65 - 69	14	5	- -	2	2	1	3	- -	1	- -
	126,186	122,776	- -	105,425	141,205	96,928	148,557	- -	$116,863	- -
70 & over	9	- -	1	1	1	1	3	2	- -	- -
	104,918	- -	117,498	82,187	95,421	138,033	109,323	91,577	- -	- -
Total	**616**	**202**	**102**	**114**	**72**	**40**	**75**	**10**	**1**	**- -**
	$119,422	**$102,399**	**$117,503**	**$121,672**	**$127,979**	**$143,681**	**$140,687**	**$139,327**	**$116,863**	**- -**

EXHIBIT B – MEMBERS IN ACTIVE SERVICE AS OF DECEMBER 31, 2018 (CONTINUED) BY AGE, YEARS OF SERVICE, AND AVERAGE PROJECTED COMPENSATION RATE GROUP #5 FOR PLANS A, B AND U (OCTA)

		Years of Service								
Age	Total	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 & over
Under 25	22	22	- -	- -	- -	- -	- -	- -	- -	- -
	$58,094	$58,094	- -	- -	- -	- -	- -	- -	- -	- -
25 - 29	53	49	4	- -	- -	- -	- -	- -	- -	- -
	57,923	56,948	$69,865	- -	- -	- -	- -	- -	- -	- -
30 - 34	66	39	22	5	- -	- -	- -	- -	- -	- -
	72,662	66,084	82,954	$78,685	- -	- -	- -	- -	- -	- -
35 - 39	108	46	13	42	7	- -	- -	- -	- -	- -
	82,258	75,785	89,066	86,670	$85,673	- -	- -	- -	- -	- -
40 - 44	141	30	24	45	37	5	- -	- -	- -	- -
	84,218	76,974	89,474	82,358	90,609	$71,889	- -	- -	- -	- -
45 - 49	173	33	29	43	49	12	7	- -	- -	- -
	82,841	71,471	86,161	84,399	83,527	95,214	$87,107	- -	- -	- -
50 - 54	218	38	26	58	51	22	21	2	- -	- -
	83,997	76,238	99,877	84,690	77,838	85,333	90,462	$79,370	- -	- -
55 - 59	249	24	21	43	76	21	39	19	6	- -
	85,152	64,776	107,217	83,078	77,361	94,084	99,479	83,156	$84,926	- -
60 - 64	189	15	18	33	40	20	33	18	11	1
	88,051	76,177	94,848	81,552	81,678	104,439	90,064	96,919	78,407	$165,381
65 - 69	47	2	4	8	12	7	5	5	3	1
	82,115	106,529	74,423	95,970	81,399	67,980	89,921	72,235	78,596	81,686
70 & over	13	2	2	1	5	- -	2	- -	- -	1
	82,928	65,815	107,284	69,219	88,514	- -	69,220	- -	- -	81,644
Total	**1,279**	**300**	**163**	**278**	**277**	**87**	**107**	**44**	**20**	**3**
	$82,351	**$69,129**	**$91,879**	**$84,106**	**$81,519**	**$91,031**	**$92,984**	**$87,373**	**$80,391**	**$109,571**

EXHIBIT B – MEMBERS IN ACTIVE SERVICE AS OF DECEMBER 31, 2018 (CONTINUED)
BY AGE, YEARS OF SERVICE, AND AVERAGE PROJECTED COMPENSATION
RATE GROUP #9 FOR PLANS M, N AND U (TCA)

	Years of Service									
Age	Total	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 & over
Under 25	1	1	- -	- -	- -	- -	- -	- -	- -	- -
	$64,117	$64,117	- -	- -	- -	- -	- -	- -	- -	- -
25 - 29	1	1	- -	- -	- -	- -	- -	- -	- -	- -
	66,557	66,557	- -	- -	- -	- -	- -	- -	- -	- -
30 - 34	2	1	- -	1	- -	- -	- -	- -	- -	- -
	100,080	82,653	- -	$117,506	- -	- -	- -	- -	- -	- -
35 - 39	10	9	- -	1	- -	- -	- -	- -	- -	- -
	91,579	96,025	- -	51,562	- -	- -	- -	- -	- -	- -
40 - 44	6	2	- -	3	1	- -	- -	- -	- -	- -
	100,694	114,887	- -	102,304	$67,479	- -	- -	- -	- -	- -
45 - 49	11	8	2	- -	1	- -	- -	- -	- -	- -
	120,691	118,834	$134,819	- -	107,297	- -	- -	- -	- -	- -
50 - 54	14	6	1	4	2	1	- -	- -	- -	- -
	125,421	137,255	141,930	127,644	90,487	$98,894	- -	- -	- -	- -
55 - 59	10	2	1	4	3	- -	- -	- -	- -	- -
	117,605	98,503	128,012	115,631	129,503	- -	- -	- -	- -	- -
60 - 64	6	2	1	- -	2	1	- -	- -	- -	- -
	151,381	149,016	292,211	- -	90,239	137,566	- -	- -	- -	- -
65 - 69	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
70 & over	1	- -	- -	1	- -	- -	- -	- -	- -	- -
	43,204	- -	- -	43,204	- -	- -	- -	- -	- -	- -
Total	**62**	**32**	**5**	**14**	**9**	**2**	**- -**	**- -**	**- -**	**- -**
	$113,901	**$111,767**	**$166,358**	**$106,592**	**$102,749**	**$118,230**	**- -**	**- -**	**- -**	**- -**

EXHIBIT B – MEMBERS IN ACTIVE SERVICE AS OF DECEMBER 31, 2018 (CONTINUED)
BY AGE, YEARS OF SERVICE, AND AVERAGE PROJECTED COMPENSATION
RATE GROUP #10 FOR PLANS I, J, M, N AND U (OCFA)

	Years of Service									
Age	Total	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 & over
Under 25	4	4	- -	- -	- -	- -	- -	- -	- -	- -
	$69,430	$69,430	- -	- -	- -	- -	- -	- -	- -	- -
25 - 29	23	23	- -	- -	- -	- -	- -	- -	- -	- -
	67,949	67,949	- -	- -	- -	- -	- -	- -	- -	- -
30 - 34	28	26	2	- -	- -	- -	- -	- -	- -	- -
	85,920	85,493	$91,481	- -	- -	- -	- -	- -	- -	- -
35 - 39	36	20	5	9	2	- -	- -	- -	- -	- -
	92,389	90,035	101,719	$93,806	$86,227	- -	- -	- -	- -	- -
40 - 44	37	11	7	14	5	- -	- -	- -	- -	- -
	97,262	94,203	76,337	110,167	97,154	- -	- -	- -	- -	- -
45 - 49	35	15	4	3	10	2	1	- -	- -	- -
	116,753	117,428	131,068	117,084	112,874	$116,535	$87,623	- -	- -	- -
50 - 54	53	10	7	4	13	9	7	3	- -	- -
	106,007	111,480	115,271	100,692	94,252	117,255	100,982	$102,158	- -	- -
55 - 59	36	5	6	4	11	6	4	- -	- -	- -
	111,912	98,443	136,431	122,453	95,071	133,577	95,244	- -	- -	- -
60 - 64	17	3	1	1	11	1	- -	- -	- -	- -
	114,614	113,008	263,875	79,055	101,322	151,941	- -	- -	- -	- -
65 - 69	4	1	1	- -	1	1	- -	- -	- -	- -
	77,914	70,647	73,597	- -	75,110	92,302	- -	- -	- -	- -
70 & over	1	- -	- -	- -	1	- -	- -	- -	- -	- -
	57,638	- -	- -	- -	57,638	- -	- -	- -	- -	- -
Total	**274**	**118**	**33**	**35**	**54**	**19**	**12**	**3**	**- -**	**- -**
	$99,352	**$90,495**	**$112,520**	**$105,985**	**$98,246**	**$122,846**	**$97,956**	**$102,158**	**- -**	**- -**

EXHIBIT B – MEMBERS IN ACTIVE SERVICE AS OF DECEMBER 31, 2018 (CONTINUED)
BY AGE, YEARS OF SERVICE, AND AVERAGE PROJECTED COMPENSATION
RATE GROUP #11 FOR PLANS M AND N, FUTURE SERVICE, AND U (CEMETERY)

	Years of Service									
Age	**Total**	**0 - 4**	**5 - 9**	**10 - 14**	**15 - 19**	**20 - 24**	**25 - 29**	**30 - 34**	**35 - 39**	**40 & over**
Under 25	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
25 - 29	1	1	- -	- -	- -	- -	- -	- -	- -	- -
	$46,531	$46,531	- -	- -	- -	- -	- -	- -	- -	- -
30 - 34	2	2	- -	- -	- -	- -	- -	- -	- -	- -
	45,679	45,679	- -	- -	- -	- -	- -	- -	- -	- -
35 - 39	2	- -	1	- -	1	- -	- -	- -	- -	- -
	57,728	- -	$51,885	- -	$63,572	- -	- -	- -	- -	- -
40 - 44	4	- -	- -	2	1	1	- -	- -	- -	- -
	70,631	- -	- -	$56,875	71,968	$96,806	- -	- -	- -	- -
45 - 49	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
50 - 54	8	2	- -	1	1	2	1	1	- -	- -
	69,156	56,005	- -	154,940	72,313	53,497	$53,497	$53,497	- -	- -
55 - 59	2	1	- -	- -	- -	1	- -	- -	- -	- -
	76,213	55,620	- -	- -	- -	96,806	- -	- -	- -	- -
60 - 64	3	- -	- -	- -	- -	2	1	- -	- -	- -
	67,014	- -	- -	- -	- -	73,773	53,497	- -	- -	- -
65 - 69	3	1	- -	- -	- -	- -	1	1	- -	- -
	66,971	51,859	- -	- -	- -	- -	53,497	95,557	- -	- -
70 & over	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
Total	**25**	**7**	**1**	**3**	**3**	**6**	**3**	**2**	**- -**	**- -**
	$65,740	**$51,054**	**$51,885**	**$89,563**	**$69,284**	**$74,692**	**$53,497**	**$74,527**	**- -**	**- -**

EXHIBIT B – MEMBERS IN ACTIVE SERVICE AS OF DECEMBER 31, 2018 (CONTINUED)
BY AGE, YEARS OF SERVICE, AND AVERAGE PROJECTED COMPENSATION
RATE GROUP #12 FOR PLANS G, H, FUTURE SERVICE, AND U (LAW LIBRARY)

		Years of Service								
Age	Total	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 & over
Under 25	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
25 - 29	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
30 - 34	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
35 - 39	1	1	- -	- -	- -	- -	- -	- -	- -	- -
	$51,422	$51,422	- -	- -	- -	- -	- -	- -	- -	- -
40 - 44	2	- -	- -	1	1	- -	- -	- -	- -	- -
	89,967	- -	- -	$104,620	$75,315	- -	- -	- -	- -	- -
45 - 49	2	1	- -	- -	1	- -	- -	- -	- -	- -
	105,687	146,627	- -	- -	64,747	- -	- -	- -	- -	- -
50 - 54	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
55 - 59	3	- -	- -	- -	2	- -	1	- -	- -	- -
	84,746	- -	- -	- -	89,538	- -	$75,164	- -	- -	- -
60 - 64	2	- -	1	- -	- -	1	- -	- -	- -	- -
	68,273	- -	$53,680	- -	- -	$82,866	- -	- -	- -	- -
65 - 69	2	- -	- -	- -	1	1	- -	- -	- -	- -
	64,747	- -	- -	- -	64,747	64,747	- -	- -	- -	- -
70 & over	2	- -	- -	1	- -	- -	- -	1	- -	- -
	66,206	- -	- -	49,754	- -	- -	- -	$82,658	- -	- -
Total	**14**	**2**	**1**	**2**	**5**	**2**	**1**	**1**	**- -**	**- -**
	$78,244	**$99,025**	**$53,680**	**$77,187**	**$76,777**	**$73,807**	**$75,164**	**$82,658**	**- -**	**- -**

EXHIBIT B – MEMBERS IN ACTIVE SERVICE AS OF DECEMBER 31, 2018 (CONTINUED)
BY AGE, YEARS OF SERVICE, AND AVERAGE PROJECTED COMPENSATION
RATE GROUP #6 FOR PLANS E, F AND V (PROBATION)

		Years of Service								
Age	Total	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 & over
Under 25	9	9	- -	- -	- -	- -	- -	- -	- -	- -
	$55,636	$55,636	- -	- -	- -	- -	- -	- -	- -	- -
25 - 29	20	19	1	- -	- -	- -	- -	- -	- -	- -
	62,475	61,593	$79,234	- -	- -	- -	- -	- -	- -	- -
30 - 34	40	12	14	14	- -	- -	- -	- -	- -	- -
	71,066	67,721	69,911	$75,088	- -	- -	- -	- -	- -	- -
35 - 39	112	7	7	80	18	- -	- -	- -	- -	- -
	76,730	64,819	65,579	76,840	$85,212	- -	- -	- -	- -	- -
40 - 44	219	1	4	54	134	26	- -	- -	- -	- -
	83,281	54,658	63,694	79,462	84,364	$89,745	- -	- -	- -	- -
45 - 49	193	3	- -	14	72	89	15	- -	- -	- -
	87,841	59,609	- -	71,154	79,807	97,072	$92,846	- -	- -	- -
50 - 54	101	2	- -	7	25	31	29	7	- -	- -
	91,135	70,969	- -	75,691	82,504	92,028	101,580	$95,933	- -	- -
55 - 59	44	- -	2	- -	9	12	12	8	1	- -
	101,077	- -	84,618	- -	80,016	98,806	97,868	129,993	$157,984	- -
60 - 64	21	- -	1	1	5	4	9	1	- -	- -
	84,361	- -	78,837	74,205	83,786	73,092	90,880	89,322	- -	- -
65 - 69	5	- -	- -	1	2	1	1	- -	- -	- -
	85,560	- -	- -	72,493	77,407	104,844	95,651	- -	- -	- -
70 & over	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
Total	**764**	**53**	**29**	**171**	**265**	**163**	**66**	**16**	**1**	**- -**
	$84,070	**$62,506**	**$69,652**	**$76,971**	**$82,797**	**$94,531**	**$97,371**	**$112,550**	**$157,984**	**- -**

EXHIBIT B – MEMBERS IN ACTIVE SERVICE AS OF DECEMBER 31, 2018 (CONTINUED) BY AGE, YEARS OF SERVICE, AND AVERAGE PROJECTED COMPENSATION RATE GROUP #7 FOR PLANS E, F, Q, R AND V (LAW ENFORCEMENT)

		Years of Service								
Age	Total	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 & over
Under 25	53	51	2	- -	- -	- -	- -	- -	- -	- -
	$81,860	$81,665	$86,833	- -	- -	- -	- -	- -	- -	- -
25 - 29	263	175	88	- -	- -	- -	- -	- -	- -	- -
	93,325	85,219	109,446	- -	- -	- -	- -	- -	- -	- -
30 - 34	354	93	185	76	- -	- -	- -	- -	- -	- -
	107,314	85,907	112,649	$120,523	- -	- -	- -	- -	- -	- -
35 - 39	303	28	99	147	29	- -	- -	- -	- -	- -
	118,781	98,372	114,520	122,849	$132,406	- -	- -	- -	- -	- -
40 - 44	297	12	30	96	103	56	- -	- -	- -	- -
	127,801	112,679	117,707	122,471	129,857	$141,804	- -	- -	- -	- -
45 - 49	357	5	15	53	81	152	51	- -	- -	- -
	138,717	107,484	126,790	134,520	134,354	143,194	$143,238	- -	- -	- -
50 - 54	261	45	3	21	35	67	78	12	- -	- -
	139,996	134,308	137,699	136,971	128,565	138,043	147,551	$162,329	- -	- -
55 - 59	104	21	17	6	10	12	24	13	1	- -
	142,341	142,297	144,638	131,618	121,157	134,618	149,002	157,088	$121,486	- -
60 - 64	30	3	8	8	- -	3	3	4	1	- -
	143,938	139,260	149,596	163,129	- -	125,331	121,864	133,806	121,766	- -
65 - 69	5	1	- -	2	1	- -	- -	1	- -	- -
	140,763	148,536	- -	143,342	116,591	- -	- -	152,003	- -	- -
70 & over	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
Total	**2,027**	**434**	**447**	**409**	**259**	**290**	**156**	**30**	**2**	**- -**
	$121,710	**$95,184**	**$115,177**	**$125,582**	**$130,987**	**$141,196**	**$145,870**	**$155,910**	**$121,626**	**- -**

EXHIBIT B – MEMBERS IN ACTIVE SERVICE AS OF DECEMBER 31, 2018 (CONTINUED)
BY AGE, YEARS OF SERVICE, AND AVERAGE PROJECTED COMPENSATION
RATE GROUP #8 FOR PLANS E, F, Q, R AND V (OCFA)

	Years of Service									
Age	Total	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 & over
Under 25	14	14	- -	- -	- -	- -	- -	- -	- -	- -
	$89,079	$89,079	- -	- -	- -	- -	- -	- -	- -	- -
25 - 29	76	70	6	- -	- -	- -	- -	- -	- -	- -
	103,807	102,979	$113,460	- -	- -	- -	- -	- -	- -	- -
30 - 34	134	80	36	18	- -	- -	- -	- -	- -	- -
	115,015	106,945	124,806	$131,303	- -	- -	- -	- -	- -	- -
35 - 39	177	55	53	63	6	- -	- -	- -	- -	- -
	126,456	110,122	127,601	137,966	$145,212	- -	- -	- -	- -	- -
40 - 44	184	21	48	75	34	6	- -	- -	- -	- -
	138,811	114,178	138,813	143,283	143,176	$144,378	- -	- -	- -	- -
45 - 49	141	3	31	36	37	22	12	- -	- -	- -
	149,565	127,119	146,369	144,404	145,455	161,550	$169,616	- -	- -	- -
50 - 54	129	- -	26	8	31	23	30	11	- -	- -
	155,892	- -	152,753	133,452	151,233	157,745	164,496	$165,425	- -	- -
55 - 59	90	1	35	2	11	16	15	8	2	- -
	142,399	149,016	139,349	136,839	136,315	142,558	145,396	153,517	$163,287	- -
60 - 64	31	2	12	- -	2	2	6	2	5	- -
	137,528	117,728	127,800	- -	133,252	123,885	162,952	131,095	148,025	- -
65 - 69	11	- -	6	1	- -	- -	2	1	1	- -
	137,821	- -	133,691	146,760	- -	- -	124,757	171,575	146,038	- -
70 & over	1	- -	1	- -	- -	- -	- -	- -	- -	- -
	127,575	- -	127,575	- -	- -	- -	- -	- -	- -	- -
Total	**988**	**246**	**254**	**203**	**121**	**69**	**65**	**22**	**8**	**- -**
	$134,002	**$106,632**	**$135,627**	**$140,336**	**$145,250**	**$153,293**	**$159,668**	**$158,253**	**$151,592**	**- -**

EXHIBIT C – RECONCILIATION OF MEMBER DATA

	Active Members	Inactive Vested Members[1]	Retired Members	Disableds	Beneficiaries	Total
Number as of December 31, 2017	**21,721**	**5,803**	**13,240**	**1,446**	**2,261**	**44,471**
• New members	1,577	118	N/A	N/A	195	1,890
• Terminations – with vested rights	(481)	481	N/A	N/A	N/A	0
• Contribution refunds	(144)	(135)	N/A	N/A	N/A	(279)
• Retirements	(727)	(182)	909	N/A	N/A	0
• New disabilities	(41)	(6)	(31)	78	N/A	0
• Return to work	42	(42)	0	0	N/A	0
• Died with or without beneficiary	(16)	(8)	(288)	(41)	(82)	(435)
• Data adjustments	(2)	(3)	(3)	(1)	(9)	(18)
Number as of December 31, 2018	**21,929**	**6,026**	**13,827**	**1,482**	**2,365**	**45,629**

[1] Includes members who chose to leave their contributions on deposit even though they have less than five years of service.

EXHIBIT D – SUMMARY STATEMENT OF INCOME AND EXPENSES ON A MARKET VALUE BASIS

		Year Ended December 31, 2018		Year Ended December 31, 2017
Net assets at market value at the beginning of the year[1]		$14,652,607,000		$12,657,418,000
Contribution income:				
• Employer contributions[2]	$595,494,000		$596,146,000	
• Member contributions	270,070,000		262,294,000	
• Discount for prepaid contributions	21,218,000		22,921,000	
• Transfer from County Investment Account[3]	0		0	
Net contribution income		$886,782,000		$881,361,000
Investment income:				
• Interest, dividends, asset appreciation and other income	$(241,629,000)		$1,974,550,000	
• Less investment and administrative fees	(119,692,000)		(96,378,000)	
Net investment income		($361,321,000)		$1,878,172,000
Total income available for benefits		**$525,461,000**		**$2,759,533,000**
Less benefit payments:				
• Benefits paid	$(814,345,000)		$(750,478,000)	
• Withdrawal of contributions	(13,933,000)		(13,866,000)	
Net benefit payments		$(828,278,000)		$(764,344,000)
Change in net assets at market value		**$(302,817,000)**		**$1,995,189,000**
Net assets at market value at the end of the year[1]		**$14,349,790,000**		**$14,652,607,000**

Note: Results may be slightly off due to rounding.

(1) See footnote 1 on next page for further detail.

(2) Includes asset transfers of $14,589,000 and $24,042,000 as of December 31, 2018 and December 31, 2017, respectively, from O.C. Sanitation District UAAL Deferred Account to valuation assets.

(3) Funded by pension obligation bond proceeds held by OCERS.

EXHIBIT E – SUMMARY STATEMENT OF PLAN ASSETS

		Year Ended December 31, 2018		Year Ended December 31, 2017
Cash equivalents		$463,805,000		$486,846,000
Accounts receivable:				
• Contributions	$20,834,000		$21,361,000	
• Investment income	19,170,000		13,727,000	
• Securities settlements	115,567,000		150,619,000	
• All other	3,223,000		199,651,000	
Total accounts receivable		$158,794,000		$385,358,000
Investments:				
• Equities	$6,773,591,000		$7,305,333,000	
• Fixed income investments	2,578,702,000		2,011,101,000	
• Alternative investments and diversified credit	5,062,529,000		5,115,269,000	
• Security lending collateral	314,333,000		189,948,000	
• Fixed assets net of accumulated depreciation	18,542,000		20,670,000	
Total investments at market value		$14,747,697,000		$14,642,321,000
Total assets		$15,370,296,000		$15,514,525,000
Accounts payable:				
• Securities settlements	$(228,647,000)		$(194,266,000)	
• Securities lending liability	(314,333,000)		(189,948,000)	
• All other	(99,503,000)		(83,864,000)	
Total accounts payable		$(642,483,000)		$(468,078,000)
Net assets at market value[1]		**$14,349,790,000**		**$14,652,607,000**
Net assets at actuarial value		**$14,994,505,000**		**$14,197,211,000**
Net assets at valuation value		**$14,994,420,000**		**$14,197,125,000**

Note: Results may be slightly off due to rounding.

[1] The market value excludes $131,890,000 and $134,417,000 as of December 31, 2018 and December 31, 2017, respectively, in the County Investment Account (funded by pension obligation bond proceeds held by OCERS), $246,133,000 and $244,552,000 as of December 31, 2018 and December 31, 2017, respectively, in the prepaid employer contributions account, $0 and $14,871,000 as of December 31, 2018 and December 31, 2017, respectively in the O.C. Sanitation District UAAL Deferred Account (after transfer).

EXHIBIT F – SUMMARY OF REPORTED RESERVE INFORMATION AS OF DECEMBER 31, 2018

		Reserves
Used in Development of Valuation Value of Assets:		
• Active Members Reserve (Book Value)		$3,261,626,000
• Retired Members Reserve (Book Value)		10,763,840,000
• Employer Advanced Reserve (Book Value)		2,640,782,000
• O.C. Sanitation District UAAL Deferred Account Transfer		14,589,000
• ERI Contribution Reserve		11,447,000
• STAR COLA Contribution Reserve		0
• Unrealized Appreciation/(Depreciation) Included in Valuation Value of Assets		(1,697,864,000)
Subtotal: Valuation Value of Assets		$14,994,420,000
Not Used in Development of Valuation Value of Assets:		
• RMBR	$0	
• Unclaimed Member Deposit	0	
• Medicare Medical Insurance Reserve	85,000	
Subtotal	$85,000	
Subtotal: Actuarial Value of Assets		$14,994,505,000
• Unrecognized Investment Income		(644,715,000)
Subtotal: Market Value of Assets (Net of County Investment Account[(1)] and Prepaid Employer Contributions)		$14,349,790,000
• County Investment Account[(1)]		131,890,000
• Prepaid Employer Contributions		246,133,000
• O.C. Sanitation District UAAL Deferred Account[(2)]		0
Total: Gross Market Value of Assets		**$14,727,813,000**

Note: Results may be slightly off due to rounding.

(1) Funded by pension obligation bond proceeds held by OCERS.

(2) After asset transfer of $14,589,000 from O.C. Sanitation District UAAL Deferred Account to valuation assets.

EXHIBIT G – DEVELOPMENT OF THE FUND THROUGH DECEMBER 31, 2018

Year Ended December 31	Employer Contributions[1]	Member Contributions	Net Investment Return[2],[3]	Benefit Payments	Market Value of Assets at Year-End	Valuation Value of Assets at Year-End	Valuation Value as a Percent of Market Value
2009	$376,614,000	$171,928,000	$1,092,660,000	$421,672,000	$7,464,761,000	$8,154,687,000	109.24%
2010	387,313,000	177,929,000	787,215,000	459,383,000	8,357,835,000	8,672,592,000	103.77%
2011	414,451,000	183,820,000	3,236,000	493,749,000	8,465,593,000	9,064,355,000	107.07%
2012	436,895,000	191,069,000	1,014,471,000	541,154,000	9,566,874,000	9,469,208,000	98.98%
2013	458,487,000	209,301,000	1,031,118,000	586,273,000	10,679,507,000	10,417,125,000	97.54%
2014	659,634,000	232,656,000	487,104,000	630,678,000	11,428,223,000	11,449,911,000	100.19%
2015	598,599,000	249,271,000	(51,601,000)	675,963,000	11,548,529,000	12,228,009,000	105.88%
2016	558,020,000	258,297,000	1,010,548,000	717,976,000	12,657,418,000	13,102,978,000	103.52%
2017	619,067,000	262,294,000	1,878,172,000	764,344,000	14,652,607,000	14,197,125,000	96.89%
2018	616,712,000	270,070,000	(361,321,000)	828,278,000	14,349,790,000	14,994,420,000	104.49%

[1] Includes discount for prepaid contributions, asset transfers from County Investment Account and asset transfer from O.C. Sanitation District UAAL Deferred Account, if any.

[2] On a market basis, net of investment fees and administrative expenses.

[3] Actual investment loss on net pension plan assets includes both the administrative expenses and discount for prepaid contributions while excluding the investment gains or losses credited to County Investment Account and O.C. Sanitation District UAAL Deferred Account, if any.

EXHIBIT H – TABLE OF AMORTIZATION BASES

Rate Groups	Date Established	Source	Initial Base ($ in '000s)	Years Remaining	Outstanding Balance ($ in '000s)	Amortization Amount ($ in '000s)
Rate Group #1 – Plans A, B and U (non-OCTA, non-OCSD) for Orange County and IHSS						
	December 31, 2012	Restart amortization	$70,164	15	$67,575	$5,928
	December 31, 2013	Actuarial (gain) or loss	(5,744)	15	(5,532)	(485)
	December 31, 2014	Actuarial (gain) or loss	(2,744)	16	(2,676)	(224)
	December 31, 2014	Assumption changes	(6,545)	16	(6,382)	(533)
	December 31, 2015	Actuarial (gain) or loss	(1,650)	17	(1,626)	(130)
	December 31, 2016	Actuarial (gain) or loss	(9,719)	18	(9,640)	(740)
	December 31, 2017	Actuarial (gain) or loss	(5,386)	19	(5,368)	(396)
	December 31, 2017	Assumption changes	21,899	19	21,823	1,612
	December 31, 2018	Actuarial (gain) or loss	44	20	44	3
Subtotal					$58,218	$5,035
Rate Group #1 – Plans A, B and U (non-OCTA, non-OCSD) for O.C. Vector Control[(1)]					$1,748	
Rate Group #1 – Plans A, B and U (non-OCTA, non-OCSD) for Department of Education[(1)]					$3,376	
Rate Group #1 – Plans A, B and U (non-OCTA, non-OCSD) for U.C.I.[(1)]					$32,770	
Rate Group #1 – Plans A, B and U (non-OCTA, non-OCSD) for Cypress Recreation and Parks[(1)]					$344	
Rate Group #1 Subtotal					**$96,456**	

[(1)] In determining the UAALs for the O.C. Vector Control District, Department of Education, U.C.I and Cypress Recreation and Parks, we first start by rolling forward the VVAs of these employers as of December 31, 2017 to December 31, 2018 to reflect the actual contributions, benefit payments and return on their VVAs during 2018. The AALs for these employers are obtained from internal valuation results.

EXHIBIT H – TABLE OF AMORTIZATION BASES (CONTINUED)

Rate Groups	Date Established	Source	Initial Base ($ in '000s)	Years Remaining	Outstanding Balance ($ in '000s)	Amortization Amount ($ in '000s)
Rate Group #2 – Plans I, J, O, P, S, T, U and W						
	December 31, 2012	Restart amortization	$3,438,555	15	$3,311,648	$290,506
	December 31, 2013	Actuarial (gain) or loss	(173,790)	15	(167,376)	(14,683)
	December 31, 2014	Actuarial (gain) or loss	(78,001)	16	(76,067)	(6,358)
	December 31, 2014	Assumption changes	(246,714)	16	(240,596)	(20,110)
	December 31, 2015	Actuarial (gain) or loss	(65,063)	17	(64,098)	(5,124)
	December 31, 2016	Actuarial (gain) or loss	39,445	18	39,125	3,002
Subtotal[1]					$2,802,636	$247,233
	December 31, 2017	Actuarial (gain) or loss	$(59,911)	19	$(59,700)	$(4,409)
	December 31, 2017	Assumption changes	481,098	19	479,406	35,402
	December 31, 2018	Actuarial (gain) or loss	207,573	20	207,573	14,794
Subtotal[2]					$627,279	$45,787
Rate Group #2 Subtotal					**$3,429,915**	**$293,020**

Note:

We have made an adjustment to the amortization bases to reflect the $1.7 million additional contributions made by Children and Families Commission to pay off their UAAL as of December 31, 2016. With that adjustment, we have reduced the amortization layers established on or before December 31, 2016 for Rate Group #2 by that amount on a pro-rata basis. The UAAL contribution rate for Children and Families Commission is determined based on the amortization layers established on or after December 31, 2017.

[1] This amount is spread over the payroll for all employers in Rate Group #2 excluding the payroll for Children and Families Commission.

[2] This amount is spread over the payroll for all employers in Rate Group #2 including the payroll for Children and Families Commission.

EXHIBIT H – TABLE OF AMORTIZATION BASES (CONTINUED)

Rate Groups	Date Established	Source	Initial Base ($ in '000s)	Years Remaining	Outstanding Balance ($ in '000s)	Amortization Amount ($ in '000s)
Rate Group #3 – Plans B, G, H and U (OCSD)						
	December 31, 2018	Restart amortization[1]	7,753	20	$7,753	$553
Rate Group #3 Subtotal					**$7,753**	**$553**

[1] After transfer of the remaining balance of $14.6 million from O.C. Sanitation District UAAL Deferred Account.

EXHIBIT H – TABLE OF AMORTIZATION BASES (CONTINUED)

Rate Groups	Date Established	Source	Initial Base ($ in '000s)	Years Remaining	Outstanding Balance ($ in '000s)	Amortization Amount ($ in '000s)
Rate Group #5 – Plans A, B and U (OCTA)						
	December 31, 2012	Restart amortization	$232,513	15	$224,116	$19,660
	December 31, 2013	Actuarial (gain) or loss	(13,471)	15	(12,984)	(1,139)
	December 31, 2014	Actuarial (gain) or loss	4,522	16	4,414	369
	December 31, 2014	Assumption changes	(19,944)	16	(19,466)	(1,627)
	December 31, 2015	Actuarial (gain) or loss	(933)	17	(920)	(74)
	December 31, 2016	Actuarial (gain) or loss	(9,743)	18	(9,672)	(742)
	December 31, 2017	Actuarial (gain) or loss	(9,948)	19	(9,913)	(732)
	December 31, 2017	Assumption changes	43,481	19	43,328	3,200
	December 31, 2018	Actuarial (gain) or loss	22,318	20	22,318	1,591
Rate Group #5 Subtotal					**$241,221**	**$20,506**

EXHIBIT H – TABLE OF AMORTIZATION BASES (CONTINUED)

Rate Groups	Date Established	Source	Initial Base ($ in '000s)	Years Remaining	Outstanding Balance ($ in '000s)	Amortization Amount ($ in '000s)
Rate Group #9 – Plans M, N and U (TCA)						
	December 31, 2012	Restart amortization	$11,906	15	$11,476	$1,007
	December 31, 2013	Actuarial (gain) or loss	(684)	15	(659)	(58)
	December 31, 2014	Actuarial (gain) or loss	496	16	485	41
	December 31, 2014	Assumption changes	(1,032)	16	(1,007)	(84)
	December 31, 2015	Actuarial (gain) or loss	778	17	767	61
	December 31, 2016	Actuarial (gain) or loss	(1,535)	18	(1,524)	(117)
	December 31, 2017	Actuarial (gain) or loss	(257)	19	(256)	(19)
	December 31, 2017	Assumption changes	1,665	19	1,659	123
	December 31, 2018	Actuarial (gain) or loss	1,449	20	1,449	103
Rate Group #9 Subtotal					**$12,390**	**$1,057**

EXHIBIT H – TABLE OF AMORTIZATION BASES (CONTINUED)

Rate Groups	Date Established	Source	Initial Base ($ in '000s)	Years Remaining	Outstanding Balance ($ in '000s)	Amortization Amount ($ in '000s)
Rate Group #10 – Plans I, J, M, N and U (OCFA)						
	December 31, 2012	Restart amortization	$72,750	15	$70,122	$6,151
	December 31, 2013	Actuarial (gain) or loss	(2,659)	15	(2,563)	(225)
	December 31, 2014	Actuarial (gain) or loss	(3,755)	16	(3,665)	(306)
	December 31, 2014	Assumption changes	(4,489)	16	(4,382)	(366)
	December 31, 2015	Actuarial (gain) or loss	626	17	617	49
	December 31, 2016	Actuarial (gain) or loss	134	18	133	10
	December 31, 2017	Actuarial (gain) or loss	(15,281)	19	(15,227)	(1,124)
	December 31, 2017	Assumption changes	9,159	19	9,127	674
	December 31, 2018	Actuarial (gain) or loss	(6,934)	20	(6,934)	(494)
Rate Group #10 Subtotal					**$47,228**	**$4,369**

EXHIBIT H – TABLE OF AMORTIZATION BASES (CONTINUED)

Rate Groups	Date Established	Source	Initial Base ($ in '000s)	Years Remaining	Outstanding Balance ($ in '000s)	Amortization Amount ($ in '000s)
Rate Group #11 – Plans M and N, future service, and U (Cemetery)						
	December 31, 2017	Restart amortization & Assumption changes	$281	19	$280	$21
	December 31, 2018	Actuarial (gain) or loss	(244)	20	(244)	(17)
Rate Group #11 Subtotal					**$36**	**$4**

EXHIBIT H – TABLE OF AMORTIZATION BASES (CONTINUED)

Rate Groups	Date Established	Source	Initial Base ($ in '000s)	Years Remaining	Outstanding Balance ($ in '000s)	Amortization Amount ($ in '000s)
Rate Group #12 – Plans G, H, future service, and U (Law Library)						
	December 31, 2017	Restart amortization & Assumption changes	$13	19	$12	$1
	December 31, 2018	Actuarial (gain) or loss	221	20	221	16
Rate Group #12 Subtotal					**$233**	**$17**

EXHIBIT H – TABLE OF AMORTIZATION BASES (CONTINUED)

Rate Groups	Date Established	Source	Initial Base ($ in '000s)	Years Remaining	Outstanding Balance ($ in '000s)	Amortization Amount ($ in '000s)
Rate Group #6 – Plans E, F and V (Probation)						
	December 31, 2012	Restart amortization	$192,912	15	$185,944	$16,311
	December 31, 2013	Actuarial (gain) or loss	(14,039)	15	(13,533)	(1,187)
	December 31, 2014	Actuarial (gain) or loss	(2,596)	16	(2,534)	(212)
	December 31, 2014	Assumption changes	36,260	16	35,390	2,958
	December 31, 2015	Actuarial (gain) or loss	(10,703)	17	(10,553)	(844)
	December 31, 2016	Actuarial (gain) or loss	13,799	18	13,698	1,051
	December 31, 2017	Actuarial (gain) or loss	(6,566)	19	(6,543)	(483)
	December 31, 2017	Assumption changes	50,030	19	49,854	3,681
	December 31, 2018	Actuarial (gain) or loss	8,046	20	8,046	573
Rate Group #6 Subtotal					**$259,769**	**$21,848**

EXHIBIT H – TABLE OF AMORTIZATION BASES (CONTINUED)

Rate Groups	Date Established	Source	Initial Base ($ in '000s)	Years Remaining	Outstanding Balance ($ in '000s)	Amortization Amount ($ in '000s)
Rate Group #7 – Plans E, F, Q, R and V (Law Enforcement)						
	December 31, 2012	Restart amortization	$988,833	15	$953,119	$83,610
	December 31, 2013	Actuarial (gain) or loss	(51,652)	15	(49,786)	(4,367)
	December 31, 2014	Actuarial (gain) or loss	(34,729)	16	(33,896)	(2,833)
	December 31, 2014	Assumption changes	102,262	16	99,808	8,342
	December 31, 2015	Actuarial (gain) or loss	23,666	17	23,334	1,865
	December 31, 2016	Actuarial (gain) or loss	39,724	18	39,434	3,025
	December 31, 2017	Actuarial (gain) or loss	(27,922)	19	(27,824)	(2,055)
	December 31, 2017	Assumption changes	161,417	19	160,849	11,878
	December 31, 2018	Actuarial (gain) or loss	69,329	20	69,329	4,941
Rate Group #7 Subtotal					**$1,234,367**	**$104,406**

EXHIBIT H – TABLE OF AMORTIZATION BASES (CONTINUED)

Rate Groups	Date Established	Source	Initial Base ($ in '000s)	Years Remaining	Outstanding Balance ($ in '000s)	Amortization Amount ($ in '000s)
Rate Group #8 – Plans E, F, Q, R and V (OCFA)						
	December 31, 2012	Restart amortization	$399,947	15	$385,502	$33,817
	December 31, 2013	Actuarial (gain) or loss	(20,177)	15	(19,448)	(1,706)
	December 31, 2014	Actuarial (gain) or loss	(35,400)	16	(34,550)	(2,888)
	December 31, 2014	Assumption changes	35,957	16	35,095	2,933
	December 31, 2015	Actuarial (gain) or loss	(22,228)	17	(21,917)	(1,752)
	December 31, 2016	Actuarial (gain) or loss	(15,736)	18	(15,621)	(1,198)
	December 31, 2017	Actuarial (gain) or loss	(43,031)	19	(42,880)	(3,166)
	December 31, 2017	Assumption changes	53,637	19	53,448	3,947
	December 31, 2018	Actuarial (gain) or loss	39,932	20	39,932	2,846
Rate Group #8 Subtotal					**$379,561**	**$32,833**

EXHIBIT H – TABLE OF AMORTIZATION BASES (CONTINUED)

Rate Groups	Date Established	Source	Initial Base ($ in '000s)	Years Remaining	Outstanding Balance ($ in '000s)	Amortization Amount ($ in '000s)
All Rate Groups Combined Excluding O.C. Vector Control, Department of Education, U.C.I. and Cypress Recreation and Parks						
	December 31, 2012	Restart amortization	$5,407,593	15	$5,209,515	$456,990
	December 31, 2013	Actuarial (gain) or loss	(282,229)	15	(271,894)	(23,850)
	December 31, 2014	Actuarial (gain) or loss	(152,205)	16	(148,487)	(12,411)
	December 31, 2014	Assumption changes	(104,247)	16	(101,542)	(8,487)
	December 31, 2015	Actuarial (gain) or loss	(75,507)	17	(74,396)	(5,949)
	December 31, 2016	Actuarial (gain) or loss	56,369	18	55,933	4,291
	December 31, 2017	Actuarial (gain) or loss	(168,305)	19	(167,713)	(12,384)
	December 31, 2017	Assumption changes	822,683	19	819,788	60,539
	December 31, 2018	Actuarial (gain) or loss	349,487	20	349,487	24,909
Subtotal					$5,670,691	$483,648
Rate Group #1 – Plans A, B and U (non-OCTA, non-OCSD) for O.C. Vector Control					$1,748	
Rate Group #1 – Plans A, B and U (non-OCTA, non-OCSD) for Department of Education					$3,376	
Rate Group #1 – Plans A, B and U (non-OCTA, non-OCSD) for U.C.I.					$32,770	
Rate Group #1 – Plans A, B and U (non-OCTA, non-OCSD) for Cypress Recreation and Parks					$344	
Total					**$5,708,929**	

EXHIBIT I – PROJECTION OF UAAL BALANCES AND PAYMENTS

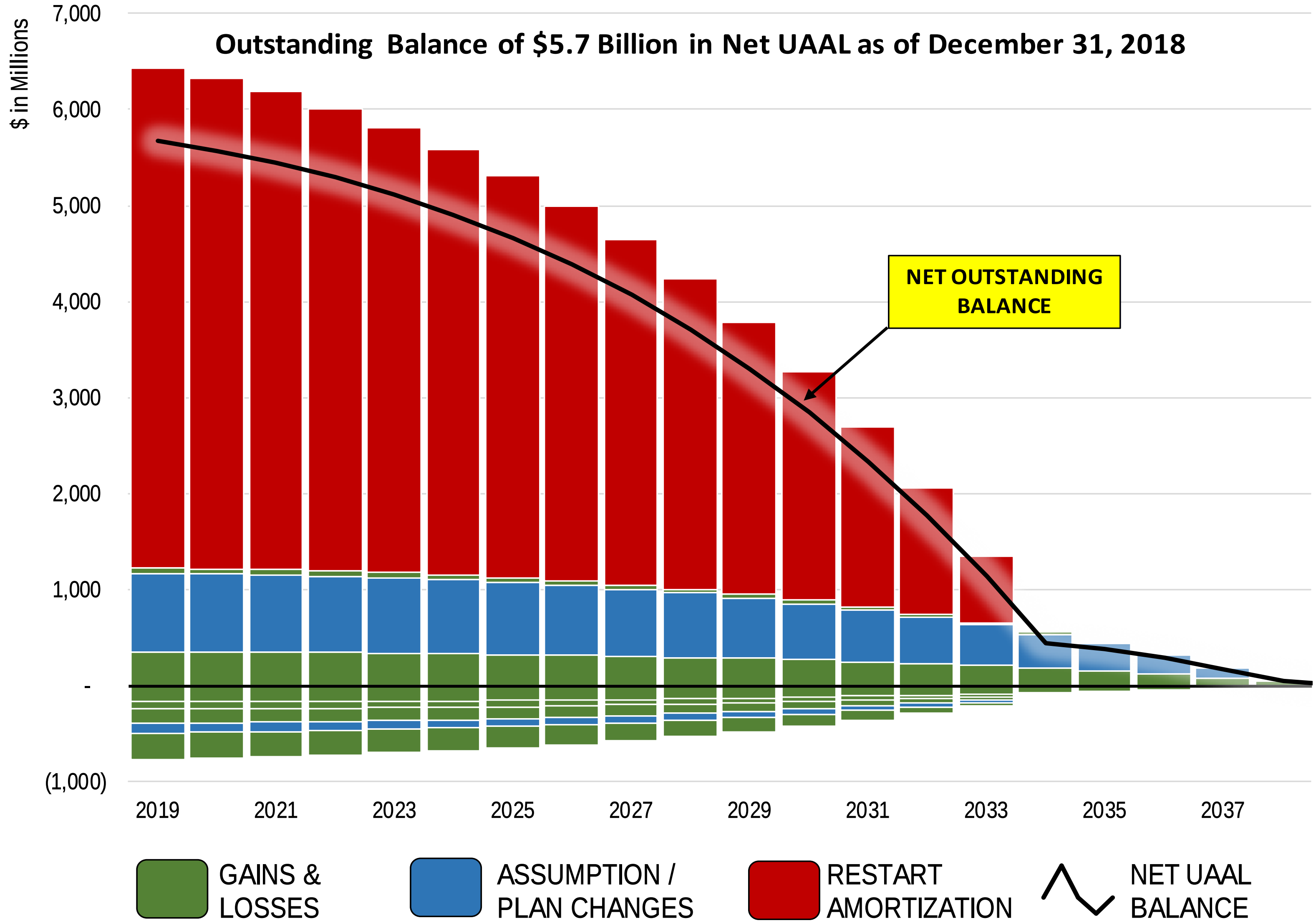


EXHIBIT I – PROJECTION OF UAAL BALANCES AND PAYMENTS (CONTINUED)

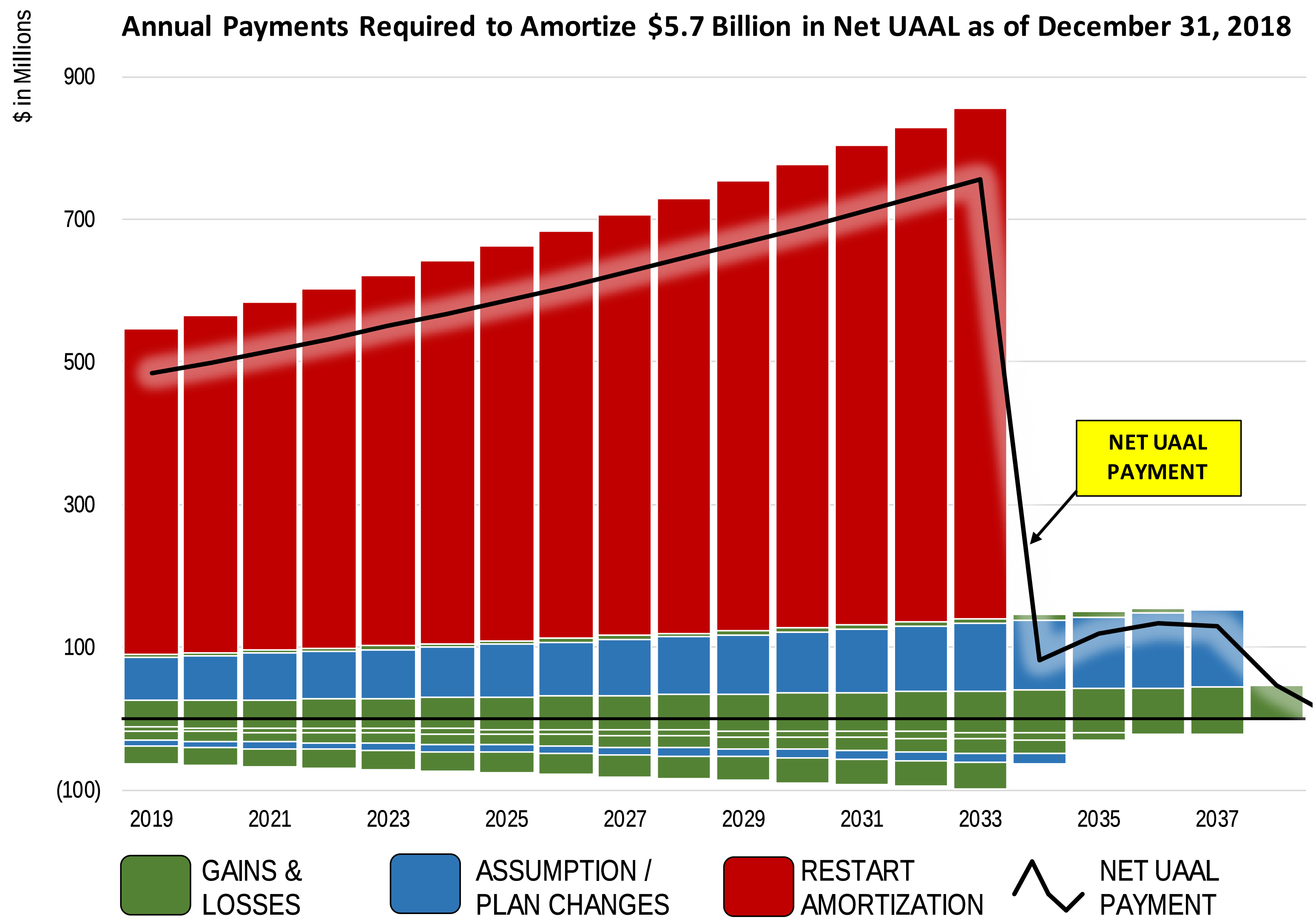


EXHIBIT J – DEFINITION OF PENSION TERMS

The following list defines certain technical terms for the convenience of the reader:

Actuarial Accrued Liability for Actives:	The equivalent of the accumulated Normal Costs allocated to the years before the valuation date.
Actuarial Accrued Liability for Pensioners and Beneficiaries:	Actuarial Present Value of lifetime benefits to existing pensioners and beneficiaries. This sum takes account of life expectancies appropriate to the ages of the annuitants and the interest that the sum is expected to earn before it is entirely paid out in benefits.
Actuarial Cost Method:	A procedure allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability that are used to determine the recommended contribution.
Actuarial Gain or Loss:	A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted, or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., assets earn more than projected, salary increases are less than assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results yield actuarial liabilities that are larger than projected.
Actuarially Equivalent:	Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.
Actuarial Present Value (APV):	The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. Each such amount or series of amounts is: Adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.) Multiplied by the probability of the occurrence of an event (such as survival, death, disability, withdrawal, etc.) on which the payment is conditioned, and Discounted according to an assumed rate (or rates) of return to reflect the time value of money.

Actuarial Present Value of Future Benefits:	The Actuarial Present Value of benefit amounts expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age, anticipated future compensation, and future service credits. The Actuarial Present Value of Future Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive members entitled to either a refund of member contributions or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.
Actuarial Valuation:	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan, as well as Actuarially Determined Contributions.
Actuarial Value of Assets (AVA):	The value of the Plan's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly plans use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the Actuarially Determined Contribution.
Actuarially Determined:	Values that have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the Plan.
Actuarially Determined Contribution (ADC):	The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under the Plan's funding policy. The ADC consists of the employer Normal Cost and the Amortization Payment.
Amortization Method:	A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the Unfunded Actuarial Accrued Liability. Under the Level Percentage of Pay method, the Amortization Payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the Unfunded Actuarial Accrued Liability. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.
Amortization Payment:	The portion of the pension plan contribution, or ADC, that is intended to payoff the Unfunded Actuarial Accrued Liability.

Assumptions or Actuarial Assumptions:	The estimates upon which the cost of the Plan is calculated, including: Investment return - the rate of investment yield that the Plan will earn over the long-term future; Mortality rates - the rate or probability of death at a given age for employees and pensioners; Retirement rates - the rate or probability of retirement at a given age or service; Disability rates – the rate or probability of disability retirement at a given age; Withdrawal rates - the rate or probability at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement; Salary increase rates - the rates of salary increase due to inflation, real wage growth and merit and promotion increases.
Closed Amortization Period:	A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example, if the amortization period is initially set at 20 years, it is 19 years at the end of one year, 18 years at the end of two years, etc. See Open Amortization Period.
Decrements:	Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or withdrawal.
Defined Benefit Plan:	A retirement plan in which benefits are defined by a formula based on the member's compensation, age and/or years of service.
Defined Contribution Plan:	A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.
Experience Study:	A periodic review and analysis of the actual experience of the Plan that may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified based on recommendations from the Actuary.
Funded Ratio:	The ratio of the Valuation Value of Assets (VVA) to the Actuarial Accrued Liability (AAL). Plans sometimes also calculate a market funded ratio, using the Market Value of Assets (MVA), rather than the VVA.
Investment Return:	The rate of earnings of the Plan from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next.
Normal Cost:	The portion of the Actuarial Present Value of Future Benefits allocated to a valuation year by the Actuarial Cost Method. Any payment with respect to an Unfunded Actuarial Accrued Liability is not part of the Normal Cost (see Amortization Payment). For pension plan benefits that are provided in part by employee contributions, Normal Cost refers to the total of member contributions and employer Normal Cost unless otherwise specifically stated.

Open Amortization Period:	An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. If the initial period is set as 30 years, the same 30-year period is used in each future year in determining the Amortization Period.
Unfunded Actuarial Accrued Liability:	The excess of the Actuarial Accrued Liability over the Valuation Value of Assets. This value may be negative, in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus or an Overfunded Actuarial Accrued Liability.
Valuation Date or Actuarial Valuation Date:	The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Benefits is determined. The expected benefits to be paid in the future are discounted to this date.
Valuation Value of Assets:	The Actuarial Value of Assets reduced by the value of non-valuation reserves.

Section 4: Actuarial Valuation Basis

EXHIBIT I – ACTUARIAL ASSUMPTIONS AND METHODS

Rationale for Assumptions	The information and analysis used in selecting each assumption that has a significant effect on this actuarial valuation is shown in the January 1, 2014 through December 31, 2016 Actuarial Experience Study dated August 14, 2017 and PowerPoint presentation dated October 16, 2017. Unless otherwise noted, all actuarial assumptions and methods shown below apply to members for all tiers. These assumptions were adopted by the Board.
Economic Assumptions	
Net Investment Return:	7.00%; net of administrative and investment expenses. Based on the Actuarial Experience Study reference above, expected administrative and investment expenses represent about 0.80% of the Actuarial Value of Assets.
Member Contribution Crediting Rate:	5.00%, compounded semi-annually.
Consumer Price Index:	Increase of 2.75% per year, retiree COLA increases due to CPI subject to a 3.0% maximum change per year.
Payroll Growth:	Inflation of 2.75% per year plus “across the board” real salary increases of 0.50% per year.
Increase in Section 7522.10 Compensation Limit:	Increase of 2.75% per year from the valuation date.

Salary Increases:	The annual rate of compensation increase includes: inflation at 2.75%, plus "across the board" salary increases of 0.50% per year, plus the following merit and promotion increases:

Merit and Promotion Increases

Years of Service	Rate (%) General	Rate (%) Safety
0-1	9.00	14.00
1-2	7.25	10.00
2-3	6.00	7.75
3-4	5.00	6.00
4-5	4.00	5.50
5-6	3.50	4.50
6-7	2.50	3.75
7-8	2.25	3.25
8-9	1.75	2.50
9-10	1.50	2.25
10-11	1.50	1.75
11-12	1.50	1.75
12-13	1.50	1.75
13-14	1.50	1.75
14-15	1.50	1.75
15-16	1.50	1.75
16-17	1.00	1.50
17-18	1.00	1.50
18-19	1.00	1.50
19-20	1.00	1.50
20 & Over	1.00	1.50

In addition to the individual salary increase assumptions, we have applied an average of two hours of additional salary annually for leap-year salary adjustment.

Demographic Assumptions	
Post-Retirement Mortality Rates:	*Healthy* • **General Members and All Beneficiaries:** Headcount-Weighted RP-2014 (RPH-2014) Healthy Annuitant Mortality Tables, projected generationally with the two-dimensional MP-2016 projection scale, with no setback for males and females. • **Safety Members:** Headcount-Weighted RP-2014 (RPH-2014) Healthy Annuitant Mortality Tables, projected generationally with the two-dimensional MP-2016 projection scale, setback four years for males and females. *Disabled* • **General Members:** Headcount-Weighted RP-2014 (RPH-2014) Healthy Annuitant Mortality Tables, projected generationally with the two-dimensional MP-2016 projection scale, set forward five years for males and females. • **Safety Members:** Headcount-Weighted RP-2014 (RPH-2014) Healthy Annuitant Mortality Tables, projected generationally with the two-dimensional MP-2016 projection scale, with no setback for males and females. The RP-2014 mortality tables and adjustments as shown above reasonably reflect the mortality experience as of the measurement date. These mortality tables were adjusted to future years using the generational projection to reflect future mortality improvement between the measurement date and those years.
Pre-Retirement Mortality Rates:	• **General and Safety Members:** Headcount-Weighted RP-2014 (RPH-2014) Employee Mortality Tables multiplied by 80%, projected generationally with the two-dimensional MP-2016 projection scale.

	Rate (%)			
	General[1]		Safety[1]	
Age	Male	Female	Male	Female
25	0.05	0.02	0.05	0.02
30	0.05	0.02	0.05	0.02
35	0.05	0.03	0.05	0.03
40	0.06	0.04	0.06	0.04
45	0.10	0.07	0.10	0.07
50	0.17	0.11	0.17	0.11
55	0.27	0.17	0.27	0.17
60	0.45	0.24	0.45	0.24
65	0.78	0.36	0.78	0.36

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.

[1] Generational projections beyond the base year (2014) are not reflected in the above mortality rates.

Mortality Rates for Member Contributions:	• **General Members:** Headcount-Weighted RP-2014 (RPH-2014) Healthy Annuitant Mortality Tables, projected 20 years with the two-dimensional mortality improvement Scale MP-2016, with no setback for males and females, weighted 40% male and 60% female. • **Safety Members:** Headcount-Weighted RP-2014 (RPH-2014) Healthy Annuitant Mortality Tables, projected 20 years with the two-dimensional mortality improvement Scale MP-2016, setback four years for males and females, weighted 80% male and 20% female.
Mortality Rates for Optional Form of Benefits:	• **General Service Retirees:** Headcount-Weighted RP-2014 (RPH-2014) Healthy Annuitant Mortality Tables, projected 20 years with the two-dimensional mortality improvement Scale MP-2016, with no setback for males and females, weighted 40% male and 60% female. • **Safety Service Retirees:** Headcount-Weighted RP-2014 (RPH-2014) Healthy Annuitant Mortality Tables, projected 20 years with the two-dimensional mortality improvement Scale MP-2016, setback four years for males and females, weighted 80% male and 20% female. • **General Disabled Retirees:** Headcount-Weighted RP-2014 (RPH-2014) Healthy Annuitant Mortality Tables, projected 20 years with the two-dimensional mortality improvement Scale MP-2016, set forward five years for males and females, weighted 40% male and 60% female. • **Safety Disabled Retirees:** Headcount-Weighted RP-2014 (RPH-2014) Healthy Annuitant Mortality Tables, projected 20 years with the two-dimensional mortality improvement Scale MP-2016, with no setback for males and females, weighted 80% male and 20% female. • **General Service Beneficiaries:** Headcount-Weighted RP-2014 (RPH-2014) Healthy Annuitant Mortality Tables, projected 20 years with the two-dimensional mortality improvement Scale MP-2016, with no setback for males and females, weighted 60% male and 40% female. • **Safety Service Beneficiaries:** Headcount-Weighted RP-2014 (RPH-2014) Healthy Annuitant Mortality Tables, projected 20 years with the two-dimensional mortality improvement Scale MP-2016, with no setback for males and females, weighted 20% male and 80% female.

Disability Incidence:

Disability Incidence				
	Rate (%)			
Age	General All Other	General OCTA	Safety Law & Fire	Safety Probation
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	0.23	0.13
45	0.13	0.43	0.40	0.21
50	0.18	0.48	1.10	0.28
55	0.23	0.65	2.40	0.42
60	0.31	1.26	4.80	0.20

60% of General All Other disabilities are assumed to be service connected disabilities. The other 40% are assumed to be non-service connected.

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

100% of Safety Law Enforcement and Fire disabilities are assumed to be service connected disabilities.

75% of Safety Probation disabilities are assumed to be service connected disabilities. The other 25% are assumed to be non-service connected.

Termination:

Termination				
	Rate (%)			
Years of Service	General All Other	General OCTA	Safety Law & Fire	Safety Probation
0-1	11.00	17.50	4.50	14.00
1-2	7.50	11.00	2.50	13.00
2-3	6.50	9.00	2.00	10.00
3-4	5.00	8.50	1.50	5.00
4-5	4.50	7.50	1.25	4.00
5-6	4.25	7.00	1.00	3.50
6-7	3.75	4.50	0.95	2.75
7-8	3.25	4.00	0.90	2.00
8-9	3.00	3.50	0.85	2.00
9-10	2.75	3.00	0.80	1.75
10-11	2.50	3.00	0.75	1.75
11-12	2.00	3.00	0.65	1.50
12-13	2.00	3.00	0.60	1.25
13-14	1.75	2.50	0.55	1.00
14-15	1.50	2.50	0.50	0.75
15-16	1.40	2.50	0.45	0.75
16-17	1.30	2.00	0.40	0.75
17-18	1.20	1.80	0.35	0.25
18-19	1.10	1.60	0.30	0.25
19-20	1.00	1.40	0.25	0.25
20 & Over	0.90	1.20	0.20	0.25

Termination				
	Election for Withdrawal of Contributions (%)			
Years of Service	General All Other	General OCTA	Safety Law & Fire	Safety Probation
0-4	35.00	40.00	20.00	25.00
5-9	30.00	35.00	20.00	25.00
10-14	25.00	30.00	20.00	25.00
15 & Over	20.00	20.00	20.00	25.00

Retirement Rates:

Age	Retirement Rates[(1)] (%) General Enhanced	General Non-Enhanced[(2)]	General SJC (31676.12)	Safety Law (31664.1)[(3)]
48	0.00	0.00	0.00	0.00
49	30.00	25.00	0.00	12.00
50	2.50	2.00	3.00	18.00
51	2.00	2.00	3.00	18.00
52	2.50	2.00	3.00	17.00
53	2.50	2.75	3.00	17.00
54	5.50	2.75	3.00	22.00
55	15.00	3.25	4.00	22.00
56	10.00	3.50	5.00	20.00
57	10.00	5.50	6.00	20.00
58	11.00	5.50	7.00	20.00
59	11.00	6.50	9.00	26.00
60	12.00	9.25	11.00	35.00
61	12.00	12.00	13.00	35.00
62	14.00	16.00	15.00	40.00
63	16.00	16.00	15.00	40.00
64	16.00	18.00	20.00	40.00
65	22.00	22.00	20.00	100.00
66	22.00	28.00	24.00	100.00
67	23.00	24.00	24.00	100.00
68	23.00	24.00	24.00	100.00
69	23.00	20.00	24.00	100.00
70	25.00	20.00	50.00	100.00
71	25.00	25.00	50.00	100.00
72	25.00	25.00	50.00	100.00
73	25.00	25.00	50.00	100.00
74	25.00	25.00	50.00	100.00
75	100.00	100.00	100.00	100.00

(1) The retirement rates only apply to members that are eligible to retire at the age shown.

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

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

Retirement Rates (continued):

Age	Retirement Rates[1] (%) Safety Law (31664.2)[2]	Safety Fire (31664.1)	Safety Fire (31664.2)	Safety Probation[2]
48	0.00	0.00	0.00	0.00
49	0.00	2.00	0.00	0.00
50	11.50	5.00	8.00	3.25
51	12.00	7.00	10.00	3.25
52	12.70	9.50	11.00	4.25
53	17.90	10.50	12.00	4.25
54	18.80	15.00	14.00	7.00
55	30.70	18.00	24.00	12.00
56	20.00	20.00	23.00	12.00
57	20.00	21.00	27.00	18.00
58	25.00	28.00	27.00	18.00
59	30.00	28.00	36.00	18.00
60	40.00	30.00	40.00	20.00
61	40.00	30.00	40.00	20.00
62	40.00	35.00	40.00	25.00
63	40.00	35.00	40.00	40.00
64	40.00	35.00	40.00	40.00
65	100.00	100.00	100.00	100.00
66	100.00	100.00	100.00	100.00
67	100.00	100.00	100.00	100.00
68	100.00	100.00	100.00	100.00
69	100.00	100.00	100.00	100.00
70	100.00	100.00	100.00	100.00
71	100.00	100.00	100.00	100.00
72	100.00	100.00	100.00	100.00
73	100.00	100.00	100.00	100.00
74	100.00	100.00	100.00	100.00
75	100.00	100.00	100.00	100.00

(1) The retirement rates only apply to members that are eligible to retire at the age shown.

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

Retirement Rates (continued):

	Retirement Rates[1] (%)			
Age	CalPEPRA 2.5% @ 67 General Formula	CalPEPRA 2.7% @ 57 Safety Formula Probation[2]	CalPEPRA 2.7% @ 57 Safety Formula Law[2]	CalPEPRA 2.7% @ 57 Safety Formula Fire
50	0.00	2.50	11.00	6.00
51	0.00	2.50	11.50	7.00
52	4.00	3.00	12.00	9.00
53	1.50	3.00	16.00	10.00
54	1.50	5.50	17.00	11.50
55	2.50	10.00	28.00	21.00
56	3.50	10.00	18.00	20.00
57	5.50	15.00	17.50	22.00
58	7.50	20.00	22.00	25.00
59	7.50	20.00	26.00	30.00
60	7.50	40.00	40.00	40.00
61	7.50	40.00	40.00	40.00
62	14.00	40.00	40.00	40.00
63	14.00	40.00	40.00	40.00
64	14.00	40.00	40.00	40.00
65	18.00	100.00	100.00	100.00
66	22.00	100.00	100.00	100.00
67	23.00	100.00	100.00	100.00
68	23.00	100.00	100.00	100.00
69	23.00	100.00	100.00	100.00
70	25.00	100.00	100.00	100.00
71	25.00	100.00	100.00	100.00
72	25.00	100.00	100.00	100.00
73	25.00	100.00	100.00	100.00
74	25.00	100.00	100.00	100.00
75	100.00	100.00	100.00	100.00

(1) The retirement rates only apply to members that are eligible to retire at the age shown.

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

Retirement Age and Benefit for Deferred Vested Members:	General Retirement Age: 59 Safety Retirement Age: 53 Future deferred vested members who terminate with less than five years of service and are not vested are assumed to retire at age 70 for both General and Safety if they decide to leave their contributions on deposit. 15% of future General and 25% of future Safety deferred vested members are assumed to continue to work for a reciprocal employer. For reciprocals, 4.25% and 4.75% compensation increases are assumed per annum for General and Safety, respectively.
Liability Calculation for Current Deferred Vested Members:	Liability for a current deferred vested member is calculated based on salary (adjusted with the additional cashout assumptions for non-CalPEPRA members), 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, we used an average salary. For those members without salary information that have less than 3 years of service or for those members without service information, we assumed 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.
Form of Payment:	All active and inactive members are assumed to elect the unmodified option at retirement.
Percent Married:	For all active and inactive members, 75% of male members and 55% of female members are assumed to be married at pre-retirement death or retirement.
Age and Gender of Spouse:	For all active and inactive members, male members are assumed to have a female spouse who is 3 years younger than the member and female members are assumed to have a male spouse who is 3 years older than the member.

Terminal Pay Assumptions:	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 Non-CalPEPRA	3.00%	2.80%
Safety Probation Non-CalPEPRA	3.80%	3.40%
Safety Law Non-CalPEPRA	5.20%	4.60%
Safety Fire Non-CalPEPRA	2.00%	1.70%
General CalPEPRA	N/A	N/A
Safety Probation CalPEPRA	N/A	N/A
Safety Law CalPEPRA	N/A	N/A
Safety Fire CalPEPRA	N/A	N/A

The additional cashout assumptions are the same for service and disability retirements.

Actuarial Funding Policy

Actuarial Cost Method:	Entry Age Actuarial Cost Method. Entry Age is the age on the valuation date minus Vesting Credit. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are based on costs allocated as a level percentage of compensation, as if the current benefit formula for each individual has always been in effect (i.e., "replacement life within a plan"). For Probation members who have prior benefit service in another OCERS plan, the normal cost rate for the current plan is calculated assuming their Entry Age is the date they entered service with their current plan.
Actuarial Value of Assets:	Market value of assets (MVA) less unrecognized returns in each of the last five annual accounting periods. Unrecognized returns are equal to the difference between the actual market return and the expected return on the market value, and are recognized annually over a five-year period.
Valuation Value of Assets:	The Actuarial Value of Assets reduced by the value of the non-valuation reserves.
Amortization Policy:	Effective December 31, 2013, the outstanding balance of the UAAL from the December 31, 2012 valuation was combined and re-amortized over a declining 20-year period (15 years remaining as of December 31, 2018). Any new UAAL resulting from plan amendments are amortized over separate decreasing 15-year periods; early retirement incentive programs (ERIPs) are amortized over separate decreasing 5-year periods; assumption and method changes are amortized over separate decreasing 20-year periods; and experience gains/losses are also amortized over separate decreasing 20-year periods.

Other Actuarial Methods	
Employer Contributions:	Employer contributions consist of two components: *Normal Cost* The annual contribution rate that, if paid annually from a member's first year of membership through the year of retirement, would accumulate to the amount necessary to fully fund the member's retirement-related benefits. Accumulation includes annual crediting of interest at the assumed investment earning rate. The contribution rate is determined as a level percentage of the member's compensation. *Contribution to the Unfunded Actuarial Accrued Liability (UAAL)* The annual contribution rate that, if paid annually over the UAAL amortization period, would accumulate to the amount necessary to fully fund the UAAL. Accumulation includes annual crediting of interest at the assumed investment earning rate. The contribution (or rate credit in the case of a negative UAAL) is calculated to remain as a level percentage of future active member payroll (including payroll for new members as they enter the System) assuming a constant number of active members. In order to remain as a level percentage of payroll, amortization payments (credits) are scheduled to increase at the annual payroll growth rate assumption The amortization policy is described on the previous page. The recommended employer contributions are provided in *Section 2, Subsection F.*
Member Contributions:	**Non-CalPEPRA Members** Articles 6 and 6.8 of the 1937 Act define the methodology to be used in the calculation of member basic contribution rates for General members and Safety members, respectively. The basic contribution rate is determined so that the accumulation of a member's basic contributions made in a given year until a certain age will be sufficient to fund an annuity at that age that is equal to: ➤ 1/200 of Final Average Salary for General Plan A; ➤ 1/120 of Final Average Salary for General Plan B; ➤ 1/100 of Final Average Salary for General Plans G, H, I, J, and S; ➤ 1/120 of Final Average Salary for General Plans M, N, O, and P; ➤ 1/200 of Final Average Salary for Safety Plans E and Q, and; ➤ 1/100 of Final Average Salary for Safety Plans F and R. The annuity age is 60 for General Plans A, B, M, N, O, P and S, 55 for Plans G, H, I, and J, and 50 for Safety Plans E, F, Q, and R. It is assumed that contributions are made annually at the same rate, starting at entry age.

	In addition to the basic contributions, members also pay one-half of the total normal cost necessary to fund cost-of-living benefits which is calculated separately for each rate group, with the exception of Rate Groups #9 and #11, which are developed on a combined or pooled basis as described in our Cost Sharing Structure letter dated July 30, 2010. Within each rate group, the COLA normal cost is either pooled for Tiers 1 and 2 because the same 3% COLA is provided for both Tiers, or it differs by a set formula based on past practice we carried over from the OCERS' prior actuary. Accumulation includes crediting of interest at the assumed investment earnings rate. Effective with the December 31, 2014 valuation, for determining the cost of the total benefit (i.e., basic and COLA components), the effect of the assumed additional cashouts are recognized in the valuation as an employer and member cost. **CalPEPRA Members** Pursuant to Section 7522.30(a) of the Government Code, members in Plans T, U, V and W are required to contribute at least 50% of the Normal Cost rate. We have assumed that exactly 50% of the Normal Cost would be paid by the new members. Also of note is that based on our recommendation, OCERS decided to use the discretion made available by AB1380 to not round the member's contribution rate to the nearest ¼% as previously required by CalPEPRA. For members in Plan T and Plan W, their basic rates have been calculated using a methodology similar to that used for Plan P. For members in Plan U or Plan V, their basic rates have been calculated using a methodology outlined in our letter dated December 4, 2012 that was previously approved by the Board. The member contribution rates for all members are provided in *Section 4, Exhibit III*.
Internal Revenue Code Section 415:	Section 415 of the Internal Revenue Code (IRC) specifies the maximum benefits that may be paid to an individual from a defined benefit plan and the maximum amounts that may be allocated each year to an individual's account in a defined contribution plan. A qualified pension plan may not pay benefits in excess of the Section 415 limits. The ultimate penalty for non-compliance is disqualification: active participants could be taxed on their vested benefits and the IRS may seek to tax the income earned on the plan's assets. In particular, Section 415(b) of the IRC limits the maximum annual benefit payable at the Normal Retirement Age to a dollar limit of $160,000 indexed for inflation. That limit is $225,000 for 2019. Normal Retirement Age for these purposes is age 62. These are the limits in simplified terms. They must be adjusted based on each participant's circumstances, for such things as age at retirement, form of benefits chosen and after tax contributions. Non-CalPEPRA benefits in excess of the limits may be paid through a qualified governmental excess plan that meets the requirements of Section 415(m). Legal Counsel's review and interpretation of the law and regulations should be sought on any questions in this regard. Non-CalPEPRA contribution rates determined in this valuation have not been reduced for the Section 415 limitations. Actual limitations will result in gains as they occur.

Justification for Change in Actuarial Assumptions:	There have been no changes in actuarial assumptions since the last valuation.

EXHIBIT II – SUMMARY OF PLAN PROVISIONS

This exhibit summarizes the major provisions of the Plan included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

Plan Year:	January 1 through December 31
Membership Eligibility:	Membership with OCERS begins with the day of employment in an eligible position by the County or a participating employer.
Non-CalPEPRA General Plans	*2.5% @ 55 Plans (Orange County Sanitation District[1] and Law Library[2])*
Plan G	General members hired before September 21, 1979.
Plan H	General members hired on or after September 21, 1979.
	2.7% @ 55 Plans (City of San Juan Capistrano, Orange County Members except bargaining unit AFSCME members, Orange County Superior Court, Local Agency Formation Commission[2], Orange County Employees Retirement System[3], Children and Families Commission[4] and Orange County OCFA)
Plan I	General members hired before September 21, 1979.
Plan J	General members hired on or after September 21, 1979.
	2.0% @ 55 Plans (Transportation Corridor Agency, Cemetery District[5] and General OCFA)
Plan M	General members hired before September 21, 1979 and General OCFA members hired on or after July 1, 2011.
Plan N	General members hired on or after September 21, 1979.
	1.62% @ 65 Plans (Orange County Members, Orange County Superior Court, Local Agency Formation Commission and County Managers unit)
Plan O	County OCEA members and Superior Court members rehired on or after May 7, 2010, LAFCO members rehired on or after July 1, 2010 and County Managers unit members rehired on or after August 17, 2010 and not electing to rejoin Plan I.
Plan P	County OCEA members and Superior Court members hired on or after May 7, 2010, LAFCO members hired on or after July 1, 2010 and County Managers unit members hired on or after August 17, 2010 and not electing Plan J.
	(1) Sanitation District members within Supervisors and Professional unit hired on or after October 1, 2010 are in Plan B. (2) Improvement is prospective only for service after June 23, 2005. (3) Improvement for management members is prospective only for service after June 30, 2005. (4) Improvement is prospective only for service after December 22, 2005. (5) Improvement is prospective only for service after December 7, 2007.

	2.0% @ 57 Plan (City of San Juan Capistrano)
Plan S	General members hired on or after July 1, 2012.
	All Other General Employers
Plan A	General members hired before September 21, 1979.
Plan B	General members hired on or after September 21, 1979 and Sanitation District members within Supervisors and Professional unit hired on or after October 1, 2010.
Non-CalPEPRA Safety Plans	*3.0% @ 50 Plans (Law Enforcement, OCFA and Probation Members)*
Plan E	Safety members hired before September 21, 1979.
Plan F	Safety members hired on or after September 21, 1979 and before April 9, 2010 for Law Enforcement, before July 1, 2011 for Safety members of OCFA Executive Management, and before July 1, 2012 for other OCFA Safety members.
	3% @ 55 Plans (Law Enforcement, OCFA)
Plan Q	Safety Law Enforcement members rehired on or after April 9, 2010, Safety members of OCFA Executive Management rehired on or after July 1, 2011, and other OCFA Safety members rehired on or after July 1, 2012 and previously in Plan E.
Plan R	Safety Law Enforcement members hired on or after April 9, 2010, Safety members of OCFA Executive Management hired on or after July 1, 2011, and other OCFA Safety members hired on or after July 1, 2012.
CalPEPRA General Plans	*1.62% @ 65 Plan (Orange County Members except County Attorneys, Orange County Employees Retirement System except Management Members, Local Agency Formation Commission, and Orange County Superior Court)*
Plan T	General members with membership dates on or after January 1, 2013.
	2.5% @ 67 Plan (All Other General Employers, Orange County Attorneys, Orange County Employees Retirement System Management Members)
Plan U	General Non-Orange County Transportation Authority members with membership dates on or after January 1, 2013 and Orange County Transportation Authority members with membership dates on or after January 1, 2015.
	1.62% @ 65 Plan (City of San Juan Capistrano)
Plan W	*General members with membership dates on or after January 1, 2016 and not electing Plan U.*
CalPEPRA Safety Plans	*2.7% @ 57 Plan (Law Enforcement, OCFA and Probation Members)*
Plan V	Safety members with membership dates on or after January 1, 2013.

Final Compensation for Benefit Determination:	
Plans A, E, G, I, M, O and Q	Highest consecutive 12 months of compensation earnable (§31462.1) (FAS1).
Plans B, F, H, J, N, P, R and S	Highest consecutive 36 months of compensation earnable (§31462) (FAS3).
Plans T	Highest consecutive 36 months of pensionable compensation (§7522.32 and §7522.34) (FAS3).
Plans U, V and W	Highest consecutive 36 months of pensionable compensation (§7522.10(c), §7522.32 and §7522.34) (FAS3).
Service:	Years of service (Yrs) are generally based on a member's employment during a period of time for which deductions are made from their compensation.
Service Retirement Eligibility:	
General	
Plans A, B, G, H, I, J, M, N, O, P, S, T and W	Age 50 with 10 years of service, or age 70 regardless of service, or after 30 years regardless of age (§31672). All part time members over age 55 with 10 years of employment may retire with 5 years of service.
Plan U	Age 52 with 5 years of service (§7522.20(a)) or age 70 regardless of service (§31672.3).
Safety	
Plans E, F, Q and R	Age 50 with 10 years of service, or age 70 regardless of service, or after 20 years regardless of age (§31663.25). All part time members over age 55 with 10 years of employment may retire with 5 years of service.
Plan V	Age 50 with 5 years of service (§7522.25(d)) or age 70 regardless of service (§31672.3).
Benefit Formula:	

General Plan G
2.5% @ 55 (§31676.18)

Retirement Age	Benefit Formula
50	2.00% x FAS1 x Yrs
55	2.50% x FAS1 x Yrs
60	2.50% x FAS1 x Yrs
62(1)	2.62% x FAS1 x Yrs
65 and over(1)	2.62% x FAS1 x Yrs

(1) Reflects benefit factors from Plan A as they provide a better benefit than those under 2.5% @ 55.

General Plan H

Retirement Age	Benefit Formula

2.5% @ 55 (§31676.18)	50	2.00% x FAS3 x Yrs
	55 and over	2.50% x FAS3 x Yrs
General Plan I	**Retirement Age**	**Benefit Formula**
2.7% @ 55 (§31676.19)	50	2.00% x FAS1 x Yrs
	55 and over	2.70% x FAS1 x Yrs
General Plan J	**Retirement Age**	**Benefit Formula**
2.7% @ 55 (§31676.19)	50	2.00% x FAS3 x Yrs
	55 and over	2.70% x FAS3 x Yrs
General Plan M	**Retirement Age**	**Benefit Formula**
2.0% @ 55 (§31676.16)	50	1.43% x FAS1 x Yrs
	55	2.00% x FAS1 x Yrs
	60(1)	2.34% x FAS1 x Yrs
	62(1)	2.62% x FAS1 x Yrs
	65 and over(1)	2.62% x FAS1 x Yrs
General Plan N	**Retirement Age**	**Benefit Formula**
2.0% @ 55 (§31676.16)	50	1.43% x FAS3 x Yrs
	55	2.00% x FAS3 x Yrs
	60	2.26% x FAS3 x Yrs
	62	2.37% x FAS3 x Yrs
	65 and over(2)	2.43% x FAS3 x Yrs

(1) Reflects benefit factors from Plan A as they provide a better benefit than those under 2.0% @ 55.

(2) Reflects benefit factors from Plan B as they provide a better benefit than those under 2.0% @ 55.

	Retirement Age	Benefit Formula
General Plan O *1.62% @ 65 (§31676.01)*	**Retirement Age**	**Benefit Formula**
	50	0.79% x FAS1 x Yrs
	55	0.99% x FAS1 x Yrs
	60	1.28% x FAS1 x Yrs
	62	1.39% x FAS1 x Yrs
	65 and over	1.62% x FAS1 x Yrs
General Plans P, T and W *1.62% @ 65 (§31676.01)*	**Retirement Age**	**Benefit Formula**
	50	0.79% x FAS3 x Yrs
	55	0.99% x FAS3 x Yrs
	60	1.28% x FAS3 x Yrs
	62	1.39% x FAS3 x Yrs
	65 and over	1.62% x FAS3 x Yrs
General Plan S *2.0% @ 57 (§31676.12)*	**Retirement Age**	**Benefit Formula**
	50	1.34% x FAS3 x Yrs
	55	1.77% x FAS3 x Yrs
	60	2.34% x FAS3 x Yrs
	62	2.62% x FAS3 x Yrs
	65 and over	2.62% x FAS3 x Yrs
General Plan A *2.0% @ 57 (§31676.12)*	**Retirement Age**	**Benefit Formula**
	50	1.34% x FAS1 x Yrs
	55	1.77% x FAS1 x Yrs
	60	2.34% x FAS1 x Yrs
	62	2.62% x FAS1 x Yrs
	65 and over	2.62% x FAS1 x Yrs

	Retirement Age	Benefit Formula
General Plan B (§31676.1)	**Retirement Age**	**Benefit Formula**
	50	1.18% x FAS3 x Yrs
	55	1.49% x FAS3 x Yrs
	60	1.92% x FAS3 x Yrs
	62	2.09% x FAS3 x Yrs
	65 and over	2.43% x FAS3 x Yrs
General Plan U (§7522.20(a))	**Retirement Age**	**Benefit Formula**
	52	1.00% x FAS3 x Yrs
	55	1.30% x FAS3 x Yrs
	60	1.80% x FAS3 x Yrs
	62	2.00% x FAS3 x Yrs
	65	2.30% x FAS3 x Yrs
	67 and over	2.50% x FAS3 x Yrs
Safety Plan E	**Retirement Age**	**Benefit Formula**
3.0% @ 50 (§31664.1)	50 and over	3.00% x FAS1 x Yrs
Safety Plan F	**Retirement Age**	**Benefit Formula**
3.0% @ 50 (§31664.1)	50 and over	3.00% x FAS3 x Yrs
Safety Plan Q	**Retirement Age**	**Benefit Formula**
3.0% @ 55 (§31664.2)	50	2.29% x FAS1 x Yrs
	55 and over	3.00% x FAS1 x Yrs
Safety Plan R	**Retirement Age**	**Benefit Formula**
3.0% @ 55 (§31664.2)	50	2.29% x FAS3 x Yrs
	55 and over	3.00% x FAS3 x Yrs
Safety Plan V (§7522.25(d))	**Retirement Age**	**Benefit Formula**
	50	2.00% x FAS3 x Yrs
	55	2.50% x FAS3 x Yrs
	57 and over	2.70% x FAS3 x Yrs

Maximum Benefit:	
Plans A, B, E, F, G, H, I, J, M, N, O, P, Q, R, S, T and W	100% of Highest Average Compensation (§31676.01, §31676.1, §31676.12, §31676.16, §31676.18, §31676.19, §31664.1, §31664.2).
Plans U and V	None.
Ordinary Disability:	
General	
Eligibility	Five years of service (§31720).
Benefit Formula	Plans A, G, I, M and O: 1.8% per year of service. If the benefit does not exceed one-third of Final Compensation, the service is projected to 62, but the total benefit cannot be more than one-third of Final Compensation. (§31727.1). Plans B, H, J, N, P, S, T, U and W: 1.5% per year of service. If the benefit does not exceed one-third of Final Compensation, the service is projected to 65, but the total benefit cannot be more than one-third of Final Compensation. (§31727). For all members, 100% of the Service Retirement benefit will be paid, if greater.
Safety	
Eligibility	Five years of service (§31720).
Benefit Formula	1.8% per year of service. If the benefit does not exceed one-third of Final Compensation, the service is projected to 55, but the total benefit cannot be more than one-third of Final Compensation (§31727.2). For all members, 100% of the Service Retirement benefit will be paid, if greater.
Line-of-Duty Disability:	
All Members	
Eligibility	No age or service requirements (§31720).
Benefit Formula	50% of the Final Compensation or 100% of Service Retirement benefit, if greater (§31727.4).

Pre-Retirement Death:	
All Members	
Eligibility	None.
Basic lump sum benefit	Refund of member contributions with interest, plus one month's compensation for each year of service, to a maximum of six months' compensation (§31781). A lump sum benefit in the amount of $1,000 is payable upon the death of a member (with 10 years of service) to his/her eligible beneficiary (§31790).
Death in line of duty	50% of Final Compensation or 100% of Service Retirement benefit, if greater, payable to spouse or minor children (§31787).
Vested Members	
Eligibility	Five years of service.
Basic benefit	60% of the greater of Service or Ordinary Disability Retirement benefit payable to surviving eligible spouse (§31765.1, §31781.1), in lieu of the basic lump sum benefit above (§31781).
Death After Retirement:	
All Members	
Service Retirement or Ordinary Disability Retirement	Unless another option was selected at retirement, 60% of member's unmodified allowance continues to eligible spouse (§31760.1). A lump sum benefit amount of $1,000 is payable upon the death of a member (with 10 years of service) to his/her eligible beneficiary (§31790). An eligible spouse is a surviving spouse who was married to the member at least one year prior to the date of retirement (§31760.1). Certain surviving spouses or domestic partners may also be eligible if marriage or domestic partnership was at least two years prior to the date of death and the surviving spouse or domestic partner has attained age 55.
Line of Duty Disability	Unless another option was selected at retirement, 100% of member's allowance continued to eligible spouse (§31786). A lump sum benefit in the amount of $1,000 is payable upon the death of a member (with 10 years of service) to his/her eligible beneficiary (§31790).
Withdrawal Benefits:	
Less than Five Years of Service	Refund of accumulated employee contributions with interest, or benefit at age 70 (§31628). Effective January 1, 2003, a member may also elect to leave contributions on deposit in the retirement fund (§31629.5).
Five or More Years of Service	If contributions left on deposit, a member is entitled to earned benefits commencing at any time after eligible to retire (§31700).
Post-retirement Cost-of-Living Benefits:	Annual adjustment based on Consumer Price Index to a maximum of 3% per year; excess "banked" (§31870.1).
Supplemental Benefit:	Non-vested supplemental COLA benefit is also paid by the System to eligible retirees and survivors. This benefit has been excluded from this valuation.

Member Contributions:	Please refer to Section 4, Exhibit III for the specific rates.
Plan A	
Basic	Entry-age based rates that provide for an annuity at age 60 equal to 1/200 of FAS1 (§31621.5).
Cost-of-Living	Entry-age based rates that provide for one-half of future Cost-of-Living costs.
Plan B	
Basic	Entry-age based rates that provide for an annuity at age 60 equal to 1/120 of FAS3 (§31621).
Cost-of-Living	Entry-age based rates that provide for one-half of future Cost-of-Living costs.
Plans G, H, I and J	
Basic	Entry-age based rates that provide for an annuity at age 55 equal to 1/100 of FAS3 (FAS1 for Plans G and I) (§31621.8).
Cost-of-Living	Entry-age based rates that provide for one-half of future Cost-of-Living costs.
Plans M, N, O and P	
Basic	Entry-age based rates that provide for an annuity at age 60 equal to 1/120 of FAS3 (FAS1 for Plans M and O) (§31621).
Cost-of-Living	Entry-age based rates that provide for one-half of future Cost-of-Living costs.
Plan S	
Basic	Entry-age based rates that provide for an annuity at age 60 equal to 1/100 of FAS3 (§31621.2).
Cost-of-Living	Entry-age based rates that provide for one-half of future Cost-of-Living costs.
Plans E and Q	
Basic	Entry-age based rates that provide for an annuity at age 50 equal to 1/200 of FAS1 (§31639.5).
Cost-of-Living	Entry-age based rates that provide for one-half of future Cost-of-Living costs.
Plans F and R	
Basic	Entry-age based rates that provide for an annuity at age 50 equal to 1/100 of FAS3 (§31639.25).
Cost-of-Living	Entry-age based rates that provide for one-half of future Cost-of-Living costs.
Plans T, U, V and W	Entry-age based rates that provide for one-half of the total Normal Cost rate.
Other Information:	Non-CalPEPRA Safety members with 30 or more years of service are exempt from paying member contributions. This also applies for General members hired on or before March 7, 1973.
Changes in Plan Provisions:	There have been no changes in plan provisions since the last valuation.

Note: The summary of major plan provisions is designed to outline principal plan benefits as interpreted for purposes of the actuarial valuation. If the System should find the plan summary not in accordance with the actual provisions, the System should alert the actuary so they can both be sure the proper provisions are valued.

EXHIBIT III – MEMBER CONTRIBUTION RATES

General Tier 1 Members' Contribution Rates Based on the December 31, 2018 Actuarial Valuation (as a % of monthly payroll)

	Plan I (2.7% @ 55)		Plan G (2.5% @ 55)		Plan M (2.0% @ 55)(1)		Plan A (OCTA)	
Entry Age	Normal	Total	Normal	Total	Normal	Total	Normal	Total
15	7.51%	10.52%	7.51%	10.31%	5.46%	7.94%	3.28%	5.46%
16	7.51%	10.52%	7.51%	10.31%	5.46%	7.94%	3.28%	5.46%
17	7.63%	10.69%	7.63%	10.48%	5.55%	8.06%	3.33%	5.55%
18	7.75%	10.86%	7.75%	10.65%	5.64%	8.19%	3.38%	5.64%
19	7.87%	11.03%	7.87%	10.82%	5.73%	8.33%	3.44%	5.73%
20	8.00%	11.21%	8.00%	10.99%	5.82%	8.46%	3.49%	5.83%
21	8.13%	11.39%	8.13%	11.17%	5.92%	8.60%	3.55%	5.92%
22	8.26%	11.57%	8.26%	11.35%	6.01%	8.73%	3.61%	6.01%
23	8.39%	11.76%	8.39%	11.53%	6.11%	8.87%	3.67%	6.11%
24	8.53%	11.95%	8.53%	11.71%	6.21%	9.02%	3.72%	6.21%
25	8.66%	12.14%	8.66%	11.90%	6.31%	9.16%	3.78%	6.31%
26	8.81%	12.34%	8.81%	12.09%	6.41%	9.31%	3.84%	6.41%
27	8.95%	12.54%	8.95%	12.29%	6.51%	9.46%	3.91%	6.51%
28	9.09%	12.74%	9.09%	12.49%	6.61%	9.61%	3.97%	6.62%
29	9.24%	12.95%	9.24%	12.70%	6.72%	9.76%	4.03%	6.72%
30	9.39%	13.16%	9.39%	12.90%	6.83%	9.92%	4.10%	6.83%
31	9.55%	13.38%	9.55%	13.12%	6.94%	10.08%	4.16%	6.94%
32	9.71%	13.60%	9.71%	13.34%	7.05%	10.24%	4.23%	7.06%
33	9.87%	13.83%	9.87%	13.56%	7.17%	10.41%	4.30%	7.17%
34	10.04%	14.07%	10.04%	13.79%	7.28%	10.58%	4.37%	7.29%
35	10.21%	14.31%	10.21%	14.03%	7.40%	10.76%	4.44%	7.41%
36	10.39%	14.56%	10.39%	14.28%	7.53%	10.93%	4.52%	7.53%
37	10.58%	14.83%	10.58%	14.53%	7.65%	11.12%	4.59%	7.66%
38	10.77%	15.10%	10.77%	14.80%	7.78%	11.30%	4.67%	7.78%
39	10.92%	15.31%	10.92%	15.01%	7.91%	11.50%	4.75%	7.92%
40	11.08%	15.53%	11.08%	15.22%	8.05%	11.70%	4.83%	8.05%

EXHIBIT III – MEMBER CONTRIBUTION RATES (CONTINUED)

General Tier 1 Members' Contribution Rates Based on the December 31, 2018 Actuarial Valuation (as a % of monthly payroll)

	Plan I (2.7% @ 55)		Plan G (2.5% @ 55)		Plan M (2.0% @ 55)[1]		Plan A (OCTA)	
Entry Age	Normal	Total	Normal	Total	Normal	Total	Normal	Total
41	11.24%	15.75%	11.24%	15.44%	8.19%	11.90%	4.92%	8.20%
42	11.41%	15.99%	11.41%	15.68%	8.34%	12.11%	5.00%	8.34%
43	11.59%	16.25%	11.59%	15.93%	8.49%	12.34%	5.10%	8.50%
44	11.79%	16.52%	11.79%	16.19%	8.61%	12.51%	5.17%	8.61%
45	12.00%	16.81%	12.00%	16.48%	8.73%	12.69%	5.24%	8.74%
46	12.20%	17.10%	12.20%	16.76%	8.86%	12.87%	5.32%	8.87%
47	12.37%	17.34%	12.37%	17.00%	9.00%	13.07%	5.40%	9.00%
48	12.54%	17.57%	12.54%	17.23%	9.14%	13.28%	5.48%	9.14%
49	12.63%	17.69%	12.63%	17.34%	9.29%	13.50%	5.58%	9.30%
50	12.68%	17.77%	12.68%	17.42%	9.46%	13.74%	5.67%	9.46%
51	12.66%	17.73%	12.66%	17.38%	9.62%	13.97%	5.77%	9.62%
52	12.55%	17.58%	12.55%	17.24%	9.75%	14.17%	5.85%	9.76%
53	12.32%	17.27%	12.32%	16.93%	9.88%	14.36%	5.93%	9.89%
54	11.86%	16.62%	11.86%	16.29%	9.95%	14.46%	5.97%	9.96%
55	11.86%	16.62%	11.86%	16.29%	10.00%	14.52%	6.00%	10.00%
56	11.86%	16.62%	11.86%	16.29%	9.98%	14.49%	5.99%	9.98%
57	11.86%	16.62%	11.86%	16.29%	9.89%	14.37%	5.93%	9.89%
58	11.86%	16.62%	11.86%	16.29%	9.71%	14.11%	5.83%	9.72%
59	11.86%	16.62%	11.86%	16.29%	9.35%	13.58%	5.61%	9.35%
60	11.86%	16.62%	11.86%	16.29%	9.35%	13.58%	5.61%	9.35%
COLA Loading:		*40.12%*		*37.36%*		*45.26%*		*66.73%*

[1] Payable by members in Rate Group #9 and Rate Group #11.

Interest:	7.00% per annum
Mortality:	See *Section 4, Exhibit I*
Salary Increase:	Inflation (2.75%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit I*)
Additional Cashouts:	See *Section 4, Exhibit I*

EXHIBIT III – MEMBER CONTRIBUTION RATES (CONTINUED)

General Tier 1 Members' Contribution Rates Based on the December 31, 2018 Actuarial Valuation (as a % of monthly payroll)

	Plan A (Non-OCTA)	
Entry Age	Normal	Total
15	3.28%	5.37%
16	3.28%	5.37%
17	3.33%	5.46%
18	3.38%	5.55%
19	3.44%	5.64%
20	3.49%	5.73%
21	3.55%	5.82%
22	3.61%	5.91%
23	3.67%	6.01%
24	3.72%	6.10%
25	3.78%	6.20%
26	3.84%	6.30%
27	3.91%	6.40%
28	3.97%	6.50%
29	4.03%	6.61%
30	4.10%	6.72%
31	4.16%	6.82%
32	4.23%	6.93%
33	4.30%	7.05%
34	4.37%	7.16%
35	4.44%	7.28%
36	4.52%	7.40%
37	4.59%	7.52%
38	4.67%	7.65%
39	4.75%	7.78%
40	4.83%	7.92%

EXHIBIT III – MEMBER CONTRIBUTION RATES (CONTINUED)

General Tier 1 Members' Contribution Rates Based on the December 31, 2018 Actuarial Valuation (as a % of monthly payroll)

	Plan A (Non-OCTA)	
Entry Age	Normal	Total
41	4.92%	8.06%
42	5.00%	8.20%
43	5.10%	8.35%
44	5.17%	8.47%
45	5.24%	8.59%
46	5.32%	8.71%
47	5.40%	8.85%
48	5.48%	8.99%
49	5.58%	9.14%
50	5.67%	9.30%
51	5.77%	9.46%
52	5.85%	9.59%
53	5.93%	9.72%
54	5.97%	9.78%
55	6.00%	9.83%
56	5.99%	9.81%
57	5.93%	9.72%
58	5.83%	9.55%
59	5.61%	9.19%
60	5.61%	9.19%
COLA Loading:		*63.87%*

Interest:	7.00% per annum
Mortality:	See *Section 4, Exhibit I*
Salary Increase:	Inflation (2.75%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit I*)
Additional Cashouts:	See *Section 4, Exhibit I*

EXHIBIT III – MEMBER CONTRIBUTION RATES (CONTINUED)

General Tier 2 Members' Contribution Rates Based on the December 31, 2018 Actuarial Valuation (as a % of monthly payroll)

	Plan J (2.7% @ 55 non-OCFA)		Plan H (2.5% @ 55 OCSD)		Plan N (2.0% @ 55)(1)		Plan B (OCTA)	
Entry Age	Normal	Total	Normal	Total	Normal	Total	Normal	Total
15	7.18%	10.07%	7.18%	9.87%	5.23%	7.60%	5.23%	7.32%
16	7.18%	10.07%	7.18%	9.87%	5.23%	7.60%	5.23%	7.32%
17	7.30%	10.23%	7.30%	10.03%	5.31%	7.72%	5.31%	7.44%
18	7.42%	10.39%	7.42%	10.19%	5.40%	7.84%	5.40%	7.56%
19	7.54%	10.56%	7.54%	10.35%	5.49%	7.97%	5.49%	7.68%
20	7.66%	10.73%	7.66%	10.52%	5.57%	8.10%	5.57%	7.81%
21	7.78%	10.90%	7.78%	10.68%	5.66%	8.23%	5.66%	7.93%
22	7.90%	11.07%	7.90%	10.86%	5.75%	8.36%	5.75%	8.06%
23	8.03%	11.25%	8.03%	11.03%	5.85%	8.49%	5.85%	8.19%
24	8.16%	11.43%	8.16%	11.21%	5.94%	8.63%	5.94%	8.32%
25	8.29%	11.62%	8.29%	11.39%	6.03%	8.77%	6.03%	8.45%
26	8.42%	11.80%	8.42%	11.57%	6.13%	8.91%	6.13%	8.59%
27	8.56%	11.99%	8.56%	11.76%	6.23%	9.05%	6.23%	8.72%
28	8.70%	12.19%	8.70%	11.95%	6.33%	9.19%	6.33%	8.86%
29	8.84%	12.39%	8.84%	12.14%	6.43%	9.34%	6.43%	9.01%
30	8.98%	12.59%	8.98%	12.34%	6.53%	9.49%	6.53%	9.15%
31	9.13%	12.79%	9.13%	12.54%	6.64%	9.64%	6.64%	9.30%
32	9.28%	13.01%	9.28%	12.75%	6.75%	9.80%	6.75%	9.45%
33	9.44%	13.22%	9.44%	12.96%	6.86%	9.96%	6.86%	9.60%
34	9.60%	13.45%	9.60%	13.18%	6.97%	10.12%	6.97%	9.76%
35	9.76%	13.68%	9.76%	13.41%	7.08%	10.29%	7.08%	9.92%
36	9.93%	13.92%	9.93%	13.64%	7.20%	10.45%	7.20%	10.08%
37	10.09%	14.14%	10.09%	13.86%	7.32%	10.63%	7.32%	10.25%
38	10.24%	14.35%	10.24%	14.07%	7.44%	10.81%	7.44%	10.42%
39	10.38%	14.55%	10.38%	14.26%	7.56%	10.99%	7.56%	10.59%
40	10.53%	14.75%	10.53%	14.46%	7.69%	11.18%	7.69%	10.78%

EXHIBIT III – MEMBER CONTRIBUTION RATES (CONTINUED)

General Tier 2 Members' Contribution Rates Based on the December 31, 2018 Actuarial Valuation (as a % of monthly payroll)

	Plan J (2.7% @ 55 non-OCFA)		Plan H (2.5% @ 55 OCSD)		Plan N (2.0% @ 55)[1]		Plan B (OCTA)	
Entry Age	Normal	Total	Normal	Total	Normal	Total	Normal	Total
41	10.68%	14.97%	10.68%	14.67%	7.83%	11.37%	7.83%	10.96%
42	10.84%	15.19%	10.84%	14.89%	7.95%	11.56%	7.95%	11.14%
43	11.01%	15.42%	11.01%	15.12%	8.07%	11.73%	8.07%	11.31%
44	11.18%	15.66%	11.18%	15.35%	8.18%	11.89%	8.18%	11.46%
45	11.34%	15.88%	11.34%	15.57%	8.30%	12.06%	8.30%	11.62%
46	11.48%	16.08%	11.48%	15.76%	8.42%	12.23%	8.42%	11.79%
47	11.58%	16.22%	11.58%	15.90%	8.54%	12.41%	8.54%	11.96%
48	11.63%	16.30%	11.63%	15.98%	8.68%	12.60%	8.68%	12.15%
49	11.63%	16.29%	11.63%	15.97%	8.81%	12.80%	8.81%	12.34%
50	11.56%	16.19%	11.56%	15.87%	8.93%	12.98%	8.93%	12.51%
51	11.40%	15.97%	11.40%	15.66%	9.05%	13.14%	9.05%	12.67%
52	11.12%	15.59%	11.12%	15.28%	9.12%	13.25%	9.12%	12.78%
53	11.48%	16.09%	11.48%	15.77%	9.17%	13.32%	9.17%	12.84%
54	11.86%	16.62%	11.86%	16.29%	9.17%	13.31%	9.17%	12.83%
55	11.86%	16.62%	11.86%	16.29%	9.11%	13.23%	9.11%	12.76%
56	11.86%	16.62%	11.86%	16.29%	8.98%	13.05%	8.98%	12.58%
57	11.86%	16.62%	11.86%	16.29%	8.77%	12.74%	8.77%	12.28%
58	11.86%	16.62%	11.86%	16.29%	9.05%	13.15%	9.05%	12.68%
59	11.86%	16.62%	11.86%	16.29%	9.35%	13.58%	9.35%	13.09%
60	11.86%	16.62%	11.86%	16.29%	9.35%	13.58%	9.35%	13.09%
COLA Loading:		*40.12%*		*37.36%*		*45.26%*		*40.04%*

[1] Payable by members in Rate Group #9 and Rate Group #11.

Interest:	7.00% per annum
Mortality:	See *Section 4, Exhibit I*
Salary Increase:	Inflation (2.75%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit I*)
Additional Cashouts:	See *Section 4, Exhibit I*

EXHIBIT III – MEMBER CONTRIBUTION RATES (CONTINUED)

General Tier 2 Members' Contribution Rates Based on the December 31, 2018 Actuarial Valuation (as a % of monthly payroll)

	Plan B (non-OCTA, non-OCSD)		Plan J (2.7% @ 55 OCFA)		Plan P (1.62% @ 65)		Plan B (OCSD)	
Entry Age	Normal	Total	Normal	Total	Normal	Total	Normal	Total
15	5.23%	7.23%	7.18%	10.06%	5.23%	6.63%	5.23%	7.28%
16	5.23%	7.23%	7.18%	10.06%	5.23%	6.63%	5.23%	7.28%
17	5.31%	7.35%	7.30%	10.22%	5.31%	6.74%	5.31%	7.40%
18	5.40%	7.47%	7.42%	10.38%	5.40%	6.85%	5.40%	7.52%
19	5.49%	7.59%	7.54%	10.55%	5.49%	6.96%	5.49%	7.64%
20	5.57%	7.71%	7.66%	10.72%	5.57%	7.07%	5.57%	7.76%
21	5.66%	7.83%	7.78%	10.89%	5.66%	7.18%	5.66%	7.88%
22	5.75%	7.96%	7.90%	11.06%	5.75%	7.30%	5.75%	8.01%
23	5.85%	8.09%	8.03%	11.24%	5.85%	7.41%	5.85%	8.14%
24	5.94%	8.22%	8.16%	11.42%	5.94%	7.53%	5.94%	8.27%
25	6.03%	8.35%	8.29%	11.61%	6.03%	7.65%	6.03%	8.40%
26	6.13%	8.48%	8.42%	11.79%	6.13%	7.78%	6.13%	8.54%
27	6.23%	8.62%	8.56%	11.98%	6.23%	7.90%	6.23%	8.67%
28	6.33%	8.75%	8.70%	12.18%	6.33%	8.03%	6.33%	8.81%
29	6.43%	8.89%	8.84%	12.38%	6.43%	8.16%	6.43%	8.95%
30	6.53%	9.04%	8.98%	12.58%	6.53%	8.29%	6.53%	9.10%
31	6.64%	9.18%	9.13%	12.78%	6.64%	8.42%	6.64%	9.24%
32	6.75%	9.33%	9.28%	13.00%	6.75%	8.56%	6.75%	9.39%
33	6.86%	9.48%	9.44%	13.21%	6.86%	8.69%	6.86%	9.54%
34	6.97%	9.64%	9.60%	13.44%	6.97%	8.84%	6.97%	9.70%
35	7.08%	9.79%	9.76%	13.67%	7.08%	8.98%	7.08%	9.86%
36	7.20%	9.96%	9.93%	13.91%	7.20%	9.13%	7.20%	10.02%
37	7.32%	10.12%	10.09%	14.13%	7.32%	9.28%	7.32%	10.19%
38	7.44%	10.29%	10.24%	14.34%	7.44%	9.43%	7.44%	10.36%
39	7.56%	10.46%	10.38%	14.54%	7.56%	9.59%	7.56%	10.53%
40	7.69%	10.64%	10.53%	14.74%	7.69%	9.76%	7.69%	10.71%

EXHIBIT III – MEMBER CONTRIBUTION RATES (CONTINUED)

General Tier 2 Members' Contribution Rates Based on the December 31, 2018 Actuarial Valuation (as a % of monthly payroll)

	Plan B (non-OCTA, non-OCSD)		Plan J (2.7% @ 55 OCFA)		Plan P (1.62% @ 65)		Plan B (OCSD)	
Entry Age	Normal	Total	Normal	Total	Normal	Total	Normal	Total
41	7.83%	10.83%	10.68%	14.95%	7.83%	9.93%	7.83%	10.90%
42	7.95%	11.00%	10.84%	15.18%	7.95%	10.09%	7.95%	11.08%
43	8.07%	11.17%	11.01%	15.41%	8.07%	10.24%	8.07%	11.24%
44	8.18%	11.32%	11.18%	15.65%	8.18%	10.38%	8.18%	11.40%
45	8.30%	11.48%	11.34%	15.87%	8.30%	10.53%	8.30%	11.55%
46	8.42%	11.64%	11.48%	16.07%	8.42%	10.68%	8.42%	11.72%
47	8.54%	11.82%	11.58%	16.21%	8.54%	10.84%	8.54%	11.90%
48	8.68%	12.00%	11.63%	16.29%	8.68%	11.00%	8.68%	12.08%
49	8.81%	12.19%	11.63%	16.28%	8.81%	11.17%	8.81%	12.27%
50	8.93%	12.36%	11.56%	16.18%	8.93%	11.33%	8.93%	12.44%
51	9.05%	12.51%	11.40%	15.96%	9.05%	11.47%	9.05%	12.59%
52	9.12%	12.62%	11.12%	15.57%	9.12%	11.57%	9.12%	12.70%
53	9.17%	12.68%	11.48%	16.08%	9.17%	11.63%	9.17%	12.77%
54	9.17%	12.68%	11.86%	16.61%	9.17%	11.62%	9.17%	12.76%
55	9.11%	12.60%	11.86%	16.61%	9.11%	11.55%	9.11%	12.68%
56	8.98%	12.43%	11.86%	16.61%	8.98%	11.39%	8.98%	12.51%
57	8.77%	12.13%	11.86%	16.61%	8.77%	11.12%	8.77%	12.21%
58	9.05%	12.52%	11.86%	16.61%	9.05%	11.48%	9.05%	12.60%
59	9.35%	12.93%	11.86%	16.61%	9.35%	11.86%	9.35%	13.02%
60	9.35%	12.93%	11.86%	16.61%	9.35%	11.86%	9.35%	13.02%
COLA Loading:		*38.32%*		*40.01%*		*26.83%*		*39.23%*

Interest:	7.00% per annum
Mortality:	See *Section 4, Exhibit I*
Salary Increase:	Inflation (2.75%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit I*)
Additional Cashouts:	See *Section 4, Exhibit I*

EXHIBIT III – MEMBER CONTRIBUTION RATES (CONTINUED)

General Tier 2 Members' Contribution Rates Based on the December 31, 2018 Actuarial Valuation (as a % of monthly payroll)

	Plan N (OCFA)		Plan S (City of SJC)		Plan H (2.5% @ 55 Law Library)	
Entry Age	Normal	Total	Normal	Total	Normal	Total
15	5.23%	7.71%	6.28%	8.70%	7.18%	9.90%
16	5.23%	7.71%	6.28%	8.70%	7.18%	9.90%
17	5.31%	7.83%	6.38%	8.84%	7.30%	10.05%
18	5.40%	7.96%	6.48%	8.98%	7.42%	10.22%
19	5.49%	8.09%	6.58%	9.12%	7.54%	10.38%
20	5.57%	8.22%	6.69%	9.27%	7.66%	10.54%
21	5.66%	8.35%	6.80%	9.42%	7.78%	10.71%
22	5.75%	8.48%	6.90%	9.57%	7.90%	10.88%
23	5.85%	8.62%	7.02%	9.72%	8.03%	11.06%
24	5.94%	8.75%	7.13%	9.88%	8.16%	11.24%
25	6.03%	8.89%	7.24%	10.03%	8.29%	11.42%
26	6.13%	9.04%	7.36%	10.19%	8.42%	11.60%
27	6.23%	9.18%	7.47%	10.36%	8.56%	11.79%
28	6.33%	9.33%	7.59%	10.52%	8.70%	11.98%
29	6.43%	9.48%	7.72%	10.69%	8.84%	12.17%
30	6.53%	9.63%	7.84%	10.86%	8.98%	12.37%
31	6.64%	9.78%	7.97%	11.04%	9.13%	12.58%
32	6.75%	9.94%	8.10%	11.22%	9.28%	12.79%
33	6.86%	10.10%	8.23%	11.40%	9.44%	13.00%
34	6.97%	10.27%	8.36%	11.58%	9.60%	13.22%
35	7.08%	10.44%	8.50%	11.77%	9.76%	13.45%
36	7.20%	10.61%	8.64%	11.97%	9.93%	13.68%
37	7.32%	10.78%	8.78%	12.17%	10.09%	13.90%
38	7.44%	10.96%	8.93%	12.37%	10.24%	14.11%
39	7.56%	11.15%	9.08%	12.58%	10.38%	14.30%
40	7.69%	11.34%	9.23%	12.79%	10.53%	14.50%

EXHIBIT III – MEMBER CONTRIBUTION RATES (CONTINUED)

General Tier 2 Members' Contribution Rates Based on the December 31, 2018 Actuarial Valuation (as a % of monthly payroll)

	Plan N (OCFA)		Plan S (City of SJC)		Plan H (2.5% @ 55 Law Library)	
Entry Age	Normal	Total	Normal	Total	Normal	Total
41	7.83%	11.54%	9.39%	13.02%	10.68%	14.71%
42	7.95%	11.72%	9.55%	13.23%	10.84%	14.93%
43	8.07%	11.90%	9.69%	13.43%	11.01%	15.16%
44	8.18%	12.06%	9.82%	13.61%	11.18%	15.39%
45	8.30%	12.23%	9.96%	13.80%	11.34%	15.61%
46	8.42%	12.41%	10.10%	14.00%	11.48%	15.81%
47	8.54%	12.59%	10.25%	14.21%	11.58%	15.94%
48	8.68%	12.79%	10.41%	14.43%	11.63%	16.02%
49	8.81%	12.98%	10.57%	14.65%	11.63%	16.02%
50	8.93%	13.17%	10.72%	14.86%	11.56%	15.92%
51	9.05%	13.33%	10.85%	15.04%	11.40%	15.70%
52	9.12%	13.45%	10.95%	15.17%	11.12%	15.32%
53	9.17%	13.51%	11.00%	15.25%	11.48%	15.82%
54	9.17%	13.51%	11.00%	15.24%	11.86%	16.34%
55	9.11%	13.43%	10.93%	15.15%	11.86%	16.34%
56	8.98%	13.24%	10.78%	14.94%	11.86%	16.34%
57	8.77%	12.92%	10.52%	14.58%	11.86%	16.34%
58	9.05%	13.34%	10.86%	15.05%	11.86%	16.34%
59	9.35%	13.78%	11.22%	15.55%	11.86%	16.34%
60	9.35%	13.78%	11.22%	15.55%	11.86%	16.34%
COLA Loading:		*47.39%*		*38.57%*		*37.73%*

Interest: 7.00% per annum
Mortality: See *Section 4, Exhibit I*
Salary Increase: Inflation (2.75%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit I*)
Additional Cashouts: See *Section 4, Exhibit I*

EXHIBIT III – MEMBER CONTRIBUTION RATES (CONTINUED)

General CalPEPRA Members' Contribution Rates Based on the December 31, 2018 Actuarial Valuation (as a % of monthly payroll)

	Rate Group 1 (Plan U)		Rate Group 2 (Plan T)		Rate Group 2 (Plan U)		Rate Group 2 (Plan W)	
Entry Age	Normal	Total	Normal	Total	Normal	Total	Normal	Total
15	6.29%	8.51%	3.89%	5.22%	5.59%	7.59%	3.90%	5.10%
16	6.29%	8.51%	3.89%	5.22%	5.59%	7.59%	3.90%	5.10%
17	6.00%	8.12%	3.95%	5.30%	5.33%	7.24%	3.96%	5.18%
18	5.70%	7.71%	4.02%	5.39%	5.06%	6.88%	4.03%	5.26%
19	5.79%	7.84%	4.08%	5.47%	5.14%	6.99%	4.09%	5.35%
20	5.89%	7.97%	4.15%	5.56%	5.23%	7.10%	4.16%	5.43%
21	5.98%	8.10%	4.22%	5.65%	5.31%	7.22%	4.22%	5.52%
22	6.08%	8.23%	4.28%	5.74%	5.40%	7.34%	4.29%	5.61%
23	6.18%	8.36%	4.35%	5.84%	5.49%	7.46%	4.36%	5.70%
24	6.28%	8.50%	4.42%	5.93%	5.57%	7.58%	4.43%	5.79%
25	6.38%	8.63%	4.49%	6.02%	5.66%	7.70%	4.50%	5.88%
26	6.48%	8.77%	4.57%	6.12%	5.76%	7.82%	4.57%	5.98%
27	6.59%	8.91%	4.64%	6.22%	5.85%	7.95%	4.65%	6.07%
28	6.69%	9.06%	4.71%	6.32%	5.94%	8.08%	4.72%	6.17%
29	6.80%	9.20%	4.79%	6.42%	6.04%	8.21%	4.80%	6.27%
30	6.91%	9.35%	4.87%	6.53%	6.14%	8.34%	4.88%	6.37%
31	7.02%	9.50%	4.95%	6.63%	6.23%	8.47%	4.96%	6.48%
32	7.14%	9.65%	5.03%	6.74%	6.33%	8.61%	5.04%	6.58%
33	7.25%	9.81%	5.11%	6.85%	6.44%	8.75%	5.12%	6.69%
34	7.37%	9.97%	5.19%	6.96%	6.54%	8.89%	5.20%	6.80%
35	7.48%	10.13%	5.28%	7.08%	6.64%	9.03%	5.29%	6.91%
36	7.61%	10.29%	5.37%	7.19%	6.75%	9.18%	5.38%	7.03%
37	7.73%	10.46%	5.45%	7.31%	6.86%	9.32%	5.47%	7.14%
38	7.85%	10.63%	5.55%	7.44%	6.97%	9.47%	5.56%	7.26%
39	7.98%	10.80%	5.64%	7.57%	7.09%	9.63%	5.65%	7.39%
40	8.11%	10.98%	5.74%	7.70%	7.20%	9.79%	5.75%	7.52%
41	8.24%	11.16%	5.84%	7.83%	7.32%	9.95%	5.85%	7.65%
42	8.38%	11.34%	5.94%	7.96%	7.44%	10.11%	5.95%	7.77%

EXHIBIT III – MEMBER CONTRIBUTION RATES (CONTINUED)

General CalPEPRA Members' Contribution Rates Based on the December 31, 2018 Actuarial Valuation (as a % of monthly payroll)

	Rate Group 1 (Plan U)		Rate Group 2 (Plan T)		Rate Group 2 (Plan U)		Rate Group 2 (Plan W)	
Entry Age	Normal	Total	Normal	Total	Normal	Total	Normal	Total
43	8.52%	11.53%	6.03%	8.08%	7.56%	10.28%	6.04%	7.89%
44	8.66%	11.72%	6.11%	8.20%	7.69%	10.45%	6.12%	8.00%
45	8.81%	11.92%	6.20%	8.31%	7.82%	10.63%	6.21%	8.12%
46	8.96%	12.12%	6.29%	8.44%	7.95%	10.81%	6.31%	8.24%
47	9.12%	12.33%	6.39%	8.57%	8.09%	11.00%	6.40%	8.37%
48	9.28%	12.55%	6.49%	8.71%	8.24%	11.19%	6.51%	8.50%
49	9.43%	12.76%	6.60%	8.85%	8.37%	11.38%	6.61%	8.64%
50	9.57%	12.95%	6.70%	8.98%	8.50%	11.55%	6.71%	8.77%
51	9.71%	13.14%	6.79%	9.10%	8.62%	11.71%	6.80%	8.89%
52	9.85%	13.33%	6.85%	9.19%	8.74%	11.88%	6.87%	8.98%
53	9.99%	13.52%	6.90%	9.25%	8.87%	12.06%	6.91%	9.03%
54	10.15%	13.73%	6.91%	9.27%	9.01%	12.24%	6.92%	9.05%
55	10.31%	13.95%	6.89%	9.24%	9.15%	12.44%	6.90%	9.02%
56	10.48%	14.18%	6.82%	9.15%	9.30%	12.64%	6.83%	8.93%
57	10.64%	14.39%	6.70%	8.98%	9.44%	12.83%	6.71%	8.77%
58	10.78%	14.58%	6.92%	9.27%	9.57%	13.00%	6.93%	9.06%
59	10.89%	14.73%	7.14%	9.58%	9.66%	13.13%	7.16%	9.36%
60	10.96%	14.83%	7.14%	9.58%	9.73%	13.22%	7.16%	9.36%
61	10.98%	14.85%	7.14%	9.58%	9.74%	13.24%	7.16%	9.36%
62	10.94%	14.80%	7.14%	9.58%	9.71%	13.20%	7.16%	9.36%
63	10.83%	14.66%	7.14%	9.58%	9.62%	13.07%	7.16%	9.36%
64	10.64%	14.40%	7.14%	9.58%	9.45%	12.84%	7.16%	9.36%
65	10.98%	14.86%	7.14%	9.58%	9.75%	13.25%	7.16%	9.36%
66 & Over	11.35%	15.35%	7.14%	9.58%	10.07%	13.69%	7.16%	9.36%
COLA Loading:		*35.31%*		*34.09%*		*35.89%*		*30.69%*

EXHIBIT III – MEMBER CONTRIBUTION RATES (CONTINUED)

General CalPEPRA Members' Contribution Rates Based on the December 31, 2018 Actuarial Valuation (as a % of monthly payroll)

Interest:	7.00% per annum
Mortality:	See *Section 4, Exhibit I*
Salary Increase:	Inflation (2.75%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit I*)

It is our understanding that in the determination of pension benefits under the CalPEPRA 2.5% at 67 formula and the Plan W 1.62% at 65 formula, the compensation that can be taken into account for 2019 is equal to $149,016 (reference: Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2019 (reference: Section 7522.10(d)).

EXHIBIT III – MEMBER CONTRIBUTION RATES (CONTINUED)

General CalPEPRA Members' Contribution Rates Based on the December 31, 2018 Actuarial Valuation (as a % of monthly payroll)

	Rate Group 3 (Plan U)		Rate Group 5 (Plan U)		Rate Group 9 (Plan U)		Rate Group 10 (Plan U)	
Entry Age	Normal	Total	Normal	Total	Normal	Total	Normal	Total
15	5.89%	7.96%	6.57%	8.90%	6.04%	8.11%	6.06%	8.20%
16	5.89%	7.96%	6.57%	8.90%	6.04%	8.11%	6.06%	8.20%
17	5.62%	7.60%	6.26%	8.49%	5.76%	7.73%	5.78%	7.82%
18	5.34%	7.22%	5.95%	8.06%	5.47%	7.35%	5.49%	7.43%
19	5.43%	7.33%	6.05%	8.20%	5.56%	7.47%	5.58%	7.55%
20	5.51%	7.45%	6.14%	8.33%	5.65%	7.59%	5.67%	7.67%
21	5.60%	7.57%	6.24%	8.46%	5.74%	7.71%	5.76%	7.80%
22	5.69%	7.70%	6.35%	8.60%	5.84%	7.84%	5.86%	7.92%
23	5.79%	7.82%	6.45%	8.74%	5.93%	7.96%	5.95%	8.05%
24	5.88%	7.95%	6.55%	8.88%	6.03%	8.09%	6.05%	8.18%
25	5.97%	8.08%	6.66%	9.02%	6.12%	8.22%	6.14%	8.31%
26	6.07%	8.21%	6.76%	9.17%	6.22%	8.35%	6.24%	8.45%
27	6.17%	8.34%	6.87%	9.32%	6.32%	8.49%	6.34%	8.58%
28	6.27%	8.47%	6.98%	9.47%	6.42%	8.62%	6.45%	8.72%
29	6.37%	8.61%	7.10%	9.62%	6.53%	8.76%	6.55%	8.86%
30	6.47%	8.75%	7.21%	9.77%	6.63%	8.90%	6.65%	9.01%
31	6.58%	8.89%	7.33%	9.93%	6.74%	9.05%	6.76%	9.15%
32	6.68%	9.03%	7.44%	10.09%	6.85%	9.19%	6.87%	9.30%
33	6.79%	9.18%	7.56%	10.25%	6.96%	9.34%	6.98%	9.45%
34	6.90%	9.32%	7.69%	10.42%	7.07%	9.49%	7.09%	9.60%
35	7.01%	9.47%	7.81%	10.59%	7.18%	9.64%	7.21%	9.75%
36	7.12%	9.63%	7.94%	10.76%	7.30%	9.80%	7.32%	9.91%
37	7.24%	9.78%	8.06%	10.93%	7.42%	9.96%	7.44%	10.07%
38	7.35%	9.94%	8.19%	11.11%	7.54%	10.12%	7.56%	10.23%
39	7.47%	10.10%	8.33%	11.29%	7.66%	10.28%	7.68%	10.40%
40	7.60%	10.27%	8.46%	11.47%	7.79%	10.45%	7.81%	10.57%
41	7.72%	10.44%	8.60%	11.66%	7.91%	10.62%	7.94%	10.74%
42	7.85%	10.61%	8.74%	11.85%	8.04%	10.80%	8.07%	10.92%

EXHIBIT III – MEMBER CONTRIBUTION RATES (CONTINUED)

General CalPEPRA Members' Contribution Rates Based on the December 31, 2018 Actuarial Valuation (as a % of monthly payroll)

	Rate Group 3 (Plan U)		Rate Group 5 (Plan U)		Rate Group 9 (Plan U)		Rate Group 10 (Plan U)	
Entry Age	Normal	Total	Normal	Total	Normal	Total	Normal	Total
43	7.98%	10.78%	8.89%	12.05%	8.18%	10.98%	8.20%	11.10%
44	8.11%	10.96%	9.04%	12.25%	8.31%	11.16%	8.34%	11.29%
45	8.25%	11.15%	9.19%	12.46%	8.45%	11.35%	8.48%	11.48%
46	8.39%	11.34%	9.35%	12.67%	8.60%	11.54%	8.63%	11.68%
47	8.54%	11.54%	9.51%	12.89%	8.75%	11.75%	8.78%	11.88%
48	8.69%	11.74%	9.68%	13.12%	8.90%	11.95%	8.93%	12.09%
49	8.83%	11.94%	9.84%	13.34%	9.05%	12.15%	9.08%	12.29%
50	8.96%	12.12%	9.99%	13.54%	9.19%	12.33%	9.22%	12.47%
51	9.09%	12.29%	10.13%	13.73%	9.32%	12.51%	9.35%	12.65%
52	9.22%	12.46%	10.27%	13.93%	9.45%	12.69%	9.48%	12.83%
53	9.36%	12.65%	10.43%	14.13%	9.59%	12.88%	9.62%	13.02%
54	9.50%	12.84%	10.59%	14.35%	9.74%	13.07%	9.77%	13.22%
55	9.65%	13.05%	10.76%	14.58%	9.90%	13.29%	9.93%	13.44%
56	9.81%	13.26%	10.93%	14.82%	10.06%	13.50%	10.09%	13.65%
57	9.96%	13.46%	11.10%	15.04%	10.21%	13.70%	10.24%	13.86%
58	10.09%	13.64%	11.25%	15.24%	10.34%	13.89%	10.38%	14.05%
59	10.19%	13.78%	11.36%	15.40%	10.45%	14.03%	10.48%	14.19%
60	10.26%	13.87%	11.43%	15.50%	10.52%	14.12%	10.55%	14.28%
61	10.28%	13.89%	11.45%	15.52%	10.53%	14.14%	10.57%	14.30%
62	10.24%	13.85%	11.41%	15.47%	10.50%	14.09%	10.53%	14.25%
63	10.14%	13.71%	11.30%	15.32%	10.40%	13.96%	10.43%	14.12%
64	9.96%	13.47%	11.10%	15.05%	10.21%	13.71%	10.24%	13.86%
65	10.29%	13.90%	11.46%	15.54%	10.54%	14.15%	10.58%	14.31%
66 & Over	10.62%	14.36%	11.84%	16.05%	10.89%	14.62%	10.92%	14.79%
COLA Loading:		*35.17%*		*35.55%*		*34.25%*		*35.34%*

EXHIBIT III – MEMBER CONTRIBUTION RATES (CONTINUED)

General CalPEPRA Members' Contribution Rates Based on the December 31, 2018 Actuarial Valuation (as a % of monthly payroll)

Interest:	7.00% per annum
Mortality:	See *Section 4, Exhibit I*
Salary Increase:	Inflation (2.75%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit I*)

It is our understanding that in the determination of pension benefits under the CalPEPRA 2.5% at 67 formula and the Plan W 1.62% at 65 formula, the compensation that can be taken into account for 2019 is equal to $149,016 (reference: Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2019 (reference: Section 7522.10(d)).

EXHIBIT III – MEMBER CONTRIBUTION RATES (CONTINUED)

General CalPEPRA Members' Contribution Rates Based on the December 31, 2018 Actuarial Valuation (as a % of monthly payroll)

	Rate Group 11 (Plan U)		Rate Group 12 (Plan U)	
Entry Age	Normal	Total	Normal	Total
15	6.36%	8.90%	5.66%	7.57%
16	6.36%	8.90%	5.66%	7.57%
17	6.07%	8.49%	5.40%	7.22%
18	5.76%	8.06%	5.13%	6.86%
19	5.86%	8.19%	5.21%	6.97%
20	5.95%	8.32%	5.29%	7.08%
21	6.05%	8.46%	5.38%	7.20%
22	6.15%	8.60%	5.47%	7.32%
23	6.25%	8.74%	5.56%	7.43%
24	6.35%	8.88%	5.65%	7.55%
25	6.45%	9.02%	5.74%	7.68%
26	6.55%	9.17%	5.83%	7.80%
27	6.66%	9.31%	5.92%	7.93%
28	6.77%	9.46%	6.02%	8.05%
29	6.88%	9.61%	6.11%	8.18%
30	6.99%	9.77%	6.21%	8.31%
31	7.10%	9.93%	6.31%	8.45%
32	7.21%	10.09%	6.41%	8.58%
33	7.33%	10.25%	6.52%	8.72%
34	7.45%	10.41%	6.62%	8.86%
35	7.57%	10.58%	6.73%	9.00%
36	7.69%	10.75%	6.84%	9.15%
37	7.81%	10.92%	6.95%	9.30%
38	7.94%	11.10%	7.06%	9.45%
39	8.07%	11.28%	7.18%	9.60%
40	8.20%	11.47%	7.29%	9.76%
41	8.34%	11.65%	7.41%	9.92%
42	8.47%	11.85%	7.53%	10.08%

EXHIBIT III – MEMBER CONTRIBUTION RATES (CONTINUED)

General CalPEPRA Members' Contribution Rates Based on the December 31, 2018 Actuarial Valuation (as a % of monthly payroll)

	Rate Group 11 (Plan U)		Rate Group 12 (Plan U)	
Entry Age	Normal	Total	Normal	Total
43	8.61%	12.04%	7.66%	10.25%
44	8.76%	12.25%	7.79%	10.42%
45	8.91%	12.45%	7.92%	10.60%
46	9.06%	12.67%	8.06%	10.78%
47	9.22%	12.89%	8.20%	10.97%
48	9.38%	13.11%	8.34%	11.16%
49	9.53%	13.33%	8.48%	11.34%
50	9.68%	13.53%	8.61%	11.52%
51	9.81%	13.72%	8.73%	11.68%
52	9.96%	13.92%	8.85%	11.85%
53	10.10%	14.13%	8.98%	12.02%
54	10.26%	14.34%	9.12%	12.21%
55	10.42%	14.58%	9.27%	12.40%
56	10.59%	14.81%	9.42%	12.61%
57	10.75%	15.03%	9.56%	12.80%
58	10.90%	15.24%	9.69%	12.97%
59	11.01%	15.39%	9.79%	13.10%
60	11.08%	15.49%	9.85%	13.18%
61	11.10%	15.51%	9.87%	13.20%
62	11.06%	15.46%	9.83%	13.16%
63	10.95%	15.31%	9.74%	13.03%
64	10.76%	15.04%	9.56%	12.80%
65	11.10%	15.53%	9.87%	13.21%
66 & Over	11.47%	16.04%	10.20%	13.65%
COLA Loading:		*39.83%*		*33.82%*

EXHIBIT III – MEMBER CONTRIBUTION RATES (CONTINUED)

General CalPEPRA Members' Contribution Rates Based on the December 31, 2018 Actuarial Valuation (as a % of monthly payroll)

Interest:	7.00% per annum
Mortality:	See *Section 4, Exhibit I*
Salary Increase:	Inflation (2.75%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit I*)

It is our understanding that in the determination of pension benefits under the CalPEPRA 2.5% at 67 formula and the Plan W 1.62% at 65 formula, the compensation that can be taken into account for 2019 is equal to $149,016 (reference: Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2019 (reference: Section 7522.10(d)).

EXHIBIT III – MEMBER CONTRIBUTION RATES (CONTINUED)

Safety Tier 2 Members' Contribution Rates Based on the December 31, 2018 Actuarial Valuation (as a % of monthly payroll)

	Plan F (OCFA)		Plan F (Law Enforcement)		Plan F (Probation)	
Entry Age	Normal	Total	Normal	Total	Normal	Total
15	8.87%	15.03%	9.11%	15.57%	9.01%	14.99%
16	8.87%	15.03%	9.11%	15.57%	9.01%	14.99%
17	8.99%	15.23%	9.22%	15.77%	9.13%	15.19%
18	9.10%	15.43%	9.34%	15.98%	9.24%	15.39%
19	9.22%	15.63%	9.47%	16.19%	9.37%	15.59%
20	9.35%	15.84%	9.59%	16.40%	9.49%	15.80%
21	9.47%	16.05%	9.72%	16.62%	9.62%	16.00%
22	9.60%	16.27%	9.85%	16.84%	9.74%	16.22%
23	9.73%	16.49%	9.98%	17.06%	9.87%	16.44%
24	9.86%	16.71%	10.11%	17.29%	10.01%	16.66%
25	10.00%	16.94%	10.25%	17.53%	10.14%	16.88%
26	10.13%	17.17%	10.39%	17.77%	10.28%	17.12%
27	10.28%	17.41%	10.53%	18.01%	10.43%	17.36%
28	10.42%	17.66%	10.68%	18.27%	10.57%	17.60%
29	10.57%	17.92%	10.83%	18.53%	10.73%	17.85%
30	10.73%	18.18%	10.99%	18.80%	10.88%	18.11%
31	10.89%	18.46%	11.15%	19.07%	11.05%	18.38%
32	11.05%	18.73%	11.31%	19.35%	11.21%	18.65%
33	11.21%	19.00%	11.47%	19.62%	11.36%	18.91%
34	11.37%	19.26%	11.63%	19.89%	11.52%	19.18%
35	11.53%	19.54%	11.80%	20.17%	11.69%	19.45%
36	11.71%	19.84%	11.97%	20.47%	11.86%	19.74%
37	11.90%	20.16%	12.16%	20.79%	12.05%	20.06%
38	12.08%	20.48%	12.34%	21.10%	12.23%	20.36%
39	12.26%	20.78%	12.51%	21.39%	12.41%	20.65%
40	12.41%	21.03%	12.65%	21.63%	12.55%	20.89%

EXHIBIT III – MEMBER CONTRIBUTION RATES (CONTINUED)

Safety Tier 2 Members' Contribution Rates Based on the December 31, 2018 Actuarial Valuation (as a % of monthly payroll)

	Plan F (OCFA)		Plan F (Law Enforcement)		Plan F (Probation)	
Entry Age	Normal	Total	Normal	Total	Normal	Total
41	12.52%	21.22%	12.75%	21.80%	12.65%	21.06%
42	12.59%	21.33%	12.80%	21.89%	12.71%	21.16%
43	12.60%	21.35%	12.79%	21.87%	12.71%	21.16%
44	12.56%	21.29%	12.72%	21.76%	12.66%	21.07%
45	12.44%	21.08%	12.57%	21.49%	12.52%	20.83%
46	12.21%	20.69%	12.28%	21.00%	12.25%	20.39%
47	11.77%	19.95%	11.77%	20.13%	11.77%	19.59%
48	12.14%	20.58%	12.14%	20.77%	12.14%	20.21%
49	12.54%	21.24%	12.54%	21.43%	12.54%	20.86%
50	12.54%	21.24%	12.54%	21.43%	12.54%	20.86%
51	12.54%	21.24%	12.54%	21.43%	12.54%	20.86%
52	12.54%	21.24%	12.54%	21.43%	12.54%	20.86%
53	12.54%	21.24%	12.54%	21.43%	12.54%	20.86%
54	12.54%	21.24%	12.54%	21.43%	12.54%	20.86%
55	12.54%	21.24%	12.54%	21.43%	12.54%	20.86%
56	12.54%	21.24%	12.54%	21.43%	12.54%	20.86%
57	12.54%	21.24%	12.54%	21.43%	12.54%	20.86%
58	12.54%	21.24%	12.54%	21.43%	12.54%	20.86%
59	12.54%	21.24%	12.54%	21.43%	12.54%	20.86%
60	12.54%	21.24%	12.54%	21.43%	12.54%	20.86%
COLA Loading:		*69.47%*		*71.00%*		*66.44%*

Interest:	7.00% per annum
Mortality:	See *Section 4, Exhibit I*
Salary Increase:	Inflation (2.75%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit I*)
Additional Cashouts:	See *Section 4, Exhibit I*

EXHIBIT III – MEMBER CONTRIBUTION RATES (CONTINUED)

Safety Tier 2 Members' Contribution Rates Based on the December 31, 2018 Actuarial Valuation (as a % of monthly payroll)

	Plan R (OCFA)		Plan R (Law Enforcement)	
Entry Age	Normal	Total	Normal	Total
15	8.87%	14.24%	9.11%	14.58%
16	8.87%	14.24%	9.11%	14.58%
17	8.99%	14.43%	9.22%	14.77%
18	9.10%	14.62%	9.34%	14.97%
19	9.22%	14.81%	9.47%	15.16%
20	9.35%	15.01%	9.59%	15.36%
21	9.47%	15.21%	9.72%	15.57%
22	9.60%	15.41%	9.85%	15.77%
23	9.73%	15.62%	9.98%	15.98%
24	9.86%	15.83%	10.11%	16.20%
25	10.00%	16.05%	10.25%	16.42%
26	10.13%	16.27%	10.39%	16.64%
27	10.28%	16.50%	10.53%	16.87%
28	10.42%	16.73%	10.68%	17.11%
29	10.57%	16.97%	10.83%	17.35%
30	10.73%	17.22%	10.99%	17.61%
31	10.89%	17.48%	11.15%	17.87%
32	11.05%	17.74%	11.31%	18.12%
33	11.21%	18.00%	11.47%	18.38%
34	11.37%	18.25%	11.63%	18.63%
35	11.53%	18.52%	11.80%	18.89%
36	11.71%	18.80%	11.97%	19.17%
37	11.90%	19.10%	12.16%	19.47%
38	12.08%	19.40%	12.34%	19.76%
39	12.26%	19.69%	12.51%	20.04%
40	12.41%	19.92%	12.65%	20.26%

EXHIBIT III – MEMBER CONTRIBUTION RATES (CONTINUED)

Safety Tier 2 Members' Contribution Rates Based on the December 31, 2018 Actuarial Valuation (as a % of monthly payroll)

	Plan R (OCFA)		Plan R (Law Enforcement)	
Entry Age	Normal	Total	Normal	Total
41	12.52%	20.10%	12.75%	20.42%
42	12.59%	20.21%	12.80%	20.50%
43	12.60%	20.23%	12.79%	20.49%
44	12.56%	20.17%	12.72%	20.38%
45	12.44%	19.97%	12.57%	20.13%
46	12.21%	19.60%	12.28%	19.67%
47	11.77%	18.90%	11.77%	18.85%
48	12.14%	19.50%	12.14%	19.45%
49	12.54%	20.12%	12.54%	20.08%
50	12.54%	20.12%	12.54%	20.08%
51	12.54%	20.12%	12.54%	20.08%
52	12.54%	20.12%	12.54%	20.08%
53	12.54%	20.12%	12.54%	20.08%
54	12.54%	20.12%	12.54%	20.08%
55	12.54%	20.12%	12.54%	20.08%
56	12.54%	20.12%	12.54%	20.08%
57	12.54%	20.12%	12.54%	20.08%
58	12.54%	20.12%	12.54%	20.08%
59	12.54%	20.12%	12.54%	20.08%
60	12.54%	20.12%	12.54%	20.08%
COLA Loading:		*60.55%*		*60.17%*

Interest: 7.00% per annum

Mortality: See *Section 4, Exhibit I*

Salary Increase: Inflation (2.75%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit I*)

Additional Cashouts: See *Section 4, Exhibit I*

EXHIBIT III – MEMBER CONTRIBUTION RATES (CONTINUED)

Safety CalPEPRA Members' Contribution Rates Based on the December 31, 2018 Actuarial Valuation (as a % of monthly payroll)

	Rate Group 6 (Plan V)		Rate Group 7 (Plan V)		Rate Group 8 (Plan V)	
Entry Age	Normal	Total	Normal	Total	Normal	Total
15	9.72%	13.83%	10.75%	15.38%	9.00%	12.95%
16	9.72%	13.83%	10.75%	15.38%	9.00%	12.95%
17	9.84%	14.01%	10.89%	15.58%	9.12%	13.12%
18	9.97%	14.19%	11.03%	15.79%	9.24%	13.29%
19	10.10%	14.37%	11.18%	15.99%	9.36%	13.47%
20	10.23%	14.56%	11.32%	16.20%	9.48%	13.64%
21	10.37%	14.75%	11.47%	16.41%	9.60%	13.82%
22	10.50%	14.94%	11.62%	16.63%	9.73%	14.00%
23	10.64%	15.14%	11.78%	16.85%	9.86%	14.19%
24	10.78%	15.34%	11.93%	17.07%	9.99%	14.37%
25	10.92%	15.54%	12.09%	17.29%	10.12%	14.56%
26	11.07%	15.75%	12.25%	17.52%	10.25%	14.75%
27	11.22%	15.96%	12.41%	17.76%	10.39%	14.95%
28	11.37%	16.17%	12.58%	17.99%	10.53%	15.15%
29	11.52%	16.39%	12.75%	18.24%	10.67%	15.36%
30	11.68%	16.61%	12.92%	18.48%	10.82%	15.56%
31	11.84%	16.84%	13.10%	18.74%	10.96%	15.78%
32	12.00%	17.07%	13.28%	18.99%	11.11%	15.99%
33	12.17%	17.31%	13.46%	19.26%	11.27%	16.22%
34	12.34%	17.56%	13.65%	19.53%	11.43%	16.45%
35	12.52%	17.81%	13.85%	19.81%	11.59%	16.68%
36	12.70%	18.07%	14.05%	20.10%	11.76%	16.93%
37	12.89%	18.34%	14.26%	20.40%	11.94%	17.18%
38	13.08%	18.62%	14.48%	20.71%	12.12%	17.44%
39	13.28%	18.89%	14.69%	21.02%	12.30%	17.70%
40	13.47%	19.17%	14.91%	21.32%	12.48%	17.96%
41	13.66%	19.44%	15.12%	21.63%	12.66%	18.21%
42	13.87%	19.73%	15.34%	21.95%	12.85%	18.48%

EXHIBIT III – MEMBER CONTRIBUTION RATES (CONTINUED)

Safety CalPEPRA Members' Contribution Rates Based on the December 31, 2018 Actuarial Valuation (as a % of monthly payroll)

	Rate Group 6 (Plan V)		Rate Group 7 (Plan V)		Rate Group 8 (Plan V)	
Entry Age	Normal	Total	Normal	Total	Normal	Total
43	14.08%	20.04%	15.58%	22.29%	13.05%	18.77%
44	14.32%	20.37%	15.84%	22.66%	13.26%	19.08%
45	14.55%	20.70%	16.10%	23.03%	13.47%	19.39%
46	14.77%	21.01%	16.34%	23.38%	13.68%	19.68%
47	14.95%	21.27%	16.54%	23.66%	13.85%	19.93%
48	15.10%	21.48%	16.70%	23.90%	13.98%	20.12%
49	15.19%	21.61%	16.81%	24.04%	14.07%	20.24%
50	15.22%	21.65%	16.84%	24.09%	14.10%	20.28%
51	15.19%	21.61%	16.81%	24.04%	14.07%	20.25%
52	15.07%	21.44%	16.68%	23.86%	13.96%	20.09%
53	14.82%	21.09%	16.40%	23.46%	13.73%	19.76%
54	14.35%	20.41%	15.88%	22.71%	13.29%	19.13%
55	14.80%	21.06%	16.38%	23.43%	13.71%	19.73%
56 & Over	15.28%	21.74%	16.91%	24.18%	14.15%	20.37%
COLA Loading:		*42.28%*		*43.06%*		*43.90%*

Interest: 7.00% per annum

Mortality: See *Section 4, Exhibit I*

Salary Increase: Inflation (2.75%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit I*)

It is our understanding that in the determination of pension benefits under the CalPEPRA 2.7% at 57 formula, the compensation that can be taken into account for 2019 is equal to $149,016 (reference: Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2019 (reference: Section 7522.10(d)).

EXHIBIT IV – FUNDED PERCENTAGES BY RATE GROUP

The funded percentages on a valuation value of assets basis by rate group provided for informational purposes only are as follows:

	December 31, 2018 Valuation	December 31, 2017 Valuation
General Members		
Rate Group #1 – Plans A, B and U (non-OCTA, non-OCSD)	80.75%	80.19%
Rate Group #2 – Plans I, J, O, P, S, T, U and W (County et al.)	70.14%	70.12%
Rate Group #3 – Plans B, G, H and U (OCSD)[1]	98.91%	100.00%
Rate Group #5 – Plans A, B and U (OCTA)	75.00%	75.74%
Rate Group #9 – Plans M, N and U (TCA)	74.02%	74.76%
Rate Group #10 – Plans I, J, M, N and U (OCFA)	80.62%	76.08%
Rate Group #11 – Plans M and N, future service, and U (Cemetery)	99.65%	97.16%
Rate Group #12 – Plans G, H, future service, and U (Law Library)	97.84%	99.87%
Safety Members		
Rate Group #6 – Plans E, F and V (Probation)	70.34%	69.20%
Rate Group #7 – Plans E, F, Q, R and V (Law Enforcement)	69.67%	69.30%
Rate Group #8 – Plans E, F, Q, R and V (OCFA)	78.70%	79.03%

(1) Reflects asset transfers of $14,589,000 and $24,042,000 as of December 31, 2018 and December 31, 2017, respectively, from O.C. Sanitation District UAAL Deferred Account to valuation assets.

EXHIBIT V – RECONCILIATION OF EMPLOYER CONTRIBUTION RATES BY RATE GROUP

The reconciliation of the employer contribution rates for the General Rate Groups #1 to #5 are as follows:

	RG #1[1]	RG #2	RG #3	RG #5
Average Recommended Employer Contribution as of December 31, 2017 (before adjustments for phase-in)	19.92%	37.38%	12.27%	30.25%
• Effect of three-year phase-in of UAAL cost impact due to changes in actuarial assumptions	(1.69%)	(2.38%)	0.00%	(2.32%)
Average Recommended Employer Contribution as of December 31, 2017 (after adjustments for phase-in)	18.23%[2]	35.00%	12.27%	27.93%
• Effect of investment loss (after smoothing)	0.56%	0.87%	1.15%	0.84%
• Effect of additional UAAL contributions from Cypress Parks and Recreation and OCFA and anticipated payments from DOE and UCI	(0.33%)	0.00%	0.00%	0.00%
• Effect of $14.6 million asset transfer from O.C. Sanitation District UAAL Deferred Account	0.00%	0.00%	(1.41%)	0.00%
• Effect of difference in actual versus expected contributions (including loss from phase-in)	0.36%	0.52%	0.15%	0.53%
• Effect of difference in actual versus expected COLA increases	0.04%	0.08%	0.09%	0.09%
• Effect of difference in actual versus expected salary increases	(0.36%)	(0.47%)	(0.10%)	0.09%
• Effect of growth in total payroll greater than expected	(0.19%)	0.01%	0.00%	0.13%
• Effect of other experience (gain)/loss[3],[4]	(0.27%)	0.16%	0.83%	(0.24%)
• Effect of three-year phase-in of UAAL cost impact due to changes in actuarial assumptions	0.85%	1.19%	0.00%	1.16%
Total change	0.66%	2.36%	0.71%	2.60%
Average Recommended Employer Contribution as of December 31, 2018	18.89%[5]	37.36%	12.98%	30.53%

(1) Liability associated with Vector Control has been excluded in determining rates for Rate Group #1.

(2) As of December 31, 2017, the net contribution rate for County and IHSS Public Authority after reflecting Board's UAAL contribution rate policies for Cypress Parks and Recreation, U.C.I. and DOE is 14.95% after adjustment for phase-in.

(3) Net of an adjustment to reflect 18-month delay between date of valuation and date of rate implementation for all actuarial experience.

(4) Effect of other experience (gain)/loss for Rate Group #3 includes: 0.38% due to payee mortality losses.

(5) As of December 31, 2018, the net contribution rate for County and IHSS Public Authority after reflecting Board's UAAL contribution rate policy for Cypress Parks and Recreation, U.C.I. and DOE is 15.40% after adjustment for phase-in.

EXHIBIT V – RECONCILIATION OF EMPLOYER CONTRIBUTION RATES BY RATE GROUP (CONTINUED)

The reconciliation of the employer contribution rates for the General Rate Groups #9 to #12 are as follows:

	RG #9	RG #10	RG #11	RG #12
Average Recommended Employer Contribution as of December 31, 2017 (before adjustments for phase-in)	25.61%	30.74%	13.45%	13.33%
• Effect of three-year phase-in of UAAL cost impact due to changes in actuarial assumptions	(1.25%)	(1.88%)	(0.96%)	0.00%
Average Recommended Employer Contribution as of December 31, 2017 (after adjustments for phase-in)	24.36%	28.86%	12.49%	13.33%
• Effect of investment loss (after smoothing)	0.60%	0.83%	0.75%	1.18%
• Effect of additional UAAL contributions from Cypress Parks and Recreation and OCFA and anticipated payments from DOE and UCI	0.00%	(2.63%)	0.00%	0.00%
• Effect of $14.6 million asset transfer from O.C. Sanitation District UAAL Deferred Account	0.00%	0.00%	0.00%	0.00%
• Effect of difference in actual versus expected contributions (including loss from phase-in)	0.21%	0.03%	0.33%	(0.14%)
• Effect of difference in actual versus expected COLA increases	0.06%	0.10%	0.03%	0.05%
• Effect of difference in actual versus expected salary increases	0.22%	(0.04%)	(1.70%)	(0.66%)
• Effect of growth in total payroll greater than expected	0.88%	0.22%	0.04%	0.00%
• Effect of other experience (gain)/loss[(1),(2)]	0.61%	(0.31%)	(0.31%)	1.53%
• Effect of three-year phase-in of UAAL cost impact due to changes in actuarial assumptions	0.63%	0.94%	0.48%	0.00%
Total change	3.21%	(0.86%)	(0.38%)	1.96%
Average Recommended Employer Contribution as of December 31, 2018	27.57%	28.00%	12.11%	15.29%

(1) Net of an adjustment to reflect 18-month delay between date of valuation and date of rate implementation for all actuarial experience.

(2) Effect of other experience (gain)/loss for Rate Group #9 includes: 0.19% due to change in contribution delay adjustment. Rate Group #12 includes: 1.25% due to retirement loss for one member with a substantial amount of benefit based on the member's age and service at OCERS.

EXHIBIT V – RECONCILIATION OF EMPLOYER CONTRIBUTION RATES BY RATE GROUP (CONTINUED)

The reconciliation of the employer contribution rates for the Safety Rate Groups are as follows:

	RG #6	RG #7	RG #8
Average Recommended Employer Contribution as of December 31, 2017 (before adjustments for phase-in)	56.33%	65.72%	48.10%
• Effect of three-year phase-in of UAAL cost impact due to changes in actuarial assumptions	(4.26%)	(3.71%)	(2.29%)
Average Recommended Employer Contribution as of December 31, 2017 (after adjustments for phase-in)	52.07%	62.01%	45.81%
• Effect of investment loss (after smoothing)	1.16%	1.40%	1.27%
• Effect of additional UAAL contributions from Cypress Parks and Recreation and OCFA and anticipated payments from DOE and UCI	0.00%	0.00%	(0.73%)
• Effect of $14.6 million asset transfer from O.C. Sanitation District UAAL Deferred Account	0.00%	0.00%	0.00%
• Effect of difference in actual versus expected contributions (including loss from phase-in)	1.05%	0.42%	0.06%
• Effect of difference in actual versus expected COLA increases	0.07%	0.14%	0.13%
• Effect of difference in actual versus expected salary increases	(1.47%)	0.08%	0.92%
• Effect of growth in total payroll greater than expected	0.96%	(0.44%)	(0.38%)
• Effect of other experience (gain)/loss[1],[2]	(0.60%)	(0.22%)	0.37%
• Effect of three-year phase-in of UAAL cost impact due to changes in actuarial assumptions	2.13%	1.85%	1.15%
Total change	3.30%	3.23%	2.79%
Average Recommended Employer Contribution as of December 31, 2018	55.37%	65.24%	48.60%

(1) Net of an adjustment to reflect 18-month delay between date of valuation and date of rate implementation for all actuarial experience.

(2) Effect of other experience (gain)/loss for Rate Group #6 includes: -0.45% due to change in contribution delay adjustment.

EXHIBIT VI – RECONCILIATION OF UAAL BY RATE GROUP

The reconciliation of UAAL for the General Rate Groups #1 to #5 are as follows ($ in '000s):

		RG #1	RG #2	RG #3	RG #5
1	Unfunded Actuarial Accrued Liability at beginning of year	$95,943	$3,271,320	$0	$222,244
2	Total Normal Cost at middle of year	16,726	264,995	17,002	22,725
3	Expected employer and member contributions	(24,742)	(538,587)	(17,002)	(41,484)
4	Interest	6,519	224,614	0	15,418
5	Expected Unfunded Actuarial Accrued Liability at end of year	$94,446	$3,222,342	$0	$218,903
6	Changes due to:				
	a) Investment losses (on smoothed value of assets)	$6,920	$138,109	$11,899	$12,442
	b) Difference in actual versus expected contributions (including loss from phase-in)	4,442	81,756	1,500	7,863
	c) Additional UAAL payments from Cypress Parks and Recreation and OCFA and anticipated payments from DOE and UCI	(4,047)	0	0	0
	d) Transfer from O.C. Sanitation District UAAL Deferred Account	0	0	(14,589)	0
	e) Difference in actual versus expected salary increases	(4,473)	(73,793)	(1,042)	1,296
	f) Difference in actual versus expected COLA increases	513	12,980	968	1,348
	g) Other experience (gain)/loss[(1)]	(1,345)	48,521	9,017	(631)
	Total changes	$2,010	$207,573	$7,753	$22,318
7	Unfunded Actuarial Accrued Liability at end of year	$96,456	$3,429,915	$7,753	$241,221

(1) Effect of other experience (gain)/loss for Rate Group #3 includes: $3.9 million due to payee mortality losses.

EXHIBIT VI – RECONCILIATION OF UAAL BY RATE GROUP (CONTINUED)

The reconciliation of UAAL for the Safety Rate Groups are as follows ($ in ‘000s):

		RG #9	RG #10	RG #11	RG #12
1	Unfunded Actuarial Accrued Liability at beginning of year	$11,115	$55,160	$281	$13
2	Total Normal Cost at middle of year	1,752	6,689	360	308
3	Expected employer and member contributions	(2,684)	(11,392)	(384)	(308)
4	Interest	758	3,705	23	1
5	Expected Unfunded Actuarial Accrued Liability at end of year	$10,941	$54,162	$280	$14
6	Changes due to:				
	a) Investment losses (on smoothed value of assets)	$599	$3,186	$174	$181
	b) Difference in actual versus expected contributions (including loss from phase-in)	210	111	75	(21)
	c) Additional UAAL payments from Cypress Parks and Recreation and OCFA and anticipated payments from DOE and UCI	0	(10,058)	0	0
	d) Transfer from O.C. Sanitation District UAAL Deferred Account	0	0	0	0
	e) Difference in actual versus expected salary increases	217	(144)	(391)	(102)
	f) Difference in actual versus expected COLA increases	60	397	6	8
	g) Other experience (gain)/loss	363	(426)	(108)	153
	Total changes	$1,449	$(6,934)	$(244)	$219
7	Unfunded Actuarial Accrued Liability at end of year	$12,390	$47,228	$36	$233

EXHIBIT VI – RECONCILIATION OF UAAL BY RATE GROUP (CONTINUED)

The reconciliation of UAAL for the General Rate Groups #9 to #12 are as follows ($ in ‘000s):

		RG #6	RG #7	RG #8
1	Unfunded Actuarial Accrued Liability at beginning of year	$255,122	$1,181,694	$345,410
2	Total Normal Cost at middle of year	25,703	99,669	52,393
3	Expected employer and member contributions	(46,850)	(196,748)	(81,507)
4	Interest	17,748	80,423	23,333
5	Expected Unfunded Actuarial Accrued Liability at end of year	$251,723	$1,165,038	$339,629
6	Changes due to:			
	a) Investment losses (on smoothed value of assets)	$10,430	$48,313	$23,655
	b) Difference in actual versus expected contributions (including loss from phase-in)	9,491	14,417	1,095
	c) Additional UAAL payments from Cypress Parks and Recreation and OCFA and anticipated payments from DOE and UCI	0	0	(13,569)
	d) Transfer from O.C. Sanitation District UAAL Deferred Account	0	0	0
	e) Difference in actual versus expected salary increases	(13,206)	2,710	17,020
	f) Difference in actual versus expected COLA increases	675	4,868	2,456
	g) Other experience (gain)/loss	656	(979)	9,275
	Total changes	$8,046	$69,329	$39,932
7	Unfunded Actuarial Accrued Liability at end of year	$259,769	$1,234,367	$379,561

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A-3

Memorandum

DATE: June 17, 2019

TO: Members of the Board of Retirement

FROM: Steve Delaney, Chief Executive Officer

SUBJECT: **REQUEST FROM CITY OF SAN JUAN CAPISTRANO REGARDING RATE GROUP POOLING**

Recommendation:

1. That the Board determine that if the City San Juan Capistrano transfers its Water Department employees to a separate special district, then the Board would find that a triggering event will have occurred under the Policy; and

2. That the Board find that exigent circumstances exist under the Policy such that the City may remain pooled in Rate Group 2, provided that the City makes an additional payment of $6.5 million in a lump sum or level dollar installments.

Background:

On May 20, 2019 the City of San Juan Capistrano [City] asked the Board to consider the actions it might take if the City were to transfer some of the City's employees in the Water Department who are covered under OCERS to a special district covered under CalPERS. [See attached staff memo of May 10, 2019]

In working with Segal, it was determined that a transfer of the Water Department would lead to a decline in the City's OCERS-covered payroll and a corresponding shift of some of the City's pension liabilities to other employers participating in the same rate sharing pool (Rate Group 2). The present value of that shift in liability was tentatively calculated at approximately $5.3 million based on a list of the affected employees provided by the City in 2018.

The County of Orange, as the primary employer in Rate Group 2, objected to any possible Board-approved outcome that would lead to the City's liabilities being shifted to other employers.

The backdrop to this discussion was the Board's *Declining Payroll* policy [Policy], which in Section 5 addresses actions such as that contemplated by the City, referencing such an action as a "triggering event" that could result in a decision by the Board to depool the employer in response. [Policy attached.]

In May, the Board considered three possible outcomes if the City were to transfer the Department employees:

1. As suggested by the Policy, depool the City, so that any liability implications would remain the City's alone; or
2. [Alternative 1] Allow the City to remain in Rate Group 2, and spread the $5.3 million in liability proportionately among all the participating rate group employers; or

3. [Alternative 2] Allow the City to remain in Rate Group 2, but require the City to pay an additional premium to prevent the $5.3 million shift in liability so as to inoculate other participating employers from the impact of the City's proposed movement of the Department.

As more fully explained in the Board's materials in May, the Policy, by its terms, is intended to establish guidelines, and not strict rules, "by which OCERS intends to assure that an employer who experiences an actual or expected material decline in the payroll attributable to its active members will continue to satisfy its obligation to timely pay all unfunded actuarial liability attributable to the employer's active, retired and deferred employees and their beneficiaries by reason of their prior and future service as OCERS' members." The Policy further provides that "*[a]bsent exigent circumstances or unless otherwise expressly approved by the Board of Retirement at a duly-noticed public meeting*, the procedures and guidelines for implementing this Policy are set forth below." (Emphasis added.)

Section 5 of the Policy states that it "covers only those employers for whom the Board determines, based on a recommendation from OCERS' Chief Executive Officer (CEO), that a *triggering event* as described in this section 4 (sic) has occurred *and* who are not excluded from coverage under this Policy as described in section 5 (sic) and 6 below." (Emphasis in original.) Accordingly, pursuant to the Policy, the Board must (1) determine whether a triggering event as described in the Policy has occurred, and (2) confirm that the employer is not excluded from coverage under the Policy.

The first step of the process is outlined in Section 9 of the Policy, which states that "upon recommendation from the CEO and notice to the affected participating employer, the Board will make a determination at a duly-noticed public meeting regarding (i) whether a triggering event has occurred for the employer…"

From discussion at the Board meeting in May, it appeared the Board would likely conclude the City's proposed action to be a "triggering event" under the Policy, but the Board did not believe depooling was warranted in this scenario where the City would continue as a viable, financially strong, active OCERS participating governmental entity, adding additional personnel, into the future. Trustee comments also indicated the Board considers pooling of participating employers as an important actuarial tool to mitigate against contribution rate volatility. As more fully explained in the materials for the May Board meeting, if the Board determines that the transfer contemplated by the City would be a triggering event under the Policy, the Board has very broad discretion (under the California Constitution, statute and the Policy) to further determine whether the employer should be excluded from coverage under the Policy – that is, whether the employer should remain pooled in light of exigent circumstances.

The OCERS Board ultimately took no action on May 20. The Board instead indicated that it wanted this issue to return on June 17, 2019 with the following two possible options for consideration:

1. Find that if the City transfers the Department it will be a triggering event under the Policy, and determine the City would be depooled; or
2. Find that if the City transfers the Department it will be a triggering event under the Policy, but the City would remain pooled in Rate Group 2 provided the City pays a premium to ensure there would be no cost impact to any other participating employer.

The Board encouraged the County and the City to work together to agree on the amount of premium that would be acceptable to all parties, including the other employers in Rate Group 2.

Discussion:

Working with Segal, it was first determined that the actual present value of the liabilities that would be left unsupported by the City's reduced OCERS-covered payroll would be $6,264,000, an increase over the earlier $5.3 million figure due to an increase in the final number of employees who were identified by the City in 2019 as moving in the event of a Department transfer.

An updated presentation by Segal related to *San Juan Capistrano Rate Group Pooling* (*Second Meeting*) is attached. While the Segal report indicates that payment of the $6,264,000 present value amount is all that is "actuarially necessary," the report also shares some possibilities of an additional premium amount beyond that figure such as had been suggested by Trustee Ball on May 20 when speaking for many on the Board in encouraging the participating employers to discuss what would make them accept a Board decision to keep the City in Rate Group 2 even after a movement of the Department out of City employment.

The Segal presentation was discussed in detail with both City representatives on Friday, June 7, as well as in separate discussions with County representatives. Looking to Slide 12 of the presentation, both the City and the County indicated they could accept the $6.5 million figure, which would provide some additional premium protection to other participating employers from future changes in assumptions that might have led to additional shared costs due to the Department departure.

Conclusion:

At the June 17 Board meeting, I will ask the Board to make two motions:

1. If the City transfers its Water Department employees to a separate special district, then the Board will find that a triggering event has occurred under the Policy; and

2. The Board finds that exigent circumstances exist under the Policy such that the City may remain pooled in Rate Group 2, provided that the City makes an additional payment of $6.5 million in a lump sum or level dollar installments.

Attached:

May 10, 2019 Staff Memo

OCERS Declining Payroll Policy

San Juan Capistrano Rate Group Pooling – PowerPoint Presentation by Segal Consulting

Submitted by:

Steve Delaney
Chief Executive Officer

Memorandum

DATE: May 10, 2019

TO: Members of the Board of Retirement

FROM: Steve Delaney, Chief Executive Officer

SUBJECT: **REQUEST FROM CITY OF SAN JUAN CAPISTRANO REGARDING RATE GROUP POOLING**

Recommendation:

That the Board determine (1) whether the City of San Juan Capistrano's (City) proposed transfer of the City's Water Department would be considered a triggering event under the Declining Employer Payroll Policy (Policy); and (2) whether application of the Policy to the City should be modified to reflect the City's unique or exigent circumstances.

Background/Discussion

The City of San Juan Capistrano (City) is considering detaching the City Water Department (Department) and transferring 13 employees to a water special district. (The City also expects an additional 5 employees to retire and 1 employee to terminate. Those numbers are based on a preliminary list[1] of employees provided in 2018) Though the Capistrano Valley Water District and the City merged nearly two decades ago, the City has determined that cost savings and improved services would be possible for its citizens if a special district whose sole purpose and expertise are to oversee water services were to take over the Department.

The Department employees would retain OCERS service credit for their service up to the point of separation, and would be covered by CalPERS thereafter. The City would continue to be liable for the service and ultimate retirement benefits related to the employment of those 13 departing employees, 5 retiring and 1 terminating employees.

Based on the results from the December 31, 2017 valuation, if the transfer takes place, the City's workforce will decline from 81 to 62 staff (23% decrease in staff), and its annual OCERS covered payroll will decrease from $8.0 million to $6.2 million (22% decrease in payroll).

The City is presently pooled for contribution purposes with five other employers -- the County of Orange, the Children and Families Commission, the Local Agency Formation Commission, Superior Courts, and OCERS (direct employees).

[1] The City has recently amended the list of employees but a new study to reflect the updated employees and associated liabilities is still pending.

With a reduced covered payroll, the City would have a reduced basis for paying the contributions that fund the pension liabilities already accrued. That is because contributions toward the Unfunded Actuarial Accrued Liability (UAAL) are allocated among the pooled employers in proportion to payroll.

DECLINING PAYROLL POLICY

In June 2015, the OCERS Board adopted the Declining Employer Payroll Policy (Policy). [See attached.] The purpose of the Policy, as stated in Section 1 of the Policy, is as follows:

1. A participating employer in the Orange County Employees Retirement System (OCERS) may experience an actual or expected material decline in the payroll attributable to its OCERS' active members (OCERS-covered payroll). The Declining Employer Payroll Policy is intended to establish guidelines by which OCERS intends to assure that such employer will continue to satisfy its obligation to timely pay all unfunded actuarial accrued liability (UAAL) attributable to the employer's active, retired and deferred employees and their beneficiaries by reason of their prior and future service as OCERS' members.

By its terms, the Policy is intended to establish guidelines, and not strict rules, by which OCERS intends to assure that an employer who experiences an actual or expected material decline in the payroll attributable to its active members will continue to satisfy its obligation to timely pay all unfunded actuarial liability attributable to the employer's active, retired and deferred employees and their beneficiaries by reason of their prior and future service as OCERS' members. The Policy further provides that "*[a]bsent exigent circumstances or unless otherwise expressly approved by the Board of Retirement at a duly-noticed public meeting*, the procedures and guidelines for implementing this Policy are set forth below." (Emphasis added.)

Section 5 of the Policy states that it "covers only those employers for whom the Board determines, based on a recommendation from OCERS' Chief Executive Officer (CEO), that a *triggering event* as described in this section 4 (sic) has occurred *and* who are not excluded from coverage under this Policy as described in section 5 (sic) and 6 below." (Emphasis in original.) Accordingly, pursuant to the Policy, the Board must (1) determine whether a triggering event as described in the Policy has occurred, and (2) confirm that the employer is not excluded from coverage under the Policy.

Section 5(b) of the Policy identifies one of the triggering events to include:

> *Triggering event resulting from a material and expected long-lasting reduction in OCERS-covered payroll.* Some employers may experience a material reduction in their OCERS-covered payroll, but nevertheless continue to enroll their new hires with OCERS. The reduction may be sudden (*e.g.*, due to a discrete event such as a partial loss of funding, or partial outsourcing), or it may be more gradual, over a period of years, and might not be tied to a discreet event. Generally, the Board would determine that this type of triggering event has occurred only if the Board expects that the reduction in employer's OCERS-covered payroll is expected to be permanent, long-lasting or for an indefinite period of time that is greater than a cycle that the employer may typically experience, or a cycle similarly experienced by the other employers, if any, in the same OCERS' rate group. Generally, by its nature, the determination whether this type of triggering event has occurred is more subjective than that described in subparagraph a) immediately above.

DETERMINE IF A TRIGGERING EVENT WOULD OCCUR

The first step in this process is outlined in Section 9 of the Policy, which states that "upon recommendation from the CEO and notice to the affected participating employer, the Board will make a determination at a duly-noticed public meeting regarding (i) whether a triggering event has occurred for the employer…"

In this case, the event has not yet occurred, but the City desires to know what actions the Board would take were the City to proceed with the transfer of the Department to another governmental entity.

As CEO, I believe the City's contemplated transfer of the Department employees to a local special district, which would result in a reduction in the number of the City's employees from 81 to 62, with a corresponding reduction in OCERS covered payroll from $8.0 million to $6.2 million, would meet the definition of a triggering event under Section 5(b) of the Policy.

The Board must determine whether it concurs with the CEO's recommendation that the City's proposed transfer of the Department would be considered a triggering event under the Policy.

DETERMINE IF THE CITY WOULD BE COVERED BY THIS POLICY

If the Board determines that the transfer contemplated by the City would be a triggering event under the Policy, then Section 9 of the Policy requires the Board to further determine "… (ii) whether the employer should be excluded from coverage under this Policy…"

Sections 6 and 7 of the Policy define the express exclusions from coverage of the Policy and appear to set out circumstances where application of the Policy would subvert the stated intention of the Policy to assure that an employer with a declining payroll will continue to satisfy its pension obligations. That is, employers who are not financially-viable entities when a triggering event occurs and who are not expected to continue indefinitely thereafter to be financially-viable entities are specifically excluded from the Policy. As stated in Section 6, the Policy expressly excludes the situation where an employer is going out of business by reason of dissolution, loss of funding, consolidation or merger (unless there is a surviving financially-viable entity that is acceptable to the Board that will make the ongoing payments under the Policy). The Policy also does not cover a "withdrawing employer" who ceases to provide OCERS membership for *all* of the employer's active OCERS members (*i.e.*, as of a date certain, withdraws both new hires and existing actives from membership with OCERS).

Because it appears that the City is both financially viable and is expected to continue to be financially viable in the future, the City would not be expressly excluded from coverage under the Policy. However, the Board retains the discretion to determine that the Policy should not apply or that application of the Policy to the City should be modified in light of the City's exigent circumstances.

Under the California Constitution, the Board has plenary authority and fiduciary responsibility for administration of the retirement system and broad authority over sound actuarial funding of employee retirement benefits. This broad authority was recently confirmed by the California Court of Appeal for the Fourth Appellate District in

Al Mijares et al., v. Orange County Employees' Retirement System (G055439; Super. Ct. No. 30-2016-00836897; ordered published 2/15/2019). The Policy sets forth guidelines, not strict rules, and expressly acknowledges that the Board has broad discretion to find that exigent circumstances exist, or to otherwise conclude that different procedures or a result other than those set forth in the Policy are warranted. This discretion should be informed by the objectives of the Policy, which include (i) ensuring equitable and adequate funding of UAAL in cases involving employers with declining payrolls, (ii) approving procedures for identifying employers who should be subject to the Policy, (iii) approving a different methodology for determining any UAAL attributable to such employers and setting the amount and schedule of the contributions needed to fund such UAAL and (iv) ensuring that the employer remains liable and must make the required appropriations and transfers to OCERS for its share of liabilities attributable to its officers and employees who are and may be entitled to receive retirement, disability and related benefits from OCERS. (Policy, Sections 2 and 3.)

If the Policy applies without modification, then it suggests that an employer must be depooled in order to immunize other participating employers in the pool from the cost impact of the triggering event.

Section 10 of the Policy states:

> If the Board determines that a triggering event has occurred and the employer is not excluded from coverage under the Policy, then, solely for the purposes of determining the covered employer's UAAL contribution obligation, OCERS will segregate on its books all assets and liabilities attributable to the employer, based upon the recommendation of OCERS' actuary, and shall maintain such separate accounting for the employer until all of the participating employer obligations to OCERS have been fully satisfied.

Therefore, if the Board determines that the transfer of the Department employees would be a triggering event, and that in that case the best course of action would be to depool the City from Rate Group 2 in order to isolate the financial impact of such an action to the City alone, then the Board should also determine that the City would not be excluded from coverage under the *Declining Payroll Policy*.

The City would argue that pools, which spread the impact of both costs and savings among all participants, are by their nature imperfect vehicles that offer protection against volatility to all participants, while not necessarily providing cost exactitude to each. For that reason, and noting the costly impact of depooling upon the City's contribution rate, and lack of further pooling protections against rate volatility brought on by unexpected risks such as employee disabilities, the City requests that rather than concluding that a strict application of the Policy would require the City to be depooled, that the Board instead exercise its broad discretion and consider other alternatives.

In discussions with the City two alternatives to depooling have been identified. Segal has reviewed both as outlined below and concluded both are actuarially sound.

ALTERNATIVE ONE – CITY REMAINS IN THE POOL

The City's stated preference is to be allowed to remain in the pool with the cost impact shared with all pool participants. The City notes all participants of the Rate Group 2 pool presently share the cost impact of voluntary actions taken by other pool participants, such as larger than assumed pay raises, without requiring depooling due to such actions.

Staff believes the Board has the discretion to conclude that the Policy is not intended to ***require*** depooling of an employer under the circumstances presented by the City. I would note however a counterargument to the City's request as expressed by other pool participants, namely that pools are generally designed to protect against unexpected risks such as disabilities, rather than protection against a planned cost reduction such as the City's contemplated transfer of the Department.

If the City were allowed to remain in the Rate Group 2 pool after the transfer, Segal would then reflect the reduction in the City's payroll as of the December 31, 2017 valuation, and the UAAL contribution rate for most employers in Rate Group 2 would increase by 0.04% of payroll (the UAAL rate for the Children and Family Commission would increase by 0.01%).

The Board could conclude that the four basis points (4 bps) impact to the other employers in Rate Group 2 is mitigated by the smoothing of costs and savings that inherently occur when different governmental bodies with differing goals and objectives are pooled, such that the City could be allowed to remain in Rate Group 2. Segal will however present data showing how those four basis points translate in actual dollar impact upon each of the Rate Group 2 pool participants

ALTERNATIVE TWO – REMAIN POOLED WITH ADDITIONAL CONTRIBUTIONS

Alternatively, the Board could conclude that the City could be allowed to remain in Rate Group 2 provided that the City pays a premium to cover the additional contributions that would otherwise be shifted to the other employers in the pool. Under this option, no change to the contribution rate for Rate Group 2 would occur. No additional cost would be attributed to the pool or paid for by those other participants. Instead, the City would pay its required unadjusted Rate Group 2 contribution on what would then be a reduced payroll, but would be assessed an additional contribution to be paid solely by the City to cover the cost impact of the unfunded liabilities no longer being financed due to the reduced covered payroll.

There is an important caveat to this alternative however. It is truly a one-time measurement, based on costs known at the time of the proposed transfer of the Department. Segal has cautioned that it would not be possible to do a "true up" in future years based on possible future changes to actuarial assumptions or actual experience with the departed group of the Department employees.

CONCLUSION

Since all three approaches - depooling; Alternative 1: pooling without conditions; and Alternative 2: pooling with additional payment by the City - are actuarially sound, the question before the Board is one of policy, equity and good governance; and the Board may choose any of the three courses of action within the exercise of its fiduciary duty to administer the retirement system and broad authority to ensure sound actuarial funding of employee retirement benefits.

Submitted by:

Steve Delaney

Steve Delaney
Chief Executive Officer

OCERS Board Policy

Declining Employer Payroll Policy

Purpose and Background

1. A participating employer in the Orange County Employees Retirement System (OCERS) may experience an actual or expected material decline in the payroll attributable to its OCERS' active members (OCERS-covered payroll). The Declining Employer Payroll Policy is intended to establish guidelines by which OCERS intends to assure that such employer will continue to satisfy its obligation to timely pay all unfunded actuarial accrued liability (UAAL) attributable to the employer's active, retired and deferred employees and their beneficiaries by reason of their prior and future service as OCERS' members.

Background and Objectives

2. As a general rule, under OCERS' practice in place prior to the adoption of this Declining Payroll Policy, OCERS determined employers' contribution obligations for UAAL by applying a contribution rate determined by OCERS' actuary to the employer's OCERS-covered payroll (the percentage-of-payroll methodology). For employers whose payrolls are generally consistent with OCERS actuarial assumptions regarding payroll growth, the percentage-of-payroll methodology continues to be appropriate. But for employers whose OCERS-covered payroll is declining, or is expected to decline, materially over time, the Board of Retirement has determined that the percentage-of-payroll methodology is not the appropriate means of collecting employer contributions owed to the system. The objectives of this Declining Employer Payroll Policy are to (i) to ensure equitable and adequate funding of UAAL in cases involving employers with declining payrolls, (ii) approve procedures for identifying employers who should be subject to this Policy, and (iii) approve a different methodology for determining any UAAL attributable to such employers and setting the amount and schedule of the contributions needed to fund such UAAL. This Policy does *not* change the methodology regarding how contributions for "normal cost" are determined for participating employers.
3. Generally, the objectives of this Policy also are to ensure compliance with County Employees Retirement Law of 1937, California Government Code sections 31450 et seq., as amended, and other applicable provisions of law. Pursuant to Gov't. Code sections 31453, 31453.5, 31581, 31582, 31584, 31585, 31586 and other applicable provisions of law, a participating employer remains liable, and must make the required appropriations and transfers, to OCERS for the district's share of liabilities attributable to its officers and employees who are and may be entitled to receive retirement, disability and related benefits from OCERS.
4. It is the Board of Retirement's intent to allow an employer covered by this Policy to satisfy its funding obligation in a manner which provides the employer reasonable flexibility; however, primary consideration will be given to ensuring the adequacy of the assets attributable to the employer to satisfy the employer's funding obligations. This will generally require redetermination of the funding obligations of the employer for several years.

Policy Procedures and Guidelines

Absent exigent circumstances or unless otherwise expressly approved by the Board of Retirement at a duly-noticed public meeting, the procedures and guidelines for implementing this Policy are set forth below.

Commencement of Coverage – Triggering Events

5. This Policy covers only those employers for whom the Board determines, based on a recommendation from OCERS' Chief Executive Officer (CEO), that a *triggering event* as described in this section 4 has occurred *and* who are not excluded from coverage under this Policy as described in sections 5 and 6 below. The Board hereby directs the CEO to work with OCERS' Internal Audit and other staff, and OCERS' service providers (*e.g.,* the actuary) to obtain the information (*e.g.,* OCERS-covered payroll history) needed for the Board to make determinations regarding triggering events. The CEO is further directed to report to the Board, at least annually, regarding these activities.

   a. *Triggering event resulting from ceasing to enroll new hires.* Some OCERS' participating employers cease to enroll new hires with OCERS but, for a period of time, continue to have at least some previously-enrolled employees maintaining their status as active OCERS members. These employers' OCERS-covered payroll will eventually diminish to zero as their active employees retire or otherwise terminate employment. Examples of employers in this category may include an employer that is acquired by another entity that is not an OCERS participating employer, or an OCERS employer that is taken over by a state agency whose employees are covered by another pension system such as CalPERS. There may be other examples as well.

   b. *Triggering event resulting from a material and expected long-lasting reduction in OCERS-covered payroll.* Some employers may experience a material reduction in their OCERS-covered payroll, but nevertheless continue to enroll their new hires with OCERS. The reduction may be sudden (*e.g.*, due to a discrete event such as a partial loss of funding, or partial outsourcing), or it may be more gradual, over a period of years, and might not be tied to a discreet event. Generally, the Board would determine that this type of triggering event has occurred only if the Board expects that the reduction in employer's OCERS-covered payroll is expected to be permanent, long-lasting or for an indefinite period of time that is greater than a cycle that the employer may typically experience, or a cycle similarly experienced by the other employers, if any, in the same OCERS' rate group. Generally, by its nature, the determination whether this type of triggering event has occurred is more subjective than that described in subparagraph a) immediately above.

Exclusions from Coverage; Terminations of Coverage

6. This Policy also covers *only* those employers (i) who are financially-viable entities when a triggering event occurs, *and* (ii) whom OCERS expects to continue indefinitely thereafter to be financially-viable entities. This Policy does not cover any other situation, including, without limitation, an employer going out of business by reason of dissolution, loss of funding, consolidation or merger (unless there is a surviving financially-viable entity that is acceptable to the Board that will make the ongoing payments under the Policy). This Policy also does not cover a "withdrawing employer" who ceases to provide OCERS membership for *all* of the employer's active OCERS members (*i.e.*, as of a date certain, withdraws both new hires and existing actives from membership with OCERS).

7. The Board of Retirement also recognizes that participating employers covered by this Policy will have UAAL funding obligations for several years. Therefore, if concerns arise during that period of time regarding the employer's ongoing existence as a financially-viable entity, the Board may

remove the employer from coverage under this Policy and/or take any other measures that may be available to ensure the actuarial soundness of the retirement system including, without limitation, assessing the projected entire amount of the employer's UAAL (as recommended by the fund's actuary and approved by the Board) using a lower discount rate and payable in a single sum immediately due.

Procedures

8. The CEO will (i) work with OCERS' Internal Audit and other staff, OCERS' service providers (*e.g.,* the actuary), and OCERS' participating employers to obtain the information (*e.g.*, OCERS-covered payroll history, financial reports) needed for the Board to make determinations regarding triggering events and exclusions from, or terminations of, coverage and (ii) report to the Board, at least annually, regarding these activities.

9. Upon a recommendation from the CEO and notice to the affected participating employer, the Board will make a determination at a duly-noticed public meeting regarding (i) whether a triggering event has occurred for the employer, (ii) whether the employer should be excluded from coverage under this Policy, and (iii) for those employers that the Board has previously determined to be covered under the Policy, whether their coverage should be terminated under section 6 above. Employers may be required to provide OCERS with updated employee census and payroll data and financial reports. *See* Gov't. Code section 31543.

10. If the Board determines that a triggering event has occurred and the employer is not excluded from coverage under the Policy, then, solely for purposes of determining the covered employer's UAAL contribution obligation, OCERS will segregate on its books all assets and liabilities attributable to the employer, based upon the recommendation of OCERS' actuary, and shall maintain such separate accounting for the employer until all of the participating employer's obligations to OCERS have been fully satisfied.

11. OCERS' actuary will determine, and certify to the Board of Retirement, the covered employer's funding obligation for its initial UAAL, which obligation shall not be pro-rata based on payroll, but rather based on the employer's actuarial accrued liability (AAL) including inactives. The Board may determine to require the employer's contributions to be paid in level, fixed-dollar amounts over a period not to exceed twenty (20) years, beginning on July 1 of the calendar year immediately after the year in which the triggering event occurs.

12. The actuary will use the actuarial valuation performed for OCERS as of the end of the calendar year immediately prior to the calendar year in which the triggering event occurs (and based on all of OCERS' then current actuarial assumptions and methodologies) to determine the initial valuation value of assets (VVA), a smoothed value, allocated to the covered employer. That initial VVA will be a pro-rata allocation based on the employer's AAL (*i.e.,* based on the employer's initial UAAL allocation determined in accordance with section 10 above). Later values of the VVA (i.e., those used in the future valuations described below) shall be determined by rolling forward the initial VVA, adding contributions, deducting benefit payments, and crediting earnings at the actual smoothed (VVA) earnings rate on total OCERS assets.

13. Annually, after the determination of the covered employer's initial funding obligation, as part of the regular annual actuarial valuation of the plan, OCERS' actuary will measure any change in the UAAL

of the participating employer due to actuarial experience or changes in actuarial assumptions. In addition to the amortized payments for the covered employer's initial UAAL funding obligation determined as of the initial valuation, the employer will be liable for, and must contribute to OCERS, any such new UAAL determined as of subsequent valuations, based upon an amortization schedule recommended by the actuary and adopted by the Board of Retirement. OCERS will hold any negative UAAL (Surplus) to be applied against any future UAAL of the covered employer.

14. If any Surplus remains after the covered employer has satisfied *all* of its UAAL obligations (Final Surplus), OCERS will distribute the Final Surplus in accordance with the terms of applicable law.

Policy Review

15. The Board of Retirement will review this Policy at least every three (3) years to ensure that it remains relevant and appropriate.

Policy History

16. The Board of Retirement adopted this Policy on June 15, 2015.

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

6/15/15

Steve Delaney
Secretary of the Board

Date

Segal Consulting

Orange County Employees Retirement System (OCERS)

San Juan Capistrano Rate Group Pooling (Second Meeting)

June 17, 2019

Andy Yeung, ASA, EA, MAAA, FCA

Segal Consulting

5585010v4

Calculating Contributions and Liability for City of San Juan Capistrano (SJC)

➢ Valuation as of December 31, 2017

- SJC contribution rates for FY 2019/2020 are developed on a pooled basis with other employers in Rate Group 2
- SJC pays same normal cost (NC, employer and employee) and unfunded actuarial accrued liability (Unfunded AAL or UAAL) rates paid by other employers
  - Only exceptions are Plan S (2.0% @ 57) and Plan W (1.62% @ 65) where SJC is the only employer
  - UAAL rates are lower for some employers to reflect additional UAAL contributions made or future service only improvement adopted for legacy plans

➢ With pooling for SJC

- Normal cost rates are developed without reflecting specific entry age profile of SJC employees
- UAAL rate is developed without reflecting specific SJC proportion of active payroll and AAL compared to other employers
- Some subsidies for SJC compared to standalone normal cost and UAAL rates developed using SJC specific employee profile and actuarial accrued liability
- More stable NC and UAAL rates

Spinoff of Some Utility Employees at SJC

➢ SJC is considering a spinoff of utility workers at City

- Some utility employees will leave SJC and new employer will enroll those employees in CalPERS
  - Future service benefits paid by CalPERS
  - Past service benefits (with reciprocity) paid by OCERS
- Some utility employees will be terminated or retired from SJC
- Some utility (and all non-utility) employees will be retained by SJC

➢ Segal recommends using results from December 31, 2017 valuation to study impact of spinoff on OCERS

- Spinoff could take place in 2019/2020
  - And 2019/2020 contribution rates are set using December 31, 2017 valuation
- Even before considering spinoff, slight decrease in SJC active headcount and total payroll between December 31, 2017 and December 31, 2018 valuations

Spinoff of Some Utility Employees at SJC

- Segal has been asked to provide contributions and liability impacts
  - Illustrative results discussed at May Board meeting
    - Based on preliminary list of utility employees provided by SJC in late 2018
    - About 22% reduction of SJC total payroll used in 12/31/2017 valuation
  - Updated results prepared for current meeting
    - Based on amended list of employees provided by SJC in 2019
    - About 26% reduction of SJC total payroll used in 12/31/2017 valuation
- How should contributions and liability be calculated upon the spinoff?
  - Payroll for utility employees expected to leave, terminate or retire amount to about 26% of SJC total payroll as of December 31, 2017 data

Costs are Potentially Affected by Three Events

- First, even without the spinoff, SJC's current pooled Rate Group 2 rates are lower than they would be if SJC was in its own Rate Group
  - SJC actives have higher average entry age than Rate Group 2 so SJC's NC rate would increase
  - SJC has relatively more retirees compared to all of Rate Group 2, so SJC's AAL and UAAL rate would increase
  - Removing these "subsidies" by depooling would materially increase SJC's rates, and slightly reduce rates for the other employers
- Second, as part of the spinoff some SJC utility employees will terminate or retire earlier than expected
  - This increases the AAL and UAAL rate, whether pooled or not
- Third, the spinoff reduces SJC's payroll by $2,105,000 or 26%
  - Materially reduces SJC's share of the pooled UAAL payment
    - This last effect is the reason for the Declining Employer Payroll Policy
  - Rate Group 2 payroll of about $1.1 billion decreases by about 0.19%.
    - UAAL rate for other employers will increase by 0.05% of payroll if no additional UAAL payment made by SJC

SJC Contributions and Liability Upon Spinoff

➢ Two choices Board is considering (narrowed from three discussed in May)

Action 1: Depool SJC from the rest of the employers in Rate Group 2

- SJC pays increased depooled NC and UAAL rates in new rate group
- Other employers pay slightly decreased NC and UAAL rates

Action 2: SJC remains in pool in Rate Group 2 and only SJC pays for change in UAAL rate

- SJC pays pooled NC and UAAL rates in Rate Group 2 based on reduced SJC payroll
- SJC makes additional payment so total value of UAAL contributions is same as before the reduction in SJC payroll
  - This offsets (avoids) increase in UAAL contribution rate for other employers by 0.05% of payroll

SJC Contributions and Liability Upon Spinoff

Action 2: SJC remains in pool in Rate Group 2 and only SJC pays for change in UAAL rate - continued

- Discussion at May Board Meeting
  - Amount used to set SJC's additional payment is measured only once
  - SJC would pay a smaller proportion of future UAAL changes if more conservative assumptions are adopted or OCERS experiences actuarial losses
  - Board suggested SJC negotiate with County and other Rate Group 2 employers on whether an extra amount should be included as margin
    - » With assistance from Segal on possible basis for such margin

SJC Contribution and Liability Upon Spinoff ($000) (Based on Amended List of Utility Employees)

	12/31/17 Valuation Results (Pooled and Before Spinoff)		12/31/17 Valuation Results (Depooled and Before Spinoff)		Action 1 Depooled and After Spinoff		Action 2 SJC Remains in Pool & SJC Makes Additional UAAL Payment	
	Rate	Contr	Rate	Contr	Rate	Contr	Rate	Contr
Er NC	11.67%	$930	12.68%	$1,011	12.37%	$726	11.31%	$664
Er UAAL[1]	22.67%	$1,808	26.28%	$2,096	39.33%	$2,309	22.67% (2)(3)	$1,331 (2)
Total	34.34%	$2,738	38.96%	$3,107	51.70%	$3,035	33.98% (2)	$1,995 (2)
Payroll		$7,975		$7,975		$5,870		$5,870
[1] Present Value UAAL payments		$23,884		$26,962		$28,478		$17,620 plus additional $6,264 equals $23,884

[2] Plus additional UAAL payment of $23,884,000 - $17,620,000 = $6,264,000, in either single sum or installments

[3] Without the additional UAAL payment in (2), UAAL rate for other employers in Rate Group 2 would increase by 0.05% of payroll

SJC Contribution and Liability Upon Spinoff

- **Action 1 - Depool SJC from rest of employers in Rate Group 2**
  - Remove current subsidy received by SJC from pooled NC and UAAL rates
  - Increase in employer SJC NC rates to reflect specific profile of SJC employees
    - **From 11.67% (pooled) to 12.68% (depooled) to 12.37% (after spinoff)**
    - CalPEPRA Tier Member NC rates also increase
  - Apply Board's Declining Employer Payroll Policy to allocate assets to SJC in new rate group based on SJC's proportion of AAL within cost group
    - Increase in SJC UAAL rates from 22.67% to 26.28% before spinoff
    - Also increase in SJC UAAL rates to reflect additional $1.5 million AAL due to SJC utility employees terminating or retiring earlier than expected
    - **UAAL payment (000s): $1,808 (pooled); $2,096 (depooled); $2,309 (spinoff)**
    - Assuming continued use of level percent of payroll to amortize UAAL
- Other employers pay slightly decreased NC and UAAL rates
  - Total rate decrease of about 0.03% of pay due to removing subsidy to SJC

SJC Contribution and Liability Upon Spinoff

➢Action 2: SJC remains in pool in Rate Group 2 and only SJC pays change in UAAL rate

- Allows SJC to continue to receive current subsidies implicit in pooled NC and UAAL rates for Rate Group 2
  - SJC also retains advantages of pooled demographic experience and contribution rate stability
- No change in SJC NC rates (employer and employee) under each plan or formula
  - Change in aggregate normal cost rate is only from change in number of members in various plans after spinoff
- Increase in UAAL rate (0.05% of pay) that other employers would otherwise pay is paid only by SJC
  - No change in UAAL rates for other employers in Rate Group 2.
- SJC makes additional payment(s) so total value of SJC's UAAL contributions is same as before the reduction in SJC payroll
- Present value of additional UAAL payments for SJC is $6,264,000
  - Paid in lump sum or level dollar installments
  - For example, 20 level installments of about $600,000 per year

SJC Contribution and Liability Upon Spinoff

➢ Action 2 (Continued)

- Discussion at May Board Meeting
  - $6,264,000 used to set SJC's additional payment is measured only once
  - SJC would pay smaller proportion of any contingent future UAAL contributions if

    (A) OCERS experiences actuarial losses

    (B) The Board adopts more conservative assumptions
  - Should an extra amount (margin) be paid by SJC?
  - Segal is not too concerned with (A) because OCERS could experience actuarial gains and/or SJC's may increase staff and payroll in future years
  - With (B), hard to predict what future assumptions may be adopted the Board
- Rather than trying to anticipate all possible assumption changes, OCERS could base margin on impact of a change in just the earnings assumption rate
  - For example, could use change from 7.00% down to 6.50% as basis for margin

SJC Contribution and Liability Upon Spinoff

➢ Action 2 (Continued)

- Possible extra amount (margin) based on 6.50% earnings assumption
  - AAL for all employers in Rate Group 2: Increase by $0.747 billion
    - » From $10.948 billion to $11.695 billion (6.8% increase)
  - UAAL for all employers in Rate Group 2: Increase by $0.747 billion
    - » From $3.271 billion to $4.018 billion (22.8% increase, note UAAL leverage)
  - $0.747 billion in additional UAAL would have been allocated in proportion to payroll and funded by all employers in Rate Group 2
  - Additional UAAL allocated to SJC using payroll before and after spinoff:
    - » Before spinoff: $5,453,000 allocated to SJC
    - » After spinoff: $4,021,000 allocated to SJC
    - » Possible additional SJC "margin" payment: $1,432,000
- Segal not recommending this or any margin as actuarially necessary
- Other possibilities to adjust the $6,264,000 amount for some margin, as suggested by OCERS Board on May 20
  - Round up to $6,500,000
  - Add an arbitrary margin like 5% ($6,577,000) or 10% ($6,890,000)

A-4

ORANGE COUNTY OCERS EMPLOYEES RETIREMENT SYSTEM

Memorandum

DATE: June 06, 2019

TO: Members, Board of Retirement

FROM: Brenda Shott, Assistant CEO, Finance and Internal Operations; Tracy Bowman, Director of Finance

SUBJECT: **2018 AUDITED FINANCIAL STATEMENTS AND COMPREHENSIVE ANNUAL FINANCIAL REPORTS**

Recommendation

Approve the following recommendations presented to the Audit Committee during a meeting held on June 6, 2019:

1. Approve OCERS' audited financial statements for the year ended December 31, 2018
2. Direct staff to finalize OCERS' 2018 Comprehensive Annual Financial Report (CAFR)
3. Approve the Governmental Accounting Standards Board (GASB) Statement 67 Actuarial Valuation as of December 31, 2018
4. Receive and file Macias, Gini & O'Connell LLP's (MGO) "OCERS' Report to the Audit Committee for the Year Ended December 31, 2018" and their "Independent Auditor's Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards*"

Background/Discussion

The attached draft of OCERS' 2018 CAFR, including the audited financial statements and related notes for the year ended December 31, 2018, are considered to be in substantially final form and include the unmodified (clean) audit opinion from MGO, OCERS' independent auditors. The audited financial statements and related notes are included in the Financial Section of OCERS' 2018 CAFR.

The attached Governmental Accounting Standards Board (GASB) Statement 67 Actuarial Valuation as of December 31, 2018 is used for reporting purposes and is separate and distinct from the funding actuarial valuation. This valuation has been audited by MGO and contains necessary information and schedules that have been incorporated into Note 8 and the Required Supplementary Information sections of OCERS' 2018 CAFR in compliance with GASB Statement No. 67, *Financial Reporting for Pension Plans*.

As part of the normal course of an annual financial statement audit, MGO has issued their "Report to the Audit Committee" that includes the required communications of the independent auditors, comments and recommendations based on their 2018 audit of OCERS and the status of prior year comments and recommendations reported to the Audit Committee related to their 2017 audit of OCERS (which there were none). MGO has also issued an "Independent Auditor's Report on Internal Control over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements, Performed in Accordance with Government Auditing Standards."

California's Government Code Section 7504 requires all state and local retirement agencies, including OCERS, to submit annual financial information to the State Controller within six months of the end of the fiscal year end. The State Controller's Office (SCO) has an automated system to allow retirement systems to provide the prescribed report containing specific financial and plan information to the SCO (this report is referred to as the State Controller's Report). In addition to the State Controller's Report, OCERS is also required to submit the annual audited financial statements and the most current funding actuarial valuation. Once the Board approves the financial statements for the year ended December 31, 2018, staff will file a timely submission of the State Controller's Report and submit OCERS' 2018 CAFR and the Actuarial Valuation (for funding purposes) as of December 31, 2017 by the deadline of June 30, 2019.

Submitted by:

Tracy Bowman
Director of Finance

Approved by:

Brenda M Shott

Brenda Shott
Asst. CEO, Finance & Internal Operations

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ORANGE COUNTY OCERS EMPLOYEES RETIREMENT SYSTEM

2018 Audited Financial Statements

Presented on June 17, 2019

by

Brenda Shott and Tracy Bowman

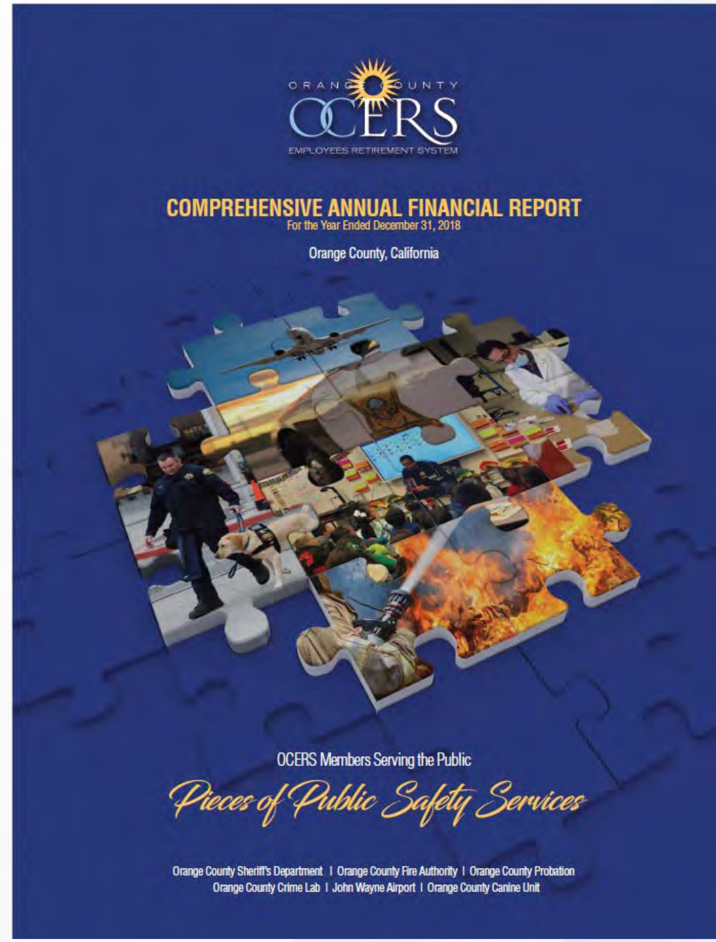
Recommendation

Approve the following recommendations presented to the Audit Committee during a meeting held on June 6, 2019:

1. Approve OCERS' audited financial statements for the year ended December 31, 2018
2. Direct staff to finalize OCERS' 2018 Comprehensive Annual Financial Report (CAFR)
3. Approve the Governmental Accounting Standards Board (GASB) Statement 67 Actuarial Valuation as of December 31, 2018
4. Receive and file Macias, Gini & O'Connell LLP's (MGO) "OCERS' Report to the Audit Committee for the Year Ended December 31, 2018" and their "Independent Auditor's Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with Government Auditing Standards"

2018 CAFR

- Theme: OCERS Members Serving the Public
  - Pieces of Public Safety Services
- Preliminary unaudited financial statements provided to the Board in February
  - No material changes reflected in final audited version included in the CAFR
- No new GASB reporting requirements implemented during 2018



"We provide secure retirement and disability benefits with the highest standards of excellence."

ORANGE COUNTY OCERS EMPLOYEES RETIREMENT SYSTEM

Financial Highlights – MD&A

- Net position totaled $14.8 billion, a decrease of $0.3 billion from the prior year
  - ➢ Net investment losses were -$331.2 million, or -1.67% vs. a net return of 14.51% in the prior year
  - ➢ Employee and employer contributions for pension and health care added $908 million

- Increases in deductions include member pension benefit payments of $814 million, an increase of 8.5% or $64 million from the prior year

Table 2 : Changes in Fiduciary Net Position

For the Years Ended December 31, 2018 and 2017

(Dollars in Thousands)

	12/31/2018	12/31/2017	Increase / (Decrease)	Percentage Change
Additions				
Employer Pension Contributions	$ 580,905	$ 572,104	$ 8,801	1.5%
Employer Health Care Contributions	57,056	62,244	(5,188)	-8.3%
Employee Pension Contributions	270,070	262,294	7,776	3.0%
Net Investment Income/(Loss)	(331,206)	1,978,871	(2,310,077)	-116.7%
Total Additions	**576,825**	**2,875,513**	**(2,298,688)**	-79.9%
Deductions				
Participant Benefits - Pension	813,775	749,784	63,991	8.5%
Participant Benefits - Health Care	38,367	36,020	2,347	6.5%
Death Benefits	570	694	(124)	-17.9%
Member Withdrawals and Refunds	13,933	13,866	67	0.5%
Administrative Expenses - Pension	18,284	17,002	1,282	7.5%
Administrative Expenses - Health Care	50	49	1	2.0%
Total Deductions	**884,979**	**817,415**	**67,564**	8.3%
Increase/(Decrease) in Net Position Restricted for Pension and Other Postemployment Benefits	(308,154)	2,058,098	**(2,366,252)**	-115.0%
Net Position Restricted for Pension and Other Postemployment Benefits				
Beginning of the Year	15,135,949	13,077,851		
End of the Year	**$ 14,827,795**	**$ 15,135,949**		

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Financial Highlights – MD&A (continued)

Table 3 : Membership Data
As of December 31, 2018 and 2017

	12/31/2018	12/31/2017	Increase/ (Decrease)	Percentage Change
Active Members	21,929	21,721	208	1.0%
Retired Members	17,674	16,947	727	4.3%
Deferred Members	6,026	5,803	223	3.8%
Total Membership	**45,629**	**44,471**	**1,158**	2.6%

- Increases in member pension benefit payments can be attributed to an increase in the number of retirees receiving a benefit
  - Number of retirees increased by 4.3% or 727, for a total of 17,674 payees as of December 31, 2018
  - The average benefit paid to retired members and beneficiaries during 2018 was $46,044 vs. $44,243 in 2017

Financial Highlights – MD&A (continued)

- CAFR includes information from the December 31, 2017 funding valuation, which is the most currently available information at the time the CAFR is completed
  - Funding status based on actuarial value of assets (which smooths market gains and losses over five years) was 72.30% versus 74.62% if market gains and losses were recognized immediately
  - In comparison, in the December 31, 2018 funding valuation to be presented at the June Board meeting, the funding status based on actuarial value of assets was 72.40% versus 69.30% if market gains and losses were recognized immediately

ORANGE COUNTY
OCERS
EMPLOYEES RETIREMENT SYSTEM

Note 1 – Pension Plan Membership

OCERS Membership - General Members

As of December 31, 2018

Rate Group	Benefit Plan	Tier	Active Vested	Active Non-Vested	Retired Members & Beneficiaries	Deferred Members	Total
1	A	I	3	-	358	1	362
1	B	II	763	10	411	280	1,464
1	U	II-PEPRA	139	698	2	235	1,074
Rate Group 1 Total			**905**	**708**	**771**	**516**	**2,900**
2	A	I	-	-	3,050	11	3,061
2	B	II	-	-	1,918	723	2,641
2	I	I	27	-	1,137	-	1,164
2	J	II	9,419	153	5,384	2,301	17,257
2	P	II	169	20	5	86	280
2	S	II	6	10	-	6	22
2	T	II-PEPRA	395	3,853	2	912	5,162
2	U	II-PEPRA	21	193	-	39	253
2	W	II-PEPRA	-	1	-	-	1
Rate Group 2 Total			**10,037**	**4,230**	**11,496**	**4,078**	**29,841**
3	A	I	-	-	87	1	88
3	B	II	43	13	62	38	156
3	G	I	1	-	29	-	30
3	H	II	350	-	308	54	712
3	U	II-PEPRA	20	189	-	24	233
Rate Group 3 Total			**414**	**202**	**486**	**117**	**1,219**
4	H	II	-	-	1	-	1
Rate Group 4 Total			**-**	**-**	**1**	**-**	**1**
5	A	II	3	-	382	3	388
5	B	II	977	64	1,020	526	2,587
5	U	II-PEPRA	1	234	-	61	296
Rate Group 5 Total			**981**	**298**	**1,402**	**590**	**3,271**
9	A	I	-	-	4	-	4
9	B	II	-	-	10	11	21
9	N	II	29	2	39	42	112
9	U	II-PEPRA	1	30	1	9	41
Rate Group 9 Total			**30**	**32**	**54**	**62**	**178**
10	A	I	-	-	8	-	8
10	B	II	-	-	40	9	49
10	I	I	-	-	16	-	16
10	J	II	133	-	119	85	337
10	N	II	17	21	1	13	52
10	U	II-PEPRA	6	97	1	71	175
Rate Group 10 Total			**156**	**118**	**185**	**178**	**637**
11	A	I	-	-	4	-	4
11	B	II	-	-	3	-	3
11	N	II	18	-	2	2	22
11	U	II-PEPRA	-	7	-	-	7
Rate Group 11 Total			**18**	**7**	**9**	**2**	**36**
12	A	I	-	-	2	-	2
12	B	II	-	-	3	2	5
12	H	II	12	-	7	2	21
12	U	II-PEPRA	-	2	-	-	2
Rate Group 12 Total			**12**	**2**	**12**	**4**	**30**
Total General Members			**12,553**	**5,597**	**14,416**	**5,547**	**38,113**

OCERS Membership - Safety Members

As of December 31, 2018

Rate Group	Benefit Plan	Tier	Active Vested	Active Non-Vested	Retired Members & Beneficiaries	Deferred Members	Total
6	C	I	-	-	89	-	89
6	D	II	-	-	45	35	80
6	E	I	-	-	45	-	45
6	F	II	705	3	211	179	1,098
6	V	II-PEPRA	6	50	-	8	64
Rate Group 6 Total			**711**	**53**	**390**	**222**	**1,376**
7	C	I	-	-	474	-	474
7	D	II	-	-	260	46	306
7	E	I	-	-	283	-	283
7	F	II	1,126	-	1,119	86	2,331
7	R	II	378	12	2	27	419
7	V	II-PEPRA	89	422	2	20	533
Rate Group 7 Total			**1,593**	**434**	**2,140**	**179**	**4,346**
8	C	I	-	-	25	-	25
8	D	II	-	-	69	5	74
8	E	I	-	-	17	-	17
8	F	II	700	1	616	46	1,363
8	R	II	23	72	1	7	103
8	V	II-PEPRA	19	173	-	20	212
Rate Group 8 Total			**742**	**246**	**728**	**78**	**1,794**
Total Safety Members			**3,046**	**733**	**3,258**	**479**	**7,516**
Grand Total			**15,599**	**6,330**	**17,674**	**6,026**	**45,629**

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GASB 67

- GASB 67 Valuation is prepared by Segal for ***reporting purposes only***
  - Information is incorporated into the Notes (Note 8) and Required Supplementary Information sections of the CAFR
  - Total Pension Liability (TPL) is based on rolling forward the TPL from the 2017 valuation to the December 31, 2018 measurement date
- 2018 Net Pension Liability (NPL) increased from $4.9 billion to $6.2 billion, primarily due to lower than expected actuarial returns
  - 2018 NPL is amount used in GASB 68 proportionate share calculation

Conclusion

Questions?

Please refer to the OCERS website at
https://www.ocers.org/sites/default/files/file-attachments/2018cafr.pdf

to view the final version of the 2018 audited financial statements included in the Comprehensive Annual Financial Report for the Fiscal Year Ended December 31, 2018.

Orange County Employees Retirement System

Governmental Accounting Standards Board (GASB) Statement 67
Actuarial Valuation as of December 31, 2018

Segal Consulting

Segal Consulting
180 Howard Street, Suite 1100 San Francisco, CA 94105-6147
T 415.263.8200 www.segalco.com

May 10, 2019

Board of Retirement
Orange County Employees Retirement System
2223 Wellington Avenue
Santa Ana, CA 92701

Dear Board Members:

We are pleased to submit this Governmental Accounting Standards Board (GASB) Statement 67 Actuarial Valuation as of December 31, 2018. It contains various information that will need to be disclosed in order to comply with GASB Statement 67.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the System. The census and financial information on which our calculations were based was prepared by Orange County Employees Retirement System (OCERS). That assistance is gratefully acknowledged.

The measurements shown in this actuarial valuation may not be applicable for other purposes. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and changes in plan provisions or applicable law.

The actuarial calculations were completed under the supervision of Andy Yeung, ASA, MAAA, FCA, Enrolled Actuary. We are members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of our knowledge, the information supplied in the actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board are reasonably related to the experience of and expectations for the System.

We look forward to reviewing this report with you and to answering any questions.

Sincerely,

Segal Consulting, a Member of The Segal Group, Inc.

By:

Paul Angelo, FSA, MAAA, FCA, EA	*Andy Yeung, ASA, MAAA, FCA, EA*
Senior Vice President and Actuary	*Vice President and Actuary*

AW/jl

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SECTION 1

VALUATION SUMMARY

SECTION 2

GASB STATEMENT 67 INFORMATION

Purpose

This report has been prepared by Segal Consulting to present certain disclosure information required by Governmental Accounting Standards Board (GASB) Statement 67 as of December 31, 2018. This valuation is based on:

- The benefit provisions of OCERS, as administered by the Board of Retirement;
- The characteristics of covered active members, inactive vested members, and retired members and beneficiaries as of December 31, 2017, provided by OCERS;
- The assets of the Plan as of December 31, 2018, provided by OCERS;
- Economic assumptions regarding future salary increases and investment earnings adopted by the Board for the December 31, 2018 valuation; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc. adopted by the Board for the December 31, 2018 valuation.

General Observations on GASB 67 Actuarial Valuation

The following points should be considered when reviewing this GASB 67 report:

- The Governmental Accounting Standards Board (GASB) rules only define pension liability and expense for financial reporting purposes, and do not apply to contribution amounts for pension funding purposes. Employers and plans still develop and adopt funding policies under current practices.
- When measuring pension liability GASB uses the same actuarial cost method (Entry Age method) and the same type of discount rate (expected return on assets) as OCERS uses for funding. This means that the Total Pension Liability (TPL) measure for financial reporting shown in this report is determined on generally the same basis as OCERS' Actuarial Accrued Liability (AAL) measure for funding. We note that the same is generally true for the Normal Cost component of the annual plan cost for funding and financial reporting.
- The Net Pension Liability (NPL) is equal to the difference between the TPL and the Plan's Fiduciary Net Position. The Plan's Fiduciary Net Position is equal to the market value of assets and therefore, the NPL measure is very similar to an Unfunded Actuarial Accrued Liability (UAAL) calculated on a market value basis.

- For this report, the reporting dates for the Plan are December 31, 2018 and 2017. The NPL's measured as of December 31, 2018 and 2017 have been determined by rolling forward the TPL as of December 31, 2017 and 2016, respectively. The Plan Fiduciary Net Positions were valued as of the measurement dates. In addition, any changes in actuarial assumptions or plan provisions that occurred between the valuation date and the measurement date have been reflected.

Significant Issues in Valuation Year

The following key findings were the result of this actuarial valuation:

- The NPL increased from $4,952.1 million as of December 31, 2017 to $6,197.2 million as of December 31, 2018 primarily as a result a -2.46%[1] return on the market value of assets during 2018 that was lower than the assumed return of 7.00% of approximately $1,388 million. This loss was offset to some extent by the gains from lower than expected active salary increases and lower than expected retiree COLA increases during 2017 (because liabilities are rolled forward from December 31, 2017 to December 31, 2018, these changes are not reflected until this valuation as of December 31, 2018)[2]. Changes in these values during the last two fiscal years ending December 31, 2018 and December 31, 2017 can be found in Exhibit 3.
- The discount rate used to determine the TPL and NPL as of both December 31, 2018 and 2017 was 7.00% following the same assumption used by the System in the pension funding valuations as of the same dates. The detailed calculation of the discount rate of 7.00% used in the calculation of the TPL and NPL as of December 31, 2018 can be found in Exhibit 5 of Section 2. Various other information that is required to be disclosed can be found throughout Exhibits 1 through 4 in Section 2.
- The Plan's Fiduciary Net Position of $14,801,895,000 as of December 31, 2017 is equal to the final market value of assets in the Pension Trust Fund as of December 31, 2017. This differs from the $14,652,607,000 market value of assets used in our December 31, 2017 funding valuation because the funding valuation excludes $134,417,000 in the

[1] *As documented in the funding valuation report, return on market value was calculated using a modified dollar-weighted approach based on pension plan assets net of accounting liabilities. Actual investment loss on net pension plan assets was $361,321,000 during 2018 after including both the administrative expenses and discount for prepaid contributions while excluding the losses credited to County Investment Account and O.C. Sanitation District UAAL Deferred Account. Without these adjustments, the actual investment loss was $324,628,000.*

[2] *It should be noted that because of the use of roll forward, any difference between actual and expected COLA increases during 2018 would not be reflected until the next valuation as of December 31, 2019.*

County Investment Account and $14,871,000 in O.C. Sanitation District UAAL Deferred Account (after transfer of $24,042,000 required for O.C. Sanitation District to offset UAAL increase for assumption changes).

The Plan's Fiduciary Net Position of $14,481,680,000 as of December 31, 2018 is equal to the final market value of assets in the Pension Trust Fund as of December 31, 2018. This differs from the $14,349,790,000 market value of assets used in our December 31, 2018 funding valuation because the funding valuation excludes $131,890,000 in the County Investment Account. (The balance in the O.C. Sanitation District UAAL Deferred Account as of December 31, 2018 is $0 after transfer of $14,589,000 to offset a portion of the District's UAAL as of December 31, 2018.)

Summary of Key Valuation Results

	December 31, 2018	December 31, 2017
Disclosure elements for plan year ending December 31:		
Service cost[(1)]	$491,372,822	$452,412,003
Total Pension Liability	20,678,882,089	19,753,994,401
Plan's Fiduciary Net Position	14,481,680,000	14,801,895,000
Net Pension Liability	6,197,202,089	4,952,099,401
Schedule of contributions for plan year ending December 31:		
Actuarially determined contributions[(2),(3)]	$556,728,000	$536,726,000
Actual contributions[(2),(3)]	580,905,000	572,104,000
Contribution deficiency (excess)[(4)]	(24,177,000)	(35,378,000)
Demographic data for plan year ending December 31:		
Number of retired members and beneficiaries	17,674	16,947
Number of vested terminated members	6,026	5,803
Number of active members	21,929	21,721
Key assumptions as of December 31:		
Investment rate of return	7.00%	7.00%
Inflation rate	2.75%	2.75%
Projected salary increases[(5)]	General: 4.25% to 12.25% and Safety: 4.75% to 17.25%	General: 4.25% to 12.25% and Safety: 4.75% to 17.25%

(1) *The service cost is based on the previous year's valuation, meaning the 2018 and 2017 values are based on the valuations as of December 31, 2017 and December 31, 2016, respectively. The 2018 service cost has been calculated using the assumptions shown in the December 31, 2017 column and the 2017 service cost has been calculated using the assumptions used in the December 31, 2016 valuation. The key assumptions as of December 31, 2016 are as follows:*

Key assumptions as of December 31, 2016:	
Investment rate of return	7.25%
Inflation rate	3.00%
Projected salary increases*	General: 4.25% to 13.50% and Safety: 5.00% to 17.50%

* Includes inflation at 3.00% plus real across-the-board salary increases of 0.50% plus merit and promotional increases.

(2) *Reduced by discount for prepaid contributions and transfer from County Investment Account, if any.*

(3) *Exclude transfers of $14,589,000 and $24,042,000 from O.C. Sanitation District Deferred UAAL Account required to offset UAAL increase as of December 31, 2018 and December 31, 2017, respectively.*

(4) *Includes additional contributions made by employers toward the reduction of their UAAL. Details are shown in Exhibit 4 of this report.*

(5) *Includes inflation at 2.75% plus real across-the-board salary increases of 0.50% plus merit and promotional increases.*

Important Information about Actuarial Valuations

An actuarial valuation is a budgeting tool with respect to the financing of future projected obligations of a pension plan. It is an estimated forecast – the actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.

In order to prepare an actuarial valuation, Segal Consulting ("Segal") relies on a number of input items. These include:

- **Plan of benefits** Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan description in this report (as well as the plan summary included in our funding valuation report) to confirm that Segal has correctly interpreted the plan of benefits.
- **Participant data** An actuarial valuation for a plan is based on data provided to the actuary by OCERS. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
- **Assets** This valuation is based on the market value of assets as of the measurement date, as provided by OCERS.
- **Actuarial assumptions** In preparing an actuarial valuation, Segal projects the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This projection requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of each participant for each year. In addition, the benefits projected to be paid for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments. The projected benefits are then discounted to a present value, based on the assumed rate of return that is expected to be achieved on the plan's assets. There is a reasonable range for each assumption used in the projection and the results may vary materially based on which assumptions are selected. It is important for any user of an actuarial valuation to understand this concept. Actuarial assumptions are periodically reviewed to ensure that future valuations reflect emerging plan experience. While future changes in actuarial assumptions may have a significant impact on the reported results, that does not mean that the previous assumptions were unreasonable.

The user of Segal's actuarial valuation (or other actuarial calculations) should keep the following in mind:

- The valuation is prepared at the request of the Board to assist OCERS in preparing items related to the pension plan in their financial reports. Segal is not responsible for the use or misuse of its report, particularly by any other party.
- An actuarial valuation is a measurement of the plan's assets and liabilities at a specific date. Accordingly, except where otherwise noted, Segal did not perform an analysis of the potential range of future financial measures. The actual long-term

cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.

- If OCERS is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.
- Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. The Board should look to their other advisors for expertise in these areas.

As Segal Consulting has no discretionary authority with respect to the management or assets of OCERS, it is not a fiduciary in its capacity as actuaries and consultants with respect to OCERS.

EXHIBIT 1

General Information – "Financial Statements", Note Disclosures and Required Supplementary Information for a Cost-Sharing Pension Plan

Plan Description

Plan administration. The Orange County Employees Retirement System (OCERS) was established by the County of Orange in 1945. OCERS is administered by the Board of Retirement and governed by the County Employees' Retirement Law of 1937 (California Government Code Section 31450 et. seq.). OCERS is a cost-sharing multiple employer public employee retirement system whose main function is to provide service retirement, disability, death and survivor benefits to the Safety and General members employed by the County of Orange. OCERS also provides retirement benefits to the employee members of the Orange County Courts, the Orange County Retirement System, two cities and thirteen special districts.

The management of OCERS is vested with the Orange County Board of Retirement. The Board consists of nine members and one alternate. The County Treasurer is a member of the Board of Retirement by law. Four members are appointed by the Board of Supervisors, one of whom may be a County Supervisor. Two members are elected by the General membership; one member and one alternate are elected by the Safety membership, one member is elected by the retired members of the System. All members of the Board of Retirement serve terms of three years except for the County Treasurer whose term runs concurrent with the County Treasurer term.

Plan membership. At December 31, 2018, pension plan membership consisted of the following:

Retired members or beneficiaries currently receiving benefits	17,674
Vested terminated members entitled to, but not yet receiving benefits	6,026
Active members	21,929
Total	45,629

Note: Data as of December 31, 2018 is not used in the measurement of the TPL as of December 31, 2018.

Benefits provided. OCERS provides service retirement, disability, death and survivor benefits to eligible employees. All regular full-time employees of the County of Orange or contracting agencies who work a minimum of 20 hours per week become members of OCERS effective on the first day of employment in an eligible position. There are separate retirement plans for General and Safety member employees. Safety membership is extended to those involved in active law enforcement, fire suppression, and certain probation officers. Any new Safety member who becomes a member on or after January 1, 2013 is designated PEPRA Safety and is subject to the provisions of California Public Employees' Pension Reform Act of 2013 (PEPRA), California Government Code 7522 et seq. All other employees are classified as General members. New General members employed on or after January 1, 2013 are designated as PEPRA General subject to the provisions of California Government Code 7522 et. seq.

General members hired prior to January 1, 2013, including all members of Plan T and Plan W hired on or after January 1, 2013, are eligible to retire once they attain the age of 50 and have acquired ten or more years of retirement service credit. A member with thirty years of service is eligible to retire regardless of age. General members who are first hired on or after January 1, 2013, excluding members of Plan T and Plan W, are eligible to retire once they have attained the age of 52, and have acquired five years of retirement service credit.

Safety members hired prior to January 1, 2013, are eligible to retire once they attain the age of 50 and have acquired ten or more years of retirement service credit. A member with twenty years of service is eligible to retire regardless of age. Safety members who are first hired on or after January 1, 2013, are eligible to retire once they have attained the age of 50, and have acquired five years of retirement service credit.

All General and Safety members can also retire at the age of 70 regardless of service.

The retirement benefit the member will receive is based upon age at retirement, final average compensation, years of retirement service credit and retirement plan and tier.

General member benefits are calculated pursuant to the provisions of Sections 31676.01, 31676.1, 31676.12, 31676.16, 31676.18 or 31676.19. For Section 31676.01, the monthly allowance is equal to 1/90th of final compensation times years of accrued retirement service credit times age factor from that Section. For Section 31676.1, the monthly allowance is equal to 1/60th of final compensation times years of accrued retirement service credit times age factor from that Section. For Sections 31676.12, 31676.16, 31676.18 or 31676.19, the monthly allowance is equal to 1/50th of final compensation times years of accrued retirement service credit times age factor from the corresponding Section. General member benefits for those who are first hired on or after January 1, 2013, excluding members of Plan T and Plan W, are calculated pursuant to the provision of California Government Code Section 7522.20(a). The monthly allowance is equal to the final compensation multiplied by years of accrued retirement credit multiplied by the age factor from Section 7522.20(a).

Safety member benefits are calculated pursuant to the provisions of California Government Code Sections 31664.1 and 31664.2. The monthly allowance is equal to 3% of final compensation times years of accrued retirement service credit times age factor from the corresponding Section. Safety member benefits for those who are first hired on or after January 1, 2013, are calculated pursuant to the provision of California Government Code Section 7522.25(d). The monthly allowance is equal to the final compensation multiplied by years of accrued retirement credit multiplied by the age factor from Section 7522.25(d).

For members with membership dates before January 1, 2013, including all members of Plan T and Plan W hired on or after January 1, 2013, the maximum monthly retirement allowance is 100% of final compensation. There is no maximum for members with membership dates on or after January 1, 2013, excluding members of Plan T and Plan W.

Final average compensation consists of the highest 12 consecutive months for a General Tier 1 or Safety Tier 1 member and the highest 36 consecutive months for a General Tier 2, General PEPRA, Safety Tier 2 or Safety PEPRA member.

The member may elect an unmodified retirement allowance, or choose an optional retirement allowance. The unmodified retirement allowance provides the highest monthly benefit and a 60% continuance to an eligible surviving spouse or domestic partner. An eligible surviving spouse or domestic partner is one married to or registered with the member one year prior to the effective retirement date. Certain surviving spouses or domestic partners may also be eligible if marriage or domestic partnership was at least two years prior to the date of death and the surviving spouse or domestic partner has attained age 55. There are four optional retirement allowances the member may choose. Each of the optional retirement allowances requires a reduction in the unmodified retirement allowance in order to allow the member the ability to provide certain benefits to a surviving spouse, domestic partner, or named beneficiary having an insurable interest in the life of the member.

OCERS provides an annual cost-of-living benefit to all retirees. The cost-of-living adjustment, based upon the Consumer Price Index for All Urban Consumers for the Los Angeles-Long Beach-Anaheim Area, is capped at 3.0%.

The County of Orange and contracting agencies contribute to the retirement plan based upon actuarially determined contribution rates adopted by the Board of Retirement. Employer contribution rates are adopted annually based upon recommendations received from OCERS' actuary after the completion of the annual actuarial valuation. The average employer contribution rate for the first six months of calendar year 2018 or the second half of fiscal year 2017-2018 (based on the December 31, 2015 valuation) was 37.25%[3] of compensation. The average employer contribution rate for the last six months of calendar year 2018 or the first half of fiscal year 2018-2019 (based on the December 31, 2016 valuation) was 36.56%[3] of compensation.

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[3] *These employer contribution rates are higher than the composite rate for 2018 as shown on page 9 of this report because these rates have not been adjusted to reflect any pick-ups or reverse pick-ups. These employer contribution rates also do not reflect the shift in payroll to the lower cost plans from the valuation date to the date of rate implementation.*

All members are required to make contributions to OCERS regardless of the retirement plan or tier in which they are included. The average member contribution rate for the first six months of calendar year 2018 or the second half of fiscal year 2017-2018 (based on the December 31, 2015 valuation) was 12.21%[4] of compensation. The average member contribution rate for the last six months of calendar year 2018 or the first half of fiscal year 2018-2019 (based on the December 31, 2016 valuation) was 12.01%[2] of compensation.

[4] *It should be noted that these member contribution rates provided above have not been adjusted to reflect any pick-ups or reverse pick-ups.*

EXHIBIT 2

Net Pension Liability

The components of the Net Pension Liability as follows:	December 31, 2018	December 31, 2017
Total Pension Liability	$20,678,882,089	$19,753,994,401
Plan's Fiduciary Net Position	(14,481,680,000)	(14,801,895,000)
Net Pension Liability	$6,197,202,089	$4,952,099,401
Plan's Fiduciary Net Position as a percentage of the Total Pension Liability	70.03%	74.93%

The Net Pension Liability (NPL) was measured as of December 31, 2018 and 2017. The Plan's Fiduciary Net Position (plan assets) was valued as of the measurement date while the Total Pension Liability (TPL) was determined based upon rolling forward the TPL from actuarial valuations as of December 31, 2017 and 2016, respectively.

Plan provisions. The plan provisions used in the measurement of the NPL as of December 31, 2018 and 2017 are the same as those used in the OCERS actuarial valuations as of December 31, 2018 and 2017, respectively.

Actuarial assumptions. The TPLs as of December 31, 2018 and 2017 were determined by actuarial valuations as of December 31, 2017 and 2016, respectively. The actuarial assumptions used were based on the results of an experience study for the period from January 1, 2014 through December 31, 2016 and they are the same assumptions used in the December 31, 2018 and 2017 funding valuations for OCERS. In particular, the following actuarial assumptions were applied to all periods included in the measurement:

Inflation	2.75%
Salary increases	General: 4.25% to 12.25% and Safety: 4.75% to 17.25%, vary by service, including inflation
Investment rate of return	7.00%, net of pension plan investment expense, including inflation
Other assumptions	See analysis of actuarial experience during the period January 1, 2014 through December 31, 2016

The long-term expected rate of return on pension plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage, adding expected inflation and subtracting expected investment expenses and a risk margin. The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation but before deducting investment expenses are shown in the following table. This information was used in the derivation of the long-term expected investment rate of return assumption for the December 31, 2018 and 2017 actuarial valuations. This information will change every three years based on the actuarial experience study.

Asset Class	Target Allocation	Long-Term Expected Arithmetic Real Rate of Return
Global Equity	35.0%	6.38%
Core Bonds	13.0%	1.03%
High Yield Bonds	4.0%	3.52%
Bank Loan	2.0%	2.86%
TIPS	4.0%	0.96%
Emerging Market Debt	4.0%	3.78%
Real Estate	10.0%	4.33%
Core Infrastructure	2.0%	5.48%
Natural Resources	10.0%	7.86%
Risk Mitigation	5.0%	4.66%
Mezzanine/Distressed Debts	3.0%	6.53%
Private Equity	8.0%	9.48%
Total	100.0%	

Discount rate: The discount rate used to measure the TPL was 7.00% as of December 31, 2018 and 2017. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the actuarially determined contribution rates. For this purpose, only employer contributions that are intended to fund benefits for current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs for future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments for current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the TPL as of both December 31, 2018 and 2017.

Sensitivity of the Net Pension Liability to changes in the discount rate. The following presents the NPL as of December 31, 2018, calculated using the discount rate of 7.00%, as well as what the NPL would be if it were calculated using a discount rate that is 1-percentage-point lower (6.00%) or 1-percentage-point higher (8.00%) than the current rate:

	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
Net Pension Liability as of December 31, 2018	$9,210,629,685	$6,197,202,089	$3,747,612,367

EXHIBIT 3

Schedule of Changes in OCERS Net Pension Liability – Last Two Plan Years

	2018	2017
Total Pension Liability		
1. Service cost	$491,372,822	$452,412,003
2. Interest	1,379,917,267	1,305,268,322
3. Change of benefit terms	0	0
4. Differences between expected and actual experience	(118,124,401)	(66,963,603)
5. Changes of assumptions	0	827,197,076
6. Benefit payments, including refunds of member contributions	(828,278,000)	(764,344,000)
7. Transfer of members among Rate Groups	0	0
8. Other	0	0
9. Net change in Total Pension Liability	$924,887,688	$1,753,569,798
10. Total Pension Liability – beginning	19,753,994,401	18,000,424,603
11. Total Pension Liability – ending	$20,678,882,089	$19,753,994,401
Plan Fiduciary Net Position		
12. Contributions – employer[(1)]	$580,905,000[(2)]	$572,104,000[(3)]
13. Contributions – plan members	270,070,000	262,294,000
14. Net investment income/(loss)	(324,628,000)	1,939,635,000
15. Benefit payments, including refunds of member contributions	(828,278,000)	(764,344,000)
16. Transfer of members among Rate Groups	0	0
17. Administrative expense	(18,284,000)	(17,002,000)
18. Other	0	0
19. Net change in Plan Fiduciary Net Position	$(320,215,000)	$1,992,687,000
20. Plan Fiduciary Net Position – beginning	14,801,895,000	12,809,208,000
21. Plan Fiduciary Net Position – ending	$14,481,680,000	$14,801,895,000
22. Net Pension Liability – ending (11) – (21)	$6,197,202,089	$4,952,099,401
23. Plan Fiduciary Net Position as a percentage of the Total Pension Liability	70.03%	74.93%
24. Covered payroll[(4)]	$1,718,798,000	$1,678,322,000
25. Plan Net Pension Liability as percentage of covered payroll	360.55%	295.06%

(1) *Reduced by discount for prepaid contributions and transfer from County Investment Account, if any.*

(2) *$14,589,000 transfer from O.C. Sanitation District Deferred UAAL Account required to offset UAAL increase for the actuarial losses as of December 31, 2018 has been excluded from this amount.*

(3) *$24,042,000 transfer from O.C. Sanitation District Deferred UAAL Account required to offset UAAL increase for the assumption changes has been excluded from this amount.*

(4) *Covered payroll represents payroll on which contributions to the pension plan are based.*

EXHIBIT 4

Schedule of Employer Contributions – Last Ten Plan Years

Year Ended December 31	Actuarially Determined Contributions(1),(2)	Contributions in Relation to the Actuarially Determined Contributions(1),(2)	Contribution Deficiency (Excess)	Covered Payroll(3)	Contributions as a Percentage of Covered Payroll(1),(2)
2009	$337,496,000	$338,387,000(4)	$(891,000)	$1,598,888,000	21.16%
2010	372,437,000	372,437,000	0	1,511,569,000	24.64%
2011	387,585,000	387,585,000	0	1,498,914,000	25.86%
2012	406,521,000	406,521,000	0	1,497,475,000	27.15%
2013	426,020,000	427,095,000(5)	(1,075,000)	1,494,745,000	28.57%
2014	476,320,000	625,520,000(6)	(149,200,000)	1,513,206,000	41.34%
2015	502,886,000	571,298,000(7)	(68,412,000)	1,521,036,000	37.56%
2016	521,447,000	567,196,000(8)	(45,749,000)	1,602,675,000	35.40%
2017	536,726,000(9)	572,104,000(9),(10)	(35,378,000)	1,678,322,000	34.09%
2018	556,728,000(11)	580,905,000(11),(12)	(24,177,000)	1,718,798,000	33.80%

(1) *Reduced by transfers from County Investment Account (funded by pension obligation proceeds held by OCERS). Those transfers are as follows:*

Plan Year Ended December 31	*Transfers from County Investment Account*	*Plan Year Ended December 31*	*Transfers from County Investment Account*
2009	*$34,900,000*	*2014*	*$5,000,000*
2010	*11,000,000*	*2015*	*0*
2011	*11,000,000*	*2016*	*0*
2012	*5,500,000*	*2017*	*0*
2013	*5,000,000*	*2018*	*0*

(2) *Reduced by discount for prepaid contributions.*

(3) *Covered payroll represents payroll on which contributions to the pension plan are based.*

(4) *Includes additional contributions of $891,000 made by O.C. Fire Authority towards the reduction of their UAAL.*

(5) *Includes additional contributions of $1,075,000 made by O.C. Fire Authority towards the reduction of their UAAL.*

(6) *Includes additional contributions of $1,663,000 made by O.C. Cemetery District, $22,537,000 made by O.C. Fire Authority and $125,000,000 made by O.C. Sanitation District towards the reduction of their UAAL.*

EXHIBIT 4 (continued)

Schedule of OCERS' Contributions – Last Ten Plan Years

(7) *Includes additional contributions of $18,412,000 made by O.C. Fire Authority and $50,000,000 made by O.C. Sanitation District towards the reduction of their UAAL.*

(8) *Includes additional contributions of $5,133,000 made by O.C. Fire Authority, $1,500,000 made by Law Library and $5,587,000 made by O.C. Sanitation District towards the reduction of their UAAL as well as $33,529,000 made by O.C. Sanitation District to their UAAL Deferred Account.*

(9) *$24,042,000 transfer from O.C. Sanitation District Deferred UAAL Account required to offset UAAL increase for the assumption changes has been excluded from both these amounts.*

(10) *Includes additional contributions of $32,096,000 made by O.C. Fire Authority, $1,538,000 made by Law Library and $1,744,000 made by O.C. Children and Families Commission towards the reduction of their UAAL.*

(11) *$14,589,000 transfer from O.C. Sanitation District Deferred UAAL Account required to offset UAAL increase for the actuarial losses as of December 31, 2018 has been excluded from both these amounts.*

(12) *Includes additional contributions of $23,437,000 made by O.C. Fire Authority and $740,000 made by Cypress Recreation and Parks District towards the reduction of their UAAL.*

Notes to Exhibit 4

Methods and assumptions used to establish "actuarially determined contribution" rates:

Valuation date	Actuarially determined contribution rates for the first six months of calendar year 2018 or the second half of fiscal year 2017-2018 are calculated based on the December 31, 2015 valuation. Actuarially determined contribution rates for the last six months of calendar year 2018 or the first half of fiscal year 2018-2019 are calculated based on the December 31, 2016 valuation.
Actuarial cost method	Entry Age Actuarial Cost Method
Amortization method	Level percent of payroll for total unfunded actuarial accrued liability
Remaining amortization period	Effective December 31, 2013, the outstanding balance of the UAAL from the December 31, 2012 valuation was combined and re-amortized over a declining 20-year period. Any changes in UAAL due to actuarial gains or losses or due to changes in assumptions or methods will be amortized over separate 20-year periods. Any changes in UAAL due to plan amendments will be amortized over separate 15-year periods and any change in UAAL due to early retirement incentive programs will be amortized over a separate period of up to 5 years.
Asset valuation method	The Actuarial Value of Assets is determined by recognizing any difference between the actual and the expected market return over a five-year period. The Valuation Value of Assets is the Actuarial Value of Assets reduced by the value of the non-valuation reserves.

Notes to Exhibit 4 – continued

Actuarial assumptions:

December 31, 2015 valuation	
Investment rate of return	7.25%, net of pension plan investment expense, including inflation
Inflation rate	3.00%
Real across-the-board salary increase	0.50%
Projected salary increases	General: 4.25% to 13.50% and Safety: 5.00% to 17.50%, vary by service, including inflation
Cost of living adjustments	3.00% of retirement income
Other assumptions	Same as those used in the December 31, 2015 funding actuarial valuation
December 31, 2016 valuation	
Investment rate of return	7.25%, net of pension plan investment expense, including inflation
Inflation rate	3.00%
Real across-the-board salary increase	0.50%
Projected salary increases	General: 4.25% to 13.50% and Safety: 5.00% to 17.50%, vary by service, including inflation
Cost of living adjustments	3.00% of retirement income
Other assumptions	Same as those used in the December 31, 2016 funding actuarial valuation

EXHIBIT 5

Calculation of Discount Rate as of December 31, 2018
Projection of Pension Plan's Fiduciary Net Position ($ in millions)

Year Beginning January 1	Projected Beginning Plan's Fiduciary Net Position (a)	Projected Total Contributions * (b)	Projected Benefit Payments (c)	Projected Administrative Expenses (d)	Projected Investment Earnings (e)	Projected Ending Plan's Fiduciary Net Position (f) = (a) + (b) - (c) - (d) + (e)
2018	$14,802	$851	$828	$18	-$325	$14,482
2019	14,482	945	900	18	1,015	15,523
2020	15,523	967	960	19	1,086	16,598
2021	16,598	978	1,021	21	1,160	17,694
2022	17,694	994	1,084	22	1,235	18,818
2023	18,818	1,023	1,150	23	1,312	19,980
2024	19,980	1,030	1,219	25	1,391	21,157
2025	21,157	1,039	1,288	26	1,472	22,354
2026	22,354	1,049	1,359	28	1,553	23,569
2027	23,569	1,059	1,433	29	1,636	24,801
2043	36,099	176	2,645	45	2,441	36,027
2044	36,027	166	2,696	45	2,433	35,886
2045	35,886	156	2,743	44	2,421	35,677
2046	35,677	147	2,786	44	2,405	35,399
2047	35,399	138	2,824	44	2,384	35,054
2092	19,045	39	238	24	1,325	20,148
2093	20,148	39	196	25	1,404	21,369
2094	21,369	39	160	26	1,491	22,712
2095	22,712	39	129	28	1,586	24,180
2096	24,180	40	102	30	1,689	25,776
2131	255,087	315	0 **	315	17,856	272,944
2132	272,944					
2132 Discounted Value:	131 ***					

* Of all the projected total contributions, only the first year's (i.e., 2018) contribution has been reduced by discount for prepaid contributions and transfers from County Investment Account, if any.

** Less than $1 million, when rounded.

*** $272,944 million when discounted with interest at the rate of 7.00% per annum has a value of $131 million as of December 31, 2018, which is about the balance in the County Investment Account as of December 31, 2018.

Note: We have not utilized the balance in the County Investment Account to reduce the projected total contributions in column (b) even though those amounts have been used to reduce the NPL for the County as of December 31, 2018.

EXHIBIT 5

Calculation of Discount Rate as of December 31, 2018
Projection of Pension Plan's Fiduciary Net Position ($ in millions)

Notes:

(1) Amounts may not total exactly due to rounding.

(2) Amounts shown in the year beginning January 1, 2018 row are actual amounts, based on the financial statements provided by OCERS.

(3) Years 2028-2042, 2048-2091, and 2097-2130 have been omitted from this table.

(4) Column (a): Except for the "discounted value" shown for 2132, all of the projected beginning Plan's Fiduciary Net Position amounts shown have not been adjusted for the time value of money.

(5) Column (b): Projected total contributions include member and employer normal cost rates applied to closed group projected payroll (based on covered active members as of December 31, 2017), plus employer contributions to the Unfunded Actuarial Accrued Liability. Contributions are assumed to occur halfway through the year, on average.

(6) Column (c): Projected benefit payments have been determined in accordance with paragraph 39 of GASB Statement No. 67, and are based on the closed group of active, inactive vested, retired members, and beneficiaries as of December 31, 2017. The projected benefit payments reflect the cost of living increase assumptions used in the December 31, 2018 valuation report. The 2018 benefit payments have been increased by the balance of the Medicare Insurance Reserve as of December 31, 2018.

(7) Column (d): Projected administrative expenses are calculated as approximately 0.12% of the projected beginning Plan's Fiduciary Net Position amount. The 0.12% portion was based on the actual calendar year 2018 administrative expenses (unaudited) as a percentage of the actual beginning Plan's Fiduciary Net Position as of January 1, 2018. Administrative expenses are assumed to occur halfway through the year, on average.

(8) Column (e): Projected investment earnings are based on the assumed investment rate of return of 7.00% per annum.

(9) As illustrated in this Exhibit, the Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments for current Plan members. In other words, there is no projected "cross-over date" when projected benefits are not covered by projected assets. Therefore, the long-term expected rate of return on Plan investments of 7.00% per annum was applied to all periods of projected benefit payments to determine the total pension liability as of December 31, 2018 shown earlier in this report, pursuant to paragraph 44 of GASB Statement No. 67.

Orange County Employees Retirement System

FY 2018 Audit Results

PRESENTED BY

Linda Hurley

Partner

June 6, 2019

MGO Certified Public Accountants

Overview

Deliverables/Report Products:

- Independent Auditor’s Report – Basic Financial Statements
- Independent Auditor’s Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed In Accordance with Government Auditing Standards
- Schedule of Allocated Pension Amounts by Employer
- Required Communications

Audit Results

Basic Financial Statements:

- **Framework**
  - U.S. Generally Accepted Accounting Principles
  - U.S. Generally Accepted Auditing Standards
  - Government Auditing Standards

- **Unmodified Opinion on Financial Statements**

Audit Results

Certified Public Accountants

Required Communications:

- **Qualitative Aspects of Accounting Practices**
  - Significant Accounting Policies
  - Accounting Estimates
- **Difficulties Encountered in Performing the Audit**
- **Corrected and Uncorrected Misstatements**
- **Disagreements with Management**
- **Management Representations**
- **Management Consultations with Other Independent Accountants**
- **Other Audit Findings or Issues**
- **Other Matters**

Questions?

Certified
Public
Accountants

Certified Public Accountants

June 6, 2019

To the Audit Committee of the
Orange County Employees Retirement System
Santa Ana, California

We have audited the financial statements of the Orange County Employees Retirement System (System) for the year ended December 31, 2018. Professional standards require that we provide you with information about our responsibilities under generally accepted auditing standards and *Government Auditing Standards*, as well as certain information related to the planned scope and timing of our audit. We have communicated such information in our meeting with the Audit Committee on March 26, 2019. Professional standards also require that we communicate to you the following information related to our audit.

Significant Audit Findings

Qualitative Aspects of Accounting Practices

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by the System are described in Note 2 to the basic financial statements. No new accounting policies were adopted and the application of existing policies was not changed during 2018. We noted no transactions entered into by the System during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

Accounting estimates are an integral part of the financial statements and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The most sensitive estimates affecting the financial statements were:

- Actuarial valuations of the total pension liability and actuarially determined contributions for the Defined Benefit Pension Plan.

  The actuarial pension data contained in Note 8 to the basic financial statements and required supplementary information is based on actuarial calculations performed by the System's actuary in accordance with the parameters set forth in GASB Statement No. 67, *Financial Reporting for Pension Plans – an amendment of GASB Statement No. 25*. The actuarial pension valuation is sensitive to the underlying assumptions, including the discount rate.

- Fair value of real assets, private equity, absolute return, risk mitigation and diversified credit investments, including derivative investments, and related income.

Directly held real estate investment fair values are based on recent estimates provided by independent third-party appraisers. Fair values for timber, energy and agriculture are based on independent appraisals and/or estimates made in good faith by the general partner or management. Commingled real estate funds are based on the investment's net asset value per share provided by the investment manager firms/general partners. The fair value of commodities is determined by quoted market prices. The fair value of private equity and absolute return investments that are not publicly traded were determined by management, in consultation with the general partner and valuation specialists, based on the net asset value per share (or its equivalent) of OCERS' ownership interest in partner's capital. The fair values of diversified credit investments and risk mitigation funds structured as partnerships are based on net asset value per share of the investment. The fair values for diversified credit investments comprised of mortgages, direct lending and energy-based credit funds are based on the general partner's estimates considering factors such as market quotes, earnings-multiple analysis or discounted cash flow analysis.

We evaluated the key factors and assumptions used to develop these estimates in determining that they are reasonable in relation to the financial statements taken as a whole.

Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. The most sensitive disclosures affecting the financial statements were:

- Participating employers' net pension liability, which is based on the total pension liability determined in the actuarial valuation of December 31, 2017, and rolled forward to December 31, 2018, and the related sensitivity analysis. As described in Note 8 to the basic financial statements, the actuarial valuations involve estimates of the value of reported amounts and assumptions about the probability of events far into the future, and these amounts and assumptions are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future.

The financial statement disclosures are neutral, consistent, and clear.

Difficulties Encountered in Performing the Audit

We encountered no significant difficulties in dealing with management in performing and completing our audit.

Corrected and Uncorrected Misstatements

Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are clearly trivial, and communicate them to the appropriate level of management. There were no such misstatements identified other than those that are clearly trivial.

Disagreements with Management

For purposes of this letter, professional standards define a disagreement with management as a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditor's report. We are pleased to report that no such disagreements arose during the course of our audit.

Management Representations

We have requested certain representations from management that are included in the management representation letter dated June 6, 2019.

Management Consultations with Other Independent Accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a “second opinion” on certain situations. If a consultation involves application of an accounting principle to the System’s financial statements or a determination of the type of auditor’s opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

Other Audit Findings or Issues

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the System’s auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

Other Matters

We applied certain limited procedures to Management’s Discussion and Analysis, the Schedule of Changes in Net Pension Liability of Participating Employers, Schedule of Investment Returns, Schedule of Employer Contributions and Notes to the Required Supplementary Information, which are required supplementary information (RSI) that supplements the basic financial statements. Our procedures consisted of inquiries of management regarding the methods of preparing the information and comparing the information for consistency with management’s responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We did not audit the RSI and do not express an opinion or provide any assurance on the RSI.

We were engaged to report on other supplementary information, which accompanies the financial statements, but are not RSI. With respect to this supplementary information, we made certain inquiries of management and evaluated the form, content, and methods of preparing the information to determine that the information complies with accounting principles generally accepted in the United States of America, the method of preparing it has not changed from the prior period, and the information is appropriate and complete in relation to our audit of the financial statements. We compared and reconciled the supplementary information to the underlying accounting records used to prepare the financial statements or to the financial statements themselves.

We were not engaged to report on the introductory, investment, actuarial, statistical, and glossary sections, which accompany the financial statements, but are not RSI. Such information has not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

Restriction on Use

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

Very truly yours,

Macias Gini & O'Connell LLP

Independent Auditor's Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed In Accordance With *Government Auditing Standards*

To the Board of Retirement of the
Orange County Employees Retirement System
Santa Ana, California

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the Orange County Employees Retirement System (the System), California, as of and for the year ended December 31, 2018, and the related notes to the financial statements, which collectively comprise the System's basic financial statements, and have issued our report thereon dated June 6, 2019. Our report contained an emphasis-of-matter paragraph that describes the System's net pension liability as of December 31, 2018.

Internal Control over Financial Reporting

In planning and performing our audit of the financial statements, we considered the System's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the System's internal control. Accordingly, we do not express an opinion on the effectiveness of the System's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the System's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the System's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Macias Gini & O'Connell LLP

Newport Beach, California
June 6, 2019

A-5

Memorandum

DATE: June 6, 2019

TO: Members of the Board of Retirement

FROM: Brenda Shott, Assistant CEO, Finance and Internal Operations; Tracy Bowman, Director of Finance

SUBJECT: **GASB 68 VALUATION AND AUDIT REPORT**

Recommendations

Approve the following recommendations from the Audit Committee during a meeting held on June 6, 2019:

1. Approve OCERS' audited Schedule of Allocated Pension Amounts by Employer as of and for the Year Ended December 31, 2018.
2. Approve the Governmental Accounting Standards Board (GASB) Statement 68 Actuarial Valuation as of December 31, 2018 for distribution to employers.

Background/Discussion

GASB Statement No. 68, *Accounting and Financial Reporting for Pensions – an Amendment of GASB Statement No. 27*, requires employers to record their proportionate share of the total pension liability less the plan's fiduciary net position (i.e., net pension liability) on the face of their financial statements. A proportionate share of the total pension expense and collective deferred inflows of resources and deferred outflows of resources of the pension trust fund at OCERS will also be shown on the face of each employer's financial statements.

Net Pension Liability vs. Unfunded Actuarial Accrued Liability

The attached GASB 68 valuation is used for financial reporting purposes and was prepared by Segal Consulting. This report is *separate and distinct from the funding actuarial valuation*. The net pension liability (NPL) shown in Exhibit 2 of the GASB 68 valuation as of December 31, 2018 is $6,197.2 million compared to the unfunded actuarial accrued liability (UAAL) of $5,708.9 million in the funding actuarial valuation as of December 31, 2018. The differences between the NPL and the UAAL are a direct result of the different liability and asset values used in measuring these amounts. The primary differences can be attributed to NPL being calculated using the Plan's current market value of assets, including the proceeds available in the County Investment Account, and the UAAL is calculated by adjusting the market value of assets for asset smoothing per OCERS Actuarial Funding Policy and excluding the County Investment Account reserves. Differences are also created by timing differences of when actuarial gains and losses are recognized in the liability calculation for financial reporting purposes compared to funding valuation purposes.

Schedule of Allocated Pension Amounts by Employer

The attached Schedule of Allocated Pension Amounts by Employer as of and for the Year Ended December 31, 2018 and related notes were audited by OCERS' independent auditor, Macias Gini & O'Connell LLP (MGO).

The proportionate share allocation is based on rate groups. All rate groups, with the exception of rate groups 1 and 2, have only one active employer, so all of the NPL for those rate groups is allocated to that employer. For rate groups 1 and 2, the NPL is allocated based on the actual employer contributions within the rate group Annual Reporting

and excludes employers with inactive membership. If an employer participates in several rate groups, the employer's total proportionate share of the NPL is the sum of its allocated NPL from each rate group.

The audit report and GASB 68 valuation, once approved by the Audit Committee and Board of Retirement, will be made available to participating employers with the following disclaimer:

> *To complete its financial statements, each participating employer will need to record its own proportionate share of collective pension amounts for all benefits provided through OCERS'cost-sharing multiple-employer defined benefit pension plan. OCERS has provided a schedule of pension amounts by employer, prepared by independent actuary Segal Consulting, in accordance with the methodology set forth in GASB 68, based on data maintained and provided by OCERS. This schedule has been audited by independent auditor, MGO. Please note that OCERS is not responsible for employers' compliance with the requirements of GASB 68. Employers are solely responsible for accurately presenting their financial statements within the requirements of GASB 68.*

Submitted by:

Tracy Bowman

Director of Finance

Approved by:

Brenda M Shott

Brenda Shott

Asst. CEO, Finance & Internal Operations

ORANGE COUNTY

OCERS

EMPLOYEES RETIREMENT SYSTEM

GASB 68 Valuation and Audit Report

Presented on June 17, 2019

by

Brenda Shott and Tracy Bowman

ORANGE COUNTY OCERS EMPLOYEES RETIREMENT SYSTEM

Recommendation

Approve the following recommendation from the Audit Committee during a meeting held on June 6, 2019:

1. Approve OCERS' audited Schedule of Allocated Pension Amounts by Employer as of and for the Year Ended December 31, 2018
2. Approve the Governmental Accounting Standards Board (GASB) Statement 68 Actuarial Valuation as of December 31, 2018 for distribution to employers

ORANGE COUNTY
OCERS
EMPLOYEES RETIREMENT SYSTEM

Overview

- This information is needed by Plan Sponsors for their annual financial reporting.
- **Reports are prepared for GASB reporting purposes only - there are no actionable decisions to be made on content.**
- This item is brought before you because the Audit Committee Charter requires approval of all audit reports.

“We provide secure retirement and disability benefits with the highest standards of excellence.”

ORANGE COUNTY OCERS EMPLOYEES RETIREMENT SYSTEM

Audit Report on GASB 68 Schedules

- Using the NPL calculated for GASB 67, Segal prepares the Schedule of Allocated Pension Amounts by Employer (included in Appendix B of the full GASB 68 valuation - Section 3)
- MGO audits this schedule which includes amounts and information required for GASB 68 reporting for each employer
- MGO has issued a "clean opinion" on the 2018 schedule and related notes which will allow our Plan Sponsors' auditors to rely on MGO's work, avoiding multiple audits of OCERS' information.

"We provide secure retirement and disability benefits with the highest standards of excellence."

Conclusion

Questions?

Orange County Employees Retirement System

Governmental Accounting Standards Board (GASB) Statement 68

Actuarial Valuation Based on December 31, 2018 Measurement Date for Employer Reporting as of June 30, 2019

Segal Consulting

Segal Consulting

180 Howard Street, Suite 1100 San Francisco, CA 94105-6147
T 415.263.8200 www.segalco.com

June 4, 2019

Board of Retirement
Orange County Employees Retirement System
2223 Wellington Avenue
Santa Ana, CA 92701

Dear Board Members:

We are pleased to submit this Governmental Accounting Standards Board (GASB) Statement 68 Actuarial Valuation based on December 31, 2018 measurement date for employer reporting as of June 30, 2019. It contains various information that will need to be disclosed in order for OCERS employers to comply with GASB 68.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist the sponsors in preparing their financial report for their liabilities associated with the OCERS pension plan. The census and financial information on which our calculations were based was provided by OCERS. That assistance is gratefully acknowledged.

The measurements shown in this actuarial valuation may not be applicable for other purposes. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and changes in plan provisions or applicable law.

The actuarial calculations were completed under the supervision of Andy Yeung, ASA, MAAA, FCA, Enrolled Actuary. We are members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of our knowledge, the information supplied in the actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board are reasonably related to the experience of and expectations for the System.

Sincerely,

Segal Consulting, a Member of The Segal Group, Inc.

By:

Paul Angelo, FSA, MAAA, FCA, EA
Senior Vice President and Actuary

Andy Yeung, ASA, MAAA, FCA, EA
Vice President and Actuary

AW/
5580339v1/05794.014

Purpose

This report has been prepared by Segal Consulting to present certain disclosure information required by Governmental Accounting Standards Board (GASB) Statement 68 for employer reporting as of June 30, 2019. The results used in preparing this GASB 68 report are comparable to those used in preparing the Governmental Accounting Standards Board (GASB) Statement 67 report for the plan based on a reporting date and a measurement date as of December 31, 2018. This valuation is based on:

- The benefit provisions of OCERS, as administered by the Board of Retirement;
- The characteristics of covered active members, inactive vested members, and retired members and beneficiaries as of December 31, 2017, provided by OCERS;
- The assets of the Plan as of December 31, 2018, provided by OCERS;
- Economic assumptions regarding future salary increases and investment earnings adopted by the Board for the December 31, 2018 valuation; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc. adopted by the Board for the December 31, 2018 valuation.

General Observations on GASB 68 Actuarial Valuation

The following points should be considered when reviewing this GASB 68 report:

- The Governmental Accounting Standards Board (GASB) rules only define pension liability and expense for financial reporting purposes, and do not apply to contribution amounts for pension funding purposes. Employers and plans still develop and adopt funding policies under current practices.
- When measuring pension liability GASB uses the same actuarial cost method (Entry Age method) and the same type of discount rate (expected return on assets) as OCERS uses for funding. This means that the Total Pension Liability (TPL) measure for financial reporting shown in this report is determined on generally the same basis as OCERS' Actuarial Accrued Liability (AAL) measure for funding. We note that the same is generally true for the Normal Cost component of the annual plan cost for funding and financial reporting.

- The Net Pension Liability (NPL) is equal to the difference between the TPL and the Plan's Fiduciary Net Position. The Plan's Fiduciary Net Position is equal to the market value of assets and therefore, the NPL measure is very similar to an Unfunded Actuarial Accrued Liability (UAAL) calculated on a market value basis.
- For this report, the reporting dates for the employers are June 30, 2019 and 2018. The NPL's measured as of December 31, 2018 and 2017 have been determined by rolling forward the TPL as of December 31, 2017 and 2016, respectively. The Plan's Fiduciary Net Positions were valued as of the measurement dates. In addition, any changes in actuarial assumptions or plan provisions that occurred between the valuation date and the measurement date have been reflected.

Significant Issues in Valuation Year

The following key findings were the result of this actuarial valuation:

- The NPL increased from $4,952.1 million as of December 31, 2017 to $6,197.2 million as of December 31, 2018 primarily as a result a -2.46%[1] return on the market value of assets during 2018 that was lower than the assumed return of 7.00% of approximately $1,388 million. This loss was offset to some extent by the gains from lower than expected active salary increases and lower than expected retiree COLA increases during 2017 (because liabilities are rolled forward from December 31, 2017 to December 31, 2018, these changes are not reflected until this valuation as of December 31, 2018)[2]. Changes in these values during the last two plan years ending December 31, 2018 and December 31, 2017 can be found in Exhibit 5.
- The discount rate used to determine the TPL and NPL as of both December 31, 2018 and 2017 was 7.00% following the same assumption used by the System in the pension funding valuations as of the same dates. The detailed calculation of the discount rate of 7.00% used in the calculation of the TPL and NPL as of December 31, 2018 can be found in Appendix A of Section 3. Various other information that is required to be disclosed can be found throughout Exhibits 1 through 13 in Section 2.

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[1] *As documented in the funding valuation report, return on market value was calculated using a modified dollar-weighted approach based on pension plan assets net of accounting liabilities. Actual investment loss on net pension plan assets was $361,321,000 during 2018 after including both the administrative expenses and discount for prepaid contributions while excluding the losses credited to County Investment Account and O.C. Sanitation District UAAL Deferred Account. Without these adjustments, the actual investment loss was $324,628,000.*

[2] *It should be noted that because of the use of roll forward, any difference between actual and expected COLA increases during 2018 would not be reflected until the next valuation as of December 31, 2019.*

- The Plan's Fiduciary Net Position of $14,801,895,000 as of December 31, 2017 is equal to the final market value of assets in the Pension Trust Fund as of December 31, 2017. This differs from the $14,652,607,000 market value of assets used in our December 31, 2017 funding valuation because the funding valuation excludes $134,417,000 in the County Investment Account and $14,871,000 in O.C. Sanitation District UAAL Deferred Account (after transfer of $24,042,000 required for O.C. Sanitation District to offset UAAL increase for assumption changes).

  The Plan's Fiduciary Net Position of $14,481,680,000 as of December 31, 2018 is equal to the final market value of assets in the Pension Trust Fund as of December 31, 2018. This differs from the $14,349,790,000 market value of assets used in our December 31, 2018 funding valuation because the funding valuation excludes $131,890,000 in the County Investment Account. (The balance in the O.C. Sanitation District UAAL Deferred Account as of December 31, 2018 is $0 after transfer of $14,589,000 to offset a portion of the District's UAAL as of December 31, 2018.)

- In Appendix B, we show the Schedule of Pension Amounts by Employer. The expanded information shown in Appendix B has been used to prepare Exhibits 8 and 9.

- Results shown in this report exclude any employer contributions made after the measurement date of December 31, 2018. Employers should consult with their auditors to determine the deferred outflow that should be created for these contributions.

- All Rate Groups except Rate Groups #1 and #2 only have one active employer, so all of the NPL for those Rate Groups is allocated to that employer.

  For Rate Groups #1[3] and #2, the NPL is allocated based on the actual employer contributions within the Rate Group. The steps we used are as follows:

  - Calculate ratio of employer's contributions to the total contributions for the Rate Group.
  - Multiply this ratio by the NPL for the Rate Group to determine the employer's proportionate share of the NPL for the Rate Group.

  If the employer is in several Rate Groups, the employer's total allocated NPL is the sum of its allocated NPL from each Rate Group. Proportionate share of total plan NPL is then the ratio of the employer's total allocated NPL to the total NPL of all employers. The NPL allocation can be found in Exhibit 7 in Section 2.

[3] *The NPL for Rate Group #1 was adjusted by the NPLs for the O.C. Vector Control District, Cypress Recreation and Parks, Department of Education and U.C.I. prior to allocating the net NPL to the other employers in Rate Group #1 as the NPLs for these four employers were calculated separately.*

Summary of Key Valuation Results

Reporting Date for Employer under GASB 68[1]	June 30, 2019	June 30, 2018
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Disclosure elements for plan year ending December 31:		
1. Service cost[2]	$491,372,822	$452,412,003
2. Total Pension Liability	20,678,882,089	19,753,994,401
3. Plan's Fiduciary Net Position	14,481,680,000	14,801,895,000
4. Net Pension Liability	6,197,202,089	4,952,099,401
5. Pension expense	783,713,497	529,375,473
Schedule of contributions for plan year ending December 31:		
6. Actuarially determined contributions[3),(4]	$556,728,000	$536,726,000
7. Actual contributions[3),(4]	580,905,000	572,104,000
8. Contribution deficiency (excess)[5] (6) – (7)	(24,177,000)	(35,378,000)
Demographic data for plan year ending December 31:		
9. Number of retired members and beneficiaries	17,674	16,947
10. Number of vested terminated members	6,026	5,803
11. Number of active members	21,929	21,721
Key assumptions as of December 31:		
12. Investment rate of return	7.00%	7.00%
13. Inflation rate	2.75%	2.75%
14. Projected salary increases[6]	General: 4.25% to 12.25% and Safety: 4.75% to 17.25%	General: 4.25% to 12.25% and Safety: 4.75% to 17.25%

(1) *The reporting date and measurement date for the plan are December 31, 2018 and December 31, 2017.*

(2) *The service cost is based on the previous year's valuation, meaning the 2018 and 2017 measurement date values are based on the valuations as of December 31, 2017 and December 31, 2016, respectively. The 2018 service cost has been calculated using the assumptions shown in the December 31, 2017 column and the 2017 service cost has been calculated using the assumptions used in the December 31, 2016 valuation. The key assumptions as of December 31, 2016 are as follows:*

Key assumptions as of December 31, 2016:	
Investment rate of return	7.25%
Inflation rate	3.00%
Projected salary increases*	General: 4.25% to 13.50% and Safety: 5.00% to 17.50%

* Includes inflation at 3.00% plus real across-the-board salary increases of 0.50% plus merit and promotional increases.

[3] *Reduced by discount for prepaid contributions and transfer from County Investment Account, if any.*

[4] *Exclude transfers of $14,589,000 and $24,042,000 from O.C. Sanitation District Deferred UAAL Account required to offset UAAL increase as of December 31, 2018 and December 31, 2017, respectively.*

[5] *Includes additional contributions made by employers toward the reduction of their UAAL. Details are shown in Exhibit 6 of this report.*

[6] *Includes inflation at 2.75% plus real across-the-board salary increases of 0.50% plus merit and promotional increases.*

Important Information about Actuarial Valuations

An actuarial valuation is a budgeting tool with respect to the financing of future projected obligations of a pension plan. It is an estimated forecast – the actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.

In order to prepare an actuarial valuation, Segal Consulting ("Segal") relies on a number of input items. These include:

- **Plan of benefits** Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan description in this report (as well as the plan summary included in our funding valuation report) to confirm that Segal has correctly interpreted the plan of benefits.
- **Participant data** An actuarial valuation for a plan is based on data provided to the actuary by OCERS. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
- **Assets** This valuation is based on the market value of assets as of the measurement date, as provided by OCERS.
- **Actuarial assumptions** In preparing an actuarial valuation, Segal projects the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This projection requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of each participant for each year. In addition, the benefits projected to be paid for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments. The projected benefits are then discounted to a present value, based on the assumed rate of return that is expected to be achieved on the plan's assets. There is a reasonable range for each assumption used in the projection and the results may vary materially based on which assumptions are selected. It is important for any user of an actuarial valuation to understand this concept. Actuarial assumptions are periodically reviewed to ensure that future valuations reflect emerging plan experience. While future changes in actuarial assumptions may have a significant impact on the reported results, that does not mean that the previous assumptions were unreasonable.

The user of Segal's actuarial valuation (or other actuarial calculations) should keep the following in mind:

- The valuation is prepared at the request of the Board to assist the sponsors of the Fund in preparing items related to the pension plan in their financial reports. Segal is not responsible for the use or misuse of its report, particularly by any other party.

- An actuarial valuation is a measurement of the plan's assets and liabilities at a specific date. Accordingly, except where otherwise noted, Segal did not perform an analysis of the potential range of future financial measures. The actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.
- If OCERS is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.
- Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. The Board should look to their other advisors for expertise in these areas.

As Segal Consulting has no discretionary authority with respect to the management or assets of OCERS, it is not a fiduciary in its capacity as actuaries and consultants with respect to OCERS.

EXHIBIT 1

General Information – "Financial Statements", Note Disclosures and Required Supplementary Information for a Cost-Sharing Pension Plan

Plan Description

Plan administration. The Orange County Employees Retirement System (OCERS) was established by the County of Orange in 1945. OCERS is administered by the Board of Retirement and governed by the County Employees' Retirement Law of 1937 (California Government Code Section 31450 et. seq.). OCERS is a cost-sharing multiple employer public employee retirement system whose main function is to provide service retirement, disability, death and survivor benefits to the Safety and General members employed by the County of Orange. OCERS also provides retirement benefits to the employee members of the Orange County Courts, the Orange County Retirement System, two cities and thirteen special districts.

The management of OCERS is vested with the Orange County Board of Retirement. The Board consists of nine members and one alternate. The County Treasurer is a member of the Board of Retirement by law. Four members are appointed by the Board of Supervisors, one of whom may be a County Supervisor. Two members are elected by the General membership; one member and one alternate are elected by the Safety membership, one member is elected by the retired members of the System. All members of the Board of Retirement serve terms of three years except for the County Treasurer whose term runs concurrent with the County Treasurer term.

Plan membership. At December 31, 2018, pension plan membership consisted of the following:

Retired members or beneficiaries currently receiving benefits	17,674
Vested terminated members entitled to, but not yet receiving benefits	6,026
Active members	21,929
Total	45,629

Note: Data as of December 31, 2018 is not used in the measurement of the TPL as of December 31, 2018.

Benefits provided. OCERS provides service retirement, disability, death and survivor benefits to eligible employees. All regular full-time employees of the County of Orange or contracting agencies who work a minimum of 20 hours per week become members of OCERS effective on the first day of employment in an eligible position. There are separate retirement plans for General and Safety member employees. Safety membership is extended to those involved in active law enforcement, fire suppression, and certain probation officers. Any new Safety member who becomes a member on or after January 1, 2013 is designated PEPRA Safety and is subject to the provisions of California Public Employees' Pension Reform Act of 2013 (PEPRA), California Government Code 7522 et seq. All other employees are classified as General members. New General members employed on or after January 1, 2013 are designated as PEPRA General subject to the provisions of California Government Code 7522 et. seq.

General members hired prior to January 1, 2013, including all members of Plan T and Plan W hired on or after January 1, 2013, are eligible to retire once they attain the age of 50 and have acquired ten or more years of retirement service credit. A member with thirty years of service is eligible to retire regardless of age. General members who are first hired on or after January 1, 2013, excluding members of Plan T and Plan W, are eligible to retire once they have attained the age of 52, and have acquired five years of retirement service credit.

Safety members hired prior to January 1, 2013, are eligible to retire once they attain the age of 50 and have acquired ten or more years of retirement service credit. A member with twenty years of service is eligible to retire regardless of age. Safety members who are first hired on or after January 1, 2013, are eligible to retire once they have attained the age of 50, and have acquired five years of retirement service credit.

All General and Safety members can also retire at the age of 70 regardless of service.

The retirement benefit the member will receive is based upon age at retirement, final average compensation, years of retirement service credit and retirement plan and tier.

General member benefits are calculated pursuant to the provisions of Sections 31676.01, 31676.1, 31676.12, 31676.16, 31676.18 or 31676.19. For Section 31676.01, the monthly allowance is equal to 1/90th of final compensation times years of accrued retirement service credit times age factor from that Section. For Section 31676.1, the monthly allowance is equal to 1/60th of final compensation times years of accrued retirement service credit times age factor from that Section. For Sections 31676.12, 31676.16, 31676.18 or 31676.19, the monthly allowance is equal to 1/50th of final compensation times years of accrued retirement service credit times age factor from the corresponding Section. General member benefits for those who are first hired on or after January 1, 2013, excluding members of Plan T and Plan W, are calculated pursuant to the provision of California Government Code Section 7522.20(a). The monthly allowance is equal to the final compensation multiplied by years of accrued retirement credit multiplied by the age factor from Section 7522.20(a).

Safety member benefits are calculated pursuant to the provisions of California Government Code Sections 31664.1 and 31664.2. The monthly allowance is equal to 3% of final compensation times years of accrued retirement service credit times age factor from the corresponding Section. Safety member benefits for those who are first hired on or after January 1, 2013, are calculated pursuant to the provision of California Government Code Section 7522.25(d). The monthly allowance is equal to the final compensation multiplied by years of accrued retirement credit multiplied by the age factor from Section 7522.25(d).

For members with membership dates before January 1, 2013, including all members of Plan T and Plan W hired on or after January 1, 2013, the maximum monthly retirement allowance is 100% of final compensation. There is no maximum for members with membership dates on or after January 1, 2013, excluding members of Plan T and Plan W.

Final average compensation consists of the highest 12 consecutive months for a General Tier 1 or Safety Tier 1 member and the highest 36 consecutive months for a General Tier 2, General PEPRA, Safety Tier 2 or Safety PEPRA member.

The member may elect an unmodified retirement allowance, or choose an optional retirement allowance. The unmodified retirement allowance provides the highest monthly benefit and a 60% continuance to an eligible surviving spouse or domestic partner. An eligible surviving spouse or domestic partner is one married to or registered with the member one year prior to the effective retirement date. Certain surviving spouses or domestic partners may also be eligible if marriage or domestic partnership was at least two years prior to the date of death and the surviving spouse or domestic partner has attained age 55. There are four optional retirement allowances the member may choose. Each of the optional retirement allowances requires a reduction in the unmodified retirement allowance in order to allow the member the ability to provide certain benefits to a surviving spouse, domestic partner, or named beneficiary having an insurable interest in the life of the member.

OCERS provides an annual cost-of-living benefit to all retirees. The cost-of-living adjustment, based upon the Consumer Price Index for All Urban Consumers for the Los Angeles-Long Beach-Anaheim Area, is capped at 3.0%.

The County of Orange and contracting agencies contribute to the retirement plan based upon actuarially determined contribution rates adopted by the Board of Retirement. Employer contribution rates are adopted annually based upon recommendations received from OCERS' actuary after the completion of the annual actuarial valuation. The average employer contribution rate for the first six months of calendar year 2018 or the second half of fiscal year 2017-2018 (based on the December 31, 2015 valuation) was 37.25%[1] of compensation. The average employer contribution rate for the last six months of calendar year 2018 or the first half of fiscal year 2018-2019 (based on the December 31, 2016 valuation) was 36.56%[1] of compensation.

All members are required to make contributions to OCERS regardless of the retirement plan or tier in which they are included. The average member contribution rate for the first six months of calendar year 2018 or the second half of fiscal year 2017-2018 (based on the December 31, 2015 valuation) was 12.21%[2] of compensation. The average member contribution rate for the last six months of calendar year 2018 or the first half of fiscal year 2018-2019 (based on the December 31, 2016 valuation) was 12.01%[2] of compensation.

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[1] *These employer contribution rates are higher than the composite rate for 2018 as shown on page 9 of this report because these rates have not been adjusted to reflect any pick-ups or reverse pick-ups. These employer contribution rates also do not reflect the shift in payroll to the lower cost plans from the valuation date to the date of rate implementation.*

[2] *It should be noted that these member contribution rates provided above have not been adjusted to reflect any pick-ups or reverse pick-ups.*

EXHIBIT 2

Net Pension Liability

Reporting Date for Employer under GASB 68	**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
The components of the Net Pension Liability are as follows:		
Total Pension Liability	$20,678,882,089	$19,753,994,401
Plan's Fiduciary Net Position	(14,481,680,000)	(14,801,895,000)
Net Pension Liability	$6,197,202,089	$4,952,099,401
Plan's Fiduciary Net Position as a percentage of the Total Pension Liability	70.03%	74.93%

The Net Pension Liability (NPL) was measured as of December 31, 2018 and 2017. The Plan's Fiduciary Net Position (plan assets) was valued as of the measurement date while the Total Pension Liability (TPL) was determined based upon rolling forward the TPL from actuarial valuations as of December 31, 2017 and 2016, respectively.

Plan provisions. The plan provisions used in the measurement of the NPL as of December 31, 2018 and 2017 are the same as those used in the OCERS actuarial valuations as of December 31, 2018 and 2017, respectively.

Actuarial assumptions. The TPLs as of December 31, 2018 and 2017 were determined by actuarial valuations as of December 31, 2017 and 2016, respectively. The actuarial assumptions used were based on the results of an experience study for the period from January 1, 2014 through December 31, 2016 and they are the same assumptions used in the December 31, 2018 and 2017 funding valuations for OCERS. In particular, the following actuarial assumptions were applied to all periods included in the measurement:

Inflation	2.75%
Salary increases	General: 4.25% to 12.25% and Safety: 4.75% to 17.25%, vary by service, including inflation
Investment rate of return	7.00%, net of pension plan investment expense, including inflation
Other assumptions	See analysis of actuarial experience during the period January 1, 2014 through December 31, 2016

EXHIBIT 3

Target Asset Allocation

The long-term expected rate of return on pension plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage, adding expected inflation and subtracting expected investment expenses and a risk margin. The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation but before deducting investment expenses are shown in the following table. This information was used in the derivation of the long-term expected investment rate of return assumption for the December 31, 2018 and 2017 actuarial valuations. This information will change every three years based on the actuarial experience study.

Asset Class	Target Allocation	Long-Term Expected Arithmetic Real Rate of Return
Global Equity	35.0%	6.38%
Core Bonds	13.0%	1.03%
High Yield Bonds	4.0%	3.52%
Bank Loan	2.0%	2.86%
TIPS	4.0%	0.96%
Emerging Market Debt	4.0%	3.78%
Real Estate	10.0%	4.33%
Core Infrastructure	2.0%	5.48%
Natural Resources	10.0%	7.86%
Risk Mitigation	5.0%	4.66%
Mezzanine/Distressed Debts	3.0%	6.53%
Private Equity	8.0%	9.48%
Total	100.0%	

EXHIBIT 3 (continued)

Target Asset Allocation

Discount rate. The discount rate used to measure the TPL was 7.00% as of December 31, 2018 and 2017. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the actuarially determined contribution rates. For this purpose, only employer contributions that are intended to fund benefits for current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs for future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments for current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the TPL as of both December 31, 2018 and 2017.

EXHIBIT 4
Discount Rate Sensitivity

Sensitivity of the Net Pension Liability to changes in the discount rate. The following presents the NPL as of December 31, 2018, calculated using the discount rate of 7.00%, as well as what the NPL would be if it were calculated using a discount rate that is 1-percentage-point lower (6.00%) or 1-percentage-point higher (8.00%) than the current rate:

Employer	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
Orange County	$7,162,237,483	$4,918,576,912	$3,094,724,273
O.C. Cemetery District	2,522,723	962,119	(306,483)
O.C. Law Library	2,131,439	573,252	(693,385)
O.C. Vector Control District	6,493,528	2,492,695	(759,548)
O.C. Retirement System	41,606,979	28,844,760	18,470,461
O.C. Fire Authority	757,726,799	466,731,526	230,183,938
Cypress Recreation and Parks	1,772,444	408,781	(699,729)
Department of Education	5,334,034	3,517,372	2,040,623
Transportation Corridor Agency	20,108,650	13,253,632	7,681,246
City of San Juan Capistrano	46,363,150	32,142,058	20,581,853
O.C. Sanitation District	131,317,068	29,029,145	(54,119,840)
O.C. Transportation Authority	410,027,534	269,788,642	155,789,636
U.C.I.	50,627,765	34,808,679	21,949,478
O.C. Children and Families Comm.	1,710,176	630,610	(246,960)
Local Agency Formation Comm.	2,282,962	1,582,703	1,013,468
Rancho Santa Margarita	8,165	1,284	(4,310)
O.C. Superior Court	566,535,998	392,760,910	251,500,616
O.C. IHSS Public Authority	1,822,788	1,097,009	507,030
Total for all Employers	$9,210,629,685	$6,197,202,089	$3,747,612,367

EXHIBIT 5

Schedule of Changes in OCERS Net Pension Liability – Last Two Plan Years

Reporting Date for Employer under GASB 68	June 30, 2019	June 30, 2018
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Total Pension Liability		
1. Service cost	$491,372,822	$452,412,003
2. Interest	1,379,917,267	1,305,268,322
3. Change of benefit terms	0	0
4. Differences between expected and actual experience	(118,124,401)	(66,963,603)
5. Changes of assumptions	0	827,197,076
6. Benefit payments, including refunds of member contributions	(828,278,000)	(764,344,000)
7. Transfer of members among Rate Groups	0	0
8. Other	0	0
9. Net change in Total Pension Liability	$924,887,688	$1,753,569,798
10. Total Pension Liability – beginning	19,753,994,401	18,000,424,603
11. Total Pension Liability – ending	$20,678,882,089	$19,753,994,401
Plan's Fiduciary Net Position		
12. Contributions – employer[(1)]	$580,905,000[(2)]	$572,104,000[(3)]
13. Contributions – plan members	270,070,000	262,294,000
14. Net investment income/(loss)	(324,628,000)	1,939,635,000
15. Benefit payments, including refunds of member contributions	(828,278,000)	(764,344,000)
16. Transfer of members among Rate Groups	0	0
17. Administrative expense	(18,284,000)	(17,002,000)
18. Other	0	0
19. Net change in Plan's Fiduciary Net Position	$(320,215,000)	$1,992,687,000
20. Plan's Fiduciary Net Position – beginning	14,801,895,000	12,809,208,000
21. Plan's Fiduciary Net Position – ending	$14,481,680,000	$14,801,895,000
22. Net Pension Liability – ending (11) – (21)	$6,197,202,089	$4,952,099,401
23. Plan's Fiduciary Net Position as a percentage of the Total Pension Liability	70.03%	74.93%
24. Covered payroll[(4)]	$1,718,798,000	$1,678,322,000
25. Plan Net Pension Liability as percentage of covered payroll	360.55%	295.06%

(1) *Reduced by discount for prepaid contributions and transfer from County Investment Account, if any.*

(2) *$14,589,000 transfer from O.C. Sanitation District Deferred UAAL Account required to offset UAAL increase for the actuarial losses as of December 31, 2018 has been excluded from this amount.*

(3) *$24,042,000 transfer from O.C. Sanitation District Deferred UAAL Account required to offset UAAL increase for the assumption changes has been excluded from this amount.*

(4) *Covered payroll represents payroll on which contributions to the pension plan are based.*

EXHIBIT 6

Schedule of Employer Contributions – Last Ten Plan Years

Year Ended December 31	Actuarially Determined Contributions[(1),(2)]	Contributions in Relation to the Actuarially Determined Contributions[(1),(2)]	Contribution Deficiency (Excess)	Covered Payroll[(3)]	Contributions as a Percentage of Covered Payroll[(1),(2)]
2009	$337,496,000	$338,387,000[(4)]	$(891,000)	$1,598,888,000	21.16%
2010	372,437,000	372,437,000	0	1,511,569,000	24.64%
2011	387,585,000	387,585,000	0	1,498,914,000	25.86%
2012	406,521,000	406,521,000	0	1,497,475,000	27.15%
2013	426,020,000	427,095,000[(5)]	(1,075,000)	1,494,745,000	28.57%
2014	476,320,000	625,520,000[(6)]	(149,200,000)	1,513,206,000	41.34%
2015	502,886,000	571,298,000[(7)]	(68,412,000)	1,521,036,000	37.56%
2016	521,447,000	567,196,000[(8)]	(45,749,000)	1,602,675,000	35.40%
2017	536,726,000[(9)]	572,104,000[(9),(10)]	(35,378,000)	1,678,322,000	34.09%
2018	556,728,000[(11)]	580,905,000[(11),(12)]	(24,177,000)	1,718,798,000	33.80%

(1) *Reduced by transfers from County Investment Account (funded by pension obligation proceeds held by OCERS). Those transfers are as follows:*

Plan Year Ended December 31	*Transfers from County Investment Account*	*Plan Year Ended December 31*	*Transfers from County Investment Account*
2009	*$34,900,000*	*2014*	*$5,000,000*
2010	*11,000,000*	*2015*	*0*
2011	*11,000,000*	*2016*	*0*
2012	*5,500,000*	*2017*	*0*
2013	*5,000,000*	*2018*	*0*

(2) *Reduced by discount for prepaid contributions.*

(3) *Covered payroll represents payroll on which contributions to the pension plan are based.*

(4) *Includes additional contributions of $891,000 made by O.C. Fire Authority towards the reduction of their UAAL.*

(5) *Includes additional contributions of $1,075,000 made by O.C. Fire Authority towards the reduction of their UAAL.*

(6) *Includes additional contributions of $1,663,000 made by O.C. Cemetery District, $22,537,000 made by O.C. Fire Authority and $125,000,000 made by O.C. Sanitation District towards the reduction of their UAAL.*

EXHIBIT 6 (continued)

Schedule of OCERS' Contributions – Last Ten Plan Years

(7) *Includes additional contributions of $18,412,000 made by O.C. Fire Authority and $50,000,000 made by O.C. Sanitation District towards the reduction of their UAAL.*

(8) *Includes additional contributions of $5,133,000 made by O.C. Fire Authority, $1,500,000 made by Law Library and $5,587,000 made by O.C. Sanitation District towards the reduction of their UAAL as well as $33,529,000 made by O.C. Sanitation District to their UAAL Deferred Account.*

(9) *$24,042,000 transfer from O.C. Sanitation District Deferred UAAL Account required to offset UAAL increase for the assumption changes has been excluded from both these amounts.*

(10) *Includes additional contributions of $32,096,000 made by O.C. Fire Authority, $1,538,000 made by Law Library and $1,744,000 made by O.C. Children and Families Commission towards the reduction of their UAAL.*

(11) *$14,589,000 transfer from O.C. Sanitation District Deferred UAAL Account required to offset UAAL increase for the actuarial losses as of December 31, 2018 has been excluded from both these amounts.*

(12) *Includes additional contributions of $23,437,000 made by O.C. Fire Authority and $740,000 made by Cypress Recreation and Parks District towards the reduction of their UAAL.*

Notes to Exhibit 6

Methods and assumptions used to establish "actuarially determined contribution" rates:	
Valuation date	Actuarially determined contribution rates for the first six months of calendar year 2018 or the second half of fiscal year 2017-2018 are calculated based on the December 31, 2015 valuation. Actuarially determined contribution rates for the last six months of calendar year 2018 or the first half of fiscal year 2018-2019 are calculated based on the December 31, 2016 valuation.
Actuarial cost method	Entry Age Actuarial Cost Method
Amortization method	Level percent of payroll for total unfunded actuarial accrued liability
Remaining amortization period	Effective December 31, 2013, the outstanding balance of the UAAL from the December 31, 2012 valuation was combined and re-amortized over a declining 20-year period. Any changes in UAAL due to actuarial gains or losses or due to changes in assumptions or methods will be amortized over separate 20-year periods. Any changes in UAAL due to plan amendments will be amortized over separate 15-year periods and any change in UAAL due to early retirement incentive programs will be amortized over a separate period of up to 5 years.
Asset valuation method	The Actuarial Value of Assets is determined by recognizing any difference between the actual and the expected market return over a five-year period. The Valuation Value of Assets is the Actuarial Value of Assets reduced by the value of the non-valuation reserves.

Notes to Exhibit 6 (continued)

Actuarial assumptions:

December 31, 2015 valuation

Investment rate of return	7.25%, net of pension plan investment expense, including inflation
Inflation rate	3.00%
Real across-the-board salary increase	0.50%
Projected salary increases	General: 4.25% to 13.50% and Safety: 5.00% to 17.50%, vary by service, including inflation
Cost of living adjustments	3.00% of retirement income
Other assumptions	Same as those used in the December 31, 2015 funding actuarial valuation

December 31, 2016 valuation

Investment rate of return	7.25%, net of pension plan investment expense, including inflation
Inflation rate	3.00%
Real across-the-board salary increase	0.50%
Projected salary increases	General: 4.25% to 13.50% and Safety: 5.00% to 17.50%, vary by service, including inflation
Cost of living adjustments	3.00% of retirement income
Other assumptions	Same as those used in the December 31, 2016 funding actuarial valuation

EXHIBIT 7

Determination of Proportionate Share

Actual Contributions (Excluding Employer Paid Member Contributions and not Reduced for Discount due to Prepaid Contributions) by Employer and Rate Group
January 1, 2017 to December 31, 2017

Employer	Rate Group #1	Rate Group #1 Percentage	Rate Group #2	Rate Group #2 Percentage	Rate Group #3	Rate Group #3 Percentage
Orange County	$14,766,000	98.637%	$247,280,000	87.558%	$0	0.000%
O.C. Cemetery District	0	0.000%	0	0.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	0	0.000%
O.C. Vector Control District	0	0.000%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	1,960,000	0.694%	0	0.000%
O.C. Fire Authority	0	0.000%	0	0.000%	0	0.000%
Cypress Recreation and Parks[1]	0	0.000%	0	0.000%	0	0.000%
Department of Education	0	0.000%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	0	0.000%
City of San Juan Capistrano	0	0.000%	2,391,000	0.847%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	7,625,000	100.000%
O.C. Transportation Authority	0	0.000%	0	0.000%	0	0.000%
U.C.I.	0	0.000%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	249,000	0.088%	0	0.000%
Local Agency Formation Comm.	0	0.000%	116,000	0.041%	0	0.000%
Rancho Santa Margarita	0	0.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	30,423,000	10.772%	0	0.000%
O.C. IHSS Public Authority	204,000	1.363%	0	0.000%	0	0.000%
Total for all Employers	$14,970,000	100.000%	$282,419,000	100.000%	$7,625,000	100.000%

[1] After the December 31, 2016 funding valuation, we have applied the Board's withdrawing employer policy to allocate a portion of the Unfunded Actuarial Accrued Liability to the District as of December 31, 2016. However, no UAAL contributions have been made by the District during 2017.

Note: Results may not total due to rounding.

EXHIBIT 7 (continued)

Determination of Proportionate Share

Actual Contributions (Excluding Employer Paid Member Contributions and not Reduced for Discount due to Prepaid Contributions) by Employer and Rate Group
January 1, 2017 to December 31, 2017

Employer	Rate Group #4	Rate Group #4 Percentage	Rate Group #5	Rate Group #5 Percentage	Rate Group #9	Rate Group #9 Percentage
Orange County	$0	0.000%	$0	0.000%	$0	0.000%
O.C. Cemetery District	0	0.000%	0	0.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	0	0.000%
O.C. Vector Control District	0	0.000%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	0	0.000%	0	0.000%
O.C. Fire Authority	0	0.000%	0	0.000%	0	0.000%
Cypress Recreation and Parks	0	0.000%	0	0.000%	0	0.000%
Department of Education	0	0.000%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	1,738,000	100.000%
City of San Juan Capistrano	0	0.000%	0	0.000%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	0	0.000%
O.C. Transportation Authority	0	0.000%	24,310,000	100.000%	0	0.000%
U.C.I.	0	0.000%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	0	0.000%	0	0.000%
Local Agency Formation Comm.	0	0.000%	0	0.000%	0	0.000%
Rancho Santa Margarita	0	100.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	0	0.000%	0	0.000%
O.C. IHSS Public Authority	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	$0	100.000%	$24,310,000	100.000%	$1,738,000	100.000%

Note: Results may not total due to rounding.

EXHIBIT 7 (continued)

Determination of Proportionate Share

Actual Contributions (Excluding Employer Paid Member Contributions and not Reduced for Discount due to Prepaid Contributions) by Employer and Rate Group
January 1, 2017 to December 31, 2017

Employer	Rate Group #10	Rate Group #10 Percentage	Rate Group #11	Rate Group #11 Percentage	Rate Group #12	Rate Group #12 Percentage
Orange County	$0	0.000%	$0	0.000%	$0	0.000%
O.C. Cemetery District	0	0.000%	170,000	100.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	264,000	100.000%
O.C. Vector Control District	0	0.000%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	0	0.000%	0	0.000%
O.C. Fire Authority	8,348,000	100.000%	0	0.000%	0	0.000%
Cypress Recreation and Parks	0	0.000%	0	0.000%	0	0.000%
Department of Education	0	0.000%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	0	0.000%
City of San Juan Capistrano	0	0.000%	0	0.000%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	0	0.000%
O.C. Transportation Authority	0	0.000%	0	0.000%	0	0.000%
U.C.I.	0	0.000%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	0	0.000%	0	0.000%
Local Agency Formation Comm.	0	0.000%	0	0.000%	0	0.000%
Rancho Santa Margarita	0	0.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	0	0.000%	0	0.000%
O.C. IHSS Public Authority	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	$8,348,000	100.000%	$170,000	100.000%	$264,000	100.000%

Note: Results may not total due to rounding.

EXHIBIT 7 (continued)

Determination of Proportionate Share

Actual Contributions (Excluding Employer Paid Member Contributions and not Reduced for Discount due to Prepaid Contributions) by Employer and Rate Group
January 1, 2017 to December 31, 2017

Employer	Rate Group #6	Rate Group #6 Percentage	Rate Group #7	Rate Group #7 Percentage	Rate Group #8	Rate Group #8 Percentage
Orange County	$26,930,000	100.000%	$131,526,000	100.000%	$0	0.000%
O.C. Cemetery District	0	0.000%	0	0.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	0	0.000%
O.C. Vector Control District	0	0.000%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	0	0.000%	0	0.000%
O.C. Fire Authority	0	0.000%	0	0.000%	56,891,000	100.000%
Cypress Recreation and Parks	0	0.000%	0	0.000%	0	0.000%
Department of Education	0	0.000%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	0	0.000%
City of San Juan Capistrano	0	0.000%	0	0.000%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	0	0.000%
O.C. Transportation Authority	0	0.000%	0	0.000%	0	0.000%
U.C.I.	0	0.000%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	0	0.000%	0	0.000%
Local Agency Formation Comm.	0	0.000%	0	0.000%	0	0.000%
Rancho Santa Margarita	0	0.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	0	0.000%	0	0.000%
O.C. IHSS Public Authority	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	$26,930,000	100.000%	$131,526,000	100.000%	$56,891,000	100.000%

Note: Results may not total due to rounding.

EXHIBIT 7 (continued)

Determination of Proportionate Share

Actual Contributions (Excluding Employer Paid Member Contributions and not Reduced for Discount due to Prepaid Contributions) by Employer and Rate Group
January 1, 2017 to December 31, 2017

Employer	Total Contributions[2]	Total Percentage
Orange County	$420,502,000	75.740%
O.C. Cemetery District	170,000	0.030%
O.C. Law Library	264,000	0.047%
O.C. Vector Control District	0	0.000%
O.C. Retirement System	1,960,000	0.353%
O.C. Fire Authority	65,239,000	11.751%
Cypress Recreation and Parks[1]	0	0.000%
Department of Education	0	0.000%
Transportation Corridor Agency	1,738,000	0.313%
City of San Juan Capistrano	2,391,000	0.431%
O.C. Sanitation District	7,625,000	1.373%
O.C. Transportation Authority	24,310,000	4.379%
U.C.I.	0	0.000%
O.C. Children and Families Comm.	249,000	0.045%
Local Agency Formation Comm.	116,000	0.021%
Rancho Santa Margarita	0	0.000%
O.C. Superior Court	30,423,000	5.480%
O.C. IHSS Public Authority	204,000	0.037%
Total for all Employers	$555,191,000	100.000%

(1) After the December 31, 2016 funding valuation, we have applied the Board's withdrawing employer policy to allocate a portion of the Unfunded Actuarial Accrued Liability to the District as of December 31, 2016. However, no UAAL contributions have been made by the District during 2017.

(2) Excludes combined additional contributions of $35,378,000 made by O.C. Law Library, O.C. Fire Authority and O.C. Children and Families Comm. towards the reduction of their UAALs, combined contributions of $3,472,000 made by Department of Education and U.C.I. and combined employer pick-up contributions of $985,000.

Note: Results may not total due to rounding.

EXHIBIT 7 (continued)

Determination of Proportionate Share

Allocation of December 31, 2017 Net Pension Liability						
Employer	Rate Group #1	Rate Group #1 Percentage	Rate Group #2	Rate Group #2 Percentage	Rate Group #3	Rate Group #3 Percentage
Orange County	$46,159,638	58.485%	$2,620,699,334	87.267%	$0	0.000%
O.C. Cemetery District	0	0.000%	0	0.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	0	0.000%
O.C. Vector Control District[3]	1,166,920	1.478%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	21,427,080	0.714%	0	0.000%
O.C. Fire Authority	0	0.000%	0	0.000%	0	0.000%
Cypress Recreation and Parks[3]	718,340	0.910%	0	0.000%	0	0.000%
Department of Education[3]	2,530,324	3.206%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	0	0.000%
City of San Juan Capistrano	0	0.000%	26,138,852	0.870%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	(39,571,102)	100.000%
O.C. Transportation Authority	0	0.000%	0	0.000%	0	0.000%
U.C.I.[3]	27,644,960	35.026%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	962,204	0.032%	0	0.000%
Local Agency Formation Comm.	0	0.000%	1,268,133	0.042%	0	0.000%
Rancho Santa Margarita	0	0.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	332,589,831	11.075%	0	0.000%
O.C. IHSS Public Authority	706,343	0.895%	0	0.000%	0	0.000%
Total for all Employers	$78,926,525	100.000%	$3,003,085,434	100.000%	$(39,571,102)	100.000%

[3] In determining the NPLs for the O.C. Vector Control District, Cypress Recreation and Parks, Department of Education and U.C.I., we first start by rolling forward the VVAs of these employers as of December 31, 2016 to December 31, 2017 for the actual contributions, benefit payments and return on their VVAs during 2017. Those VVAs are then marked to the Plan's Fiduciary Net Position as of December 31, 2017. The TPLs for these employers are obtained from internal valuation results (by rolling forward their TPLs from December 31, 2016).

Note: Results may not total due to rounding.

EXHIBIT 7 (continued)

Determination of Proportionate Share

Allocation of December 31, 2017 Net Pension Liability						
Employer	**Rate Group #4**	**Rate Group #4 Percentage**	**Rate Group #5**	**Rate Group #5 Percentage**	**Rate Group #9**	**Rate Group #9 Percentage**
Orange County	$0	0.000%	$0	0.000%	$0	0.000%
O.C. Cemetery District	0	0.000%	0	0.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	0	0.000%
O.C. Vector Control District	0	0.000%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	0	0.000%	0	0.000%
O.C. Fire Authority	0	0.000%	0	0.000%	0	0.000%
Cypress Recreation and Parks	0	0.000%	0	0.000%	0	0.000%
Department of Education	0	0.000%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	10,242,769	100.000%
City of San Juan Capistrano	0	0.000%	0	0.000%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	0	0.000%
O.C. Transportation Authority	0	0.000%	212,117,162	100.000%	0	0.000%
U.C.I.	0	0.000%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	0	0.000%	0	0.000%
Local Agency Formation Comm.	0	0.000%	0	0.000%	0	0.000%
Rancho Santa Margarita	(2,320)	100.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	0	0.000%	0	0.000%
O.C. IHSS Public Authority	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	$(2,320)	100.000%	$212,117,162	100.000%	$10,242,769	100.000%

Note: Results may not total due to rounding.

EXHIBIT 7 (continued)

Determination of Proportionate Share

Allocation of December 31, 2017 Net Pension Liability						
Employer	Rate Group #10	Rate Group #10 Percentage	Rate Group #11	Rate Group #11 Percentage	Rate Group #12	Rate Group #12 Percentage
Orange County	$0	0.000%	$0	0.000%	$0	0.000%
O.C. Cemetery District	0	0.000%	(173,677)	100.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	(36,317)	100.000%
O.C. Vector Control District	0	0.000%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	0	0.000%	0	0.000%
O.C. Fire Authority	49,719,504	100.000%	0	0.000%	0	0.000%
Cypress Recreation and Parks	0	0.000%	0	0.000%	0	0.000%
Department of Education	0	0.000%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	0	0.000%
City of San Juan Capistrano	0	0.000%	0	0.000%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	0	0.000%
O.C. Transportation Authority	0	0.000%	0	0.000%	0	0.000%
U.C.I.	0	0.000%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	0	0.000%	0	0.000%
Local Agency Formation Comm.	0	0.000%	0	0.000%	0	0.000%
Rancho Santa Margarita	0	0.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	0	0.000%	0	0.000%
O.C. IHSS Public Authority	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	$49,719,504	100.000%	$(173,677)	100.000%	$(36,317)	100.000%

Note: Results may not total due to rounding.

EXHIBIT 7 (continued)

Determination of Proportionate Share

Allocation of December 31, 2017 Net Pension Liability						
Employer	**Rate Group #6**	**Rate Group #6 Percentage**	**Rate Group #7**	**Rate Group #7 Percentage**	**Rate Group #8**	**Rate Group #8 Percentage**
Orange County	$237,985,846	100.000%	$1,078,850,413	100.000%	$0	0.000%
O.C. Cemetery District	0	0.000%	0	0.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	0	0.000%
O.C. Vector Control District	0	0.000%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	0	0.000%	0	0.000%
O.C. Fire Authority	0	0.000%	0	0.000%	320,955,164	100.000%
Cypress Recreation and Parks	0	0.000%	0	0.000%	0	0.000%
Department of Education	0	0.000%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	0	0.000%
City of San Juan Capistrano	0	0.000%	0	0.000%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	0	0.000%
O.C. Transportation Authority	0	0.000%	0	0.000%	0	0.000%
U.C.I.	0	0.000%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	0	0.000%	0	0.000%
Local Agency Formation Comm.	0	0.000%	0	0.000%	0	0.000%
Rancho Santa Margarita	0	0.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	0	0.000%	0	0.000%
O.C. IHSS Public Authority	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	$237,985,846	100.000%	$1,078,850,413	100.000%	$320,955,164	100.000%

Note: Results may not total due to rounding.

EXHIBIT 7 (continued)

Determination of Proportionate Share

Allocation of December 31, 2017 Net Pension Liability		
Employer	**Total NPL**	**Total Percentage**
Orange County	$3,983,695,231	80.445%
O.C. Cemetery District	(173,677)	(0.004%)
O.C. Law Library	(36,317)	(0.001%)
O.C. Vector Control District(3)	1,166,920	0.024%
O.C. Retirement System	21,427,080	0.433%
O.C. Fire Authority	370,674,668	7.485%
Cypress Recreation and Parks(3)	718,340	0.015%
Department of Education(3)	2,530,324	0.051%
Transportation Corridor Agency	10,242,769	0.207%
City of San Juan Capistrano	26,138,852	0.528%
O.C. Sanitation District	(39,571,102)	(0.799%)
O.C. Transportation Authority	212,117,162	4.283%
U.C.I.(3)	27,644,960	0.558%
O.C. Children and Families Comm.	962,204	0.019%
Local Agency Formation Comm.	1,268,133	0.026%
Rancho Santa Margarita	(2,320)	(0.000%)
O.C. Superior Court	332,589,831	6.716%
O.C. IHSS Public Authority	706,343	0.014%
Total for all Employers	$4,952,099,401	100.000%

(3) In determining the NPLs for the O.C. Vector Control District, Cypress Recreation and Parks, Department of Education and U.C.I., we first start by rolling forward the VVAs of these employers as of December 31, 2016 to December 31, 2017 for the actual contributions, benefit payments and return on their VVAs during 2017. Those VVAs are then marked to the Plan's Fiduciary Net Position as of December 31, 2017. The TPLs for these employers are obtained from internal valuation results (by rolling forward their TPLs from December 31, 2016).

Note: Results may not total due to rounding.

EXHIBIT 7 (continued)

Determination of Proportionate Share

Notes Regarding Determination of Proportionate Share as of December 31, 2017 Measurement Date:

1. Based on the January 1, 2017 through December 31, 2017 employer contributions as provided by OCERS. These contributions have been adjusted to exclude employer paid member contributions and they have not been reduced for discount due to prepaid contributions. (It should be noted that we would also have included transfers made from the County Investment Account had those transfers been made in 2017.)

2a. The Net Pension Liability (NPL) for each Rate Group is the Total Pension Liability (TPL) minus the Plan’s Fiduciary Net Position (plan assets). The TPL for each Rate Group is obtained from internal valuation results. The Plan’s Fiduciary Net Position for each Rate Group is estimated by adjusting the Valuation Value of Assets (VVA) for each membership class by the ratio of the total OCERS Plan’s Fiduciary Net Position (excluding the balance of the County Investment Account and the O.C. Sanitation District UAAL Deferred Account) to total OCERS VVA. As previously directed by OCERS, the County Investment Account is then allocated among the four County Rate Groups using the proportions of County POB contributions made during 2017. Again, as there were no such County POB contributions made during 2017, we have continued to apply the same proportions determined in 2014 for each of the four County Rate Groups to allocate the $134,417,000 in the County Investment Accout as of December 31, 2017. These amounts are provided in item 3. The O.C. Sanitation District UAAL Deferred Account is allocated entirely to Rate Group #3 and the balance in that account has been reduced by $24,042,000 to $14,871,000 at the end of the year to mitigate the additional UAAL due to the changes in assumption approved by the Board for the December 31, 2017 valuation (and that UAAL was measured on a VVA basis). Nonetheless, the balance of the O.C. Sanitation District UAAL Deferred Account was used to reduce the NPL for O.C. Sanitation District as of the measurement date.

b. Each of General Rate Groups #3, #4, #5, #9, #10, #11 and #12 and Safety Rate Groups #6, #7 and #8 have only one active employer, so all of the NPL for that Rate Group is allocated to the corresponding employer.

c. For General Rate Groups #1 and #2, the NPL is allocated based on the actual employer contributions within the General Rate Group.

- The NPL for Rate Group #1 was adjusted by the NPLs for the O.C. Vector Control District, Cypress Recreation and Parks, Department of Education and U.C.I. prior to allocating the net NPL to the other employers in Rate Group #1 as the NPLs for these four employers were calculated separately.
- Calculate ratio of employer's contributions to the total contributions for the Rate Group. For this purpose, the employer contributions exclude the following amounts:

(i) Rate Group #1 (Department of Education):	$524,000
(ii) Rate Group #1 (U.C.I.):	$2,948,000
(iii) Rate Group #2 (O.C. Children and Families Comm.):	$1,744,000

- Multiply this ratio (unrounded) by the NPL for the Rate Group to determine the employer's proportionate share of the NPL for the Rate Group.
- The UAAL contributions referenced in (i), (ii) and (iii) above are adjusted with interest to December 31, 2017 and are used to reduced the NPL for the three employers as of December 31, 2017.

EXHIBIT 7 (continued)

Determination of Proportionate Share

Notes Regarding Determination of Proportionate Share as of December 31, 2017 Measurement Date:

3. The percentages of contributions by employer are not exactly equal to the percentages we use to allocate the NPL by employer because the NPL for the County has been reduced to reflect the portion of the County Investment Account that has been allocated among the four County Rate Groups. The amounts of the County Investment Account that have been allocated to those Rate Groups are as follows:

Rate Group #1:	$4,967,147
Rate Group #2:	82,611,101
Rate Group #6:	8,585,705
Rate Group #7:	38,253,047
Total:	$134,417,000

In addition, the NPL for Rate Group #2 was allocated prior to applying the adjusted balance of the $1,744,454 in additional UAAL contributions made by O.C. Children and Families Commission on November 15, 2017. That balance is equal to $1,759,910 as of December 31, 2017 when adjusted with interest from November 15, 2017 to December 31, 2017. We would continue to maintain the outstanding balance of the additional UAAL contributions for use in determining the NPL for this employer.

4. If the employer is in several Rate Groups, the employer's total allocated NPL is the sum of its allocated NPL from each Rate Group. Proportionate share of total plan NPL is then the ratio of the employer's total allocated NPL to the total NPL of all employers.

EXHIBIT 7 (continued)

Determination of Proportionate Share

Actual Contributions (Excluding Employer Paid Member Contributions and not Reduced for Discount due to Prepaid Contributions) by Employer and Rate Group
January 1, 2018 to December 31, 2018

Employer	Rate Group #1	Rate Group #1 Percentage	Rate Group #2	Rate Group #2 Percentage	Rate Group #3	Rate Group #3 Percentage
Orange County	$13,361,000	98.591%	$252,306,000	87.908%	$0	0.000%
O.C. Cemetery District	0	0.000%	0	0.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	0	0.000%
O.C. Vector Control District	0	0.000%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	2,187,000	0.762%	0	0.000%
O.C. Fire Authority	0	0.000%	0	0.000%	0	0.000%
Cypress Recreation and Parks	0	0.000%	0	0.000%	0	0.000%
Department of Education	0	0.000%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	0	0.000%
City of San Juan Capistrano	0	0.000%	2,437,000	0.849%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	7,728,000	100.000%
O.C. Transportation Authority	0	0.000%	0	0.000%	0	0.000%
U.C.I.	0	0.000%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	185,000	0.064%	0	0.000%
Local Agency Formation Comm.	0	0.000%	120,000	0.042%	0	0.000%
Rancho Santa Margarita	0	0.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	29,779,000	10.375%	0	0.000%
O.C. IHSS Public Authority	191,000	1.409%	0	0.000%	0	0.000%
Total for all Employers	$13,552,000	100.000%	$287,014,000	100.000%	$7,728,000	100.000%

Note: Results may not total due to rounding.

EXHIBIT 7 (continued)

Determination of Proportionate Share

Actual Contributions (Excluding Employer Paid Member Contributions and not Reduced for Discount due to Prepaid Contributions) by Employer and Rate Group
January 1, 2018 to December 31, 2018

Employer	Rate Group #4	Rate Group #4 Percentage	Rate Group #5	Rate Group #5 Percentage	Rate Group #9	Rate Group #9 Percentage
Orange County	$0	0.000%	$0	0.000%	$0	0.000%
O.C. Cemetery District	0	0.000%	0	0.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	0	0.000%
O.C. Vector Control District	0	0.000%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	0	0.000%	0	0.000%
O.C. Fire Authority	0	0.000%	0	0.000%	0	0.000%
Cypress Recreation and Parks	0	0.000%	0	0.000%	0	0.000%
Department of Education	0	0.000%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	1,641,000	100.000%
City of San Juan Capistrano	0	0.000%	0	0.000%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	0	0.000%
O.C. Transportation Authority	0	0.000%	24,725,000	100.000%	0	0.000%
U.C.I.	0	0.000%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	0	0.000%	0	0.000%
Local Agency Formation Comm.	0	0.000%	0	0.000%	0	0.000%
Rancho Santa Margarita	0	100.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	0	0.000%	0	0.000%
O.C. IHSS Public Authority	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	$0	100.000%	$24,725,000	100.000%	$1,641,000	100.000%

Note: Results may not total due to rounding.

EXHIBIT 7 (continued)

Determination of Proportionate Share

Actual Contributions (Excluding Employer Paid Member Contributions and not Reduced for Discount due to Prepaid Contributions) by Employer and Rate Group
January 1, 2018 to December 31, 2018

Employer	Rate Group #10	Rate Group #10 Percentage	Rate Group #11	Rate Group #11 Percentage	Rate Group #12	Rate Group #12 Percentage
Orange County	$0	0.000%	$0	0.000%	$0	0.000%
O.C. Cemetery District	0	0.000%	171,000	100.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	169,000	100.000%
O.C. Vector Control District	0	0.000%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	0	0.000%	0	0.000%
O.C. Fire Authority	8,206,000	100.000%	0	0.000%	0	0.000%
Cypress Recreation and Parks	0	0.000%	0	0.000%	0	0.000%
Department of Education	0	0.000%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	0	0.000%
City of San Juan Capistrano	0	0.000%	0	0.000%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	0	0.000%
O.C. Transportation Authority	0	0.000%	0	0.000%	0	0.000%
U.C.I.	0	0.000%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	0	0.000%	0	0.000%
Local Agency Formation Comm.	0	0.000%	0	0.000%	0	0.000%
Rancho Santa Margarita	0	0.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	0	0.000%	0	0.000%
O.C. IHSS Public Authority	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	$8,206,000	100.000%	$171,000	100.000%	$169,000	100.000%

Note: Results may not total due to rounding.

EXHIBIT 7 (continued)

Determination of Proportionate Share

Actual Contributions (Excluding Employer Paid Member Contributions and not Reduced for Discount due to Prepaid Contributions) by Employer and Rate Group January 1, 2018 to December 31, 2018

Employer	Rate Group #6	Rate Group #6 Percentage	Rate Group #7	Rate Group #7 Percentage	Rate Group #8	Rate Group #8 Percentage
Orange County	$28,033,000	100.000%	$143,462,000	100.000%	$0	0.000%
O.C. Cemetery District	0	0.000%	0	0.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	0	0.000%
O.C. Vector Control District	0	0.000%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	0	0.000%	0	0.000%
O.C. Fire Authority	0	0.000%	0	0.000%	59,905,000	100.000%
Cypress Recreation and Parks	0	0.000%	0	0.000%	0	0.000%
Department of Education	0	0.000%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	0	0.000%
City of San Juan Capistrano	0	0.000%	0	0.000%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	0	0.000%
O.C. Transportation Authority	0	0.000%	0	0.000%	0	0.000%
U.C.I.	0	0.000%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	0	0.000%	0	0.000%
Local Agency Formation Comm.	0	0.000%	0	0.000%	0	0.000%
Rancho Santa Margarita	0	0.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	0	0.000%	0	0.000%
O.C. IHSS Public Authority	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	$28,033,000	100.000%	$143,462,000	100.000%	$59,905,000	100.000%

Note: Results may not total due to rounding.

EXHIBIT 7 (continued)

Determination of Proportionate Share

Actual Contributions (Excluding Employer Paid Member Contributions and not Reduced for Discount due to Prepaid Contributions) by Employer and Rate Group
January 1, 2018 to December 31, 2018

Employer	Total Contributions[1]	Total Percentage
Orange County	$437,162,000	76.079%
O.C. Cemetery District	171,000	0.030%
O.C. Law Library	169,000	0.029%
O.C. Vector Control District	0	0.000%
O.C. Retirement System	2,187,000	0.381%
O.C. Fire Authority	68,111,000	11.854%
Cypress Recreation and Parks	0	0.000%
Department of Education	0	0.000%
Transportation Corridor Agency	1,641,000	0.286%
City of San Juan Capistrano	2,437,000	0.424%
O.C. Sanitation District	7,728,000	1.345%
O.C. Transportation Authority	24,725,000	4.303%
U.C.I.	0	0.000%
O.C. Children and Families Comm.	185,000	0.032%
Local Agency Formation Comm.	120,000	0.021%
Rancho Santa Margarita	0	0.000%
O.C. Superior Court	29,779,000	5.183%
O.C. IHSS Public Authority	191,000	0.033%
Total for all Employers	$574,606,000	100.000%

(1) Excludes additional contributions of $23,437,000 made by O.C. Fire Authority towards the reduction of their UAALs, combined contributions of $3,916,000 made by Cypress Recreation and Parks, Department of Education and U.C.I. and combined employer pick-up contributions of $164,000.

Note: Results may not total due to rounding.

EXHIBIT 7 (continued)

Determination of Proportionate Share

Employer	Rate Group #1	Rate Group #1 Percentage	Rate Group #2	Rate Group #2 Percentage	Rate Group #3	Rate Group #3 Percentage
	Allocation of December 31, 2018 Net Pension Liability					
Orange County	$71,865,137	62.935%	$3,246,653,910	87.685%	$0	0.000%
O.C. Cemetery District	0	0.000%	0	0.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	0	0.000%
O.C. Vector Control District(2)	2,492,695	2.183%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	28,844,760	0.779%	0	0.000%
O.C. Fire Authority	0	0.000%	0	0.000%	0	0.000%
Cypress Recreation and Parks(2)	408,781	0.358%	0	0.000%	0	0.000%
Department of Education(2)	3,517,372	3.080%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	0	0.000%
City of San Juan Capistrano	0	0.000%	32,142,058	0.868%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	29,029,145	100.000%
O.C. Transportation Authority	0	0.000%	0	0.000%	0	0.000%
U.C.I.(2)	34,808,679	30.483%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	630,610	0.017%	0	0.000%
Local Agency Formation Comm.	0	0.000%	1,582,703	0.043%	0	0.000%
Rancho Santa Margarita	0	0.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	392,760,910	10.608%	0	0.000%
O.C. IHSS Public Authority	1,097,009	0.961%	0	0.000%	0	0.000%
Total for all Employers	$114,189,673	100.000%	$3,702,614,951	100.000%	$29,029,145	100.000%

(2) In determining the NPLs for the O.C. Vector Control District, Cypress Recreation and Parks, Department of Education and U.C.I., we first start by rolling forward the VVAs of these employers as of December 31, 2017 to December 31, 2018 for the actual contributions, benefit payments and return on their VVAs during 2018. Those VVAs are then marked to the Plan's Fiduciary Net Position as of December 31, 2018. The TPLs for these employers are obtained from internal valuation results (by rolling forward their TPLs from December 31, 2017).

Note: Results may not total due to rounding.

EXHIBIT 7 (continued)

Determination of Proportionate Share

Allocation of December 31, 2018 Net Pension Liability						
Employer	Rate Group #4	Rate Group #4 Percentage	Rate Group #5	Rate Group #5 Percentage	Rate Group #9	Rate Group #9 Percentage
Orange County	$0	0.000%	$0	0.000%	$0	0.000%
O.C. Cemetery District	0	0.000%	0	0.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	0	0.000%
O.C. Vector Control District	0	0.000%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	0	0.000%	0	0.000%
O.C. Fire Authority	0	0.000%	0	0.000%	0	0.000%
Cypress Recreation and Parks	0	0.000%	0	0.000%	0	0.000%
Department of Education	0	0.000%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	13,253,632	100.000%
City of San Juan Capistrano	0	0.000%	0	0.000%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	0	0.000%
O.C. Transportation Authority	0	0.000%	269,788,642	100.000%	0	0.000%
U.C.I.	0	0.000%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	0	0.000%	0	0.000%
Local Agency Formation Comm.	0	0.000%	0	0.000%	0	0.000%
Rancho Santa Margarita	1,284	100.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	0	0.000%	0	0.000%
O.C. IHSS Public Authority	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	$1,284	100.000%	$269,788,642	100.000%	$13,253,632	100.000%

Note: Results may not total due to rounding.

EXHIBIT 7 (continued)

Determination of Proportionate Share

Allocation of December 31, 2018 Net Pension Liability						
Employer	**Rate Group #10**	**Rate Group #10 Percentage**	**Rate Group #11**	**Rate Group #11 Percentage**	**Rate Group #12**	**Rate Group #12 Percentage**
Orange County	$0	0.000%	$0	0.000%	$0	0.000%
O.C. Cemetery District	0	0.000%	962,119	100.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	573,252	100.000%
O.C. Vector Control District	0	0.000%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	0	0.000%	0	0.000%
O.C. Fire Authority	55,836,641	100.000%	0	0.000%	0	0.000%
Cypress Recreation and Parks	0	0.000%	0	0.000%	0	0.000%
Department of Education	0	0.000%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	0	0.000%
City of San Juan Capistrano	0	0.000%	0	0.000%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	0	0.000%
O.C. Transportation Authority	0	0.000%	0	0.000%	0	0.000%
U.C.I.	0	0.000%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	0	0.000%	0	0.000%
Local Agency Formation Comm.	0	0.000%	0	0.000%	0	0.000%
Rancho Santa Margarita	0	0.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	0	0.000%	0	0.000%
O.C. IHSS Public Authority	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	$55,836,641	100.000%	$962,119	100.000%	$573,252	100.000%

Note: Results may not total due to rounding.

EXHIBIT 7 (continued)

Determination of Proportionate Share

Allocation of December 31, 2018 Net Pension Liability						
Employer	Rate Group #6	Rate Group #6 Percentage	Rate Group #7	Rate Group #7 Percentage	Rate Group #8	Rate Group #8 Percentage
Orange County	$289,061,877	100.000%	$1,310,995,988	100.000%	$0	0.000%
O.C. Cemetery District	0	0.000%	0	0.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	0	0.000%
O.C. Vector Control District	0	0.000%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	0	0.000%	0	0.000%
O.C. Fire Authority	0	0.000%	0	0.000%	410,894,885	100.000%
Cypress Recreation and Parks	0	0.000%	0	0.000%	0	0.000%
Department of Education	0	0.000%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	0	0.000%
City of San Juan Capistrano	0	0.000%	0	0.000%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	0	0.000%
O.C. Transportation Authority	0	0.000%	0	0.000%	0	0.000%
U.C.I.	0	0.000%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	0	0.000%	0	0.000%
Local Agency Formation Comm.	0	0.000%	0	0.000%	0	0.000%
Rancho Santa Margarita	0	0.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	0	0.000%	0	0.000%
O.C. IHSS Public Authority	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	$289,061,877	100.000%	$1,310,995,988	100.000%	$410,894,885	100.000%

Note: Results may not total due to rounding.

EXHIBIT 7 (continued)

Determination of Proportionate Share

Allocation of December 31, 2018 Net Pension Liability		
Employer	**Total NPL**	**Total Percentage**
Orange County	$4,918,576,912	79.367%
O.C. Cemetery District	962,119	0.016%
O.C. Law Library	573,252	0.009%
O.C. Vector Control District(2)	2,492,695	0.040%
O.C. Retirement System	28,844,760	0.465%
O.C. Fire Authority	466,731,526	7.531%
Cypress Recreation and Parks(2)	408,781	0.007%
Department of Education(2)	3,517,372	0.057%
Transportation Corridor Agency	13,253,632	0.214%
City of San Juan Capistrano	32,142,058	0.519%
O.C. Sanitation District	29,029,145	0.468%
O.C. Transportation Authority	269,788,642	4.353%
U.C.I.(2)	34,808,679	0.562%
O.C. Children and Families Comm.	630,610	0.010%
Local Agency Formation Comm.	1,582,703	0.026%
Rancho Santa Margarita	1,284	0.000%
O.C. Superior Court	392,760,910	6.338%
O.C. IHSS Public Authority	1,097,009	0.018%
Total for all Employers	$6,197,202,089	100.000%

(2) In determining the NPLs for the O.C. Vector Control District, Cypress Recreation and Parks, Department of Education and U.C.I., we first start by rolling forward the VVAs of these employers as of December 31, 2017 to December 31, 2018 for the actual contributions, benefit payments and return on their VVAs during 2018. Those VVAs are then marked to the Plan's Fiduciary Net Position as of December 31, 2018. The TPLs for these employers are obtained from internal valuation results (by rolling forward their TPLs from December 31, 2017).

Note: Results may not total due to rounding.

EXHIBIT 7 (continued)

Determination of Proportionate Share

Notes Regarding Determination of Proportionate Share as of December 31, 2018 Measurement Date:

1. Based on the January 1, 2018 through December 31, 2018 employer contributions as provided by OCERS. These contributions have been adjusted to exclude employer paid member contributions and they have not been reduced for discount due to prepaid contributions. (It should be noted that we would also have included transfers made from the County Investment Account had those transfers been made in 2018.)

2a. The Net Pension Liability (NPL) for each Rate Group is the Total Pension Liability (TPL) minus the Plan's Fiduciary Net Position (plan assets). The TPL for each Rate Group is obtained from internal valuation results. The Plan's Fiduciary Net Position for each Rate Group is estimated by adjusting the Valuation Value of Assets (VVA) for each membership class by the ratio of the total OCERS Plan's Fiduciary Net Position (excluding the balance of the County Investment Account) to total OCERS VVA. As previously directed by OCERS, the County Investment Account is then allocated among the four County Rate Groups using the proportions of County POB contributions made during 2018. Again, as there were no such County POB contributions made during 2018, we have continued to apply the same proportions determined in 2014 for each of the four County Rate Groups to allocate the $131,890,000 in the County Investment Accout as of December 31, 2018. These amounts are provided in item 3. The O.C. Sanitation District UAAL Deferred Account is allocated entirely to Rate Group #3 and the remaining balance of $14,589,000 in that account has been transferred at the end of the year to partially offset the actuarial losses (primarily from investment after smoothing) during 2018. The balance of the O.C. Sanitation District UAAL Deferred Account is $0 at the end of the year after the transfer.

b. Each of General Rate Groups #3, #4, #5, #9, #10, #11 and #12 and Safety Rate Groups #6, #7 and #8 have only one active employer, so all of the NPL for that Rate Group is allocated to the corresponding employer.

c. For General Rate Groups #1 and #2, the NPL is allocated based on the actual employer contributions within the General Rate Group.

- The NPL for Rate Group #1 was adjusted by the NPLs for the O.C. Vector Control District, Cypress Recreation and Parks, Department of Education and U.C.I. prior to allocating the net NPL to the other employers in Rate Group #1 as the NPLs for these four employers were calculated separately.
- Calculate ratio of employer's contributions to the total contributions for the Rate Group. For this purpose, the employer contributions exclude the following amounts:

(i) Rate Group #1 (Department of Education):	$301,000
(ii) Rate Group #1 (U.C.I.):	$2,875,000
(iii) Rate Group #1 (Cypress Recreation and Parks):	$740,000

- Multiply this ratio (unrounded) by the NPL for the Rate Group to determine the employer's proportionate share of the NPL for the Rate Group.
- The UAAL contributions referenced in (i), (ii) and (iii) above are adjusted with interest to December 31, 2018 and are used to reduced the NPL for the three employers as of December 31, 2018.

EXHIBIT 7 (continued)

Determination of Proportionate Share

Notes Regarding Determination of Proportionate Share as of December 31, 2018 Measurement Date:

3. The percentages of contributions by employer are not exactly equal to the percentages we use to allocate the NPL by employer because the NPL for the County has been reduced to reflect the portion of the County Investment Account that has been allocated among the four County Rate Groups. The amounts of the County Investment Account that have been allocated to those Rate Groups are as follows:

Rate Group #1:	$4,873,766
Rate Group #2:	81,058,036
Rate Group #6:	8,424,297
Rate Group #7:	37,533,901
Total:	$131,890,000

   In addition, the NPL for Rate Group #2 was allocated prior to applying the adjusted balance of the $1,744,454 in additional UAAL contributions made by O.C. Children and Families Commission on November 15, 2017. That balance is equal to $1,809,390 as of December 31, 2018 when adjusted with interest for the entire year and UAAL contribution offset starting from July 1, 2018 to December 31, 2018. We would continue to maintain the outstanding balance of the additional UAAL contributions for use in determining the NPL for this employer.

4. If the employer is in several Rate Groups, the employer's total allocated NPL is the sum of its allocated NPL from each Rate Group. Proportionate share of total plan NPL is then the ratio of the employer's total allocated NPL to the total NPL of all employers.

For the active employers, the following items are allocated based on the corresponding proportionate share within each Rate Group:

- 1) Net Pension Liability
- 2) Service cost
- 3) Interest on the Total Pension Liability
- 4) Expensed portion of current-period benefit changes
- 5) Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability
- 6) Expensed portion of current-period changes of assumptions or other inputs
- 7) Member contributions
- 8) Projected earnings on plan investments
- 9) Expensed portion of current-period differences between actual and projected earnings on plan investments
- 10) Administrative expense
- 11) Recognition of beginning of year deferred outflows of resources as pension expense
- 12) Recognition of beginning of year deferred inflows of resources as pension expense

EXHIBIT 8

Pension Expense: Total for all Employers

Reporting Date for Employer under GASB 68	**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Components of Pension Expense		
1. Service cost	$491,372,822	$452,412,003
2. Interest on the Total Pension Liability	1,379,917,267	1,305,268,323
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
4. Expensed portion of current-period benefit changes	0	0
5. Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(19,987,206)	(11,142,029)
6. Expensed portion of current-period changes of assumptions or other inputs	0	137,636,784
7. Member contributions[1]	(270,234,000)	(263,279,000)
8. Projected earnings on plan investments	(1,035,650,701)	(929,983,428)
9. Expensed portion of current-period differences between actual and projected earnings on plan investments	272,055,741	(201,930,314)
10. Administrative expense	18,284,000	17,002,000
11. Other	0	0
12. Recognition of beginning of year deferred outflows of resources as pension expense	399,004,768	258,095,232
13. Recognition of beginning of year deferred inflows of resources as pension expense	(451,049,194)	(234,704,098)
14. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
Pension Expense	$783,713,497	$529,375,473

[1] *Member contributions include employer paid member contributions, if any.*

EXHIBIT 8 (continued)

Pension Expense: Orange County

Reporting Date for Employer under GASB 68	**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Components of Pension Expense		
1. Service cost	$361,704,111	$331,004,944
2. Interest on the Total Pension Liability	1,025,915,198	965,662,018
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	2,225,549	1,348,921
4. Expensed portion of current-period benefit changes	0	0
5. Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(14,167,674)	(2,367,219)
6. Expensed portion of current-period changes of assumptions or other inputs	0	105,720,645
7. Member contributions[1]	(207,127,558)	(201,833,900)
8. Projected earnings on plan investments	(748,179,749)	(670,274,220)
9. Expensed portion of current-period differences between actual and projected earnings on plan investments	195,956,417	(144,893,476)
10. Administrative expense	13,464,032	12,328,336
11. Other	0	0
12. Recognition of beginning of year deferred outflows of resources as pension expense	298,563,409	189,480,429
13. Recognition of beginning of year deferred inflows of resources as pension expense	(327,351,945)	(176,479,079)
14. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	5,016,038	3,667,117
Pension Expense	$606,017,828	$413,364,516

[1] *Member contributions include employer paid member contributions, if any.*

EXHIBIT 8 (continued)

Pension Expense: O.C. Cemetery District

Reporting Date for Employer under GASB 68	June 30, 2019	June 30, 2018
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Components of Pension Expense		
1. Service cost	$348,025	$266,508
2. Interest on the Total Pension Liability	708,227	632,926
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
4. Expensed portion of current-period benefit changes	0	0
5. Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	24,792	(34,941)
6. Expensed portion of current-period changes of assumptions or other inputs	0	81,205
7. Member contributions[1]	(141,000)	(131,000)
8. Projected earnings on plan investments	(696,211)	(623,108)
9. Expensed portion of current-period differences between actual and projected earnings on plan investments	185,536	(132,686)
10. Administrative expense	6,553	5,970
11. Other	0	0
12. Recognition of beginning of year deferred outflows of resources as pension expense	232,446	151,243
13. Recognition of beginning of year deferred inflows of resources as pension expense	(301,651)	(134,024)
14. Net amortization of deferred amounts from changes in proportion and differences between employer’s contributions and proportionate share of contributions	0	0
Pension Expense	$366,717	$82,093

[1] *Member contributions include employer paid member contributions, if any.*

EXHIBIT 8 (continued)

Pension Expense: O.C. Law Library

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Components of Pension Expense	June 30, 2019 December 31, 2018	June 30, 2018 December 31, 2017
1. Service cost	$322,890	$293,545
2. Interest on the Total Pension Liability	710,772	680,271
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
4. Expensed portion of current-period benefit changes	0	0
5. Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(59,333)	(11,212)
6. Expensed portion of current-period changes of assumptions or other inputs	0	71,355
7. Member contributions[(1)]	(159,000)	(163,000)
8. Projected earnings on plan investments	(726,252)	(553,962)
9. Expensed portion of current-period differences between actual and projected earnings on plan investments	193,384	(135,333)
10. Administrative expense	6,897	39,754
11. Other	0	0
12. Recognition of beginning of year deferred outflows of resources as pension expense	782,777	711,421
13. Recognition of beginning of year deferred inflows of resources as pension expense	(626,694)	(480,149)
14. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	(372,508)	(372,508)
Pension Expense	$72,933	$80,182

(1) *Member contributions include employer paid member contributions, if any.*

EXHIBIT 8 (continued)

Pension Expense: O.C. Vector Control District

Reporting Date for Employer under GASB 68	June 30, 2019	June 30, 2018
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Components of Pension Expense		
1. Service cost	$0	$0
2. Interest on the Total Pension Liability	1,848,812	1,912,655
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
4. Expensed portion of current-period benefit changes	0	0
5. Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(196,473)	55,049
6. Expensed portion of current-period changes of assumptions or other inputs	0	144,654
7. Member contributions[1]	0	(4,000)
8. Projected earnings on plan investments	(1,848,408)	(1,767,751)
9. Expensed portion of current-period differences between actual and projected earnings on plan investments	497,306	(368,815)
10. Administrative expense	0	82
11. Other	0	0
12. Recognition of beginning of year deferred outflows of resources as pension expense	721,308	521,606
13. Recognition of beginning of year deferred inflows of resources as pension expense	(865,968)	(497,153)
14. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
Pension Expense	$156,577	$(3,673)

[1] *Member contributions include employer paid member contributions, if any.*

EXHIBIT 8 (continued)

Pension Expense: O.C. Retirement System

Reporting Date for Employer under GASB 68	June 30, 2019	June 30, 2018
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Components of Pension Expense		
1. Service cost	$1,995,184	$1,689,285
2. Interest on the Total Pension Liability	5,980,605	5,190,896
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	368,482	8,281
4. Expensed portion of current-period benefit changes	0	0
5. Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(79,280)	(21,922)
6. Expensed portion of current-period changes of assumptions or other inputs	0	558,486
7. Member contributions[1]	(1,344,479)	(1,214,802)
8. Projected earnings on plan investments	(4,355,868)	(3,600,833)
9. Expensed portion of current-period differences between actual and projected earnings on plan investments	1,144,155	(780,091)
10. Administrative expense	75,152	64,326
11. Other	0	0
12. Recognition of beginning of year deferred outflows of resources as pension expense	1,591,215	898,870
13. Recognition of beginning of year deferred inflows of resources as pension expense	(2,056,153)	(1,081,169)
14. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	335,339	327,058
Pension Expense	$3,654,352	$2,038,385

[1] *Member contributions include employer paid member contributions, if any.*

EXHIBIT 8 (continued)

Pension Expense: O.C. Fire Authority

Reporting Date for Employer under GASB 68	June 30, 2019	June 30, 2018
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Components of Pension Expense		
1. Service cost	$57,116,725	$54,227,641
2. Interest on the Total Pension Liability	132,967,401	126,475,589
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
4. Expensed portion of current-period benefit changes	0	0
5. Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(2,961,807)	(4,002,910)
6. Expensed portion of current-period changes of assumptions or other inputs	0	9,375,593
7. Member contributions[1]	(23,623,000)	(22,249,000)
8. Projected earnings on plan investments	(107,511,750)	(93,925,010)
9. Expensed portion of current-period differences between actual and projected earnings on plan investments	28,451,707	(20,480,172)
10. Administrative expense	2,443,231	2,400,825
11. Other	0	0
12. Recognition of beginning of year deferred outflows of resources as pension expense	37,792,896	28,417,306
13. Recognition of beginning of year deferred inflows of resources as pension expense	(41,721,158)	(17,238,076)
14. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
Pension Expense	$82,954,245	$63,001,786

[1] *Member contributions include employer paid member contributions, if any.*

EXHIBIT 8 (continued)

Pension Expense: Cypress Recreation and Parks

Reporting Date for Employer under GASB 68	**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Components of Pension Expense		
1. Service cost	$0	$0
2. Interest on the Total Pension Liability	300,934	299,448
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
4. Expensed portion of current-period benefit changes	0	0
5. Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	3,345	710,578
6. Expensed portion of current-period changes of assumptions or other inputs	0	23,368
7. Member contributions[1]	0	0
8. Projected earnings on plan investments	(259,495)	10,169
9. Expensed portion of current-period differences between actual and projected earnings on plan investments	70,660	(800,458)
10. Administrative expense	15,899	0
11. Other	0	0
12. Recognition of beginning of year deferred outflows of resources as pension expense	733,946	0
13. Recognition of beginning of year deferred inflows of resources as pension expense	(800,458)	0
14. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
Pension Expense	$64,831	$243,105

[1] *Member contributions include employer paid member contributions, if any.*

EXHIBIT 8 (continued)

Pension Expense: Department of Education

Reporting Date for Employer under GASB 68	**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Components of Pension Expense		
1. Service cost	$0	$0
2. Interest on the Total Pension Liability	856,137	872,268
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
4. Expensed portion of current-period benefit changes	0	0
5. Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	34,113	(205,455)
6. Expensed portion of current-period changes of assumptions or other inputs	0	59,066
7. Member contributions[1]	0	0
8. Projected earnings on plan investments	(675,747)	(663,547)
9. Expensed portion of current-period differences between actual and projected earnings on plan investments	180,008	(140,158)
10. Administrative expense	6,477	10,677
11. Other	0	0
12. Recognition of beginning of year deferred outflows of resources as pension expense	382,586	323,520
13. Recognition of beginning of year deferred inflows of resources as pension expense	(504,215)	(158,602)
14. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
Pension Expense	$279,359	$97,769

[1] *Member contributions include employer paid member contributions, if any.*

EXHIBIT 8 (continued)

Pension Expense: Transportation Corridor Agency

Reporting Date for Employer under GASB 68 **Measurement Date for Employer under GASB 68** **Components of Pension Expense**	**June 30, 2019** **December 31, 2018**	**June 30, 2018** **December 31, 2017**
1. Service cost	$1,693,722	$1,481,244
2. Interest on the Total Pension Liability	3,137,101	2,926,806
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
4. Expensed portion of current-period benefit changes	0	0
5. Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(31,117)	(264,613)
6. Expensed portion of current-period changes of assumptions or other inputs	0	292,487
7. Member contributions[1]	(840,000)	(692,000)
8. Projected earnings on plan investments	(2,396,991)	(2,117,402)
9. Expensed portion of current-period differences between actual and projected earnings on plan investments	624,025	(467,722)
10. Administrative expense	51,803	47,844
11. Other	0	0
12. Recognition of beginning of year deferred outflows of resources as pension expense	806,977	514,489
13. Recognition of beginning of year deferred inflows of resources as pension expense	(1,103,568)	(371,233)
14. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
Pension Expense	$1,941,952	$1,349,900

[1] *Member contributions include employer paid member contributions, if any.*

EXHIBIT 8 (continued)

Pension Expense: City of San Juan Capistrano

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Components of Pension Expense	June 30, 2019 December 31, 2018	June 30, 2018 December 31, 2017
1. Service cost	$2,223,256	$2,060,755
2. Interest on the Total Pension Liability	6,664,259	6,332,364
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	(24,181)	278,735
4. Expensed portion of current-period benefit changes	0	0
5. Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(88,342)	(26,743)
6. Expensed portion of current-period changes of assumptions or other inputs	0	681,296
7. Member contributions[(1)]	(1,498,168)	(1,481,934)
8. Projected earnings on plan investments	(4,853,795)	(4,392,649)
9. Expensed portion of current-period differences between actual and projected earnings on plan investments	1,274,945	(951,631)
10. Administrative expense	83,742	78,471
11. Other	0	0
12. Recognition of beginning of year deferred outflows of resources as pension expense	1,773,109	1,096,529
13. Recognition of beginning of year deferred inflows of resources as pension expense	(2,291,196)	(1,318,916)
14. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	(76,591)	(355,326)
Pension Expense	$3,187,038	$2,000,951

[(1)] *Member contributions include employer paid member contributions, if any.*

EXHIBIT 8 (continued)

Pension Expense: O.C. Sanitation District

Reporting Date for Employer under GASB 68	June 30, 2019	June 30, 2018
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Components of Pension Expense		
1. Service cost	$16,436,454	$14,599,044
2. Interest on the Total Pension Liability	46,856,849	44,099,066
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
4. Expensed portion of current-period benefit changes	0	0
5. Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	558,074	(912,523)
6. Expensed portion of current-period changes of assumptions or other inputs	0	4,090,055
7. Member contributions[1]	(7,825,000)	(7,496,000)
8. Projected earnings on plan investments	(48,767,818)	(44,715,731)
9. Expensed portion of current-period differences between actual and projected earnings on plan investments	13,140,559	(9,558,791)
10. Administrative expense	327,747	301,020
11. Other	0	0
12. Recognition of beginning of year deferred outflows of resources as pension expense	12,786,061	8,696,006
13. Recognition of beginning of year deferred inflows of resources as pension expense	(18,624,486)	(8,153,172)
14. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	372,508	372,508
Pension Expense	$15,260,948	$1,321,482

[1] *Member contributions include employer paid member contributions, if any.*

EXHIBIT 8 (continued)

Pension Expense: O.C. Transportation Authority

Reporting Date for Employer under GASB 68	**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Components of Pension Expense		
1. Service cost	$21,969,087	$20,177,368
2. Interest on the Total Pension Liability	64,268,721	61,058,113
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
4. Expensed portion of current-period benefit changes	0	0
5. Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(2,053,634)	(2,891,372)
6. Expensed portion of current-period changes of assumptions or other inputs	0	7,282,694
7. Member contributions[1]	(9,162,000)	(8,926,000)
8. Projected earnings on plan investments	(49,856,360)	(45,299,139)
9. Expensed portion of current-period differences between actual and projected earnings on plan investments	13,108,760	(9,816,088)
10. Administrative expense	705,212	652,940
11. Other	0	0
12. Recognition of beginning of year deferred outflows of resources as pension expense	18,923,272	11,640,577
13. Recognition of beginning of year deferred inflows of resources as pension expense	(22,803,216)	(10,095,756)
14. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
Pension Expense	$35,099,842	$23,783,337

[1] *Member contributions include employer paid member contributions, if any.*

EXHIBIT 8 (continued)

Pension Expense: U.C.I.

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Components of Pension Expense	June 30, 2019 December 31, 2018	June 30, 2018 December 31, 2017
1. Service cost	$0	$0
2. Interest on the Total Pension Liability	7,453,561	7,693,145
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
4. Expensed portion of current-period benefit changes	0	0
5. Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	115,980	(791,340)
6. Expensed portion of current-period changes of assumptions or other inputs	0	473,486
7. Member contributions(1)	0	0
8. Projected earnings on plan investments	(5,577,083)	(5,525,591)
9. Expensed portion of current-period differences between actual and projected earnings on plan investments	1,483,017	(1,167,612)
10. Administrative expense	61,773	60,070
11. Other	0	0
12. Recognition of beginning of year deferred outflows of resources as pension expense	1,987,876	1,514,390
13. Recognition of beginning of year deferred inflows of resources as pension expense	(3,684,569)	(1,725,616)
14. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
Pension Expense	$1,840,555	$530,932

(1) *Member contributions include employer paid member contributions, if any.*

EXHIBIT 8 (continued)

Pension Expense: O.C. Children and Families Comm.

Reporting Date for Employer under GASB 68	June 30, 2019	June 30, 2018
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Components of Pension Expense		
1. Service cost	$43,618	$75,858
2. Interest on the Total Pension Liability	130,749	233,102
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	(61,098)	(74,128)
4. Expensed portion of current-period benefit changes	0	0
5. Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(1,733)	(984)
6. Expensed portion of current-period changes of assumptions or other inputs	0	25,079
7. Member contributions[1]	(29,393)	(54,552)
8. Projected earnings on plan investments	(95,229)	(161,699)
9. Expensed portion of current-period differences between actual and projected earnings on plan investments	25,014	(35,031)
10. Administrative expense	1,643	2,889
11. Other	0	0
12. Recognition of beginning of year deferred outflows of resources as pension expense	34,787	40,365
13. Recognition of beginning of year deferred inflows of resources as pension expense	(44,952)	(48,551)
14. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	(289,199)	(215,071)
Pension Expense	$(285,793)	$(212,723)

[1] *Member contributions include employer paid member contributions, if any.*

EXHIBIT 8 (continued)

Pension Expense: Local Agency Formation Comm.

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Components of Pension Expense	June 30, 2019 December 31, 2018	June 30, 2018 December 31, 2017
1. Service cost	$109,475	$99,978
2. Interest on the Total Pension Liability	328,154	307,216
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	2,334	(8,500)
4. Expensed portion of current-period benefit changes	0	0
5. Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(4,350)	(1,297)
6. Expensed portion of current-period changes of assumptions or other inputs	0	33,053
7. Member contributions[1]	(73,771)	(71,896)
8. Projected earnings on plan investments	(239,005)	(213,110)
9. Expensed portion of current-period differences between actual and projected earnings on plan investments	62,779	(46,169)
10. Administrative expense	4,124	3,807
11. Other	0	0
12. Recognition of beginning of year deferred outflows of resources as pension expense	87,309	53,198
13. Recognition of beginning of year deferred inflows of resources as pension expense	(112,820)	(63,988)
14. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	28,915	37,415
Pension Expense	$193,144	$129,707

[1] *Member contributions include employer paid member contributions, if any.*

EXHIBIT 8 (continued)

Pension Expense: Rancho Santa Margarita

Reporting Date for Employer under GASB 68	June 30, 2019	June 30, 2018
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Components of Pension Expense		
1. Service cost	$0	$0
2. Interest on the Total Pension Liability	3,220	3,263
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
4. Expensed portion of current-period benefit changes	0	0
5. Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	132	(1,287)
6. Expensed portion of current-period changes of assumptions or other inputs	0	159
7. Member contributions[1]	0	0
8. Projected earnings on plan investments	(3,328)	(3,147)
9. Expensed portion of current-period differences between actual and projected earnings on plan investments	586	(998)
10. Administrative expense	0	0
11. Other	0	0
12. Recognition of beginning of year deferred outflows of resources as pension expense	4,028	3,869
13. Recognition of beginning of year deferred inflows of resources as pension expense	(3,362)	(1,077)
14. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
Pension Expense	$1,276	$782

[1] *Member contributions include employer paid member contributions, if any.*

EXHIBIT 8 (continued)

Pension Expense: O.C. Superior Court

Reporting Date for Employer under GASB 68	June 30, 2019	June 30, 2018
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Components of Pension Expense		
1. Service cost	$27,167,159	$26,220,982
2. Interest on the Total Pension Liability	81,434,123	80,572,779
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	(2,508,769)	(1,564,112)
4. Expensed portion of current-period benefit changes	0	0
5. Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(1,079,499)	(340,280)
6. Expensed portion of current-period changes of assumptions or other inputs	0	8,668,789
7. Member contributions[1]	(18,306,917)	(18,856,078)
8. Projected earnings on plan investments	(59,311,106)	(55,891,915)
9. Expensed portion of current-period differences between actual and projected earnings on plan investments	15,579,236	(12,108,524)
10. Administrative expense	1,023,291	998,464
11. Other	0	0
12. Recognition of beginning of year deferred outflows of resources as pension expense	21,666,565	13,952,203
13. Recognition of beginning of year deferred inflows of resources as pension expense	(27,997,338)	(16,781,835)
14. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	(5,054,972)	(3,490,860)
Pension Expense	$32,611,773	$21,379,613

(1) *Member contributions include employer paid member contributions, if any.*

EXHIBIT 8 (continued)

Pension Expense: O.C. IHSS Public Authority

Reporting Date for Employer under GASB 68 **Measurement Date for Employer under GASB 68** **Components of Pension Expense**	**June 30, 2019** **December 31, 2018**	**June 30, 2018** **December 31, 2017**
1. Service cost	$243,116	$214,851
2. Interest on the Total Pension Liability	352,444	316,398
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	(2,317)	10,803
4. Expensed portion of current-period benefit changes	0	0
5. Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(400)	(33,558)
6. Expensed portion of current-period changes of assumptions or other inputs	0	55,314
7. Member contributions[1]	(103,714)	(104,838)
8. Projected earnings on plan investments	(296,506)	(264,783)
9. Expensed portion of current-period differences between actual and projected earnings on plan investments	77,647	(46,559)
10. Administrative expense	6,424	6,525
11. Other	0	0
12. Recognition of beginning of year deferred outflows of resources as pension expense	134,201	79,211
13. Recognition of beginning of year deferred inflows of resources as pension expense	(155,445)	(75,702)
14. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	40,470	29,667
Pension Expense	$295,920	$187,329

[1] *Member contributions include employer paid member contributions, if any.*

EXHIBIT 9

Deferred Outflows of Resources and Deferred Inflows of Resources: Total for all Employers

Reporting Date for Employer under GASB 68	**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Deferred Outflows of Resources		
1. Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$30,727,591	$24,632,387
2. Changes of assumptions or other inputs	585,314,769	751,249,228
3. Difference between projected and actual earnings on pension plan investments	1,258,427,015	399,097,683
4. Difference between expected and actual experience in the Total Pension Liability	18,724,448	19,285,230
5. Total Deferred Outflows of Resources	$1,893,193,823	$1,194,264,528
Deferred Inflows of Resources		
6. Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$30,727,591	$24,632,387
7. Changes of assumptions or other inputs	57,779,687	106,745,521
8. Difference between projected and actual earnings on pension plan investments	691,386,466	936,796,353
9. Difference between expected and actual experience in the Total Pension Liability	454,047,301	508,967,680
10. Total Deferred Inflows of Resources	$1,233,941,045	$1,577,141,941

Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:

Reporting Date for Employer under GASB 68 Year Ended June 30:		
2019	N/A	$(52,044,426)
2020	$142,015,101	(110,053,434)
2021	32,203,133	(219,865,402)
2022	123,394,687	(128,673,848)
2023	378,563,286	126,494,755
2024	(16,923,429)	1,264,942
2025	0	0
Thereafter	0	0

[1] *Calculated in accordance with Paragraphs 54 and 55 of GASB 68.*

EXHIBIT 9 (continued)

Deferred Outflows of Resources and Deferred Inflows of Resources: Orange County

Reporting Date for Employer under GASB 68	**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Deferred Outflows of Resources		
1. Changes in proportion and differences between employer's contributions and proportionate share of contributions(1)	$25,452,653	$19,581,719
2. Changes of assumptions or other inputs	451,779,162	578,664,495
3. Difference between projected and actual earnings on pension plan investments	907,051,313	289,836,042
4. Difference between expected and actual experience in the Total Pension Liability	10,053,569	12,560,694
5. Total Deferred Outflows of Resources	$1,394,336,697	$900,642,950
Deferred Inflows of Resources		
6. Changes in proportion and differences between employer's contributions and proportionate share of contributions(1)	$108,921	$149,391
7. Changes of assumptions or other inputs	43,625,464	80,224,845
8. Difference between projected and actual earnings on pension plan investments	498,410,128	672,815,006
9. Difference between expected and actual experience in the Total Pension Liability	315,142,849	358,243,068
10. Total Deferred Inflows of Resources	$857,287,362	$1,111,432,310

Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:

Reporting Date for Employer under GASB 68 Year Ended June 30:		
2019	N/A	$(23,522,660)
2020	$115,938,471	(67,689,625)
2021	36,829,538	(146,661,529)
2022	105,067,064	(78,664,919)
2023	289,031,435	104,702,347
2024	(9,817,173)	1,047,026
2025	0	0
Thereafter	0	0

(1) *Calculated in accordance with Paragraphs 54 and 55 of GASB 68.*

EXHIBIT 9 (continued)

Deferred Outflows of Resources and Deferred Inflows of Resources: O.C. Cemetery District

Reporting Date for Employer under GASB 68	June 30, 2019	June 30, 2018
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Deferred Outflows of Resources		
1. Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$0	$0
2. Changes of assumptions or other inputs	325,633	406,838
3. Difference between projected and actual earnings on pension plan investments	859,393	262,218
4. Difference between expected and actual experience in the Total Pension Liability	134,653	19,195
5. Total Deferred Outflows of Resources	$1,319,679	$688,251
Deferred Inflows of Resources		
6. Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$0	$0
7. Changes of assumptions or other inputs	38,647	71,399
8. Difference between projected and actual earnings on pension plan investments	450,507	609,417
9. Difference between expected and actual experience in the Total Pension Liability	287,311	397,300
10. Total Deferred Inflows of Resources	$776,465	$1,078,116

Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:

Reporting Date for Employer under GASB 68 Year Ended June 30:		
2019	N/A	$(69,205)
2020	$113,405	(96,923)
2021	57,227	(153,101)
2022	92,962	(117,366)
2023	256,591	46,264
2024	23,029	466
2025	0	0
Thereafter	0	0

[1] *Calculated in accordance with Paragraphs 54 and 55 of GASB 68.*

EXHIBIT 9 (continued)

Deferred Outflows of Resources and Deferred Inflows of Resources: O.C. Law Library

Reporting Date for Employer under GASB 68		**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68		**December 31, 2018**	**December 31, 2017**
Deferred Outflows of Resources			
1.	Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$60,420	$111,626
2.	Changes of assumptions or other inputs	286,133	357,488
3.	Difference between projected and actual earnings on pension plan investments	1,371,152	1,309,037
4.	Difference between expected and actual experience in the Total Pension Liability	0	0
5.	Total Deferred Outflows of Resources	$1,717,705	$1,778,151
Deferred Inflows of Resources			
6.	Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$872,851	$1,296,565
7.	Changes of assumptions or other inputs	200,032	369,550
8.	Difference between projected and actual earnings on pension plan investments	437,711	588,902
9.	Difference between expected and actual experience in the Total Pension Liability	774,494	789,153
10.	Total Deferred Inflows of Resources	$2,285,088	$3,044,170

Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:

Reporting Date for Employer under GASB 68 Year Ended June 30:		
2019	N/A	$(216,425)
2020	$(196,181)	(330,232)
2021	(516,673)	(650,724)
2022	4,672	(129,379)
2023	194,195	60,143
2024	(53,396)	598
2025	0	0
Thereafter	0	0

[1] *Calculated in accordance with Paragraphs 54 and 55 of GASB 68.*

EXHIBIT 9 (continued)

Deferred Outflows of Resources and Deferred Inflows of Resources: O.C. Vector Control District

		June 30, 2019	June 30, 2018
Reporting Date for Employer under GASB 68		**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68		**December 31, 2018**	**December 31, 2017**
Deferred Outflows of Resources			
1.	Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$0	$0
2.	Changes of assumptions or other inputs	580,065	724,719
3.	Difference between projected and actual earnings on pension plan investments	2,352,302	882,069
4.	Difference between expected and actual experience in the Total Pension Liability	228,434	286,098
5.	Total Deferred Outflows of Resources	$3,160,801	$1,892,886
Deferred Inflows of Resources			
6.	Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$0	$0
7.	Changes of assumptions or other inputs	0	0
8.	Difference between projected and actual earnings on pension plan investments	1,278,263	1,732,987
9.	Difference between expected and actual experience in the Total Pension Liability	1,811,847	1,258,406
10.	Total Deferred Inflows of Resources	$3,090,110	$2,991,393

Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:

Reporting Date for Employer under GASB 68 Year Ended June 30:		
2019	N/A	$(144,660)
2020	$262	(300,571)
2021	(362,816)	(663,649)
2022	109,504	(191,329)
2023	500,535	199,703
2024	(176,794)	1,999
2025	0	0
Thereafter	0	0

(1) *Calculated in accordance with Paragraphs 54 and 55 of GASB 68.*

EXHIBIT 9 (continued)

Deferred Outflows of Resources and Deferred Inflows of Resources: O.C. Retirement System

Reporting Date for Employer under GASB 68	June 30, 2019	June 30, 2018
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Deferred Outflows of Resources		
1. Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$2,594,615	$1,233,255
2. Changes of assumptions or other inputs	2,445,231	2,798,016
3. Difference between projected and actual earnings on pension plan investments	5,304,404	1,565,430
4. Difference between expected and actual experience in the Total Pension Liability	0	0
5. Total Deferred Outflows of Resources	$10,344,250	$5,596,701
Deferred Inflows of Resources		
6. Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$330,892	$443,441
7. Changes of assumptions or other inputs	374,031	632,877
8. Difference between projected and actual earnings on pension plan investments	2,919,627	3,620,981
9. Difference between expected and actual experience in the Total Pension Liability	1,894,371	2,024,402
10. Total Deferred Inflows of Resources	$5,518,921	$6,721,701

Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:

Reporting Date for Employer under GASB 68 Year Ended June 30:		
2019	N/A	$(90,487)
2020	$1,050,111	(322,796)
2021	652,140	(699,315)
2022	826,474	(562,695)
2023	2,027,486	544,845
2024	269,118	5,448
2025	0	0
Thereafter	0	0

[1] *Calculated in accordance with Paragraphs 54 and 55 of GASB 68.*

EXHIBIT 9 (continued)

Deferred Outflows of Resources and Deferred Inflows of Resources: O.C. Fire Authority

Reporting Date for Employer under GASB 68	**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Deferred Outflows of Resources		
1. Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$0	$0
2. Changes of assumptions or other inputs	44,462,250	59,656,589
3. Difference between projected and actual earnings on pension plan investments	130,602,672	39,155,278
4. Difference between expected and actual experience in the Total Pension Liability	703,034	942,161
5. Total Deferred Outflows of Resources	$175,767,956	$99,754,028
Deferred Inflows of Resources		
6. Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$0	$0
7. Changes of assumptions or other inputs	858,688	1,586,390
8. Difference between projected and actual earnings on pension plan investments	69,359,310	93,798,878
9. Difference between expected and actual experience in the Total Pension Liability	58,320,223	60,331,638
10. Total Deferred Inflows of Resources	$128,538,221	$155,716,906

Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:

Reporting Date for Employer under GASB 68 Year Ended June 30:		
2019	N/A	$(3,928,262)
2020	$15,998,056	(9,491,844)
2021	(2,215,414)	(27,705,314)
2022	5,226,034	(20,263,866)
2023	30,862,579	5,372,683
2024	(2,641,520)	53,725
2025	0	0
Thereafter	0	0

[1] *Calculated in accordance with Paragraphs 54 and 55 of GASB 68.*

EXHIBIT 9 (continued)

Deferred Outflows of Resources and Deferred Inflows of Resources: Cypress Recreation and Parks

Reporting Date for Employer under GASB 68	**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Deferred Outflows of Resources		
1. Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$0	$0
2. Changes of assumptions or other inputs	93,704	117,072
3. Difference between projected and actual earnings on pension plan investments	282,642	0
4. Difference between expected and actual experience in the Total Pension Liability	2,865,838	3,559,994
5. Total Deferred Outflows of Resources	$3,242,184	$3,677,066
Deferred Inflows of Resources		
6. Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$0	$0
7. Changes of assumptions or other inputs	0	0
8. Difference between projected and actual earnings on pension plan investments	2,401,373	3,201,831
9. Difference between expected and actual experience in the Total Pension Liability	0	0
10. Total Deferred Inflows of Resources	$2,401,373	$3,201,831

Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:

Reporting Date for Employer under GASB 68 Year Ended June 30:		
2019	N/A	$(66,512)
2020	$7,493	(66,512)
2021	7,493	(66,512)
2022	7,494	(66,511)
2023	807,953	733,946
2024	10,378	7,336
2025	0	0
Thereafter	0	0

(1) *Calculated in accordance with Paragraphs 54 and 55 of GASB 68.*

EXHIBIT 9 (continued)

Deferred Outflows of Resources and Deferred Inflows of Resources: Department of Education

Reporting Date for Employer under GASB 68	June 30, 2019	June 30, 2018
Measurement Date for Employer under GASB 68	December 31, 2018	December 31, 2017
Deferred Outflows of Resources		
1. Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$0	$0
2. Changes of assumptions or other inputs	236,853	295,919
3. Difference between projected and actual earnings on pension plan investments	872,456	304,850
4. Difference between expected and actual experience in the Total Pension Liability	369,390	372,992
5. Total Deferred Outflows of Resources	$1,478,699	$973,761
Deferred Inflows of Resources		
6. Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$0	$0
7. Changes of assumptions or other inputs	66,119	122,153
8. Difference between projected and actual earnings on pension plan investments	499,033	685,764
9. Difference between expected and actual experience in the Total Pension Liability	940,191	1,201,641
10. Total Deferred Inflows of Resources	$1,505,343	$2,009,558

Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:

Reporting Date for Employer under GASB 68 Year Ended June 30:		
2019	N/A	$(121,629)
2020	$99,788	(114,333)
2021	(146,986)	(361,107)
2022	(76,751)	(290,872)
2023	67,730	(146,389)
2024	29,575	(1,467)
2025	0	0
Thereafter	0	0

(1) *Calculated in accordance with Paragraphs 54 and 55 of GASB 68.*

EXHIBIT 9 (continued)

Deferred Outflows of Resources and Deferred Inflows of Resources: Transportation Corridor Agency

	June 30, 2019	June 30, 2018
Reporting Date for Employer under GASB 68	**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Deferred Outflows of Resources		
1. Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$0	$0
2. Changes of assumptions or other inputs	1,172,875	1,465,362
3. Difference between projected and actual earnings on pension plan investments	2,855,534	832,113
4. Difference between expected and actual experience in the Total Pension Liability	114,750	156,559
5. Total Deferred Outflows of Resources	$4,143,159	$2,454,034
Deferred Inflows of Resources		
6. Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$0	$0
7. Changes of assumptions or other inputs	184,306	340,496
8. Difference between projected and actual earnings on pension plan investments	1,588,385	2,148,715
9. Difference between expected and actual experience in the Total Pension Liability	1,358,355	1,592,621
10. Total Deferred Inflows of Resources	$3,131,046	$4,081,832

Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:

Reporting Date for Employer under GASB 68 Year Ended June 30:		
2019	N/A	$(296,591)
2020	$183,068	(409,840)
2021	52,104	(540,804)
2022	184,190	(408,718)
2023	620,784	27,874
2024	(28,033)	281
2025	0	0
Thereafter	0	0

[1] *Calculated in accordance with Paragraphs 54 and 55 of GASB 68.*

EXHIBIT 9 (continued)

Deferred Outflows of Resources and Deferred Inflows of Resources: City of San Juan Capistrano

		June 30, 2019	June 30, 2018
Reporting Date for Employer under GASB 68		**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68		**December 31, 2018**	**December 31, 2017**
Deferred Outflows of Resources			
1.	Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$1,434,064	$1,980,885
2.	Changes of assumptions or other inputs	2,724,750	3,413,294
3.	Difference between projected and actual earnings on pension plan investments	5,910,760	1,909,665
4.	Difference between expected and actual experience in the Total Pension Liability	0	0
5.	Total Deferred Outflows of Resources	$10,069,574	$7,303,844
Deferred Inflows of Resources			
6.	Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$1,662,955	$2,167,638
7.	Changes of assumptions or other inputs	416,787	772,045
8.	Difference between projected and actual earnings on pension plan investments	3,253,375	4,417,227
9.	Difference between expected and actual experience in the Total Pension Liability	2,110,920	2,469,564
10.	Total Deferred Inflows of Resources	$7,444,037	$9,826,474

Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:

Reporting Date for Employer under GASB 68 Year Ended June 30:		
2019	N/A	$(596,055)
2020	$285,103	(879,449)
2021	(218,881)	(1,384,189)
2022	558,425	(605,555)
2023	2,093,974	933,288
2024	(93,084)	9,330
2025	0	0
Thereafter	0	0

[1] *Calculated in accordance with Paragraphs 54 and 55 of GASB 68.*

EXHIBIT 9 (continued)

Deferred Outflows of Resources and Deferred Inflows of Resources: O.C. Sanitation District

Reporting Date for Employer under GASB 68	June 30, 2019	June 30, 2018
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Deferred Outflows of Resources		
1. Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$872,851	$1,296,565
2. Changes of assumptions or other inputs	16,401,122	20,491,177
3. Difference between projected and actual earnings on pension plan investments	59,867,140	16,000,909
4. Difference between expected and actual experience in the Total Pension Liability	2,740,145	0
5. Total Deferred Outflows of Resources	$79,881,258	$37,788,651
Deferred Inflows of Resources		
6. Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$60,420	$111,626
7. Changes of assumptions or other inputs	2,445,073	4,517,168
8. Difference between projected and actual earnings on pension plan investments	32,687,002	44,251,106
9. Difference between expected and actual experience in the Total Pension Liability	10,405,119	15,393,406
10. Total Deferred Inflows of Resources	$45,597,614	$64,273,306

Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:

Reporting Date for Employer under GASB 68 Year Ended June 30:		
2019	N/A	$(5,465,917)
2020	$6,841,613	(6,857,020)
2021	3,479,359	(10,219,274)
2022	6,546,883	(7,151,750)
2023	16,876,166	3,177,532
2024	539,623	31,774
2025	0	0
Thereafter	0	0

[1] *Calculated in accordance with Paragraphs 54 and 55 of GASB 68.*

EXHIBIT 9 (continued)

Deferred Outflows of Resources and Deferred Inflows of Resources: O.C. Transportation Authority

Reporting Date for Employer under GASB 68	June 30, 2019	June 30, 2018
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Deferred Outflows of Resources		
1. Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$0	$0
2. Changes of assumptions or other inputs	29,203,603	36,486,297
3. Difference between projected and actual earnings on pension plan investments	60,889,928	19,886,895
4. Difference between expected and actual experience in the Total Pension Liability	429,659	638,231
5. Total Deferred Outflows of Resources	$90,523,190	$57,011,423
Deferred Inflows of Resources		
6. Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$0	$0
7. Changes of assumptions or other inputs	3,903,525	7,211,596
8. Difference between projected and actual earnings on pension plan investments	33,794,383	45,783,529
9. Difference between expected and actual experience in the Total Pension Liability	31,328,024	28,750,678
10. Total Deferred Inflows of Resources	$69,025,932	$81,745,803

Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:

Reporting Date for Employer under GASB 68 Year Ended June 30:		
2019	N/A	$(3,879,944)
2020	$4,198,065	(6,857,061)
2021	280,630	(10,774,496)
2022	3,397,014	(7,658,112)
2023	15,446,447	4,391,322
2024	(1,824,898)	43,911
2025	0	0
Thereafter	0	0

[1] *Calculated in accordance with Paragraphs 54 and 55 of GASB 68.*

EXHIBIT 9 (continued)

Deferred Outflows of Resources and Deferred Inflows of Resources: U.C.I.

Reporting Date for Employer under GASB 68	June 30, 2019	June 30, 2018
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Deferred Outflows of Resources		
1. Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$0	$0
2. Changes of assumptions or other inputs	1,898,677	2,372,163
3. Difference between projected and actual earnings on pension plan investments	7,212,467	2,560,794
4. Difference between expected and actual experience in the Total Pension Liability	1,083,806	748,341
5. Total Deferred Outflows of Resources	$10,194,950	$5,681,298
Deferred Inflows of Resources		
6. Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$0	$0
7. Changes of assumptions or other inputs	521,873	964,138
8. Difference between projected and actual earnings on pension plan investments	4,163,238	6,335,570
9. Difference between expected and actual experience in the Total Pension Liability	3,502,059	4,572,031
10. Total Deferred Inflows of Resources	$8,187,170	$11,871,739

Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:

Reporting Date for Employer under GASB 68 Year Ended June 30:		
2019	N/A	$(1,696,693)
2020	$576,825	(1,022,172)
2021	(112,439)	(1,711,436)
2022	159,891	(1,439,106)
2023	1,281,144	(317,854)
2024	102,359	(3,180)
2025	0	0
Thereafter	0	0

[1] *Calculated in accordance with Paragraphs 54 and 55 of GASB 68.*

EXHIBIT 9 (continued)

Deferred Outflows of Resources and Deferred Inflows of Resources: O.C. Children and Families Comm.

Reporting Date for Employer under GASB 68		**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68		**December 31, 2018**	**December 31, 2017**
Deferred Outflows of Resources			
1.	Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$0	$0
2.	Changes of assumptions or other inputs	53,458	125,648
3.	Difference between projected and actual earnings on pension plan investments	115,966	70,297
4.	Difference between expected and actual experience in the Total Pension Liability	0	0
5.	Total Deferred Outflows of Resources	$169,424	$195,945
Deferred Inflows of Resources			
6.	Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$1,081,690	$1,070,900
7.	Changes of assumptions or other inputs	8,177	28,420
8.	Difference between projected and actual earnings on pension plan investments	63,829	162,604
9.	Difference between expected and actual experience in the Total Pension Liability	41,415	90,908
10.	Total Deferred Inflows of Resources	$1,195,111	$1,352,832

Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:

Reporting Date for Employer under GASB 68 Year Ended June 30:		
2019	N/A	$(308,321)
2020	$(342,726)	(318,753)
2021	(304,205)	(285,145)
2022	(221,833)	(194,136)
2023	(99,138)	(50,033)
2024	(57,785)	(499)
2025	0	0
Thereafter	0	0

[1] *Calculated in accordance with Paragraphs 54 and 55 of GASB 68.*

EXHIBIT 9 (continued)

Deferred Outflows of Resources and Deferred Inflows of Resources: Local Agency Formation Comm.

Reporting Date for Employer under GASB 68	June 30, 2019	June 30, 2018
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Deferred Outflows of Resources		
1. Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$204,067	$278,946
2. Changes of assumptions or other inputs	134,169	165,597
3. Difference between projected and actual earnings on pension plan investments	291,051	92,648
4. Difference between expected and actual experience in the Total Pension Liability	0	0
5. Total Deferred Outflows of Resources	$629,287	$537,191
Deferred Inflows of Resources		
6. Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$134,872	$192,297
7. Changes of assumptions or other inputs	20,523	37,456
8. Difference between projected and actual earnings on pension plan investments	160,199	214,303
9. Difference between expected and actual experience in the Total Pension Liability	103,944	119,812
10. Total Deferred Inflows of Resources	$419,538	$563,868

Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:

Reporting Date for Employer under GASB 68 Year Ended June 30:		
2019	N/A	$3,713
2020	$50,250	(10,036)
2021	7,729	(52,387)
2022	68,962	8,548
2023	84,409	23,256
2024	(1,601)	229
2025	0	0
Thereafter	0	0

[1] *Calculated in accordance with Paragraphs 54 and 55 of GASB 68.*

EXHIBIT 9 (continued)

Deferred Outflows of Resources and Deferred Inflows of Resources: Rancho Santa Margarita

	June 30, 2019	June 30, 2018
Reporting Date for Employer under GASB 68	**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Deferred Outflows of Resources		
1. Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$0	$0
2. Changes of assumptions or other inputs	639	798
3. Difference between projected and actual earnings on pension plan investments	6,148	7,228
4. Difference between expected and actual experience in the Total Pension Liability	1,170	965
5. Total Deferred Outflows of Resources	$7,957	$8,991
Deferred Inflows of Resources		
6. Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$0	$0
7. Changes of assumptions or other inputs	203	377
8. Difference between projected and actual earnings on pension plan investments	2,995	3,993
9. Difference between expected and actual experience in the Total Pension Liability	7,578	9,768
10. Total Deferred Inflows of Resources	$10,776	$14,138

Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:

Reporting Date for Employer under GASB 68 Year Ended June 30:		
2019	N/A	$666
2020	$512	(206)
2021	(1,013)	(1,731)
2022	(2,021)	(2,739)
2023	(408)	(1,128)
2024	111	(9)
2025	0	0
Thereafter	0	0

[1] *Calculated in accordance with Paragraphs 54 and 55 of GASB 68.*

EXHIBIT 9 (continued)

Deferred Outflows of Resources and Deferred Inflows of Resources: O.C. Superior Court

	June 30, 2019	June 30, 2018
Reporting Date for Employer under GASB 68	**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Deferred Outflows of Resources		
1. Changes in proportion and differences between employer's contributions and proportionate share of contributions[(1)]	$0	$0
2. Changes of assumptions or other inputs	33,295,171	43,430,635
3. Difference between projected and actual earnings on pension plan investments	72,226,722	24,298,513
4. Difference between expected and actual experience in the Total Pension Liability	0	0
5. Total Deferred Outflows of Resources	$105,521,893	$67,729,148
Deferred Inflows of Resources		
6. Changes in proportion and differences between employer's contributions and proportionate share of contributions[(1)]	$26,463,615	$19,200,529
7. Changes of assumptions or other inputs	5,092,945	9,823,473
8. Difference between projected and actual earnings on pension plan investments	39,754,715	56,204,643
9. Difference between expected and actual experience in the Total Pension Liability	25,794,457	31,422,648
10. Total Deferred Inflows of Resources	$97,105,732	$116,651,293

Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:

Reporting Date for Employer under GASB 68 Year Ended June 30:		
2019	N/A	$(11,664,619)
2020	$(2,848,528)	(15,270,511)
2021	(5,329,545)	(17,904,480)
2022	1,391,461	(10,914,578)
2023	18,403,968	6,764,398
2024	(3,201,195)	67,645
2025	0	0
Thereafter	0	0

(1) *Calculated in accordance with Paragraphs 54 and 55 of GASB 68.*

EXHIBIT 9 (continued)

Deferred Outflows of Resources and Deferred Inflows of Resources: O.C. IHSS Public Authority

Reporting Date for Employer under GASB 68	June 30, 2019	June 30, 2018
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Deferred Outflows of Resources		
1. Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$108,921	$149,391
2. Changes of assumptions or other inputs	221,274	277,121
3. Difference between projected and actual earnings on pension plan investments	354,965	123,697
4. Difference between expected and actual experience in the Total Pension Liability	0	0
5. Total Deferred Outflows of Resources	$685,160	$550,209
Deferred Inflows of Resources		
6. Changes in proportion and differences between employer's contributions and proportionate share of contributions[1]	$11,375	$0
7. Changes of assumptions or other inputs	23,294	43,138
8. Difference between projected and actual earnings on pension plan investments	162,393	220,897
9. Difference between expected and actual experience in the Total Pension Liability	224,144	300,636
10. Total Deferred Inflows of Resources	$421,206	$564,671

Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:

Reporting Date for Employer under GASB 68 Year Ended June 30:		
2019	N/A	$19,175
2020	$59,514	(15,550)
2021	44,885	(30,209)
2022	54,262	(20,765)
2023	107,436	32,558
2024	(2,143)	329
2025	0	0
Thereafter	0	0

[1] *Calculated in accordance with Paragraphs 54 and 55 of GASB 68.*

EXHIBIT 9 (continued)

Deferred Outflows of Resources and Deferred Inflows of Resources

There are changes in each employer's proportionate share of the total NPL during the measurement period ended December 31, 2018. The net effect of the change on the employer's proportionate share of the collective NPL and collective deferred outflows of resources and deferred inflows of resources for the current periord (i.e., 2018) is recognized over the average of the expected remaining service lives of all employees that are provided with pensions through OCERS which is 5.91 years determined as of December 31, 2017 (the beginning of the measurement period ended December 31, 2018). This is described in Paragraph 33a. of GASB 68.

In addition, the difference between the actual employer contributions and the proportionate share of the employer contributions during the measurement period ended December 31, 2018 is recognized over the same period.

The net effects of the change on the employer's proportionate share of the collective NPL and collective deferred outflows of resources and deferred inflows of resources for prior periods are continued to be recognized based on the expected remaining service lives of all employees calculated as of those prior measurement dates.

The average of the expected service lives of all employees is determined by:

- Calculating each active employees' expected remaining service life as the present value of $1 per year of future service at zero percent interest.
- Setting the remaining service life to zero for each nonactive or retired member.
- Dividing the sum of the above amounts by the total number of active employee, nonactive and retired members.

EXHIBIT 10

Schedule of Proportionate Share of the Net Pension Liability: Total for all Employers

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll[1]	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	100.000%	$5,291,126,088	$1,494,745,333	353.98%	67.16%
2015	100.000%	5,082,480,673	1,513,206,357	335.87%	69.42%
2016	100.000%	5,716,604,741	1,521,035,820	375.84%	67.10%
2017	100.000%	5,191,216,603	1,602,675,426	323.91%	71.16%
2018	100.000%	4,952,099,401	1,678,322,080	295.06%	74.93%
2019	100.000%	6,197,202,089	1,718,798,287	360.55%	70.03%

[1] *Covered payroll represents payroll on which contributions to the pension plan are based.*

EXHIBIT 10 (continued)

Schedule of Proportionate Share of the Net Pension Liability: Orange County

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll[1]	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	74.198%	$3,925,918,613	$1,086,993,804	361.17%	66.88%
2015	76.680%	3,897,232,634	1,107,550,873	351.88%	68.16%
2016	76.813%	4,391,070,880	1,117,547,827	392.92%	65.66%
2017	77.898%	4,043,855,643	1,199,272,843	337.19%	69.56%
2018	80.445%	3,983,695,231	1,246,487,036	319.59%	72.85%
2019	79.367%	4,918,576,912	1,271,800,976	386.74%	68.06%

[1] *Covered payroll represents payroll on which contributions to the pension plan are based.*

EXHIBIT 10 (continued)

Schedule of Proportionate Share of the Net Pension Liability: O.C. Cemetery District

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll[(1)]	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	0.034%	$1,820,018	$1,183,960	153.72%	76.02%
2015	(0.002%)	(95,350)	1,202,916	(7.93%)	101.24%
2016	0.009%	533,906	1,247,006	42.82%	93.62%
2017	0.004%	222,409	1,288,388	17.26%	97.47%
2018	(0.004%)	(173,677)	1,419,045	(12.24%)	101.78%
2019	0.016%	962,119	1,518,808	63.35%	91.02%

(1) *Covered payroll represents payroll on which contributions to the pension plan are based.*

EXHIBIT 10 (continued)

Schedule of Proportionate Share of the Net Pension Liability: O.C. Law Library

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll[1]	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	0.063%	$3,314,766	$1,191,662	278.16%	63.14%
2015	0.063%	3,221,570	1,193,852	269.85%	66.76%
2016	0.061%	3,472,003	1,153,022	301.12%	62.38%
2017	0.034%	1,770,282	1,106,587	159.98%	80.96%
2018	(0.001%)	(36,317)	1,095,599	(3.31%)	100.35%
2019	0.009%	573,252	1,075,119	53.32%	94.64%

[1] *Covered payroll represents payroll on which contributions to the pension plan are based.*

EXHIBIT 10 (continued)

Schedule of Proportionate Share of the Net Pension Liability: O.C. Vector Control District

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll[1]	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	0.047%	$2,464,723	$0	N/A	91.24%
2015	0.057%	2,900,367	0	N/A	89.85%
2016	0.034%	1,941,891	0	N/A	92.66%
2017	0.032%	1,669,793	0	N/A	93.78%
2018	0.024%	1,166,920	0	N/A	95.89%
2019	0.040%	2,492,695	0	N/A	90.92%

[1] *Covered payroll represents payroll on which contributions to the pension plan are based.*

EXHIBIT 10 (continued)

Schedule of Proportionate Share of the Net Pension Liability: O.C. Retirement System

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll[1]	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	0.402%	$21,259,813	$5,368,550	396.01%	64.40%
2015	0.406%	20,656,114	5,655,725	365.22%	67.15%
2016	0.433%	24,747,342	6,063,327	408.15%	64.73%
2017	0.422%	21,886,393	6,190,905	353.52%	68.69%
2018	0.433%	21,427,080	6,486,488	330.33%	71.95%
2019	0.465%	28,844,760	7,501,588	384.52%	67.06%

[1] *Covered payroll represents payroll on which contributions to the pension plan are based.*

EXHIBIT 10 (continued)

Schedule of Proportionate Share of the Net Pension Liability: O.C. Fire Authority

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll[1]	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	8.366%	$442,651,348	$129,689,221	341.32%	69.66%
2015	9.188%	466,968,323	129,187,729	361.46%	70.35%
2016	9.056%	517,669,806	129,452,647	399.89%	68.90%
2017	9.043%	469,430,660	124,514,004	377.01%	73.11%
2018	7.485%	370,674,668	148,890,685	248.96%	80.44%
2019	7.531%	466,731,526	155,479,486	300.19%	76.63%

[1] *Covered payroll represents payroll on which contributions to the pension plan are based.*

EXHIBIT 10 (continued)

Schedule of Proportionate Share of the Net Pension Liability: Cypress Recreation and Parks

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll[1]	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	0.000%	$0	$0	N/A	N/A
2015	0.000%	0	0	N/A	N/A
2016	0.000%	0	0	N/A	N/A
2017	0.000%	0	0	N/A	N/A
2018	0.015%	718,340	0	N/A	83.78%
2019	0.007%	408,781	0	N/A	90.81%

[1] *Covered payroll represents payroll on which contributions to the pension plan are based.*

EXHIBIT 10 (continued)

Schedule of Proportionate Share of the Net Pension Liability: Department of Education

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll[1]	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	0.051%	$2,691,224	$62,538	4303.34%	81.08%
2015	0.072%	3,637,615	0	N/A	75.31%
2016	0.075%	4,306,689	0	N/A	69.50%
2017	0.085%	4,415,517	0	N/A	68.18%
2018	0.051%	2,530,324	0	N/A	80.00%
2019	0.057%	3,517,372	0	N/A	71.79%

[1] *Covered payroll represents payroll on which contributions to the pension plan are based.*

EXHIBIT 10 (continued)

Schedule of Proportionate Share of the Net Pension Liability: Transportation Corridor Agency

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll[(1)]	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	0.215%	$11,359,334	$6,054,822	187.61%	66.44%
2015	0.210%	10,682,807	6,118,067	174.61%	69.62%
2016	0.222%	12,713,136	6,088,331	208.81%	66.45%
2017	0.239%	12,423,364	6,431,272	193.17%	69.93%
2018	0.207%	10,242,769	6,775,031	151.18%	76.84%
2019	0.214%	13,253,632	6,609,886	200.51%	71.83%

(1) *Covered payroll represents payroll on which contributions to the pension plan are based.*

EXHIBIT 10 (continued)

Schedule of Proportionate Share of the Net Pension Liability: City of San Juan Capistrano

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll[1]	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	0.535%	$28,312,625	$6,324,207	447.69%	64.40%
2015	0.548%	27,866,378	6,863,345	406.02%	67.15%
2016	0.512%	29,249,120	6,464,876	452.43%	64.73%
2017	0.483%	25,089,009	6,636,488	378.05%	68.69%
2018	0.528%	26,138,852	7,227,226	361.67%	71.95%
2019	0.519%	32,142,058	7,253,654	443.12%	67.06%

[1] *Covered payroll represents payroll on which contributions to the pension plan are based.*

EXHIBIT 10 (continued)

Schedule of Proportionate Share of the Net Pension Liability: O.C. Sanitation District

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll[1]	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	3.832%	$202,747,516	$58,954,754	343.90%	63.14%
2015	1.130%	57,418,760	58,641,163	97.92%	89.61%
2016	0.742%	42,439,759	59,789,927	70.98%	92.74%
2017	(0.200%)	(10,384,510)	60,000,017	(17.31%)	101.70%
2018	(0.799%)	(39,571,102)	62,341,796	(63.47%)	105.96%
2019	0.468%	29,029,145	66,475,479	43.67%	95.86%

[1] *Covered payroll represents payroll on which contributions to the pension plan are based.*

EXHIBIT 10 (continued)

Schedule of Proportionate Share of the Net Pension Liability: O.C. Transportation Authority

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll[1]	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	4.112%	$217,568,793	$92,199,745	235.98%	71.77%
2015	4.006%	203,591,950	95,061,437	214.17%	74.00%
2016	4.377%	250,192,983	93,109,984	268.71%	69.82%
2017	4.436%	230,260,478	94,507,309	243.64%	73.17%
2018	4.283%	212,117,162	94,528,116	224.40%	77.15%
2019	4.353%	269,788,642	97,229,545	277.48%	71.97%

(1) *Covered payroll represents payroll on which contributions to the pension plan are based.*

EXHIBIT 10 (continued)

Schedule of Proportionate Share of the Net Pension Liability: U.C.I.

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll[1]	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	0.609%	$32,214,491	$643,375	5007.11%	74.44%
2015	0.523%	26,578,391	574,780	4624.10%	77.81%
2016	0.633%	36,184,065	285,025	12695.05%	69.50%
2017	0.696%	36,113,699	43,707	82626.81%	68.96%
2018	0.558%	27,644,960	14,874	185860.97%	75.13%
2019	0.562%	34,808,679	0	N/A	67.93%

[1] *Covered payroll represents payroll on which contributions to the pension plan are based.*

EXHIBIT 10 (continued)

Schedule of Proportionate Share of the Net Pension Liability: O.C. Children and Families Comm.

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll[1]	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	0.087%	$4,590,845	$1,116,074	411.34%	64.40%
2015	0.078%	3,957,425	1,043,030	379.42%	67.15%
2016	0.071%	4,066,523	1,042,786	389.97%	64.73%
2017	0.061%	3,158,290	925,031	341.43%	68.69%
2018	0.019%	962,204	849,266	113.30%	90.09%
2019	0.010%	630,610	966,061	65.28%	91.49%

(1) *Covered payroll represents payroll on which contributions to the pension plan are based.*

EXHIBIT 10 (continued)

Schedule of Proportionate Share of the Net Pension Liability: Local Agency Formation Comm.

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll[1]	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	0.022%	$1,187,537	$273,719	433.85%	64.40%
2015	0.026%	1,303,484	334,804	389.33%	67.15%
2016	0.020%	1,156,534	287,698	402.00%	64.73%
2017	0.026%	1,340,888	374,792	357.77%	68.69%
2018	0.026%	1,268,133	394,760	321.24%	71.95%
2019	0.026%	1,582,703	419,538	377.25%	67.06%

[1] *Covered payroll represents payroll on which contributions to the pension plan are based.*

EXHIBIT 10 (continued)

Schedule of Proportionate Share of the Net Pension Liability: Rancho Santa Margarita

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll[1]	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	(0.000%)	$(4,181)	$0	N/A	108.66%
2015	0.000%	1,729	0	N/A	96.78%
2016	0.000%	6,660	0	N/A	88.06%
2017	0.000%	9,332	0	N/A	82.95%
2018	(0.000%)	(2,320)	0	N/A	104.91%
2019	0.000%	1,284	0	N/A	97.28%

[1] *Covered payroll represents payroll on which contributions to the pension plan are based.*

EXHIBIT 10 (continued)

Schedule of Proportionate Share of the Net Pension Liability: O.C. Superior Court

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll[1]	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	7.415%	$392,321,750	$103,987,082	377.28%	64.40%
2015	7.002%	355,886,410	99,034,265	359.36%	67.15%
2016	6.926%	395,957,480	97,656,241	405.46%	64.73%
2017	6.726%	349,173,850	100,413,439	347.74%	68.69%
2018	6.716%	332,589,831	100,683,255	330.33%	71.95%
2019	6.338%	392,760,910	101,374,099	387.44%	67.06%

(1) *Covered payroll represents payroll on which contributions to the pension plan are based.*

EXHIBIT 10 (continued)

Schedule of Proportionate Share of the Net Pension Liability: O.C. IHSS Public Authority

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll[1]	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	0.013%	$706,873	$701,820	100.72%	73.15%
2015	0.013%	672,066	744,371	90.29%	75.26%
2016	0.016%	895,964	847,123	105.77%	73.52%
2017	0.015%	781,506	970,644	80.51%	79.30%
2018	0.014%	706,343	1,128,903	62.57%	84.20%
2019	0.018%	1,097,009	1,094,048	100.27%	77.97%

(1) *Covered payroll represents payroll on which contributions to the pension plan are based.*

EXHIBIT 11

Schedule of Reconciliation of Net Pension Liability: Total for all Employers

Reporting Date for Employer under GASB 68	**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Reconciliation of Net Pension Liability		
1. Beginning Net Pension Liability	$4,952,099,401	$5,191,216,603
2. Pension Expense	783,713,497	529,375,473
3. Employer Contributions	(580,741,000)	(571,119,000)
4. New Net Deferred Inflows/Outflows	990,085,765	(173,982,541)
5. Change in Allocation of Prior Deferred Inflows/Outflows	0	0
6. New Net Deferred Flows Due to Change in Proportion[1]	0	0
7. Recognition of Prior Deferred Inflows/Outflows	52,044,426	(23,391,134)
8. Recognition of Prior Deferred Flows Due to Change in Proportion[1]	0	0
9. Ending Net Pension Liability	$6,197,202,089	$4,952,099,401

[1] *Includes differences between employer contributions and proportionate share of contributions.*

EXHIBIT 11 (continued)

Schedule of Reconciliation of Net Pension Liability: Orange County

Reporting Date for Employer under GASB 68	**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Reconciliation of Net Pension Liability		
1. Beginning Net Pension Liability	$3,983,695,231	$4,043,855,643
2. Pension Expense	606,017,828	413,364,516
3. Employer Contributions	(418,974,842)	(401,124,000)
4. New Net Deferred Inflows/Outflows	714,262,376	(61,773,234)
5. Change in Allocation of Prior Deferred Inflows/Outflows	(1,123,621)	(717,319)
6. New Net Deferred Flows Due to Change in Proportion[1]	10,927,442	6,758,092
7. Recognition of Prior Deferred Inflows/Outflows	28,788,536	(13,001,350)
8. Recognition of Prior Deferred Flows Due to Change in Proportion[1]	(5,016,038)	(3,667,117)
9. Ending Net Pension Liability	$4,918,576,912	$3,983,695,231

[1] *Includes differences between employer contributions and proportionate share of contributions.*

EXHIBIT 11 (continued)

Schedule of Reconciliation of Net Pension Liability: O.C. Cemetery District

Reporting Date for Employer under GASB 68	**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Reconciliation of Net Pension Liability		
1. Beginning Net Pension Liability	$(173,677)	$222,409
2. Pension Expense	366,717	82,093
3. Employer Contributions	(164,000)	(162,000)
4. New Net Deferred Inflows/Outflows	863,874	(298,960)
5. Change in Allocation of Prior Deferred Inflows/Outflows	0	0
6. New Net Deferred Flows Due to Change in Proportion[1]	0	0
7. Recognition of Prior Deferred Inflows/Outflows	69,205	(17,219)
8. Recognition of Prior Deferred Flows Due to Change in Proportion[1]	0	0
9. Ending Net Pension Liability	$962,119	$(173,677)

[1] *Includes differences between employer contributions and proportionate share of contributions.*

EXHIBIT 11 (continued)

Schedule of Reconciliation of Net Pension Liability: O.C. Law Library

Reporting Date for Employer under GASB 68	**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Reconciliation of Net Pension Liability		
1. Beginning Net Pension Liability	$(36,317)	$1,770,282
2. Pension Expense	72,933	80,182
3. Employer Contributions	(162,000)	(1,788,000)
4. New Net Deferred Inflows/Outflows	482,211	(240,017)
5. Change in Allocation of Prior Deferred Inflows/Outflows	0	0
6. New Net Deferred Flows Due to Change in Proportion[1]	0	0
7. Recognition of Prior Deferred Inflows/Outflows	(156,083)	(231,272)
8. Recognition of Prior Deferred Flows Due to Change in Proportion[1]	372,508	372,508
9. Ending Net Pension Liability	$573,252	$(36,317)

[1] *Includes differences between employer contributions and proportionate share of contributions.*

EXHIBIT 11 (continued)

Schedule of Reconciliation of Net Pension Liability: O.C. Vector Control District

Reporting Date for Employer under GASB 68	**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Reconciliation of Net Pension Liability		
1. Beginning Net Pension Liability	$1,166,920	$1,669,793
2. Pension Expense	156,577	(3,673)
3. Employer Contributions	0	0
4. New Net Deferred Inflows/Outflows	1,024,538	(474,747)
5. Change in Allocation of Prior Deferred Inflows/Outflows	0	0
6. New Net Deferred Flows Due to Change in Proportion[1]	0	0
7. Recognition of Prior Deferred Inflows/Outflows	144,660	(24,453)
8. Recognition of Prior Deferred Flows Due to Change in Proportion[1]	0	0
9. Ending Net Pension Liability	$2,492,695	$1,166,920

[1] *Includes differences between employer contributions and proportionate share of contributions.*

EXHIBIT 11 (continued)

Schedule of Reconciliation of Net Pension Liability: O.C. Retirement System

Reporting Date for Employer under GASB 68	**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Reconciliation of Net Pension Liability		
1. Beginning Net Pension Liability	$21,427,080	$21,886,393
2. Pension Expense	3,654,352	2,038,385
3. Employer Contributions	(2,187,000)	(1,960,000)
4. New Net Deferred Inflows/Outflows	4,187,357	(432,179)
5. Change in Allocation of Prior Deferred Inflows/Outflows	(175,876)	(2,249)
6. New Net Deferred Flows Due to Change in Proportion[1]	1,809,248	41,489
7. Recognition of Prior Deferred Inflows/Outflows	464,938	182,299
8. Recognition of Prior Deferred Flows Due to Change in Proportion[1]	(335,339)	(327,058)
9. Ending Net Pension Liability	$28,844,760	$21,427,080

[1] *Includes differences between employer contributions and proportionate share of contributions.*

EXHIBIT 11 (continued)

Schedule of Reconciliation of Net Pension Liability: O.C. Fire Authority

Reporting Date for Employer under GASB 68	**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Reconciliation of Net Pension Liability		
1. Beginning Net Pension Liability	$370,674,668	$469,430,660
2. Pension Expense	82,954,245	63,001,786
3. Employer Contributions	(90,090,000)	(95,575,000)
4. New Net Deferred Inflows/Outflows	99,264,351	(55,003,548)
5. Change in Allocation of Prior Deferred Inflows/Outflows	0	0
6. New Net Deferred Flows Due to Change in Proportion[1]	0	0
7. Recognition of Prior Deferred Inflows/Outflows	3,928,262	(11,179,230)
8. Recognition of Prior Deferred Flows Due to Change in Proportion[1]	0	0
9. Ending Net Pension Liability	$466,731,526	$370,674,668

[1] *Includes differences between employer contributions and proportionate share of contributions.*

EXHIBIT 11 (continued)

Schedule of Reconciliation of Net Pension Liability: Cypress Recreation and Parks

Reporting Date for Employer under GASB 68	**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Reconciliation of Net Pension Liability		
1. Beginning Net Pension Liability	$718,340	$0
2. Pension Expense	64,831	243,105
3. Employer Contributions	(739,966)	0
4. New Net Deferred Inflows/Outflows	299,064	475,235
5. Change in Allocation of Prior Deferred Inflows/Outflows	0	0
6. New Net Deferred Flows Due to Change in Proportion(1)	0	0
7. Recognition of Prior Deferred Inflows/Outflows	66,512	0
8. Recognition of Prior Deferred Flows Due to Change in Proportion(1)	0	0
9. Ending Net Pension Liability	$408,781	$718,340

(1) *Includes differences between employer contributions and proportionate share of contributions.*

EXHIBIT 11 (continued)

Schedule of Reconciliation of Net Pension Liability: Department of Education

Reporting Date for Employer under GASB 68	June 30, 2019	June 30, 2018
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Reconciliation of Net Pension Liability		
1. Beginning Net Pension Liability	$2,530,324	$4,415,517
2. Pension Expense	279,359	97,769
3. Employer Contributions	(301,464)	(524,000)
4. New Net Deferred Inflows/Outflows	887,524	(1,294,044)
5. Change in Allocation of Prior Deferred Inflows/Outflows	0	0
6. New Net Deferred Flows Due to Change in Proportion(1)	0	0
7. Recognition of Prior Deferred Inflows/Outflows	121,629	(164,918)
8. Recognition of Prior Deferred Flows Due to Change in Proportion(1)	0	0
9. Ending Net Pension Liability	$3,517,372	$2,530,324

(1) *Includes differences between employer contributions and proportionate share of contributions.*

EXHIBIT 11 (continued)

Schedule of Reconciliation of Net Pension Liability: Transportation Corridor Agency

Reporting Date for Employer under GASB 68	**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Reconciliation of Net Pension Liability		
1. Beginning Net Pension Liability	$10,242,769	$12,423,364
2. Pension Expense	1,941,952	1,349,900
3. Employer Contributions	(1,571,000)	(1,656,000)
4. New Net Deferred Inflows/Outflows	2,343,320	(1,731,239)
5. Change in Allocation of Prior Deferred Inflows/Outflows	0	0
6. New Net Deferred Flows Due to Change in Proportion[1]	0	0
7. Recognition of Prior Deferred Inflows/Outflows	296,591	(143,256)
8. Recognition of Prior Deferred Flows Due to Change in Proportion[1]	0	0
9. Ending Net Pension Liability	$13,253,632	$10,242,769

[1] *Includes differences between employer contributions and proportionate share of contributions.*

EXHIBIT 11 (continued)

Schedule of Reconciliation of Net Pension Liability: City of San Juan Capistrano

Reporting Date for Employer under GASB 68	June 30, 2019	June 30, 2018
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Reconciliation of Net Pension Liability		
1. Beginning Net Pension Liability	$26,138,852	$25,089,009
2. Pension Expense	3,187,038	2,000,951
3. Employer Contributions	(2,332,000)	(2,273,000)
4. New Net Deferred Inflows/Outflows	4,666,022	(527,215)
5. Change in Allocation of Prior Deferred Inflows/Outflows	6,197	(125,066)
6. New Net Deferred Flows Due to Change in Proportion(1)	(118,729)	1,396,460
7. Recognition of Prior Deferred Inflows/Outflows	518,087	222,387
8. Recognition of Prior Deferred Flows Due to Change in Proportion(1)	76,591	355,326
9. Ending Net Pension Liability	$32,142,058	$26,138,852

(1) *Includes differences between employer contributions and proportionate share of contributions.*

EXHIBIT 11 (continued)

Schedule of Reconciliation of Net Pension Liability: O.C. Sanitation District

Reporting Date for Employer under GASB 68	**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Reconciliation of Net Pension Liability		
1. Beginning Net Pension Liability	$(39,571,102)	$(10,384,510)
2. Pension Expense	15,260,948	1,321,482
3. Employer Contributions	(7,429,000)	(7,277,000)
4. New Net Deferred Inflows/Outflows	55,302,382	(22,315,732)
5. Change in Allocation of Prior Deferred Inflows/Outflows	0	0
6. New Net Deferred Flows Due to Change in Proportion(1)	0	0
7. Recognition of Prior Deferred Inflows/Outflows	5,838,425	(542,834)
8. Recognition of Prior Deferred Flows Due to Change in Proportion(1)	(372,508)	(372,508)
9. Ending Net Pension Liability	$29,029,145	$(39,571,102)

(1) *Includes differences between employer contributions and proportionate share of contributions.*

EXHIBIT 11 (continued)

Schedule of Reconciliation of Net Pension Liability: O.C. Transportation Authority

Reporting Date for Employer under GASB 68	**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Reconciliation of Net Pension Liability		
1. Beginning Net Pension Liability	$212,117,162	$230,260,478
2. Pension Expense	35,099,842	23,783,337
3. Employer Contributions	(23,660,000)	(23,118,000)
4. New Net Deferred Inflows/Outflows	42,351,694	(17,263,832)
5. Change in Allocation of Prior Deferred Inflows/Outflows	0	0
6. New Net Deferred Flows Due to Change in Proportion[1]	0	0
7. Recognition of Prior Deferred Inflows/Outflows	3,879,944	(1,544,821)
8. Recognition of Prior Deferred Flows Due to Change in Proportion[1]	0	0
9. Ending Net Pension Liability	$269,788,642	$212,117,162

[1] *Includes differences between employer contributions and proportionate share of contributions.*

EXHIBIT 11 (continued)

Schedule of Reconciliation of Net Pension Liability: U.C.I.

Reporting Date for Employer under GASB 68	**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Reconciliation of Net Pension Liability		
1. Beginning Net Pension Liability	$27,644,960	$36,113,699
2. Pension Expense	1,840,555	530,932
3. Employer Contributions	(2,875,057)	(2,948,000)
4. New Net Deferred Inflows/Outflows	6,501,528	(6,262,897)
5. Change in Allocation of Prior Deferred Inflows/Outflows	0	0
6. New Net Deferred Flows Due to Change in Proportion[1]	0	0
7. Recognition of Prior Deferred Inflows/Outflows	1,696,693	211,226
8. Recognition of Prior Deferred Flows Due to Change in Proportion[1]	0	0
9. Ending Net Pension Liability	$34,808,679	$27,644,960

[1] *Includes differences between employer contributions and proportionate share of contributions.*

EXHIBIT 11 (continued)

Schedule of Reconciliation of Net Pension Liability: O.C. Children and Families Comm.

Reporting Date for Employer under GASB 68	June 30, 2019	June 30, 2018
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Reconciliation of Net Pension Liability		
1. Beginning Net Pension Liability	$962,204	$3,158,290
2. Pension Expense	(285,793)	(212,723)
3. Employer Contributions	(177,000)	(1,981,000)
4. New Net Deferred Inflows/Outflows	91,545	(19,407)
5. Change in Allocation of Prior Deferred Inflows/Outflows	40,279	165,166
6. New Net Deferred Flows Due to Change in Proportion[1]	(299,989)	(371,379)
7. Recognition of Prior Deferred Inflows/Outflows	10,165	8,186
8. Recognition of Prior Deferred Flows Due to Change in Proportion[1]	289,199	215,071
9. Ending Net Pension Liability	$630,610	$962,204

[1] *Includes differences between employer contributions and proportionate share of contributions.*

EXHIBIT 11 (continued)

Schedule of Reconciliation of Net Pension Liability: Local Agency Formation Comm.

Reporting Date for Employer under GASB 68	June 30, 2019	June 30, 2018
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Reconciliation of Net Pension Liability		
1. Beginning Net Pension Liability	$1,268,133	$1,340,888
2. Pension Expense	193,144	129,707
3. Employer Contributions	(115,000)	(111,000)
4. New Net Deferred Inflows/Outflows	229,759	(25,578)
5. Change in Allocation of Prior Deferred Inflows/Outflows	(1,390)	3,329
6. New Net Deferred Flows Due to Change in Proportion[1]	11,461	(42,588)
7. Recognition of Prior Deferred Inflows/Outflows	25,511	10,790
8. Recognition of Prior Deferred Flows Due to Change in Proportion[1]	(28,915)	(37,415)
9. Ending Net Pension Liability	$1,582,703	$1,268,133

[1] *Includes differences between employer contributions and proportionate share of contributions.*

EXHIBIT 11 (continued)

Schedule of Reconciliation of Net Pension Liability: Rancho Santa Margarita

Reporting Date for Employer under GASB 68	**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Reconciliation of Net Pension Liability		
1. Beginning Net Pension Liability	$(2,320)	$9,332
2. Pension Expense	1,276	782
3. Employer Contributions	0	0
4. New Net Deferred Inflows/Outflows	2,994	(9,642)
5. Change in Allocation of Prior Deferred Inflows/Outflows	0	0
6. New Net Deferred Flows Due to Change in Proportion[1]	0	0
7. Recognition of Prior Deferred Inflows/Outflows	(666)	(2,792)
8. Recognition of Prior Deferred Flows Due to Change in Proportion[1]	0	0
9. Ending Net Pension Liability	$1,284	$(2,320)

[1] *Includes differences between employer contributions and proportionate share of contributions.*

EXHIBIT 11 (continued)

Schedule of Reconciliation of Net Pension Liability: O.C. Superior Court

Reporting Date for Employer under GASB 68	June 30, 2019	June 30, 2018
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Reconciliation of Net Pension Liability		
1. Beginning Net Pension Liability	$332,589,831	$349,173,850
2. Pension Expense	32,611,773	21,379,613
3. Employer Contributions	(29,779,000)	(30,423,000)
4. New Net Deferred Inflows/Outflows	57,016,602	(6,708,263)
5. Change in Allocation of Prior Deferred Inflows/Outflows	1,254,017	683,339
6. New Net Deferred Flows Due to Change in Proportion[1]	(12,318,058)	(7,836,200)
7. Recognition of Prior Deferred Inflows/Outflows	6,330,773	2,829,632
8. Recognition of Prior Deferred Flows Due to Change in Proportion[1]	5,054,972	3,490,860
9. Ending Net Pension Liability	$392,760,910	$332,589,831

[1] *Includes differences between employer contributions and proportionate share of contributions.*

EXHIBIT 11 (continued)

Schedule of Reconciliation of Net Pension Liability: O.C. IHSS Public Authority

Reporting Date for Employer under GASB 68	**June 30, 2019**	**June 30, 2018**
Measurement Date for Employer under GASB 68	**December 31, 2018**	**December 31, 2017**
Reconciliation of Net Pension Liability		
1. Beginning Net Pension Liability	$706,343	$781,506
2. Pension Expense	295,920	187,329
3. Employer Contributions	(183,671)	(199,000)
4. New Net Deferred Inflows/Outflows	308,624	(77,242)
5. Change in Allocation of Prior Deferred Inflows/Outflows	394	(7,200)
6. New Net Deferred Flows Due to Change in Proportion[1]	(11,375)	54,126
7. Recognition of Prior Deferred Inflows/Outflows	21,244	(3,509)
8. Recognition of Prior Deferred Flows Due to Change in Proportion[1]	(40,470)	(29,667)
9. Ending Net Pension Liability	$1,097,009	$706,343

[1] *Includes differences between employer contributions and proportionate share of contributions.*

EXHIBIT 12

Schedule of Recognition of Changes in Total Net Pension Liability

Reporting Date for Employer under GASB 68 Year Ended June 30	Differences between Expected and Actual Experience	Recognition Period (Years)	Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Differences between Expected and Actual Experience on Total Pension Liability — Reporting Date for Employer under GASB 68 Year Ended June 30: 2015	2016	2017	2018	2019	2020	2021	2022
2015	$(327,402,088)	6.18	$(52,977,684)	$(52,977,684)	$(52,977,684)	$(52,977,684)	$(52,977,684)	$(52,977,684)	$(9,535,984)	$0
2016	(205,462,673)	6.06	N/A	(33,904,732)	(33,904,732)	(33,904,732)	(33,904,732)	(33,904,732)	(33,904,732)	(2,034,281)
2017	(323,565,741)	5.94	N/A	N/A	(54,472,347)	(54,472,347)	(54,472,347)	(54,472,347)	(54,472,347)	(51,204,006)
2018	(66,963,603)	6.01	N/A	N/A	N/A	(11,142,029)	(11,142,029)	(11,142,029)	(11,142,029)	(11,142,029)
2019	(118,124,401)	5.91	N/A	N/A	N/A	N/A	(19,987,206)	(19,987,206)	(19,987,206)	(19,987,206)
Net increase (decrease) in pension expense			$(52,977,684)	$(86,882,416)	$(141,354,763)	$(152,496,792)	$(172,483,998)	$(172,483,998)	$(129,042,298)	$(84,367,522)

Reporting Date for Employer under GASB 68 Year Ended June 30	Differences between Expected and Actual Experience	Recognition Period (Years)	Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Differences between Expected and Actual Experience on Total Pension Liability — Reporting Date for Employer under GASB 68 Year Ended June 30: 2023	2024	2025	2026	2027	2028	2029	2030
2015	$(327,402,088)	6.18	$0	$0	$0	$0	$0	$0	$0	$0
2016	(205,462,673)	6.06	0	0	0	0	0	0	0	0
2017	(323,565,741)	5.94	0	0	0	0	0	0	0	0
2018	(66,963,603)	6.01	(11,142,029)	(111,429)	0	0	0	0	0	0
2019	(118,124,401)	5.91	(19,987,206)	(18,188,371)	0	0	0	0	0	0
Net increase (decrease) in pension expense			$(31,129,235)	$(18,299,800)	$0	$0	$0	$0	$0	$0

As described in Exhibit 9, for the current period, the average of the expected remaining service lives of all employees that are provided with pensions through OCERS (active and inactive employees) determined as of December 31, 2017 (the beginning of the measurement period ending December 31, 2018) is 5.91 years.

EXHIBIT 12 (continued)

Schedule of Recognition of Changes in Total Net Pension Liability

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Assumption Changes

Reporting Date for Employer under GASB 68 Year Ended June 30	Effects of Assumption Changes	Recognition Period (Years)	Reporting Date for Employer under GASB 68 Year Ended June 30: 2015	2016	2017	2018	2019	2020	2021	2022
2015	$(127,729,220)	6.18	$(20,668,159)	$(20,668,159)	$(20,668,159)	$(20,668,159)	$(20,668,159)	$(20,668,159)	$(3,720,266)	$0
2016	0	6.06	N/A	0	0	0	0	0	0	0
2017	0	5.94	N/A	N/A	0	0	0	0	0	0
2018	827,197,075	6.01	N/A	N/A	N/A	137,636,784	137,636,784	137,636,784	137,636,784	137,636,784
2019	0	5.91	N/A	N/A	N/A	N/A	0	0	0	0
Net increase (decrease) in pension expense			$(20,668,159)	$(20,668,159)	$(20,668,159)	$116,968,625	$116,968,625	$116,968,625	$133,916,518	$137,636,784

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Assumption Changes

Reporting Date for Employer under GASB 68 Year Ended June 30	Effects of Assumption Changes	Recognition Period (Years)	Reporting Date for Employer under GASB 68 Year Ended June 30: 2023	2024	2025	2026	2027	2028	2029	2030
2015	$(127,729,220)	6.18	$0	$0	$0	$0	$0	$0	$0	$0
2016	0	6.06	0	0	0	0	0	0	0	0
2017	0	5.94	0	0	0	0	0	0	0	0
2018	827,197,075	6.01	137,636,784	1,376,371	0	0	0	0	0	0
2019	0	5.91	0	0	0	0	0	0	0	0
Net increase (decrease) in pension expense			$137,636,784	$1,376,371	$0	$0	$0	$0	$0	$0

As described in Exhibit 9, for the current period, the average of the expected remaining service lives of all employees that are provided with pensions through OCERS (active and inactive employees) determined as of December 31, 2017 (the beginning of the measurement period ending December 31, 2018) is 5.91 years.

EXHIBIT 12 (continued)

Schedule of Recognition of Changes in Total Net Pension Liability

Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Projected and Actual Earnings on Pension Plan Investments

Reporting Date for Employer under GASB 68 Year Ended June 30	Differences between Projected and Actual Earnings	Recognition Period (Years)	Reporting Date for Employer under GASB 68 Year Ended June 30: 2015	2016	2017	2018	2019	2020	2021	2022
2015	$290,045,074	5.00	$58,009,015	$58,009,015	$58,009,015	$58,009,015	$58,009,014	$0	$0	$0
2016	851,007,781	5.00	N/A	170,201,555	170,201,555	170,201,555	170,201,555	170,201,561	0	0
2017	(213,982,570)	5.00	N/A	N/A	(42,796,514)	(42,796,514)	(42,796,514)	(42,796,514)	(42,796,514)	0
2018	(1,009,651,572)	5.00	N/A	N/A	N/A	(201,930,314)	(201,930,314)	(201,930,314)	(201,930,314)	(201,930,316)
2019	1,360,278,701	5.00	N/A	N/A	N/A	N/A	272,055,741	272,055,741	272,055,741	272,055,741
Net increase (decrease) in pension expense			$58,009,015	$228,210,570	$185,414,056	$(16,516,258)	$255,539,482	$197,530,474	$27,328,913	$70,125,425

Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Projected and Actual Earnings on Pension Plan Investments

Reporting Date for Employer under GASB 68 Year Ended June 30	Differences between Projected and Actual Earnings	Recognition Period (Years)	Reporting Date for Employer under GASB 68 Year Ended June 30: 2023	2024	2025	2026	2027	2028	2029	2030
2015	$290,045,074	5.00	$0	$0	$0	$0	$0	$0	$0	$0
2016	851,007,781	5.00	0	0	0	0	0	0	0	0
2017	(213,982,570)	5.00	0	0	0	0	0	0	0	0
2018	(1,009,651,572)	5.00	0	0	0	0	0	0	0	0
2019	1,360,278,701	5.00	272,055,737	0	0	0	0	0	0	0
Net increase (decrease) in pension expense			$272,055,737	$0	$0	$0	$0	$0	$0	$0

The differences between projected and actual earnings on pension plan investments are recognized over a five-year period per Paragraph 33b. of GASB 68.

EXHIBIT 12 (continued)

Schedule of Recognition of Changes in Total Net Pension Liability

Total Increase (Decrease) in Pension Expense

Reporting Date for Employer under GASB 68 Year Ended June 30	Total Differences	Reporting Date for Employer under GASB 68 Year Ended June 30: 2015	2016	2017	2018	2019	2020	2021	2022
2015	$(165,086,234)	$(15,636,828)	$(15,636,828)	$(15,636,828)	$(15,636,828)	$(15,636,829)	$(73,645,843)	$(13,256,250)	$0
2016	645,545,108	N/A	136,296,823	136,296,823	136,296,823	136,296,823	136,296,829	(33,904,732)	(2,034,281)
2017	(537,548,311)	N/A	N/A	(97,268,861)	(97,268,861)	(97,268,861)	(97,268,861)	(97,268,861)	(51,204,006)
2018	(249,418,100)	N/A	N/A	N/A	(75,435,559)	(75,435,559)	(75,435,559)	(75,435,559)	(75,435,561)
2019	1,242,154,300	N/A	N/A	N/A	N/A	252,068,535	252,068,535	252,068,535	252,068,535
Net increase (decrease) in pension expense		$(15,636,828)	$120,659,995	$23,391,134	$(52,044,425)	$200,024,109	$142,015,101	$32,203,133	$123,394,687

Total Increase (Decrease) in Pension Expense

Reporting Date for Employer under GASB 68 Year Ended June 30	Total Differences	Reporting Date for Employer under GASB 68 Year Ended June 30: 2023	2024	2025	2026	2027	2028	2029	2030
2015	$(165,086,234)	$0	$0	$0	$0	$0	$0	$0	$0
2016	645,545,108	0	0	0	0	0	0	0	0
2017	(537,548,311)	0	0	0	0	0	0	0	0
2018	(249,418,100)	126,494,755	1,264,942	0	0	0	0	0	0
2019	1,242,154,300	252,068,531	(18,188,371)	0	0	0	0	0	0
Net increase (decrease) in pension expense		$378,563,286	$(16,923,429)	$0	$0	$0	$0	$0	$0

EXHIBIT 13

Allocation of Changes in Total Net Pension Liability

In addition to the amounts shown in Exhibit 12, there are changes in each employer's proportionate share of the total Net Pension Liability (NPL) during the measurement period ending on December 31, 2018. The net effect of the change in the employer's proportionate share of the collective NPL and collective deferred outflows of resources and deferred inflows of resources is also recognized over the average of the expected remaining service lives of all employees shown above. The difference between the actual employer contributions and the proportionate share of the employer contributions during the measurement period ending on December 31, 2018 is recognized over the same periods. These amounts are shown on the following table, with the corresponding amounts for the measurement periods ending on December 31 beginning in 2014 shown on the following pages. While these amounts are different for each employer, they sum to zero over the entire OCERS.

EXHIBIT 13 (continued)

Allocation of Changes in Total Net Pension Liability

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of the Change in Proportion and Change in Employer Contributions for the Year Ended December 31, 2018

	Total Change to be Recognized	Recognition Period (Years)	Reporting Date for Employer under GASB 68 Year Ended June 30: 2019	2020	2021	2022	2023	2024	Thereafter
Orange County	$13,152,991	5.91	$2,225,549	$2,225,549	$2,225,549	$2,225,549	$2,225,549	$2,025,246	$0
O.C. Cemetery District	0	5.91	0	0	0	0	0	0	0
O.C. Law Library	0	5.91	0	0	0	0	0	0	0
O.C. Vector Control District	0	5.91	0	0	0	0	0	0	0
O.C. Retirement System	2,177,730	5.91	368,482	368,482	368,482	368,482	368,482	335,320	0
O.C. Fire Authority	0	5.91	0	0	0	0	0	0	0
Cypress Recreation and Parks	0	5.91	0	0	0	0	0	0	0
Department of Education	0	5.91	0	0	0	0	0	0	0
Transportation Corridor Agency	0	5.91	0	0	0	0	0	0	0
City of San Juan Capistrano	(142,910)	5.91	(24,181)	(24,181)	(24,181)	(24,181)	(24,181)	(22,005)	0
O.C. Sanitation District	0	5.91	0	0	0	0	0	0	0
O.C. Transportation Authority	0	5.91	0	0	0	0	0	0	0
U.C.I.	0	5.91	0	0	0	0	0	0	0
O.C. Children and Families Comm.	(361,087)	5.91	(61,098)	(61,098)	(61,098)	(61,098)	(61,098)	(55,597)	0
Local Agency Formation Comm.	13,795	5.91	2,334	2,334	2,334	2,334	2,334	2,125	0
Rancho Santa Margarita	0	5.91	0	0	0	0	0	0	0
O.C. Superior Court	(14,826,827)	5.91	(2,508,769)	(2,508,769)	(2,508,769)	(2,508,769)	(2,508,769)	(2,282,982)	0
O.C. IHSS Public Authority	(13,692)	5.91	(2,317)	(2,317)	(2,317)	(2,317)	(2,317)	(2,107)	0
Total for all Employers	$0		$0	$0	$0	$0	$0	$0	$0

EXHIBIT 13 (continued)

Allocation of Changes in Total Net Pension Liability

The amounts as of December 31, 2017 are as follows:

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of the Change in Proportion and Change in Employer Contributions for the Year Ended December 31, 2017

	Total Change to be Recognized	Recognition Period (Years)	Reporting Date for Employer under GASB 68 Year Ended June 30: 2018	2019	2020	2021	2022	2023	Thereafter
Orange County	$8,107,013	6.01	$1,348,921	$1,348,921	$1,348,921	$1,348,921	$1,348,921	$1,348,921	$13,487
O.C. Cemetery District	0	6.01	0	0	0	0	0	0	0
O.C. Law Library	0	6.01	0	0	0	0	0	0	0
O.C. Vector Control District	0	6.01	0	0	0	0	0	0	0
O.C. Retirement System	49,770	6.01	8,281	8,281	8,281	8,281	8,281	8,281	84
O.C. Fire Authority	0	6.01	0	0	0	0	0	0	0
Cypress Recreation and Parks	0	6.01	0	0	0	0	0	0	0
Department of Education	0	6.01	0	0	0	0	0	0	0
Transportation Corridor Agency	0	6.01	0	0	0	0	0	0	0
City of San Juan Capistrano	1,675,195	6.01	278,735	278,735	278,735	278,735	278,735	278,735	2,785
O.C. Sanitation District	0	6.01	0	0	0	0	0	0	0
O.C. Transportation Authority	0	6.01	0	0	0	0	0	0	0
U.C.I.	0	6.01	0	0	0	0	0	0	0
O.C. Children and Families Comm.	(445,507)	6.01	(74,128)	(74,128)	(74,128)	(74,128)	(74,128)	(74,128)	(739)
Local Agency Formation Comm.	(51,088)	6.01	(8,500)	(8,500)	(8,500)	(8,500)	(8,500)	(8,500)	(88)
Rancho Santa Margarita	0	6.01	0	0	0	0	0	0	0
O.C. Superior Court	(9,400,312)	6.01	(1,564,112)	(1,564,112)	(1,564,112)	(1,564,112)	(1,564,112)	(1,564,112)	(15,640)
O.C. IHSS Public Authority	64,929	6.01	10,803	10,803	10,803	10,803	10,803	10,803	111
Total for all Employers	$0		$0	$0	$0	$0	$0	$0	$0

EXHIBIT 13 (continued)

Allocation of Changes in Total Net Pension Liability

The amounts as of December 31, 2016 are as follows:

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of the Change in Proportion and Change in Employer Contributions for the Year Ended December 31, 2016

	Total Change to be Recognized	Recognition Period (Years)	Reporting Date for Employer under GASB 68 Year Ended June 30: 2017	2018	2019	2020	2021	2022	Thereafter
Orange County	$14,453,662	5.94	$2,433,278	$2,433,278	$2,433,278	$2,433,278	$2,433,278	$2,287,272	$0
O.C. Cemetery District	0	5.94	0	0	0	0	0	0	0
O.C. Law Library	0	5.94	0	0	0	0	0	0	0
O.C. Vector Control District	0	5.94	0	0	0	0	0	0	0
O.C. Retirement System	(668,539)	5.94	(112,549)	(112,549)	(112,549)	(112,549)	(112,549)	(105,794)	0
O.C. Fire Authority	0	5.94	0	0	0	0	0	0	0
Department of Education	0	5.94	0	0	0	0	0	0	0
Transportation Corridor Agency	0	5.94	0	0	0	0	0	0	0
City of San Juan Capistrano	(1,754,991)	5.94	(295,453)	(295,453)	(295,453)	(295,453)	(295,453)	(277,726)	0
O.C. Sanitation District	0	5.94	0	0	0	0	0	0	0
O.C. Transportation Authority	0	5.94	0	0	0	0	0	0	0
U.C.I.	0	5.94	0	0	0	0	0	0	0
O.C. Children and Families Comm.	(598,916)	5.94	(100,828)	(100,828)	(100,828)	(100,828)	(100,828)	(94,776)	0
Local Agency Formation Comm.	306,180	5.94	51,545	51,545	51,545	51,545	51,545	48,455	0
Rancho Santa Margarita	0	5.94	0	0	0	0	0	0	0
O.C. Superior Court	(11,785,507)	5.94	(1,984,092)	(1,984,092)	(1,984,092)	(1,984,092)	(1,984,092)	(1,865,047)	0
O.C. IHSS Public Authority	48,111	5.94	8,099	8,099	8,099	8,099	8,099	7,616	0
Total for all Employers	$0		$0	$0	$0	$0	$0	$0	$0

EXHIBIT 13 (continued)

Allocation of Changes in Total Net Pension Liability

The amounts as of December 31, 2015 are as follows:

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of the Change in Proportion and Change in Employer Contributions for the Year Ended December 31, 2015

	Total Change to be Recognized	Recognition Period (Years)	Reporting Date for Employer under GASB 68 Year Ended June 30: 2016	2017	2018	2019	2020	2021	Thereafter
Orange County	$2,736,401	6.06	$451,552	$451,552	$451,552	$451,552	$451,552	$451,552	$27,089
O.C. Cemetery District	0	6.06	0	0	0	0	0	0	0
O.C. Law Library	(2,567,707)	6.06	(423,714)	(423,714)	(423,714)	(423,714)	(423,714)	(423,714)	(25,423)
O.C. Vector Control District	0	6.06	0	0	0	0	0	0	0
O.C. Retirement System	1,607,456	6.06	265,257	265,257	265,257	265,257	265,257	265,257	15,914
O.C. Fire Authority	0	6.06	0	0	0	0	0	0	0
Department of Education	0	6.06	0	0	0	0	0	0	0
Transportation Corridor Agency	0	6.06	0	0	0	0	0	0	0
City of San Juan Capistrano	(1,987,430)	6.06	(327,959)	(327,959)	(327,959)	(327,959)	(327,959)	(327,959)	(19,676)
O.C. Sanitation District	2,567,707	6.06	423,714	423,714	423,714	423,714	423,714	423,714	25,423
O.C. Transportation Authority	0	6.06	0	0	0	0	0	0	0
U.C.I.	0	6.06	0	0	0	0	0	0	0
O.C. Children and Families Comm.	(366,436)	6.06	(60,468)	(60,468)	(60,468)	(60,468)	(60,468)	(60,468)	(3,628)
Local Agency Formation Comm.	(296,484)	6.06	(48,925)	(48,925)	(48,925)	(48,925)	(48,925)	(48,925)	(2,934)
Rancho Santa Margarita	0	6.06	0	0	0	0	0	0	0
O.C. Superior Court	(1,805,959)	6.06	(298,013)	(298,013)	(298,013)	(298,013)	(298,013)	(298,013)	(17,881)
O.C. IHSS Public Authority	112,452	6.06	18,556	18,556	18,556	18,556	18,556	18,556	1,116
Total for all Employers	$0		$0	$0	$0	$0	$0	$0	$0

EXHIBIT 13 (continued)

Allocation of Changes in Total Net Pension Liability

The amounts as of December 31, 2014 are as follows:

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of the Change in Proportion and Change in Employer Contributions for the Year Ended December 31, 2014

	Total Change to be Recognized	Recognition Period (Years)	Reporting Date for Employer under GASB 68 Year Ended June 30: 2015	2016	2017	2018	2019	2020	Thereafter
Orange County	$4,834,533	6.18	$782,287	$782,287	$782,287	$782,287	$782,287	$782,287	$140,811
O.C. Cemetery District	0	6.18	0	0	0	0	0	0	0
O.C. Law Library	316,450	6.18	51,206	51,206	51,206	51,206	51,206	51,206	9,214
O.C. Vector Control District	0	6.18	0	0	0	0	0	0	0
O.C. Retirement System	1,077,481	6.18	174,350	174,350	174,350	174,350	174,350	174,350	31,381
O.C. Fire Authority	0	6.18	0	0	0	0	0	0	0
Department of Education	0	6.18	0	0	0	0	0	0	0
Transportation Corridor Agency	0	6.18	0	0	0	0	0	0	0
City of San Juan Capistrano	1,656,769	6.18	268,086	268,086	268,086	268,086	268,086	268,086	48,253
O.C. Sanitation District	(316,450)	6.18	(51,206)	(51,206)	(51,206)	(51,206)	(51,206)	(51,206)	(9,214)
O.C. Transportation Authority	0	6.18	0	0	0	0	0	0	0
U.C.I.	0	6.18	0	0	0	0	0	0	0
O.C. Children and Families Comm.	(332,329)	6.18	(53,775)	(53,775)	(53,775)	(53,775)	(53,775)	(53,775)	(9,679)
Local Agency Formation Comm.	215,036	6.18	34,795	34,795	34,795	34,795	34,795	34,795	6,266
Rancho Santa Margarita	0	6.18	0	0	0	0	0	0	0
O.C. Superior Court	(7,470,106)	6.18	(1,208,755)	(1,208,755)	(1,208,755)	(1,208,755)	(1,208,755)	(1,208,755)	(217,576)
O.C. IHSS Public Authority	18,616	6.18	3,012	3,012	3,012	3,012	3,012	3,012	544
Total for all Employers	$0		$0	$0	$0	$0	$0	$0	$0

Actuarial Assumptions and Methods
For December 31, 2018 Measurement Date and Employer Reporting as of June 30, 2019

Rationale for Assumptions: The information and analysis used in selecting each assumption that has a significant effect on this actuarial valuation is shown in the January 1, 2014 through December 31, 2016 Actuarial Experience Study dated August 14, 2017 and PowerPoint presentation dated October 16, 2017. Unless otherwise noted, all actuarial assumptions and methods shown below apply to members for all tiers.

Economic Assumptions

Net Investment Return: 7.00%; net of investment expenses.

Member Contribution Crediting Rate: 5.00%, compounded semi-annually.

Consumer Price Index: Increase of 2.75% per year, retiree COLA increases due to CPI subject to a 3.0% maximum change per year.

Payroll Growth: Inflation of 2.75% per year plus “across the board” real salary increases of 0.50% per year.

Increase in Section 7522.10 Compensation Limit: Increase of 2.75% per year from the valuation date.

Individual Salary Increases:

Annual Rate of Compensation Increase (%)

Inflation: 2.75% per year, plus “across the board” real salary increases of 0.50% per year, plus the following merit and promotional increases:

Years of Service	General	Safety
Less than 1	9.00	14.00
1	7.25	10.00
2	6.00	7.75
3	5.00	6.00
4	4.00	5.50
5	3.50	4.50
6	2.50	3.75
7	2.25	3.25
8	1.75	2.50
9	1.50	2.25
10	1.50	1.75
11	1.50	1.75
12	1.50	1.75
13	1.50	1.75
14	1.50	1.75
15	1.50	1.75
16	1.00	1.50
17	1.00	1.50
18	1.00	1.50
19	1.00	1.50
20 & over	1.00	1.50

In addition to the individual salary increase assumptions, we have applied an average of two hours of additional salary annually for leap-year salary adjustment.

Demographic Assumptions

Post – Retirement Mortality Rates:

Healthy:	For General Members and All Beneficiaries: Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table, projected generationally with the two-dimensional MP-2016 projection scale. For Safety Members: Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table, projected generationally with the two-dimensional MP-2016 projection scale, setback four years.
Disabled:	For General Members: Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table, projected generationally with the two-dimensional MP-2016 projection scale, set forward five years,. For Safety Members: Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table, projected generationally with the two-dimensional MP-2016 projection scale.

The RP-2014 mortality tables and adjustments as shown above reflect the mortality experience as of the measurement date. The generational projection is a provision for future mortality improvement.

Member Contribution Rates:	For General Members: Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table (separate tables for males and females), projected 20 years with the two-dimensional mortality improvement scale MP-2016, weighted 40% male and 60% female. For Safety Members: Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table (separate tables for males and females), projected 20 years with the two-dimensional mortality improvement scale MP-2016, setback four years, weighted 80% male and 20% female.
Optional Forms of Benefits:	For General Service Retirees: Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table (separate tables for males and females), projected 20 years with the two-dimensional mortality improvement scale MP-2016, weighted 40% male and 60% female. For Safety Service Retirees: Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table (separate tables for males and females), projected 20 years with the two-dimensional mortality improvement scale MP-2016, setback four years, weighted 80% male and 20% female. For General Disabled Retirees: Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table (separate tables for males and females), projected 20 years with the two-dimensional mortality improvement scale MP-2016, set forward five years, weighted 40% male and 60% female. For Safety Disabled Retirees: Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table (separate tables for males and females), projected 20 years with the two-dimensional mortality improvement scale MP-2016, weighted 80% male and 20% female.

For General Beneficiaries: Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table (separate tables for males and females), projected 20 years with the two-dimensional mortality improvement scale MP-2016, weighted 60% male and 40% female.

For Safety Beneficiaries: Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table (separate tables for males and females), projected 20 years with the two-dimensional mortality improvement scale MP-2016, weighted 20% male and 80% female.

Pre-Retirement Mortality Rates: For General and Safety Members: Headcount-Weighted RP-2014 Employee Mortality Table times 80%, projected generationally with the two-dimensional MP-2016 projection scale.

Termination Rates Before Retirement:

	Rate (%)	
	Mortality (General and Safety)	
Age	**Male**	**Female**
25	0.05	0.02
30	0.05	0.02
35	0.05	0.03
40	0.06	0.04
45	0.10	0.07
50	0.17	0.11
55	0.27	0.17
60	0.45	0.24
65	0.78	0.36
70	1.27	0.59

Note that generational projections beyond the base year (2014) are not reflected in the above mortality rates.

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.

Termination Rates Before Retirement (Continued):

	Rate (%)			
	Disability			
Age	General All Other[1]	General OCTA[2]	Safety - Law & Fire[3]	Safety - Probation[4]
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	0.23	0.13
45	0.13	0.43	0.40	0.21
50	0.18	0.48	1.10	0.28
55	0.23	0.65	2.40	0.42
60	0.31	1.26	4.80	0.20

(1) *60% of General All Other disabilities are assumed to be service connected disabilities. The other 40% 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 and Fire disabilities are assumed to be service connected disabilities.*

(4) *75% of Safety Probation disabilities are assumed to be service connected disabilities. The other 25% are assumed to be non-service connected.*

Termination Rates Before Retirement (Continued):

	Rate (%) Termination			
Years of Service	**General All Other**	**General OCTA**	**Safety – Law & Fire**	**Safety - Probation**
0	11.00	17.50	4.50	14.00
1	7.50	11.00	2.50	13.00
2	6.50	9.00	2.00	10.00
3	5.00	8.50	1.50	5.00
4	4.50	7.50	1.25	4.00
5	4.25	7.00	1.00	3.50
6	3.75	4.50	0.95	2.75
7	3.25	4.00	0.90	2.00
8	3.00	3.50	0.85	2.00
9	2.75	3.00	0.80	1.75
10	2.50	3.00	0.75	1.75
11	2.00	3.00	0.65	1.50
12	2.00	3.00	0.60	1.25
13	1.75	2.50	0.55	1.00
14	1.50	2.50	0.50	0.75
15	1.40	2.50	0.45	0.75
16	1.30	2.00	0.40	0.75
17	1.20	1.80	0.35	0.25
18	1.10	1.60	0.30	0.25
19	1.00	1.40	0.25	0.25
20 +	0.90	1.20	0.20	0.25

Termination Rates Before Retirement (Continued):

	Election for Withdrawal of Contributions (%)			
Years of Service	**General All Other**	**General OCTA**	**Safety – Law & Fire**	**Safety - Probation**
0 – 4	35.0	40.0	20.0	25.0
5 – 9	30.0	35.0	20.0	25.0
10 – 14	25.0	30.0	20.0	25.0
15 or more	20.0	20.0	20.0	25.0

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)	Safety - Fire (31664.2)	Safety - Probation[2]
48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
49	30.00	25.00	0.00	12.00	0.00	2.00	0.00	0.00
50	2.50	2.00	3.00	18.00	11.50	5.00	8.00	3.25
51	2.00	2.00	3.00	18.00	12.00	7.00	10.00	3.25
52	2.50	2.00	3.00	17.00	12.70	9.50	11.00	4.25
53	2.50	2.75	3.00	17.00	17.90	10.50	12.00	4.25
54	5.50	2.75	3.00	22.00	18.80	15.00	14.00	7.00
55	15.00	3.25	4.00	22.00	30.70	18.00	24.00	12.00
56	10.00	3.50	5.00	20.00	20.00	20.00	23.00	12.00
57	10.00	5.50	6.00	20.00	20.00	21.00	27.00	18.00
58	11.00	5.50	7.00	20.00	25.00	28.00	27.00	18.00
59	11.00	6.50	9.00	26.00	30.00	28.00	36.00	18.00
60	12.00	9.25	11.00	35.00	40.00	30.00	40.00	20.00
61	12.00	12.00	13.00	35.00	40.00	30.00	40.00	20.00
62	14.00	16.00	15.00	40.00	40.00	35.00	40.00	25.00
63	16.00	16.00	15.00	40.00	40.00	35.00	40.00	40.00
64	16.00	18.00	20.00	40.00	40.00	35.00	40.00	40.00
65	22.00	22.00	20.00	100.00	100.00	100.00	100.00	100.00
66	22.00	28.00	24.00	100.00	100.00	100.00	100.00	100.00
67	23.00	24.00	24.00	100.00	100.00	100.00	100.00	100.00
68	23.00	24.00	24.00	100.00	100.00	100.00	100.00	100.00
69	23.00	20.00	24.00	100.00	100.00	100.00	100.00	100.00
70	25.00	20.00	50.00	100.00	100.00	100.00	100.00	100.00
71	25.00	25.00	50.00	100.00	100.00	100.00	100.00	100.00
72	25.00	25.00	50.00	100.00	100.00	100.00	100.00	100.00
73	25.00	25.00	50.00	100.00	100.00	100.00	100.00	100.00
74	25.00	25.00	50.00	100.00	100.00	100.00	100.00	100.00
75	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

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

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

Retirement Rates (Continued):

	Rate (%)			
Age	**CalPEPRA 2.5% @ 67 General Formula**	**CalPEPRA Safety Formula - Probation[1]**	**CalPEPRA Safety Formula - Law[1]**	**CalPEPRA Safety Formula - Fire**
50	0.00	2.50	11.00	6.00
51	0.00	2.50	11.50	7.00
52	4.00	3.00	12.00	9.00
53	1.50	3.00	16.00	10.00
54	1.50	5.50	17.00	11.50
55	2.50	10.00	28.00	21.00
56	3.50	10.00	18.00	20.00
57	5.50	15.00	17.50	22.00
58	7.50	20.00	22.00	25.00
59	7.50	20.00	26.00	30.00
60	7.50	40.00	40.00	40.00
61	7.50	40.00	40.00	40.00
62	14.00	40.00	40.00	40.00
63	14.00	40.00	40.00	40.00
64	14.00	40.00	40.00	40.00
65	18.00	100.00	100.00	100.00
66	22.00	100.00	100.00	100.00
67	23.00	100.00	100.00	100.00
68	23.00	100.00	100.00	100.00
69	23.00	100.00	100.00	100.00
70	25.00	100.00	100.00	100.00
71	25.00	100.00	100.00	100.00
72	25.00	100.00	100.00	100.00
73	25.00	100.00	100.00	100.00
74	25.00	100.00	100.00	100.00
75	100.00	100.00	100.00	100.00

(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:	General Retirement Age: 59 Safety Retirement Age: 53 Future deferred vested members who terminate with less than five years of service and are not vested are assumed to retire at age 70 for both General and Safety if they decide to leave their contributions on deposit. 15% of future General and 25% of future Safety deferred vested members are assumed to continue to work for a reciprocal employer. For reciprocals, 4.25% and 4.75% compensation increases are assumed per annum for General and Safety, respectively.
Liability Calculation for Current Deferred Vested Members:	Liability for a current deferred vested member is calculated based on salary (adjusted with the additional cashout assumptions for non-CalPEPRA members), 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, we used an average salary. For those members without salary information that have less than 3 years of service or for those members without service information, we assumed 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 55% 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.

Additional Cashout Assumptions:

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	3.00%	2.80%
Safety - Probation	3.80%	3.40%
Safety - Law	5.20%	4.60%
Safety - Fire	2.00%	1.70%

The additional cashout assumptions are the same for service and disability retirements.

CalPEPRA Formulas

None

Actuarial Methods

Actuarial Cost Method:

Entry Age Actuarial Cost Method. Entry Age is the current age minus Vesting Credit. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are based on costs allocated as a level percentage of compensation, as if the current benefit formula for each individual has always been in effect (i.e., "replacement life within a tier").

Please note that for Probation members who have prior benefit service in another General OCERS plan, the normal cost rate for the current plan is calculated assuming their Entry Age is the date they entered service with their current plan.

Expected Remaining Service Lives:

The average of the expected service lives of all employees is determined by:

- Calculating each active employee's expected remaining service life as the present value of $1 per year of future service at zero percent interest.

- Setting the remaining service life to zero for each nonactive or retired member.
- Dividing the sum of the above amounts by the total number of active employee, nonactive and retired members.

Changes in Actuarial Assumptions and Methods:	None.

APPENDIX A

Calculation of Discount Rate as of December 31, 2018

Projection of Pension Plan's Fiduciary Net Position ($ in millions)

Year Beginning January 1	Projected Beginning Plan's Fiduciary Net Position (a)	Projected Total Contributions * (b)	Projected Benefit Payments (c)	Projected Administrative Expenses (d)	Projected Investment Earnings (e)	Projected Ending Plan's Fiduciary Net Position (f) = (a) + (b) - (c) - (d) + (e)
2018	$14,802	$851	$828	$18	-$325	$14,482
2019	14,482	945	900	18	1,015	15,523
2020	15,523	967	960	19	1,086	16,598
2021	16,598	978	1,021	21	1,160	17,694
2022	17,694	994	1,084	22	1,235	18,818
2023	18,818	1,023	1,150	23	1,312	19,980
2024	19,980	1,030	1,219	25	1,391	21,157
2025	21,157	1,039	1,288	26	1,472	22,354
2026	22,354	1,049	1,359	28	1,553	23,569
2027	23,569	1,059	1,433	29	1,636	24,801
2043	36,099	176	2,645	45	2,441	36,027
2044	36,027	166	2,696	45	2,433	35,886
2045	35,886	156	2,743	44	2,421	35,677
2046	35,677	147	2,786	44	2,405	35,399
2047	35,399	138	2,824	44	2,384	35,054
2092	19,045	39	238	24	1,325	20,148
2093	20,148	39	196	25	1,404	21,369
2094	21,369	39	160	26	1,491	22,712
2095	22,712	39	129	28	1,586	24,180
2096	24,180	40	102	30	1,689	25,776
2131	255,087	315	0 **	315	17,856	272,944
2132	272,944					
2132 Discounted Value:	131 ***					

* Of all the projected total contributions, only the first year's (i.e., 2018) contribution has been reduced by discount for prepaid contributions and transfers from County Investment Account, if any.

** Less than $1 million, when rounded.

*** $272,944 million when discounted with interest at the rate of 7.00% per annum has a value of $131 million as of December 31, 2018, which is about the balance in the County Investment Account as of December 31, 2018.

Note: We have not utilized the balance in the County Investment Account to reduce the projected total contributions in column (b) even though those amounts have been used to reduce the NPL for the County as of December 31, 2018.

APPENDIX A (continued)

Calculation of Discount Rate as of December 31, 2018

Projection of Pension Plan's Fiduciary Net Position ($ in millions)

Notes:

(1) Amounts may not total exactly due to rounding.

(2) Amounts shown in the year beginning January 1, 2018 row are actual amounts, based on the financial statements provided by OCERS.

(3) Years 2028-2042, 2048-2091, and 2097-2130 have been omitted from this table.

(4) Column (a): Except for the "discounted value" shown for 2132, all of the projected beginning Plan's Fiduciary Net Position amounts shown have not been adjusted for the time value of money.

(5) Column (b): Projected total contributions include member and employer normal cost rates applied to closed group projected payroll (based on covered active members as of December 31, 2017), plus employer contributions to the Unfunded Actuarial Accrued Liability. Contributions are assumed to occur halfway through the year, on average.

(6) Column (c): Projected benefit payments have been determined in accordance with paragraph 39 of GASB Statement No. 67, and are based on the closed group of active, inactive vested, retired members, and beneficiaries as of December 31, 2017. The projected benefit payments reflect the cost of living increase assumptions used in the December 31, 2018 valuation report. The 2018 benefit payments have been increased by the balance of the Medicare Insurance Reserve as of December 31, 2018.

(7) Column (d): Projected administrative expenses are calculated as approximately 0.12% of the projected beginning Plan's Fiduciary Net Position amount. The 0.12% portion was based on the actual calendar year 2018 administrative expenses (unaudited) as a percentage of the actual beginning Plan's Fiduciary Net Position as of January 1, 2018. Administrative expenses are assumed to occur halfway through the year, on average.

(8) Column (e): Projected investment earnings are based on the assumed investment rate of return of 7.00% per annum.

(9) As illustrated in this Appendix, the Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments for current Plan members. In other words, there is no projected "cross-over date" when projected benefits are not covered by projected assets. Therefore, the long-term expected rate of return on Plan investments of 7.00% per annum was applied to all periods of projected benefit payments to determine the total pension liability as of December 31, 2018 shown earlier in this report, pursuant to paragraph 44 of GASB Statement No. 67.

APPENDIX B

Schedule of Pension Amounts by Employer as of December 31, 2018

Deferred Outflows of Resources	Orange County	O.C. Cemetery District	O.C. Law Library	O.C. Vector Control District	O.C. Retirement System
Differences Between Expected and Actual Experience	$10,053,569	$134,653	$0	$228,434	$0
Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	907,051,313	859,393	1,371,152	2,352,302	5,304,404
Changes of Assumptions	451,779,162	325,633	286,133	580,065	2,445,231
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	25,452,653	0	60,420	0	2,594,615
Total Deferred Outflows of Resources	$1,394,336,697	$1,319,679	$1,717,705	$3,160,801	$10,344,250
Deferred Inflows of Resources					
Differences Between Expected and Actual Experience	$315,142,849	$287,311	$774,494	$1,811,847	$1,894,371
Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	498,410,128	450,507	437,711	1,278,263	2,919,627
Changes of Assumptions	43,625,464	38,647	200,032	0	374,031
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	108,921	0	872,851	0	330,892
Total Deferred Inflows of Resources	$857,287,362	$776,465	$2,285,088	$3,090,110	$5,518,921
Net Pension Liability as of December 31, 2017	$3,983,695,231	$(173,677)	$(36,317)	$1,166,920	$21,427,080
Net Pension Liability as of December 31, 2018	$4,918,576,912	$962,119	$573,252	$2,492,695	$28,844,760
Pension Expense Excluding That Attributable to Employer-Paid Member Contributions					
Proportionate Share of Allocable Plan Pension Expense	$598,776,241	$366,717	$445,441	$156,577	$2,950,531
Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,241,587	0	(372,508)	0	703,821
Total Employer Pension Expense Excluding That Attributable to Employer-Paid Member Contributions	$606,017,828	$366,717	$72,933	$156,577	$3,654,352

APPENDIX B (continued)

Schedule of Pension Amounts by Employer as of December 31, 2018

Deferred Outflows of Resources	O.C. Fire Authority	Cypress Recreation and Parks	Department of Education	Transportation Corridor Agency	City of San Juan Capistrano
Differences Between Expected and Actual Experience	$703,034	$2,865,838	$369,390	$114,750	$0
Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	130,602,672	282,642	872,456	2,855,534	5,910,760
Changes of Assumptions	44,462,250	93,704	236,853	1,172,875	2,724,750
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	0	0	0	0	1,434,064
Total Deferred Outflows of Resources	$175,767,956	$3,242,184	$1,478,699	$4,143,159	$10,069,574
Deferred Inflows of Resources					
Differences Between Expected and Actual Experience	$58,320,223	$0	$940,191	$1,358,355	$2,110,920
Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	69,359,310	2,401,373	499,033	1,588,385	3,253,375
Changes of Assumptions	858,688	0	66,119	184,306	416,787
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	0	0	0	0	1,662,955
Total Deferred Inflows of Resources	$128,538,221	$2,401,373	$1,505,343	$3,131,046	$7,444,037
Net Pension Liability as of December 31, 2017	$370,674,668	$718,340	$2,530,324	$10,242,769	$26,138,852
Net Pension Liability as of December 31, 2018	$466,731,526	$408,781	$3,517,372	$13,253,632	$32,142,058
Pension Expense Excluding That Attributable to Employer-Paid Member Contributions					
Proportionate Share of Allocable Plan Pension Expense	$82,954,245	$64,831	$279,359	$1,941,952	$3,287,810
Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	0	0	0	0	(100,772)
Total Employer Pension Expense Excluding That Attributable to Employer-Paid Member Contributions	$82,954,245	$64,831	$279,359	$1,941,952	$3,187,038

APPENDIX B (continued)

Schedule of Pension Amounts by Employer as of December 31, 2018

Deferred Outflows of Resources	O.C. Sanitation District	O.C. Transportation Authority	U.C.I.	O.C. Children and Families Comm.	Local Agency Formation Comm.
Differences Between Expected and Actual Experience	$2,740,145	$429,659	$1,083,806	$0	$0
Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	59,867,140	60,889,928	7,212,467	115,966	291,051
Changes of Assumptions	16,401,122	29,203,603	1,898,677	53,458	134,169
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	872,851	0	0	0	204,067
Total Deferred Outflows of Resources	$79,881,258	$90,523,190	$10,194,950	$169,424	$629,287
Deferred Inflows of Resources					
Differences Between Expected and Actual Experience	$10,405,119	$31,328,024	$3,502,059	$41,415	$103,944
Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	32,687,002	33,794,383	4,163,238	63,829	160,199
Changes of Assumptions	2,445,073	3,903,525	521,873	8,177	20,523
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	60,420	0	0	1,081,690	134,872
Total Deferred Inflows of Resources	$45,597,614	$69,025,932	$8,187,170	$1,195,111	$419,538
Net Pension Liability as of December 31, 2017	$(39,571,102)	$212,117,162	$27,644,960	$962,204	$1,268,133
Net Pension Liability as of December 31, 2018	$29,029,145	$269,788,642	$34,808,679	$630,610	$1,582,703
Pension Expense Excluding That Attributable to Employer-Paid Member Contributions					
Proportionate Share of Allocable Plan Pension Expense	$14,888,440	$35,099,842	$1,840,555	$64,504	$161,895
Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	372,508	0	0	(350,297)	31,249
Total Employer Pension Expense Excluding That Attributable to Employer-Paid Member Contributions	$15,260,948	$35,099,842	$1,840,555	$(285,793)	$193,144

APPENDIX B (continued)

Schedule of Pension Amounts by Employer as of December 31, 2018

Deferred Outflows of Resources	**Rancho Santa Margarita**	**O.C. Superior Court**	**O.C. IHSS Public Authority**	**Total for all Employers**
Differences Between Expected and Actual Experience	$1,170	$0	$0	$18,724,448
Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	6,148	72,226,722	354,965	1,258,427,015
Changes of Assumptions	639	33,295,171	221,274	585,314,769
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	0	0	108,921	30,727,591
Total Deferred Outflows of Resources	$7,957	$105,521,893	$685,160	$1,893,193,823
Deferred Inflows of Resources				
Differences Between Expected and Actual Experience	$7,578	$25,794,457	$224,144	$454,047,301
Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	2,995	39,754,715	162,393	691,386,466
Changes of Assumptions	203	5,092,945	23,294	57,779,687
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	0	26,463,615	11,375	30,727,591
Total Deferred Inflows of Resources	$10,776	$97,105,732	$421,206	$1,233,941,045
Net Pension Liability as of December 31, 2017	$(2,320)	$332,589,831	$706,343	$4,952,099,401
Net Pension Liability as of December 31, 2018	$1,284	$392,760,910	$1,097,009	$6,197,202,089
Pension Expense Excluding That Attributable to Employer-Paid Member Contributions				
Proportionate Share of Allocable Plan Pension Expense	$1,276	$40,175,514	$257,767	$783,713,497
Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	0	(7,563,741)	38,153	0
Total Employer Pension Expense Excluding That Attributable to Employer-Paid Member Contributions	$1,276	$32,611,773	$295,920	$783,713,497

APPENDIX B (continued)

Schedule of Pension Amounts by Employer as of December 31, 2018

Notes:
Amounts shown in this exhibit were allocated by employer based on the Employer Allocation Percentage calculated in Exhibit 7 in this report.

In determining the pension expense:

- Any differences between projected and actual investment earnings on pension plan investments are recognized over a period of five years beginning with the year in which they occur.
- Current-period (i.e., 2018) differences between expected and actual experience and changes of assumptions are recognized over the average of the expected remaining service lives of all employees that are provided with pensions through OCERS determined as of December 31, 2017 (the beginning of the measurement period ending December 31, 2018) and is 5.91 years.
- Prior-period differences between expected and actual experience and changes of assumptions are continued to be recognized based on the expected remaining service lives of all employees calculated as of those prior measurement dates.

The average of the expected remaining service lives of all employees was determined by:

- Calculating each active employee's expected remaining service life as the present value of $1 per year of future service at zero percent interest.
- Setting the remaining service life to zero for each nonactive or retired members.
- Dividing the sum of the above amounts by the total number of active employee, nonactive and retired members.

Note: Results may not total due to rounding.

APPENDIX C
GLOSSARY

Definitions of certain terms *as they are used in Statement 68;* the terms may have different meanings in other contexts.

Active employees
Individuals employed at the end of the reporting or measurement period, as applicable.

Actual contributions
Cash contributions recognized as additions to a Pension Plan's Fiduciary Net Position.

Actuarial present value of projected benefit payments
Projected benefit payments discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment.

Actuarial valuation
The determination, as of a point in time (the actuarial valuation date), of the service cost, Total Pension Liability, and related actuarial present value of projected benefit payments for pensions performed in conformity with Actuarial Standards of Practice unless otherwise specified by the GASB.

Actuarial valuation date
The date as of which an actuarial valuation is performed.

Actuarially determined contribution
A target or recommended contribution to a defined benefit pension plan for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.

Ad hoc cost-of-living adjustments (ad hoc COLAs)
Cost-of-living adjustments that require a decision to grant by the authority responsible for making such decisions.

APPENDIX C (continued)

GLOSSARY

Automatic cost-of-living adjustments (automatic COLAs)
Cost-of-living adjustments that occur without a requirement for a decision to grant by a responsible authority, including those for which the amounts are determined by reference to a specified experience factor (such as the earnings experience of the pension plan) or to another variable (such as an increase in the consumer price index).

Closed period
A specific number of years that is counted from one date and declines to zero with the passage of time. For example, if the recognition period initially is five years on a closed basis, four years remain after the first year, three years after the second year, and so forth.

Collective deferred outflows of resources and deferred inflows of resources related to pensions
Deferred outflows of resources and deferred inflows of resources related to pensions arising from certain changes in the collective Net Pension Liability.

Collective Net Pension Liability
The Net Pension Liability for benefits provided through (1) a cost-sharing pension plan or (2) a single-employer or agent pension plan in circumstances in which there is a special funding situation.

Collective pension expense
Pension expense arising from certain changes in the collective Net Pension Liability.

Contributions
Additions to a Pension Plan's Fiduciary Net Position for amounts from employers, nonemployer contributing entities (for example, state government contributions to a local government pension plan), or employees. Contributions can result from cash receipts by the pension plan or from recognition by the pension plan of a receivable from one of these sources.

Cost-of-living adjustments
Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.

Cost-sharing employer
An employer whose employees are provided with pensions through a cost-sharing multiple-employer defined benefit pension plan.

APPENDIX C (continued)

GLOSSARY

Cost-sharing multiple-employer defined benefit pension plan (cost-sharing pension plan)
A multiple-employer defined benefit pension plan in which the pension obligations to the employees of more than one employer are pooled and pension plan assets can be used to pay the benefits of the employees of any employer that provides pensions through the pension plan.

Covered payroll
The payroll of members that are provided with pensions through the pension plan.

Defined benefit pension plans
Pension plans that are used to provide defined benefit pensions.

Defined benefit pensions
Pensions for which the income or other benefits that the employee will receive at or after separation from employment are defined by the benefit terms. The pensions may be stated as a specified dollar amount or as an amount that is calculated based on one or more factors such as age, years of service, and compensation. (A pension that does not meet the criteria of a defined contribution pension is classified as a defined benefit pension for purposes of Statement 68.)

Defined contribution pension plans
Pension plans that are used to provide defined contribution pensions.

Defined contribution pensions
Pensions having terms that (1) provide an individual account for each employee; (2) define the contributions that an employer is required to make (or the credits that it is required to provide) to an active employee's account for periods in which that employee renders service; and (3) provide that the pensions an employee will receive will depend only on the contributions (or credits) to the employee's account, actual earnings on investments of those contributions (or credits), and the effects of forfeitures of contributions (or credits) made for other employees, as well as pension plan administrative costs, that are allocated to the employee's account.

APPENDIX C (continued)

GLOSSARY

Discount rate
The single rate of return that, when applied to all projected benefit payments, results in an actuarial present value of projected benefit payments equal to the total of the following:

1. The actuarial present value of benefit payments projected to be made in future periods in which (a) the amount of the Pension Plan's Fiduciary Net Position is projected (under the requirements of Statement 68) to be greater than the benefit payments that are projected to be made in that period and (b) pension plan assets up to that point are expected to be invested using a strategy to achieve the long-term expected rate of return, calculated using the long-term expected rate of return on pension plan investments.

2. The actuarial present value of projected benefit payments not included in (1), calculated using the municipal bond rate.

Entry age actuarial cost method
A method under which the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit age(s). The portion of this actuarial present value allocated to a valuation year is called the *normal cost.* The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is called the *actuarial accrued liability.*

Inactive employees
Terminated individuals that have accumulated benefits but are not yet receiving them, and retirees or their beneficiaries currently receiving benefits.

Measurement period
The period between the prior and the current measurement dates.

Multiple-employer defined benefit pension plan
A defined benefit pension plan that is used to provide pensions to the employees of more than one employer.

APPENDIX C (continued)

GLOSSARY

Net Pension Liability
The liability of employers and nonemployer contributing entities to employees for benefits provided through a defined benefit pension plan.

Pension plans
Arrangements through which pensions are determined, assets dedicated for pensions are accumulated and managed, and benefits are paid as they come due.

Pensions
Retirement income and, if provided through a pension plan, postemployment benefits other than retirement income (such as death benefits, life insurance, and disability benefits). Pensions do not include postemployment healthcare benefits and termination benefits.

Plan members
Individuals that are covered under the terms of a pension plan. Plan members generally include (1) employees in active service (active plan members) and (2) terminated employees who have accumulated benefits but are not yet receiving them and retirees or their beneficiaries currently receiving benefits (inactive plan members).

Postemployment
The period after employment.

Postemployment benefit changes
Adjustments to the pension of an inactive employee.

Projected benefit payments
All benefits estimated to be payable through the pension plan to current active and inactive employees as a result of their past service and their expected future service.

Public employee retirement system
A special-purpose government that administers one or more pension plans; also may administer other types of employee benefit plans, including postemployment healthcare plans and deferred compensation plans.

APPENDIX C (continued)

GLOSSARY

Real rate of return
The rate of return on an investment after adjustment to eliminate inflation.

Service costs
The portions of the actuarial present value of projected benefit payments that are attributed to valuation years.

Termination benefits
Inducements offered by employers to active employees to hasten the termination of services, or payments made in consequence of the early termination of services. Termination benefits include early-retirement incentives, severance benefits, and other termination-related benefits.

Total Pension Liability
The portion of the actuarial present value of projected benefit payments that is attributed to past periods of employee service in conformity with the requirements of Statement 68.

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VIA E-MAIL & USPS

June 3, 2019

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

Re: Orange County Employees Retirement System
Reconciliation of the Plan's December 31, 2018 Net Pension Liability (NPL) and Unfunded Actuarial Accrued Liability (UAAL)

Dear Steve:

We have been requested by the Retirement System to reconcile, for each Rate Group, the December 31, 2018 Net Pension Liability (NPL) and the Unfunded Actuarial Accrued Liability (UAAL) as shown in the December 31, 2018 Governmental Accounting Standards Board (GASB) Statement 67 addendum letter and funding valuation report, respectively. (The breakdown of the NPL as disclosed in the GASB 67 addendum letter also appears in our GASB 68 financial report.)

The reconciliation is provided in Attachment A of this letter. The difference between the NPL and the UAAL is a direct result of the different liability and asset values we used in those developments.

LIABILITY

The Total Pension Liability (TPL) shown in the GASB 67 addendum letter was measured based on the December 31, 2017 demographic data by: (i) rolling forward the liability from December 31, 2017 to December 31, 2018 and (ii) assuming that the actuarial experience of the System would match with that anticipated by the demographic assumptions. On the other hand, the Actuarial Accrued Liability (AAL) shown in the funding valuation report was measured based on the December 31, 2018 demographic data.

The differences between the TPL and the AAL were primarily due to: (a) actuarial gains/losses on the liability items as documented in Section 4, Exhibit VI of the December 31, 2018 funding valuation report for each Rate Group and (b) differences between the rolled forward liabilities and the actual liabilities.

ASSETS

The Plan Fiduciary Net Position shown in the GASB 67 report as of December 31, 2018 (that we subsequently used for our GASB 67 addendum letter) was based on the plan's Market Value of Assets (MVA) including the proceeds available in the County Investment Account. On the other hand, the funding valuation report used the Valuation Value of Assets (VVA) after adjusting the MVA for asset smoothing and excluding the non-valuation reserve.

The differences between the Plan Fiduciary Net Position and the VVA were primarily due to adjustment of deferred investment gain and the non-valuation reserve.

The NPL and UAAL were calculated by taking the TPL and the AAL and subtracting the Plan Fiduciary Net Position and the VVA, respectively.

The undersigned is a member of the American Academy of Actuaries and meets the Qualification Standard of the American Academy of Actuaries to render the actuarial opinion contained herein.

Please let us know if you have any questions or comments.

Sincerely,

Andy Yeung

Andy Yeung

AW/hy
Enclosures

cc: Tracy Bowman
Brenda Shott

Attachment A
All Rate Groups (Results are as of December 31, 2018)

(A) Liability Reconciliation	Rate Group #1	Rate Group #2	Rate Group #3	Rate Group #4
(1) Total Pension Liability Included in the development of the GASB 67 Addendum Letter	$506,303,601	$11,493,354,005	$701,924,912	$47,220
(2) (Gain)/Loss from (Lower)/Higher than Expected Salary Increases*	($4,473,000)	($73,793,000)	($1,042,000)	$0
(3) (Gain)/Loss from (Lower)/Higher than Expected COLA Increases*	$513,000	$12,980,000	$968,000	$0
(4) Other Experience (Gain)/Loss*	($1,345,000)	$48,521,000	$9,017,000	$0
(5) Other (Gain)/Loss from Rolled Forward Liabilities to Actual Liabilities	$93,399	$4,872,995	$9,088	$780
(6) Actuarial Accrued Liability Included in the Funding Valuation Report (1) + (2) + (3) + (4) + (5)	$501,092,000	$11,485,935,000	$710,877,000	$48,000

** These actuarial gain/loss items can be found in Section 4, Exhibit VI of our December 31, 2018 funding valuation report.*

(B) Asset Reconciliation	Rate Group #1	Rate Group #2	Rate Group #3	Rate Group #4
(1) Market Value of Assets Excluding County Investment Account	$387,240,162	$7,709,681,018	$672,895,767	$45,936
(2) County Investment Account	$4,873,766	$81,058,036	$0	$0
(3) Plan's Fiduciary Net Position Included in the development of the GASB 67 Addendum Letter (1) + (2)	$392,113,928	$7,790,739,054	$672,895,767	$45,936
(4) Adjustment for Deferred Investment Return and Non-Valuation Reserve	$17,395,838	$346,338,982	$30,228,233	$2,064
(5) Valuation of Assets Included in the Funding Valuation Report (1) + (4)	$404,636,000	$8,056,020,000	$703,124,000	$48,000

	Rate Group #1	Rate Group #2	Rate Group #3	Rate Group #4
Net Pension Liability Shown in the GASB 67 Addendum Letter (A1) - (B3)	$114,189,673	$3,702,614,951	$29,029,145	$1,284
Unfunded Actuarial Accrued Liability Shown in the Funding Valuation Report (A6) - (B5)	$96,456,000	$3,429,915,000	$7,753,000	$0

Attachment A
All Rate Groups (Results are as of December 31, 2018)

(A) Liability Reconciliation	Rate Group #5	Rate Group #9	Rate Group #10	Rate Group #11
(1) Total Pension Liability Included in the development of the GASB 67 Addendum Letter	$962,353,808	$47,040,823	$243,895,544	$10,709,252
(2) (Gain)/Loss from (Lower)/Higher than Expected Salary Increases*	$1,296,000	$217,000	($144,000)	($391,000)
(3) (Gain)/Loss from (Lower)/Higher than Expected COLA Increases*	$1,348,000	$60,000	$397,000	$6,000
(4) Other Experience (Gain)/Loss*	($631,000)	$363,000	($426,000)	($108,000)
(5) Other (Gain)/Loss from Rolled Forward Liabilities to Actual Liabilities	$531,192	$14,177	$12,456	$4,748
(6) Actuarial Accrued Liability Included in the Funding Valuation Report (1) + (2) + (3) + (4) + (5)	$964,898,000	$47,695,000	$243,735,000	$10,221,000

** These actuarial gain/loss items can be found in Section 4, Exhibit VI of our December 31, 2018 funding valuation report.*

(B) Asset Reconciliation	Rate Group #5	Rate Group #9	Rate Group #10	Rate Group #11
(1) Market Value of Assets Excluding County Investment Account	$692,565,166	$33,787,191	$188,058,903	$9,747,133
(2) County Investment Account	$0	$0	$0	$0
(3) Plan's Fiduciary Net Position Included in the development of the GASB 67 Addendum Letter (1) + (2)	$692,565,166	$33,787,191	$188,058,903	$9,747,133
(4) Adjustment for Deferred Investment Return and Non-Valuation Reserve	$31,111,834	$1,517,809	$8,448,097	$437,867
(5) Valuation of Assets Included in the Funding Valuation Report (1) + (4)	$723,677,000	$35,305,000	$196,507,000	$10,185,000

	Rate Group #5	Rate Group #9	Rate Group #10	Rate Group #11
Net Pension Liability Shown in the GASB 67 Addendum Letter (A1) - (B3)	$269,788,642	$13,253,632	$55,836,641	$962,119
Unfunded Actuarial Accrued Liability Shown in the Funding Valuation Report (A6) - (B5)	$241,221,000	$12,390,000	$47,228,000	$36,000

Attachment A
All Rate Groups (Results are as of December 31, 2018)

(A) Liability Reconciliation	Rate Group #12	Rate Group #6	Rate Group #7	Rate Group #8	Total
(1) Total Pension Liability Included in the development of the GASB 67 Addendum Letter	$10,692,662	$886,964,280	$4,062,610,316	$1,752,985,666	$20,678,882,089
(2) (Gain)/Loss from (Lower)/Higher than Expected Salary Increases*	($102,000)	($13,206,000)	$2,710,000	$17,020,000	($71,908,000)
(3) (Gain)/Loss from (Lower)/Higher than Expected COLA Increases*	$8,000	$675,000	$4,868,000	$2,456,000	$24,279,000
(4) Other Experience (Gain)/Loss*	$153,000	$656,000	($979,000)	$9,275,000	$64,496,000
(5) Other (Gain)/Loss from Rolled Forward Liabilities to Actual Liabilities	$55,338	$638,720	$1,161,684	$205,334	$7,599,911
(6) Actuarial Accrued Liability Included in the Funding Valuation Report (1) + (2) + (3) + (4) + (5)	$10,807,000	$875,728,000	$4,070,371,000	$1,781,942,000	$20,703,349,000

** These actuarial gain/loss items can be found in Section 4, Exhibit VI of our December 31, 2018 funding valuation report.*

(B) Asset Reconciliation	Rate Group #12	Rate Group #6	Rate Group #7	Rate Group #8	Total
(1) Market Value of Assets Excluding County Investment Account	$10,119,410	$589,478,106	$2,714,080,427	$1,342,090,781	$14,349,790,000
(2) County Investment Account	$0	$8,424,297	$37,533,901	$0	$131,890,000
(3) Plan's Fiduciary Net Position Included in the development of the GASB 67 Addendum Letter (1) + (2)	$10,119,410	$597,902,403	$2,751,614,328	$1,342,090,781	$14,481,680,000
(4) Adjustment for Deferred Investment Return and Non-Valuation Reserve	$454,590	$26,480,894	$121,923,573	$60,290,219	$644,630,000
(5) Valuation of Assets Included in the Funding Valuation Report (1) + (4)	$10,574,000	$615,959,000	$2,836,004,000	$1,402,381,000	$14,994,420,000

	Rate Group #12	Rate Group #6	Rate Group #7	Rate Group #8	Total
Net Pension Liability Shown in the GASB 67 Addendum Letter (A1) - (B3)	$573,252	$289,061,877	$1,310,995,988	$410,894,885	$6,197,202,089
Unfunded Actuarial Accrued Liability Shown in the Funding Valuation Report (A6) - (B5)	$233,000	$259,769,000	$1,234,367,000	$379,561,000	$5,708,929,000

ORANGE COUNTY EMPLOYEES
RETIREMENT SYSTEM
Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
Schedule of Allocated Pension Amounts by Employer
As of and for the Year Ended December 31, 2018

Orange County Employees Retirement System
Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
Schedule of Allocated Pension Amounts by Employer
As of and for the Year Ended December 31, 2018

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Independent Auditor's Report

To the Board of Retirement of the
Orange County Employees Retirement System
Santa Ana, California

We have audited the employer allocations and the total for all employers of the rows titled total deferred outflows of resources, total deferred inflows of resources, net pension liability, and total pension expense excluding employer-paid member contributions (specified row totals) included in the accompanying Schedule of Allocated Pension Amounts by Employer (Schedule) of the Orange County Employees Retirement System (OCERS) Cost-Sharing Multiple-Employer Defined Benefit Pension Plan as of and for the year ended December 31, 2018, and the related notes to the Schedule of Allocated Pension Amounts by Employer.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of the Schedule in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of the Schedule that is free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express opinions on the employer allocations and the specified row totals in the Schedule based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the Schedule is free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the Schedule. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the Schedule, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the Schedule in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the Schedule.

Macias Gini & O'Connell LLP
4675 MacArthur Court, Suite 600
Newport Beach, CA 92660

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We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the Schedule referred to above presents fairly, in all material respects, the employer allocations, and the total deferred outflows of resources, total deferred inflows of resources, net pension liability, and total pension expense excluding employer-paid member contributions for the total of all employers participating in the Orange County Employees Retirement System Cost-Sharing Multiple-Employer Defined Benefit Pension Plan as of and for the year ended December 31, 2018, in accordance with accounting principles generally accepted in the United States of America.

Other Matter

We have audited, in accordance with auditing standards generally accepted in the United States of America, the financial statements of OCERS as of and for the year ended December 31, 2018, and our report thereon dated June 6, 2019, expressed an unmodified opinion on those financial statements.

Restriction on Use

Our report is intended solely for the information and use of OCERS' management, the Board of Retirement, the Orange County Employees Retirement System Cost-Sharing Multiple-Employer Defined Benefit Pension Plan employers and their auditors and is not intended to be and should not be used by anyone other than these specified parties.

Macias Gini & O'Connell LLP

Newport Beach, California
June 6, 2019

Orange County Employees Retirement System
Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
Schedule of Allocated Pension Amounts by Employer
As of and for the Year Ended December 31, 2018

Deferred Outflows of Resources	**Orange County**	**O.C. Cemetery District**	**O.C. Public Law Library**	**O.C. Mosquito and Vector Control District**	**O.C. Employees Retirement System**
Differences Between Expected and Actual Experience	$10,053,569	$134,653	$-	$228,434	$-
Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	408,641,185	408,886	933,441	1,074,039	2,384,777
Changes of Assumptions	451,779,162	325,633	286,133	580,065	2,445,231
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	25,452,653	-	60,420	-	2,594,615
Total Deferred Outflows of Resources	$895,926,569	$869,172	$1,279,994	$1,882,538	$7,424,623
Deferred Inflows of Resources					
Differences Between Expected and Actual Experience	$315,142,849	$287,311	$774,494	$1,811,847	$1,894,371
Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	-	-	-	-	-
Changes of Assumptions	43,625,464	38,647	200,032	-	374,031
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	108,921	-	872,851	-	330,892
Total Deferred Inflows of Resources	$358,877,234	$325,958	$1,847,377	$1,811,847	$2,599,294
Net Pension Liability as of December 31, 2018	$4,918,576,912	$962,119	$573,252	$2,492,695	$28,844,760
Pension Expense Excluding That Attributable to Employer-Paid Member Contributions					
Proportionate Share of Plan Pension Expense	$598,776,241	$366,717	$445,441	$156,577	$2,950,531
Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,241,587	-	(372,508)	-	703,821
Total Employer Pension Expense Excluding That Attributable to Employer-Paid Member Contributions	$606,017,828	$366,717	$72,933	$156,577	$3,654,352

(Continued)

The accompanying notes are an integral part of these schedules.

Orange County Employees Retirement System
Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
Schedule of Allocated Pension Amounts by Employer
As of and for the Year Ended December 31, 2018

Deferred Outflows of Resources	**O.C. Fire Authority**	**Cypress Recreation & Parks District**	**Orange County Department of Education**	**Transportation Corridor Agencies**	**City of San Juan Capistrano**
Differences Between Expected and Actual Experience	$703,034	$2,865,838	$369,390	$114,750	$-
Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	61,243,362	-	373,423	1,267,149	2,657,385
Changes of Assumptions	44,462,250	93,704	236,853	1,172,875	2,724,750
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	-	-	-	1,434,064
Total Deferred Outflows of Resources	$106,408,646	$2,959,542	$979,666	$2,554,774	$6,816,199
Deferred Inflows of Resources					
Differences Between Expected and Actual Experience	$58,320,223	$-	$940,191	$1,358,355	$2,110,920
Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	-	2,118,731	-	-	-
Changes of Assumptions	858,688	-	66,119	184,306	416,787
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	-	-	-	1,662,955
Total Deferred Inflows of Resources	$59,178,911	$2,118,731	$1,006,310	$1,542,661	$4,190,662
Net Pension Liability as of December 31, 2018	$466,731,526	$408,781	$3,517,372	$13,253,632	$32,142,058
Pension Expense Excluding That Attributable to Employer-Paid Member Contributions					
Proportionate Share of Plan Pension Expense	$82,954,245	$64,831	$279,359	$1,941,952	$3,287,810
Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	-	-	-	(100,772)
Total Employer Pension Expense Excluding That Attributable to Employer-Paid Member Contributions	$82,954,245	$64,831	$279,359	$1,941,952	$3,187,038

(Continued)

The accompanying notes are an integral part of these schedules.

Orange County Employees Retirement System
Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
Schedule of Allocated Pension Amounts by Employer
As of and for the Year Ended December 31, 2018

Deferred Outflows of Resources	**O.C. Sanitation District**	**O.C. Transportation Authority**	**U.C.I. Medical Center and Campus**	**Children & Families Commission of OC**	**OC Local Agency Formation Commission**
Differences Between Expected and Actual Experience	$2,740,145	$429,659	$1,083,806	$-	$-
Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	27,180,138	27,095,545	3,049,229	52,137	130,852
Changes of Assumptions	16,401,122	29,203,603	1,898,677	53,458	134,169
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	872,851	-	-	-	204,067
Total Deferred Outflows of Resources	$47,194,256	$56,728,807	$6,031,712	$105,595	$469,088
Deferred Inflows of Resources					
Differences Between Expected and Actual Experience	$10,405,119	$31,328,024	$3,502,059	$41,415	$103,944
Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	-	-	-	-	-
Changes of Assumptions	2,445,073	3,903,525	521,873	8,177	20,523
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	60,420	-	-	1,081,690	134,872
Total Deferred Inflows of Resources	$12,910,612	$35,231,549	$4,023,932	$1,131,282	$259,339
Net Pension Liability as of December 31, 2018	$29,029,145	$269,788,642	$34,808,679	$630,610	$1,582,703
Pension Expense Excluding That Attributable to Employer-Paid Member Contributions					
Proportionate Share of Plan Pension Expense	$14,888,440	$35,099,842	$1,840,555	$64,504	$161,895
Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	372,508	-	-	(350,297)	31,249
Total Employer Pension Expense Excluding That Attributable to Employer-Paid Member Contributions	$15,260,948	$35,099,842	$1,840,555	$(285,793)	$193,144

(Continued)

The accompanying notes are an integral part of these schedules.

Orange County Employees Retirement System
Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
Schedule of Allocated Pension Amounts by Employer
As of and for the Year Ended December 31, 2018

Deferred Outflows of Resources	**City of Rancho Santa Margarita**	**O.C. Superior Court of California**	**O.C. IHSS Public Authority**	**Total for all Employers**
Differences Between Expected and Actual Experience	$1,170	$-	$-	$18,724,448
Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	3,153	32,472,007	192,572	569,159,280
Changes of Assumptions	639	33,295,171	221,274	585,314,769
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	-	108,921	30,727,591
Total Deferred Outflows of Resources	$4,962	$65,767,178	$522,767	$1,203,926,088
Deferred Inflows of Resources				
Differences Between Expected and Actual Experience	$7,578	$25,794,457	$224,144	$454,047,301
Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	-	-	-	2,118,731
Changes of Assumptions	203	5,092,945	23,294	57,779,687
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	26,463,615	11,375	30,727,591
Total Deferred Inflows of Resources	$7,781	$57,351,017	$258,813	$544,673,310
Net Pension Liability as of December 31, 2018	$1,284	$392,760,910	$1,097,009	$6,197,202,089
Pension Expense Excluding That Attributable to Employer-Paid Member Contributions				
Proportionate Share of Plan Pension Expense	$1,276	$40,175,514	$257,767	$783,713,497
Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(7,563,741)	38,153	-
Total Employer Pension Expense Excluding That Attributable to Employer-Paid Member Contributions	$1,276	$32,611,773	$295,920	$783,713,497

The accompanying notes are an integral part of these schedules.

NOTE 1 – PLAN DESCRIPTION

The Orange County Employees Retirement System (OCERS or System) administers a cost-sharing multiple-employer defined benefit pension plan (the Plan) for the County of Orange, Orange County Superior Court of California, City of San Juan Capistrano, and ten special districts: Orange County Cemetery District, Children and Families Commission of Orange County, Orange County Employees Retirement System, Orange County Fire Authority, Orange County In-Home Supportive Services Public Authority, Orange County Local Agency Formation Commission, Orange County Public Law Library, Orange County Sanitation District, Orange County Transportation Authority and the Transportation Corridor Agencies. The Orange County Department of Education, University of California, Irvine Medical Center and Campus, Capistrano Beach Sanitation District, Cypress Recreation & Parks District, Orange County Mosquito and Vector Control District and City of Rancho Santa Margarita are no longer active employers, but retired members and their beneficiaries, as well as deferred members, remain in the System. Capistrano Beach is not presented in the accompanying schedule as this employer is no longer in existence and OCERS does not have the ability to collect any unfunded liabilities from this inactive employer. OCERS is legally and fiscally independent of the County of Orange.

OCERS provides retirement, disability and death benefits to general and safety members. Safety membership includes those members serving in active law enforcement, fire suppression and as probation officers. General membership applies to all other occupations. Plan retirement benefits are tiered based upon the date of OCERS membership. Additional information regarding the pensions plan's benefit structure is included in the Summary of Plan Description that is available on the web at: https://www.ocers.org/summary-plan-description.

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation and Basis of Accounting

Employers participating in the Plan are required to report pension information in their financial statements in accordance with Governmental Accounting Standards Board (GASB) Statement No. 68, *Accounting and Financial Reporting for Pensions – an Amendment of GASB Statement No. 27*. The Schedule of Allocated Pension Amounts by Employer (the Schedule) along with OCERS' audited financial statements, the GASB Statement 67 Actuarial Valuation as of December 31, 2018 and the GASB Statement 68 Actuarial Valuation Based on the December 31, 2018 Measurement Date for Employer Reporting as of June 30, 2019, prepared by OCERS' third-party actuary, provide the required information for financial reporting related to the Plan that employers may use in their financial statements.

The accompanying Schedule was prepared by OCERS' third-party actuary and was derived from information provided by OCERS in accordance with accounting principles generally accepted in the United States of America (GAAP) as applicable to governmental organizations.

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Basis of Presentation and Basis of Accounting (Continued)

Legally or statutorily required employer contributions for the year ended December 31, 2018, less any amounts of those legally or statutorily required contributions that are paid by the employees (referred to as reverse pick-ups), are used as the basis for determining each employer's proportion of total contributions. For the year ended December 31, 2018, employer paid member contributions of $164,000 under Government Code Section 31581.1 which OCERS reports as employer contributions as these payments do not become part of the accumulated employee contributions, have been excluded in determining each employer's proportion of total contributions. Contributions made by the employer on behalf of employees under Government Code Section 31581.2 are classified as employee contributions and are not included in the proportionate share calculation for the year ended December 31, 2018.

Employer contributions have not been reduced for discount due to prepaid contributions. Contributions for each employer are assigned to its respective participating Rate Group. Rate Groups are a collection of members who are or were employed by employers that offer similar pension benefit formula(s). Rate Groups exist for the purpose of risk-pooling and the contribution rates developed by the actuary should, in the long-term, fairly and accurately reflect the benefits offered/promised to members in each group. Rate Groups can contain one or more employers and employers may be included in one or more Rate Groups. If an employer participates in several Rate Groups, the employer's total proportionate share of the Net Pension Liability (NPL) and related allocated pension amounts is the sum of its NPL and allocated pension amounts from each Rate Group.

The following Rate Groups have only one active employer, so all of the NPL for that Rate Group is allocated to the corresponding employer:

Rate Group	Employer
3	Orange County Sanitation District
4	City of Rancho Santa Margarita
5	Orange County Transportation Authority
6	County of Orange (Probation)
7	County of Orange (Law Enforcement)
8	Orange County Fire Authority (Safety)
9	Transportation Corridor Agencies
10	Orange County Fire Authority (General)
11	Orange County Cemetery District
12	Orange County Public Law Library

The total Plan contributions are determined through OCERS' annual actuarial valuation process. The actuarially determined rate is the estimated amount necessary to finance the costs of benefits earned by employees during the year, with an additional amount to finance any unfunded accrued liability. California Government Code Title 3, Division 4, Parts 3 and 3.9, Articles 6 and 6.8 define the methodology used to calculate member basic contribution rates for General members and Safety members. The employer is required to contribute the difference between the actuarially determined rate and the contribution rate of employees. Legally or statutorily required employer contributions were determined by multiplying the employers' contribution rate by the employers' payrolls for the fiscal year.

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Basis of Presentation and Basis of Accounting (Continued)

The NPL is the Total Pension Liability (TPL) minus the Plan Fiduciary Net Position (plan assets). The TPL for each Rate Group is obtained from valuation results. The Fiduciary Net Position for each Rate Group is estimated by adjusting the valuation value of assets for each membership class by the ratio of the total Plan Fiduciary Net Position (excluding the balance of the County of Orange (County) Investment Account) to total OCERS' valuation value of assets. The County Investment Account is then allocated among the four County Rate Groups using the proportion of the County's most recent contributions that were derived from the proceeds of the Pension Obligation Bonds for each of the four County Rate Groups. The Orange County Sanitation District (OCSD) Unfunded Actuarial Accrued Liability (UAAL) Deferred Account balance of $14,589,000 was allocated entirely to Rate Group 3 and was transferred at the end of the year to partially offset actuarial losses incurred during 2018, resulting in an account balance of $0 as of December 31, 2018. The NPL is then allocated to the respective employers based on the legally or statutorily required employer contributions within each Rate Group.

In developing the pension expense amounts, the NPL proportionate share percentage is used to calculate the employer's pension expense components (service cost, interest, change in benefit terms, differences between expected and actual experience, changes in assumptions and benefit payments, including refunds of employee contributions), with the exception of the Orange County Mosquito and Vector Control District (Vector Control), Cypress Recreation & Parks District (CRPD), University of California, Irvine Medical Center and Campus (UCI) and the Orange County Department of Education (OCDE) which were adjusted to reflect the appropriate amount of service costs based on their current inactive membership.

The employer contributions used to determine the NPL proportionate share percentage for Rate Group 1 excludes UCI, OCDE and CRPD employer contributions of $2,875,000, $301,000 and $740,000, respectively. These employer contributions were intended to reduce the NPL of the specific employer, not the respective Rate Group as a whole. The percentages of contributions by employer do not equal the percentages used to allocate the NPL by employer because the NPL for the County has been reduced to reflect the portion of the County Investment Account, as described above. The amounts of the County Investment Account that have been allocated to those Rate Groups are as follows:

Rate Group	2018
1	$4,873,766
2	81,058,036
6	8,424,297
7	37,533,901
Total	$131,890,000

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Basis of Presentation and Basis of Accounting (Continued)

In addition, the NPL for Rate Group 1 was adjusted by the NPL for Vector Control, OCDE, UCI and CRPD prior to allocating the net NPL to the other employers in Rate Group 1. The NPL for these four employers were calculated separately as follows:

The Vector Control is no longer an active employer, but retired members and their beneficiaries, as well as deferred members, remain in the Plan. For this employer, the allocated net pension liability is based on the most recent estimate of the withdrawal liability and adjusted to reflect the Plan Fiduciary Net Position as of December 31, 2018.

The participation in the Plan for the OCDE and UCI is closed to new members. The funding obligation for these employers' UAAL is no longer pro-rata based on its payroll as there are no active members. Instead, the employer's UAAL is determined based on its specific actuarial accrued liability and a share of assets allocated to the employer. The employer's contributions for its UAAL are to be paid at level, fixed-dollar amounts over a period not to exceed twenty years. The employer will also be liable, or receive a credit, for any change in its funding obligation determined annually thereafter as a result of actuarial experience or changes in actuarial assumptions.

On October 19, 2015, the Board of Retirement approved the amortization schedule for payment of the OCDE UAAL and UCI UAAL of $3,238,000 and $27,586,000, respectively. These balances were calculated based on the December 31, 2014 actuarial valuation assuming fixed-dollar payments over twenty years beginning on July 1, 2016. As per the Declining Payroll Policy, the UAAL balances were updated as of the December 31, 2017 actuarial valuation to reflect actuarial gains or losses and other events that will be captured in a new twenty-year closed amortization layer. The amortization schedules for the new UAAL layers for the OCDE and UCI, after being adjusted for interest to December 31, 2018, can be found on OCERS' website as discussed in Note 5 – Additional Financial and Actuarial Information.

CRPD and Capistrano Beach Sanitary District (CBSD) are no longer active employers. CRPD has twenty-three retired members and beneficiaries, as well as five deferred members, and CBSD has four retired members remaining in the Plan. At the time these employers left the System, OCERS did not have an express policy addressing how the UAAL would be funded for inactive employers. On October 15, 2018, OCERS entered into a withdrawing employer and continuing contribution agreement with the City of Cypress and received payment of the UAAL associated with CRPD members, including interest through October 14, 2018, for a total of $740,000. As of December 31, 2020, and every three years thereafter, CRPD's UAAL obligation will be recalculated and in the event there is any new UAAL obligation, CRPD will have three years following the effective date of the recalculation to satisfy the obligation in full, including accrued interest. As of December 31, 2018, the allocated net pension liability is based on the most recent estimate of the withdrawal liability and adjusted to reflect the Plan Fiduciary Net Position as of December 31, 2018. CBSD is no longer in existence and OCERS does not have the ability to collect any UAAL from this inactive employer under OCERS' Declining Employer Payroll Policy; unpaid liabilities from this employer are deemed immaterial.

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Use of Estimates in the Preparation of Financial Schedules

The preparation of the Schedule in conformity with GAAP requires management to make significant estimates and assumptions that affect the reported amounts during the reporting period. Actual results could differ from those estimates.

The components of the NPL related to OCERS' plan at December 31, 2018, are as follows (dollars in thousands):

	2018
Total pension liability	$ 20,678,882
Less: Plan fiduciary net position	(14,481,680)
Net pension liability	$ 6,197,202

For the measurement period ended December 31, 2018 (the measurement date), total pension liability was determined by rolling forward the December 31, 2017 (the valuation date) total pension liability. The actuarial assumptions used were based on the results of an experience study for the period from January 1, 2014 through December 31, 2016.

NOTE 3 -- ACTUARIAL METHODS AND ASSUMPTIONS

Actuarial Methods and Assumptions Used to Determine Total Pension Liability

The December 31, 2018 total pension liability was based on the following actuarial methods and assumptions:

Actuarial Experience Study	Three-Year Period Ending December 31, 2016
Actuarial Cost Method	Entry Age in accordance with the requirements of GASB Statement No. 68
Actuarial Assumptions	
Investment Rate of Return	7.00%. net of pension plan investment expenses; including inflation
Inflation Rate	2.75%
Projected Salary Increases	General: 4.25% to 12.25% and Safety: 4.75% to 17.25% Vary by service, including inflation
Cost of Living Adjustments	2.75% of retirement income

NOTE 3 – ACTUARIAL METHODS AND ASSUMPTIONS (CONTINUED)

Actuarial Methods and Assumptions Used to Determine Total Pension Liability (Continued)

Mortality Assumptions
The mortality assumptions used in the TPL at December 31, 2018, were based on the results of the actuarial experience study for the period January 1, 2014 through December 31, 2016, using the Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table as a starting point, projected generationally using the two-dimensional Scale MP-2016, with age adjustments, and adjusted separately for healthy and disabled for both general and safety members.

Discount Rate
The discount rate used to measure the TPL as of December 31, 2018 was 7.00%. In determining the discount rate OCERS took into account the projection of cash flows and assumed plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the actuarially determined contribution rates. For this purpose, only employer contributions that are intended to fund benefits for current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs for future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the Plan's fiduciary net position was projected to be available to make all projected future benefit payments for current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability as of December 31, 2018.

According to Paragraph 30 of Statement 68, the long-term expected rate of return should be determined net of pension plan investment expense but without reduction for pension plan administrative expense.

The 7.00% investment return assumption used in the actuarial valuation for funding is net of administrative expenses. Administrative expenses are assumed to be 12 basis points. The investment return assumption remained the same for reporting purposes due to the immaterial impact administrative expenses has on the overall assumed rate of return.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rate of return by the target asset allocation percentage and by adding expected inflation and deducting expected investment expenses. Additional information on the target allocation and projected arithmetic real rate of return for each major asset class is available in the OCERS' Comprehensive Annual Financial Report for the year ended December 31, 2018.

NOTE 3 – ACTUARIAL METHODS AND ASSUMPTIONS (CONTINUED)

Actuarial Methods and Assumptions Used to Determine Total Pension Liability (Continued)

Amortization of Deferred Outflows and Deferred Inflows of Resources

The net difference between projected and actual investment earnings on pension plan investments in the Schedule represents the unamortized balance relating to the current measurement period and the prior measurement periods on a net basis. The net difference between projected and actual investment earnings on pension plan investments is amortized over a five-year period on a straight-line basis beginning with the year in which they occur. One-fifth was recognized in pension expense during the measurement period, and the remaining net difference between projected and actual investment earnings on pension plan investments at the measurement date is to be amortized over the remaining period.

Deferred outflows of resources and deferred inflows of resources related to the differences between expected and actual experience, changes of assumptions, and changes in proportion and differences between employer contributions and proportionate share of contributions are recognized over the average of the expected remaining service lives of all employees that are provided with pensions through the Plan determined as of December 31, 2017 (the beginning of the measurement period ending December 31, 2018) which is 5.91 years. Prior measurement period differences between expected and actual experience, changes of assumptions, and changes in proportion and differences between employer contributions and proportionate share of contributions continue to be recognized based on the expected remaining service lives of all employees calculated as of the beginning of those measurement periods.

The Schedule of Allocated Pension Amounts by Employer does not reflect contributions made to OCERS subsequent to the measurement date as defined in GASB Statement No. 68 paragraph 57. Appropriate treatment of such amounts is the responsibility of the employers.

NOTE 4 - LITIGATION

On February 23, 2016, the OCDE filed a declaratory relief action against OCERS, seeking a declaration that the OCDE was not obligated after the OCDE no longer had any active employees to continue making employer contributions towards the portion of the UAAL attributable to the benefits owed to the OCDE's retirees and beneficiaries. OCERS vigorously defended the action, contending the OCDE remained liable to make contributions and counter-sued the OCDE for the amount owed. Based on calculations performed by OCERS' third-party actuary, the OCDE's share of UAAL is approximately $2.9 million, if amortized in the ordinary course, as of December 31, 2018. On January 27, 2017, the Court entered a judgment in favor of OCERS and ordered the OCDE to pay the payments that were due between July 2016 and December 2016, including interest at 7.25% per annum from the due date of each payment to the date paid. The OCDE complied with the Court's order. Subsequently, on June 19, 2017, the Court granted OCERS' Motion for Judgment on the Pleadings and held that OCERS was within its authority to assess the UAAL against the OCDE and that the OCDE's obligation to pay OCERS is ministerial and mandatory. OCDE appealed to the Fourth District Court of Appeal. On January 23, 2019, the court unanimously affirmed the trial court judgment in favor of OCERS, holding that the OCERS' Board acted entirely within its statutory and constitutional authority to prudently fund the benefits owed to retired OCDE employees and their beneficiaries and that OCDE lacked any basis in law or fact to support its refusal to pay. The time for OCDE to appeal the decision of the Court of Appeal has expired. OCERS intends to pursue collection from the OCDE of OCERS' legal fees and administrative costs incurred in connection with this matter pursuant to Government Code section 31580.1.

NOTE 5 - ADDITIONAL FINANCIAL AND ACTUARIAL INFORMATION

Additional financial and actuarial information required for GASB Statement No. 68 disclosures is presented in OCERS' Comprehensive Annual Financial Report as of and for the year ended December 31, 2018, the OCERS' GASB Statement No. 67 Actuarial Valuation as of December 31, 2018, the OCERS' GASB Statement No. 68 Actuarial Valuation Based on the December 31, 2018, Measurement Date for Employer Reporting as of June 30, 2019, and the Unfunded Actuarial Liability and Associated Amortization Schedules as of the December 31, 2017 valuation for the Orange County Department Education and University of California, Irvine Medical Center and Campus, which can be found on OCERS' website at www.ocers.org.

A-6

ORANGE COUNTY
OCERS
EMPLOYEES RETIREMENT SYSTEM

Memorandum

DATE: June 17, 2019

TO: Members of the Board of Retirement

FROM: Gina Ratto, General Counsel

SUBJECT: **BOARD APPROVAL OF SELECTION AND ENGAGEMENT OF HEARING OFFICERS**

Recommendation

On behalf of the Hearing Officer Selection Panel, staff recommends the Board approve the appointment of and the award of a contract (subject to negotiation of satisfactory contract terms) with, the following individuals to serve as OCERS hearing officers for a term of seven years:

- Duane Bennett
- James Cloninger
- Robert Klepa

Background

Pursuant to Government Code section 31533, the Board is authorized to appoint one of its members or a member of the State Bar of California to serve as a referee (commonly referred to as a hearing officer) to hold hearings and issue proposed findings of fact and recommended decisions in connection with the determination of member applications for disability retirement and other pension benefits. On April 17, 2000, the Board adopted a Hearing Officer Selection and Retention Policy (Policy). The Policy was substantially revised in January 16, 2018, at the time the Board formed the Disability Committee.

The Policy outlines the roles and responsibilities of the Board in appointing hearing officers. The Policy also establishes a Hearing Officer Selection Panel (Panel) consisting of the CEO; the General Counsel; either the Assistant CEO for External Operations or the Director of Member Services; and either the Disability Committee Chair or Vice Chair. The Panel is responsible for interviewing and recommending to the Board for its approval competent and qualified hearing officers; evaluating the performance of hearing officers; and maintaining a list of hearing officers sufficient in number to meet OCERS' needs.

OCERS has traditionally maintained two groups or panels of hearing officers, with approximately three hearing officers in each panel. The two panels have seven year, staggered terms. The contract terms for one panel expired in 2018, leaving OCERS with only one panel of three hearing officers with contracts expiring on March 1, 2023.

Under the Policy, when the General Counsel determines it is necessary to add additional hearing officers in order to maintain a sufficient number of them, the Panel will initiate a Request for Proposal (RFP). Based upon the number of member appeals that OCERS handles each year, the General Counsel determined that a second panel of hearing officers was needed; and in July of 2018, OCERS issued an RFP for Hearing Officer Services to fill the second, vacant, panel of hearing officers. Candidates had until August 17, 2018 to submit their proposals in response to the RFP. OCERS advertised the RFP on its website, BizNet, and Twitter. No proposals were received, and the RFP was rescinded in August of 2018.

In October of 2018, OCERS reissued its RFP for Hearing Officer Services with a submission deadline of December 5, 2018. Prior to reissuing the RFP, OCERS staff reached out to the other CERL systems to learn about their practices in engaging qualified hearing officers. During this process, staff also acquired each of those system's current list of hearing officers. Based upon this information, staff marketed the RFP on the OCERS website as well as the CALAPRS and SACRS websites. An advertisement was placed in the Daily Journal (legal publication) and the National Association of Hearing Officials (NAHO) for the duration of the submission period. In addition, staff reached out directly via email to the hearing officers used by the other CERL systems.

Discussion

Five responses were received by OCERS in response to the RFP issued in October 2018.

The Policy sets forth hearing officer qualifications and the selection and retention procedures. Consistent with these procedures, the Panel reviewed all five proposals, which included answers to specific questions and requests for information, writing samples and references. Based on the review, the Panel determined that all candidates met the minimum qualifications of the RFP, and selected all five candidates for formal interviews.

Interviews were conducted on March 12, 2019. One candidate withdrew from the selection process shortly after his interview. Of the four remaining candidates, the Panel selected its top three candidates as finalists.

Staff checked references on the three finalists and was satisfied with all of the responses. Consistent with the Policy, staff then submitted the list of finalists to OCERS plan sponsors, employee representation units, and attorneys who regularly practice before the Board to give each of them an opportunity to provide comments. Staff received no comments in response to this outreach.

Below is a brief background on the three finalists. Their proposals, including cover letters, resumes, and writing samples, are attached.

- **Duane E. Bennett, Poway, CA** – *Mr. Bennett was admitted to the California State Bar in 1983. He is admitted to practice in the Southern and Central Districts of the U.S. District Courts and has Appellate experience in the Third and Fourth California District Courts of Appeals. Since 1998, he has been in private practice. He has served as a Hearing Officer for KCERA, LACERA, SBCERA, and SDCERA.*

- **James P. Cloninger, Henderson, NV** – *Mr. Cloninger was admitted to the California State Bar in 1979. He was appointed as a Municipal Court Judge in Ventura from March of 1994 to April of 1995 and was elected as a Judge to the Ventura County Superior Court in April of 1995. He retired from the bench in June of 2014 and was re-elected, without opposition, three times prior to retiring. He served as a Deputy District Attorney for both the County of Ventura and the County of Orange. He currently serves as a Hearing Officer for VCERA.*

- **Robert Klepa, Santa Monica, CA** – *Mr. Klepa was admitted to the California State Bar in 1989. He is admitted to practice in the Central District of the U.S. District Courts and the Ninth Circuit Court of Appeals. He currently serves as a Judge Pro Tem, Arbitrator, and Mediator for the Los Angeles County Superior Court. He serves as a Hearing Officer for VCERA, the Los Angeles City Housing & Community Investment Department, Los Angeles County Chief Executive Office Disability Division, Los Angeles County Housing Authority, City of Long Beach, Los Angeles County Civil Service Commission, and the City of Santa Monica.*

On behalf of the Panel, staff recommends the three finalists to the Board for its approval and for the award of a contract, subject to negotiation of satisfactory terms, with each.

Attachments

Submitted by:

Gina M. Ratto

General Counsel

Duane E. Bennett

Attorney At Law

P.O. Box 942
Poway, California
92074
(858) 693-4237-phone/fax
debennettlaw@cox.net

November 9, 2018

William Singleton, Paralegal
Orange County Employees Retirement System
2223 E. Wellington Ave., Suite 100
Santa Ana, CA 92701
RE: Response to RFP for Administrative Hearing Officer Services

Dear Mr. Singleton:

Please find enclosed my Response to the OCERS RFP for Administrative Hearing Officer Services.

The responses to RFP section 7 are included under the following sections:

1. Section 1: RFP §7.1 - Curriculum Vita
2. Section 2: RFP §§7.2 - 7.5 - Affirmative Statements
3. Section 3: RFP §7.6 - ADR Experience
4. Section 4: RFP §§7.7 - 7.10 - Other Experience
5. Section 5: RFP §7.11 - No Conflicts of Interest
6. Section 6: RFP §7.12 - Writing Samples

I certify and declare under the laws of California that all of the contents of this response to Request for Proposals are true and accurate.

Very truly yours,

/s Duane E. Bennett

Duane E. Bennett

SECTION 1 - Curriculum Vita

(RFP Section 7.1)

DUANE E. BENNETT
P.O. Box 942
Poway, California 92074
(858) 693-4237 - Phone
(858) 693-4237 - Fax
debennettlaw@cox.net

Profession: Attorney, Mediator and Arbitrator

Adjudicatory/Dispute Resolution Experience: Hearing Officer/Referee - Employee Retirement Associations for Kern County, Los Angeles County, San Bernardino County and San Diego County; Arbitrator/Hearing Officer- County of Riverside and Riverside Sheriff's Association; Arbitrator/ Mediator, American Arbitration Association; Mediator, Orange County Superior Court and California Department of Fair Employment and Housing; Judge Pro Tem, San Diego County Superior Court

Extensive expertise in due process proceedings, arbitrations, hearings and instruction relative to law enforcement, POBOR, FBOR, Administrative Procedures Act (APA), Due Process and Equal Protection clauses

Education: University of California, Davis School of Law, J.D.

University of California, Santa Barbara, B.A. – Sociology
"Thomas More Storke Award" for Outstanding Graduating Senior
"Outstanding Graduate in Sociology"
"Community Service Award"

Licenses: Admitted to the California Bar in 1983; Admitted to practice in Southern and Central Districts of U. S. District Courts; Appellate experience in Third and Fourth California District Courts of Appeals

Employment:

1998 - *Present* ***Law Office of Duane E. Bennett***
My practice primarily involves arbitration, mediation and hearing officer services. I serve as an employment and commercial arbitrator and mediator for the American Arbitration Association. I have served as a mediator for the California Department of Fair Employment and Housing and Orange County Superior Court. I also practice law in employment, contracts, I advise public safety agencies and municipalities and serve as a lecturer and instructor for governmental agencies.

2003-2012 (ret.) ***General Counsel, San Diego Port District***
Served as general counsel for the Port District in all legal matters. Advised and represented the Board of Port Commissioners and District staff in legal matters related to the Brown Act, conflicts of interest, contracts, real estate, environmental, insurance, Police, employment and maritime matters. Supervised and directed District and retained attorneys and staff. Supervised, directed and handled tort claims and civil litigation involving the District in state and federal courts. Drafted and interpreted all manner of legal documents including contracts, leases, development agreements, labor agreements, resolutions and ordinances.

1998-2003 ***City Attorney, City of Oceanside***
Served as chief attorney for the City in all legal matters. Represented and advised the City Council in public and executive meetings; as well as provided Brown Act and conflicts of interest advice to numerous commissions, boards and City staff. Provided advice and assistance to all City departments including Police, Fire, Personnel, Planning, Public Works, Building, Finance and Housing departments. Served as negotiator for the City in contracts, reviewed documents and drafted ordinances. Supervised and managed attorneys in all litigation matters involving the City.

1992-1998 ***Assistant City Attorney, City of Oceanside***
Handled all manner of municipal advisory and litigation functions. Supervised attorney and legal support staff. Served as primary attorney for Police, Fire, Personnel, Housing, Library, Parks and Recreation and Building Departments. Handled litigation in state and federal courts including general tort cases, police matters, employment lawsuits and civil rights litigation. Drafted and reviewed leases, contracts and related documents.

1990-1992 ***Police Legal Advisor, Santa Ana Police Department***
Served as in-house attorney for the police department advising on legal matters affecting the Police Department. Handled tort and civil rights litigation brought against the department. Provided advice in personnel matters, internal investigations, use of force matters and departmental policies. Provided departmental training to law enforcement personnel on an ongoing basis in all aspects of civil and municipal law.

1987-1990 ***Deputy City Attorney, City of Santa Ana***
Handled municipal litigation, prosecution and advisory functions. Worked with Personnel, Planning, Building and Safety, Housing, Fire, Parks and Recreation and related City departments in an advisory and litigation capacity. Prepared and reviewed City contracts and documents.

1984-1987 ***Deputy District Attorney, County of Riverside***

Past and Present Professional Activities:

- Hearing Officer - Kern County Employees' Retirement Association
- Referee/Hearing Officer - Los Angeles County Employees' Retirement Association
- Hearing Officer - San Bernardino County Employees' Retirement Association
- Hearing Officer - San Diego County Employees' Retirement Association
- Judge Pro Tem for North San Diego County Court
- Arbitrator/Mediator - American Arbitration Association
- Arbitrator - County of Riverside and Riverside Sheriffs' Association
- Mediator - California Department of Fair Employment and Housing
- Mediation Panel - Orange County Superior Court
- Peace Officer Standards and Training (POST) Certified Instructor
- Police Legal Advisor: Banning Police Department
- Consultant: Inglewood Police Department
- Workplace Investigator/Consultant: City of Vista
- Consultant: Cleveland Police Department
- Consultant: Coachella Police Department
- Consultant: Rock Island Police Department
- Consultant: San Diego County District Attorney Investigators
- California Peace Officers' Association Legal Advisors
- Adjunct Professor: California Western School of Law
- Faculty: National Attorneys General Research and Training Institute
- Faculty: National College of District Attorneys
- Vermont Village Community Development Corporation Board of Directors
- Vermont Village Human Services Board of Directors
- Vista Community Clinic Advisory Board
- League of California Cities Municipal Law Handbook Editor
- Martin Luther King Middle School Street Law Program
- League of California Cities Legislative Committee
- North San Diego County Bar Domestic Violence Program
- Inland Empire Latino Lawyers Association Legal Services Program
- Riverside County Bar Housing Clinic/Public Law Service Corporation
- National Bar Association
- Richard T. Fields Bar Association

SECTION 2 - Affirmative Statements

(RFP Sections 7.2-7.5)

Duane E. Bennett
Attorney At Law
P.O. Box 942
Poway, California
92074
(858) 693-4237-phone/fax
debennettlaw@cox.net

RE: Affirmative Statements - RFP Sections 7.2-7.5

Mr. Singleton or To Whom It May Concern:

1. This is to affirmatively state that if selected to serve as a Hearing Officer, I will be independent of OCERS and not related in any way to OCERS' business operations. I am not currently in litigation with OCERS, the County of Orange, or any agency or retirement association as referenced in my CV.

2. This is to affirmatively state that I have not given a gift or political campaign contribution to any officer, Board member, or employee of OCERS within the past.

3. I certify that I am an active member in good standing with the State Bar of California. I have been licensed to practice law since 1983. My California Bar license is 110202. I have never been subject to a disciplinary action by the California Bar.

4. I have not been the subject of a malpractice claim or case within the last five (5) years, or any sanctions by any court. I have never been the subject of any discipline by the California Bar or the Bar of any other jurisdiction.

SECTION 3 - ADR Experience

(RFP Section 7.6)

ADR Experience

I am the former City Attorney for the City of Oceanside and former General Counsel/Port Attorney for the San Diego Unified Port District. Since retiring from the Port District in 2012, I have been primarily involved in alternative dispute resolution and serve as a Hearing Officer/Referee for several retirement associations.

Since 2009, I have served as a Referee for the Los Angeles County Employees' Retirement Association (LACERA). I also serve as a Hearing Officer for the Kern County Employees' Retirement Association (KCERA), San Bernardino County Employees' Retirement Association (SBCERA) and San Diego County Employees' Retirement Association (SDCERA).

I also serve as an arbitrator for the County of Riverside and Riverside Sheriff's Association, and on the employment/commercial arbitration panels for the American Arbitration Association (AAA).

My experience in the area of disability retirements stems back to my time as a Deputy City Attorney for the City of Santa Ana. This involvement continued as Assistant City Attorney and City Attorney for the City of Oceanside, where I handled disputed PERS disability retirement matters. (At the San Diego Port District, I was intricately involved in negotiations with SDCERS regarding the retirement trust given an underfunding issue.) It should be noted that I am a PERS and SDCERS retiree.

I have enjoyed my work as a hearing officer/referee/arbitrator and recognize the important nature of the disputed issues. In this regard, my decisions have always been thoroughly prepared and timely. I would encourage you to contact any of the retirement association or county representatives in this regard.

My ADR background includes experience in all manner of employment law, including handling issues related to the ADA, workers' compensation and disability laws. My arbitration hearings have also included matters regarding the Labor Code, public safety issues and disciplinary matters. In this regard, I am very familiar with the Public Safety Officers' Procedural Bill of Rights, Fair Labor Standards Act, Fair Employment and Housing Act, etc. In fact, some of the disability retirement matters that I have handled over the years have included one or more of these issues.

I would especially appreciate the opportunity to serve as a hearing officer for OCERS.

SECTION 4 - Other Experience
(RFP Sections 7.7-7.10)

Retirement System and Related Experience

In response to RFP Section 7.7, I have never performed any work for OCERS.

Despite never working with OCERS, I serve as a referee/hearing officer for several county retirement systems. I perform hearing officer or referee services for retirement systems in the counties of Kern, Los Angeles, San Bernardino and San Diego.

I find the work as a referee and hearing officer exciting and important, particularly given the impact on county retirees. I recognize the tremendous impact that disability retirement decisions have on employees, retirees and retirement associations.

I give all disability retirement matters first priority in my practice. This is particularly important given the due process and strict timelines that associations utilize. I thoroughly analyze and summarize medical reports and exhibits for purposes of my recommendations and decisions. Moreover, I strive for fairness and clarity in my quest to apply due process and correct legal standards in all proposed recommendations and findings.

I have served as a hearing officer and referee since 2009 and been involved in over 45 disability retirement appeals during that time. Moreover, I have been involved in disability retirement matters since 1987 when I handled disability appeals as a Deputy City Attorney for the City of Santa Ana. It was during this time that I first realized the impact and ramifications of disability retirement decisions.

As General Counsel for the San Diego Port District, I worked closely with SDCERS regarding underfunding of pensions and related impacts to employees and retirees. This critical work made me even more aware of financial decisions and pension obligations respecting current and future retirees.

All of my hearing assignments at KCERA, LACERA, SBCERA and SDCERA contain aspects of workers' compensation law. Although workers' compensation laws are different than the laws related to disability retirements, the two bodies of law intersect when deciding disability retirement appeals. I am very experienced in workers' compensation law as a result of this work, recognizing that a careful understanding of workers' compensation serves as the predicate for understanding and analyzing disability retirement claims.

For several years, I served as a Judge Pro Tem for the San Diego Superior Court handling civil matters as the court requested. This work led me to become an employment and commercial arbitrator for the American Arbitration Association and the County of Riverside.

As an arbitrator, I have decided numerous matters, including disciplinary appeals, grievances and contractual disputes. In this context, I have handled disputes related to disability discrimination (ADA), employment discrimination/sexual harassment (FEHA), public safety (POBR) and related matters.

Finally, I serve as a mediator for the American Arbitration Association. In the past, I also served on mediation panels for the California Department of Fair Employment and Housing (DFEH) and the Orange County Superior Court.

SECTION 5 - No Conflicts of Interest

(RFP Section 7.11)

Certification of No Conflicts of Interest

This is to certify that I do not perform any other work that would create a potential conflict of interest with regards to the work to be performed for OCERS. This includes representation of OCERS' plan sponsors or retirement system members in actions against OCERS.

November 9, 2018 /s Duane E. Bennett

SECTION 6 – Writing Samples

Writing Sample No. 1

In this matter, the Applicant contends that he is entitled to a service-connected disability retirement because of the work-related automobile accident of 2002. He stated that he was treated at U.S. HealthWorks for his low back injury that resulted from the accident. To support this contention, he submitted records under Exhibit “12A.”

The Applicant also argues that he suffered cumulative trauma arising from the wearing of a duty belt, as presumed under California Labor Code section 3213.2. This section states, in part

(b) The lower back impairment so developing or manifesting itself in the peace officer shall be presumed to arise out of and in the course of the employment. This presumption is disputable and may be controverted by other evidence, but unless so controverted, the appeals board is bound to find in accordance with it. This presumption shall be extended to a person following termination of service for a period of three calendar months for each full year of the requisite service, but not to exceed 60 months in any circumstance, commencing with the last date actually worked in the specified capacity.
(c) For purposes of this section, "duty belt" means a belt used for the purpose of holding a gun, handcuffs, baton, and other items related to law enforcement.”

It is axiomatic that this Labor Code section applies to matters presented under the laws and procedures that apply to workers’ compensation matters and the Workers Compensation Appeals Board. As the Respondent argues, the laws related to workers’ compensation and disability retirement matters are different and not necessarily equally applicable. Moreover, the presumption is *disputable and may be controverted by other evidence.*

In this case, the Hearing office finds insufficient evidence to apply the presumption in any event. There is insufficient evidence in medical reports supporting cumulative trauma as a cause of the Applicant’s medical condition. The records presented detail medical treatments that occurred after the Applicant’s 2006 off-duty automobile accident. There is a lack of evidence associating cumulative trauma to the Applicant’s duty belt or otherwise.

The Applicant did not offer specific testimony detailing medical injuries associated with his duty belt. Moreover, the medical records do not support such a finding. To the contrary, the medical records on file, including the reports of Dr. X, indicate that the Applicant’s disabling back condition stemmed from his off-duty automobile accident in 2006 and degenerative conditions in his body.

In his initial medical report dated 1-13-2016, Dr. X referenced the deposition of the Applicant, which indicated that the Applicant wore a gun and duty belt during 2002. The report stated that the Applicant was treated for his injuries. However, the medical reports were not reviewed or summarized by Dr. X. On the other hand, Dr. X medical report provided the most comprehensive and complete evidence of the Applicant's medical history and treatments in this matter. [1]

According to Dr. X, the accident caused right-sided low back pain and right lower extremity pain. Apparently believing that the hospital records existed or would be produced, Dr. X stated, "There was no time after the car accident in 2002 where his low back complaints completely resolved. His back pain has been ongoing since 2002 and will intermittently flare up…"

Doctor X also discussed the off-duty motor vehicle accident in 2006 which was not job related. The Applicant sustained treatment from a chiropractor and complained of significant right-sided low back pain after the injury in 2006.

Doctor X impression was:

> "1. LUMBAR STRAIN.
> 2. LUMBAR SPONDYLOSIS, INDUSTRIAL AGGRAVATION.
> 3. LUMBAR STENOSIS, INDUSTRIAL AGGRAVATION.
> 4. STATUS POST ANTERIOR LUMBAR INTERBODY FUSION, L5-S1 WITH POSTERIOR DECOMPRESSION."

Dr. X found that the Applicant's disability condition was permanent and stated that there would be no change for the better with regards to his claimed disability.

As for causation, Dr. X concluded that "… *based on the available medical records*, the patient's low back symptoms did begin after his work-related motor-vehicle accident in 2002." (Emphasis added.) However, as noted above he stated that medical records related to the 2002 work-related injury were not available at the time.

Doctor X further stated that imaging studies taken years after the 2002 injury showed evidence of significant degeneration at the L5-S1 level. He noted that other than a lumbar strain, the Applicant denied any significant low back symptoms prior to his work-related injury in 2002. Therefore, Dr. X initially opined that the Applicant's medical condition was substantially connected to his employment as a deputy probation officer. However, he specifically stated that he reserved the right to amend his medical opinion if he was provided with medical records related to the 2002 work-related injury.[2]

In his subsequent report of 5-15-2016, Dr. X qualified and reversed his initial finding as to causation based on new evidence. He stated: [*Excerpt omitted*]

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[1] See Exhibit "5A."
[2] Exhibit "5A."

In essence, Dr. X initial causation determination was not based on complete evidence and presumed that the Applicant had medical records supporting medical treatments in regards to the 2002 automobile accident.[3] However, the only records produced at the administrative hearing in this regard involved the A/R Detail Listing from U.S. HealthWorks under Exhibit "12A."

These records detailed two succinct medical visits in connection with the 2002 automobile accident. Moreover, the Applicant testified that he did not recall further treatments in connection with the accident. As noted, no other medical records were produced in this regard and the Applicant was summarily released back to work without any significant work restrictions.

The Appellant cited the medical recommendations of doctors XX and XXX in regards to causation. However, the reports of both doctors made little reference to the automobile accident of 2006 and any associated injuries or treatments. There is minimal discussion in the reports regarding the Applicant's medical treatments after the 2006 auto accident.

This lack of discussion by Dr. X and Dr. X lead the Hearing Officer to believe that the doctors were unaware of the gravamen of the 2006 injuries suffered by the Applicant. It may also be that the doctors did not receive a complete medical history in this matter as referenced in Dr. X initial report.[4]

In this regard, the medical reports of Dr. X and Dr. XX cannot be relied upon as substantial evidence for purposes of determining causation in this disability retirement matter.

On the other hand, there was substantial evidence produced in connection with medical treatments after the Applicant's off-duty accident in 2006. Exhibits "13R"- "16R" indicate that the Applicant was treated for his low back injury several times. The report of 9-21-2009 associates right-sided low back pain to weight lifting. One would assume that the report would make some mention of the 2002 automobile accident as a contributing factor if such were the case, especially given the time proximity of the medical visit in juxtaposition to the auto accident.[5]

The acupuncture report under Exhibit "15R" states that the Applicant's low back pain began two years prior (or in 2014) and was not work related. Finally, the preliminary MRI report by Dr. X under Exhibit "16R" stated that the Applicant's spine had normal alignment and curvature. However, "degenerative disc disease with space height loss at L5-S1" was noted.

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[3] In this regard, Dr. X did not truly develop any analysis or evidence of cumulative trauma associated with the Applicant's duty belt besides brief references.
[4] Exhibit "4R."
[5] Exhibit "13R."

These medical reports provide substantial evidence that the Applicant's disability condition was not necessarily caused by the on-duty automobile accident of 2002. The reports indicate that the condition was caused by a degenerative disc condition and/or the off-duty automobile accident of 2006.

Writing Sample No. 2

DISCUSSION AND ANALYSIS

The Applicant has the burden of proof by a preponderance of the evidence to support her contention that she is substantially incapacitated from the performance of her duties as a Sheriff's Sergeant. (*Glover v. Board of Retirement* (1989) 214 Cal.App.3d 1327, 1337; *McCoy v. Board of Retirement* (1986) 183 Cal.App.3d 1044, 1051.)

As provided by Evidence Code section 500, "Except as otherwise provided by law, a party has the burden of proof as to each fact the existence or nonexistence of which is essential to the claim for relief or defense that he is asserting." The burden of proof is only met with reliable, "substantial" evidence. (*Weiser v. Board of Retirement* (1984) 152 Cal.App.3d 775, 783.) Substantial evidence has been defined as "relevant evidence that a reasonable mind might accept as adequate to support a conclusion. (*Kuhn v. Dept. of General Service* (1994) 22 Cal.App.4th 1627, 1633.)

Once the initial burden is met, the responding party is charged with producing evidence as to the matters established. The burden of producing evidence means the obligation of a party to introduce evidence sufficient to avoid a ruling against him on the issue. (See Evidence Code section 110.)

In disability retirement matters, proof to a moral certainty is not required to meet the burden of proof. It is sufficient that the evidence establishes the reasonable probability that a fact exists. (*McAllister v. Workmen's Compensation Appeal Board* (1968) 69 Cal. 2d 408, 416-417.) In the instant matter, the Applicant must meet her burden of proof based on competent medical evidence. Government Code section 31720.3 provides, in part, that in determining whether a member is eligible to retire for disability, the board shall not consider medical opinion unless it is deemed competent. Moreover, medical reports are allowed into evidence and do not constitute inadmissible hearsay under LACERA Rule 12.

The Applicant applied for service-connected disability retirement benefits citing heart, hypertension and sleep apnea conditions. She testified that her history with the Sheriff's Department was replete with stressful jobs, from her assignment at SBI through her last assignment with Risk Management. She indicated that she began to experience headaches and blurred vision in or about 2002, while working in the Internal Affairs Division ("IA").

It is axiomatic that the duties of law enforcement can be stressful. The Applicant testified of job functions as a deputy and sergeant that required her to patrol violent communities under life threatening conditions. She also recounted her supervisory functions at SBI and Pitchess Detention Center, which included transportation and oversight of violent inmates, riot control, and related custody functions.

The Applicant began experiencing headaches and blurred vision while working in IA. The assignment involved investigating officer misconduct, uses of force, Title VII complaints and related incidents.[6] She testified that investigating such misconduct created stress given the inherent nature of the assignment, which involved investigating associates, commanders and chiefs.[7]

In her Closing Brief, the Applicant also spent a great deal of time discussing the stress associated with time constraints, heavy workload, etc. related to her last assignment in Risk Management. She also testified that there were "changing guidelines" from her supervisor.[8] During this time, she experienced physical problems, including "shortness of breath and difficulties sleeping because of the issues that were - - were being generated at work."[9]

In analyzing the issues and making a recommendation as to findings of fact in this matter, the Referee must analyze whether the Applicant is permanently incapacitated for a substantial portion of her normal and customary duties as a Sergeant in the Sheriff's Department.

The Respondent has argued that the Referee should compare the Applicant's job at Century Regional Detention Facility ("CRDF") as opposed to her job in Risk Management. However, the Referee has declined to focus on any specific job assignment in deference to the Applicant's *usual and customary* job duties as a sergeant in the Sherriff's Department. In contradistinction to her emphasis placed on her last assignment in Risk Management, the Referee's analysis is based on the totality of the Applicant's usual and customary duties, as provided through testimony and as specified in her job description as a sergeant in the Sheriff's Department.

As such, the Referee must determine whether any permanent incapacity is a result of an injury or disease that arose out of, and in the course of employment, and whether such employment contributed substantially to such incapacity.

1) ***Is the Applicant permanently incapacitated for a substantial portion of her normal and customary duties as a Sergeant in the Sheriff's Department?***

The Administrative Record, and the exhibits submitted by the Parties, contains relevant evidence as to the Applicant's medical history and disability status. The Applicant primarily bases her disability claim on the medical reports and opinions of Drs. XXXX,

[6] R.T at pages 42-43.
[7] R.T. at pages 44-45.
[8] R.T. at page 66, line 3.
[9] R.T. at page 67, lines 2-4.

XXXX, and XXXX. The Respondent's position is primarily supported by the medical reports and opinion of Dr. XXXX.

The Applicant was diagnosed with hypertension by XXX in April 2009. Lisinopril-Hydrochlorothiazide 10-12.5 mg was prescribed to treat the condition.[10] She commenced treatment with Dr. XXXX on 7/6/09, with complaints of stress, anxiety and elevated blood pressure.[11]

In his medical report of 9/29/09, Dr. XXXX stated that the Applicant complained of heart palpitations, daytime headaches and snoring. He indicated that the patient is unable to return to work and is symptomatic. He diagnosed "Hypertension, out of control", "Sinus tachycardia" and "Sleep apnea disorder." Dr. XXXX indicated that the Applicant was unable to return to work and that she was symptomatic.[12]

Several other medical reports by Dr. XXXX and Drs. XXXX, XXXX and XXXX support the diagnosis that the Applicant is hypertensive and that she suffers from sleep apnea. There are varying opinions as to whether her condition supports a determination that she is incapacitated for a substantial portion of her normal and customary duties with the Sheriff's Department.

In his Agreed Medical Examiner Report to the Workers Compensation Appeals Board dated 9/29/09, Dr. XXXX discussed the Applicant's medical condition. Dr. XXXX stated the Applicant developed hypertension as early as 2002, due to the "anxiety and stress of her job."[13] He went on to state:

> "In my opinion at this time her hypertension is satisfactorily controlled but is not normal. She has reached **maximum medical improvement and is permanent and stationary from the cardiovascular perspective.** However the blood pressure and heart rate are not normal. She is not able to perform the duties of her usual and customary occupation."[14]

In his Comprehensive Cardiology Consultation Agreed Medical Evaluation dated 1/12/10, Dr. XXXX discussed the Applicant's cardiovascular condition and her ability to return to work. [15]

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[10] *Exhibit 14.*
[11] *Exhibit 23.*
[12] *Exhibit B.*
[13] *Exhibit 9.*
[14] As argued by the Respondent, the Referee is mindful of the differences between workers' compensation decisions and disability retirement matters. However, medical reports and opinions relative to workers' compensation determinations are deemed probative in this matter.
[15] *Exhibit 11*.

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702 901 7724

November 14, 2018

Orange County Employees Retirement System
2223 E. Wellington Avenue
Santa Ana, CA 92701

Attn: William Singleton, Paralegal
Re: OCERS RFP to provide hearing officer services

Dear Mr. Singleton:

On November 5 I received a Request for Proposal from you on behalf of the Orange County Employees Retirement System.

I am interested in performing this work for the OCERS. Enclosed please find my curriculum vitae, a proposal to provide hearing officer services, and a writing sample.

If you need further information please don't hesitate to contact me.

Very truly yours,

James P. Cloninger

James P. Cloninger
Attorney At Law
2880 Bicentennial Parkway, Suite 100, PMB 175
Henderson, Nevada 89044-4484
jpclaw@fastmail.com
702 901 7724

Date: November 12, 2018
To: The Orange County Employees Retirement System
Attn: William Singleton, Paralegal
Re: Proposal To Provide Hearing Officer Services

1. My curriculum vitae is enclosed herewith.

2. If I am selected to serve as a hearing officer I will be independent of the OCERS. I am not currently, nor have I ever been, in litigation with the OCERS nor related to any business operations of the OCERS.

3. I have not given a gift or political campaign contribution to any officer, Board member or employee of the OCERS within the past 24 months.

4. I am an active member, in good standing, of the State Bar of California. I have been a licensed lawyer in California since 1980. My bar number is 89062. From 1980 to 1994 I was a deputy district attorney, first in Orange County and later in Ventura County. From 1994 to 2014 my bar membership was inactive because I held office as a judge in Ventura County. Following my retirement from the bench I re-activated my bar membership.

5. I have not had any malpractice claims against me in my career. I have not had any sanctions imposed upon me by a court in the last 5 years. I have not been disciplined by the State Bar of California, or the bar of any other jurisdiction.

6. The information about my experience as an adjudicator and my experience with CERL, disability and workers' compensation law is set forth in my curriculum vitae. I do not have experience with Social Security law.

7. I have not performed previous work for the OCERS.

8. I have had a contract to serve as a hearing officer/referee for the Ventura County Retirement Association since February, 2015. During that time I have been assigned 3 cases, one of which went to hearing. I attach a redacted copy of the summary and analysis of the evidence, proposed findings of fact and conclusions of law in the case which was tried.

9. My work in the field of workers' compensation law is set forth in my curriculum vitae. It should be understood that my professional activities have had very little to do

with California workers' compensation law over the last 38 years. My knowledge of the subject is not current.

10. My work as a judge is set forth in my curriculum vitae.

11. I do not perform any work which would create an actual or potential conflict of interest with work which I might perform for the OCERS.

12. A writing sample in the form of the redacted document referenced in paragraph 8, above, is enclosed herewith.

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702 901 7724

Lawyer / Superior Court Judge (Retired)

Professional Experience:

Private Practice of Law, October, 2014 to present

- Active membership in the California State Bar after retiring from the bench.
- Admitted to the bar in the state of Washington, presently in inactive status.
- Practice is part-time and includes hearing cases for a retirement board which involve the application of the County Employees Retirement Law. I have also litigated petitions for writs to enforce the requirements of the California Public Records Act and to restrain certain activities of the California Board of Parole Hearings.

Ventura County Municipal Court, March, 1994 to April, 1995; Ventura County Superior Court, April, 1995 to June, 2014

- Appointed to the Municipal Court and the Superior Court in 1994 and 1995, respectively. Elected and re-elected, without opposition, three times. Retired from office in June, 2014.

- Presided over criminal and civil jury and bench trials, master calendar courts, juvenile delinquency, juvenile dependency, and family law matters. Served on the Superior Court appellate panel.

- Handled a large number of cases which were serious and complex. These included homicides (capital and non-capital), sexual assaults, civil detention cases under California's Sexually Violent Predator and Mentally Disordered Offender laws, child abuse cases, public corruption cases and major frauds. Experienced in managing lawyers and difficult trials.

- Received the Trial Judge of the Year award from the Ventura County Trial Lawyers' Association in 2000.

Office of the District Attorney, County of Ventura, California; September, 1990 to March, 1994

Title: Deputy District Attorney

- Investigated and prosecuted criminal cases. These included cases of special interest to the district attorney, vehicular manslaughter, major frauds, allegations of public corruption and general felonies.

- Reinstituted the use of the grand jury as a means of investigating and charging criminal cases following the passage of Proposition 115 in 1990. Served as the office's liaison with the Ventura County Grand Jury. Updated and re-wrote procedure manual for prosecutors in grand jury proceedings. Personally presented or supervised all cases presented to the Grand Jury by the Ventura County District Attorney for approximately one year. Provided training to the California Grand Jury Association.

- Investigated and prosecuted complex major fraud cases, including Ponzi schemes, real estate fraud and California securities and insurance law violations.

Office of the District Attorney, County of Orange, California; January, 1980 to August, 1990

Titles: Deputy District Attorney, Supervising Deputy District Attorney

- Investigated and prosecuted criminal cases of all kinds, including homicides, sexual assaults, child abuse cases, financial crimes, general felonies, and misdemeanors.

- Assigned to the Homicide Unit in 1983. Investigated and prosecuted various homicides. Litigated pretrial, trial, and sentencing issues on capital and non-capital homicides. Evaluated uses of deadly force by police officers in the performance of their duties. Provided training to police officers and prosecutors, with emphasis on the law of homicide, searches and seizures, and admissions and confessions.

- Prosecuted the case of People v. Protopappas (1988) 201 Cal. App. 3d 152. Directed the investigative efforts of police detectives and district attorney investigators over the course of several months as we gathered and analyzed the evidence of the deaths of three murder victims. The jury trial lasted approximately four and one-half months.

- Supervised and managed the Writs and Appeals Unit, which was responsible for handling law and motion work in the District Attorney's Office, along with certain appeals. Managed the staff of lawyers assigned to the unit. Maintained high standards for legal writing, courtroom advocacy, and the fair and efficient resolution of cases.

Legal Reform Activities

- 1981 through 1994: Worked with the California District Attorneys' Association, victims' rights groups, and the Governor's Office to reform the criminal laws in California in order to better protect the rights of crime victims, to improve the enforcement of the law and to deter liberal judicial activism in California courts. Worked extensively, with others, to remove activist justices from the state supreme court. This effort succeeded in 1986 with the removal of three such justices by the voters.
- 1986 through 1990: Was one of the authors of an initiative measure which reformed California's criminal laws and procedure. The measure was designated as Proposition 115 and was enacted by the voters in June of 1990.
- Co-authored amicus curiae briefing in support of Proposition 115 in a challenge brought against the measure before the California Supreme Court. Raven v. Deukmejian (1990) 52 Cal. 3d 336.

Workers' Compensation Law Experience

- 1975 through 1979: Employed by the State Compensation Insurance Fund. From 1975 through 1978 I worked as a claims adjuster handling injury and disability claims made by employees injured on the job. During 1978 and 1979 I moved to a position in the Claims/Rehabilitation Unit in the Los Angeles office of the State Fund. There I handled cases which involved exposure for the reinsurance carriers for the State Compensation Insurance Fund. Such cases included spinal cord injuries, brain injuries, severe burns, etc. I was also in charge of a separate program in which I traveled to the nine State Fund offices in Southern California to manage and, where appropriate, settle difficult cases which did not yet meet reinsurance criteria. My work at the State Fund required a working knowledge of California's workers' compensation laws.

Education

- Loyola University School of Law, Los Angeles, California: Juris Doctor degree, 1979.

- University of California, Berkeley: Bachelor's degree, Psychology, 1974.

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Date: January 2, 2018

To: The Ventura County Employees' Retirement Association Board of Retirement

Attn: Ms. Donna Edwards, Retirement Specialist

Re: Ventura County Employees' Retirement Association Case No. [Redacted]
The application of [Redacted] for disability retirement

Subject: Summary And Analysis Of The Evidence, Proposed Findings Of Fact And Conclusions Of Law

This matter was heard by the undersigned at the Ventura County Government Center on October 10, 2017. The applicant was self-represented. Respondent County of Ventura was represented by its counsel, Mr. Roberson. Below is the referee's summary and analysis of the evidence in the case, along with proposed findings of fact and the recommended conclusion of law. The matter was submitted for decision as of November 10, 2017, with the receipt of the parties' written final arguments.

Summary of the Relevant Evidence

Documentary Evidence - Hearing Officer's Exhibit 1

The series of documents submitted by the VCERA to the undersigned, consisting of 365 pages, was marked and received as Hearing Officer's Exhibit 1. They included the following:

Application for Disability Retirement

On March 21, 2016 the applicant submitted his application for disability retirement. Mr. [Redacted] stated that he had been employed by the County of Ventura for 15 years. He stated that he last worked on June 30, 2014, and that he left County employment on June 30, 2015.

The applicant stated that he was applying for disability retirement due to injuries received in a traffic accident that occurred on October 18, 2001, on Highway 118, while he was traveling between work locations.

Retirement Information Database System Information

The applicant was employed by the County of Ventura from April 5, 1999 through June 29, 2015. He was credited with a total of 14.66 years of County service.

Job Description

The applicant was employed as a Human Services Client Benefit Specialist. The physical demands of this position are those of routine office work and included the requirement that the employee be able to drive a car.

Traffic Collision Report

State of California Traffic Collision Report 01– 92512, which was apparently prepared by the California Highway Patrol, documents the accident which was identified by the applicant as the source of his injuries. On October 18, 2001, at about 8:45 AM, the applicant failed to yield the right-of-way to oncoming traffic and caused a collision between his vehicle and that of another driver. The report taken by the officer indicates that this was a property damage collision only. No injuries appear to have been reported by either party.

County of Ventura EAP Program Documents

The applicant received assistance from the County of Ventura EAP program commencing February 19, 2013. His last visit was on March 8. Mr. [Redacted] chief complaint at the time his EAP case was opened was as follows: "[Redacted] has recently had surgery for colon cancer. Also he has bulging and herniated discs in his lower back. He has been in quite a lot of pain. He has been off of work for almost 3 months."

Mr. [Redacted] was seen again at EAP on March 1 and March 8, 2013. On March 8, his last visit, the notes indicate that Mr. [Redacted] had been cleared to return to work on the 15th by his physician.

The Applicant's Letter Dated July 11, 2016

Mr. [Redacted] submitted a letter, dated July 11, 2016, to Donna Edwards of the Ventura County Employees' Retirement Association.

In his letter Mr. [Redacted] reiterated his request to receive a disability retirement. He stated that he had delayed the submission of certain documents in connection with this request due to his profound sadness and depressed mental state due to the illness, and subsequent passing, of his stepdaughter, Luz Cuevas.

In paragraph 4 of his letter Mr. [Redacted] reiterated that he was seeking disability benefits due to the auto accident of October 18, 2001. In paragraph 5 of his letter the applicant states that he told his doctor that "I did not feel any pain and I was good to return to work."

In paragraph 6 of his letter Mr. [Redacted] reports when he first went to see Dr. Alexander Meyer for his back pain. The statements in the letter are ambiguous: the first visit with Dr. Meyer was either three years after the auto accident or three years after a time in 2003 when the applicant's health insurance changed.

In paragraphs 7 and 8 the applicant stated that he was assigned to an office at the Clinicas del Camino Real facility on Wells Road. The office in which he worked at this facility was "not set up to work." The applicant left on sick leave and, when he returned, the office had been remodeled. After his return to work Mr. [Redacted] was reassigned to 3 other offices before his retirement. During this period of time he called in sick several times because of his back problems.

In paragraph 9 Mr. [Redacted] states "I believe that the time I spent at Clinicas del Camino Real was very instrumental in making my injury worst before they remodeled the office."
In paragraph 10 Mr. [Redacted] states that he went on state disability from July 1, 2014 until July 2015. He had hoped to return to work but was unable to do so and requested to retire from County service on June 30, 2015.

In paragraphs 11 and 12 the applicant outlined the doctors he had seen and the medical treatment he had received for his back problem.

In paragraph 13 Mr. [Redacted] states: "I asked my primary physician Dr. Meyer on July 21, 2015 if the car accident which I got T-bone on October 18, 2001 had anything to do with my back because I never had any problems with my back before October 18, 2001. He said it was very probable that the current degenerative disc issues stem from that accident."

In paragraphs 15 and 16 the applicant outlines his current medications.

In paragraph 17 Mr. [Redacted] lists the documents he submitted to Ms. Edwards with his letter.

Medical Records – Reports and Records Of Treating Doctors

Alexander B. Meyer, M.D.

June 4, 2010: The applicant was seen by Dr. Meyer on this date due to a problem with depression. No physical complaints are noted in the doctor's report, though it is noted that the applicant was receiving prescription medication for pain.

October 8, 2010: The applicant was seen by Dr. Meyer on this date for a physical examination and to receive a flu shot. Back pain was noted by the doctor and was assessed as lumbago. Physical therapy was recommended.

January 14, 2011: The applicant was seen by the doctor on this date for back pain. The applicant's back pain was noted as worsening. Pain was noted in the lower lumbar. Physical therapy had not been helpful over the past two months.

January 21, 2011: The applicant saw the doctor on this date for back pain. Mr. [Redacted] reported that the pain was about the same as it had been. The doctor recommended that the applicant take 3 weeks off from work due to pain and the use of narcotics to treat the pain. The doctor continued to assess the pain as lumbago.

February 25, 2011: The applicant was seen on this date for a recheck of his back pain. The doctor noted that the applicant had pain across his lower lumbar which was better when standing. The doctor approved a return to work "Monday." The doctor's assessment changed from lumbago to back pain.

March 4, 2011: The applicant visited the doctor on this date because of a complaint of shaking and to obtain a release to return to work. Mr. [Redacted] had received a steroid shot on the prior visit. Mr. [Redacted] reported that his back pain had pretty much resolved a few days after this steroid shot, describing his symptoms as more of a discomfort than pain. The doctor believed that the steroid shot would wear off and offered a lumbar epidural. The applicant was released to return to work.

June 27, 2011: The applicant visited the doctor on this date for back pain. The applicant told the doctor that his back pain had returned slowly since his last visit. The applicant complained that the chair in which he was sitting at work was very awkward, that he had a very small desk and had to separate his legs and lean forward to do his work. The doctor prescribed an ergonomic evaluation of the workplace. The doctor noted: "He did mention that he had a pretty significant car accident in 2001 although he did not have significant pain with that probably that's not directly related…although it's hard to say." The applicant reported to the doctor that he was unable to work. The doctor assessed the problem as lumbago and prescribed a lumbar epidural.

July 1, 2011: The applicant visited the doctor on this date to be released to return to work. He reported that his pain and improved by about 50% and told the doctor that he wanted to try to return to work.

October 7, 2011: The applicant visited the doctor on this date for back pain. The previously prescribed epidural had been completed, but was not as successful as the doctor and patient had hoped. The applicant reported that he had received an ergonomic chair at work which had helped his pain.

January 23, 2012: The applicant visited the doctor on this date for a follow-up on his back pain. He described this pain as "pretty bad." They discussed "giving him 2 weeks off of work." On examination the doctor reported that the applicant had pain in his lower lumbar area.

January 27, 2012: The applicant visited the doctor on this date due to his back pain. During this visit the applicant requested that the doctor release him from work for a week due to an illness he was experiencing and due to the back pain. The doctor diagnosed the applicant with sinusitis, gastroenteritis, and lumbago.

February 6, 2012: On this date the applicant was seen for a follow-up visit. The applicant reported that he was feeling better and requested permission to return to work.

June 20, 2012: On this date the applicant saw the doctor because of abdominal problems. The doctor assessed his condition as that of abdominal pain and depression.

August 10, 2012: This was a follow-up visit for the abdominal pain. The applicant was assessed as having abdominal pain and GERD.

October 9, 2012: On this date the applicant visited the doctor because of body aches. He reported to the doctor that he was having worsening stomach problems. He told the doctor that he had been struggling to work due to stomach problems. The doctor recommended time off from work for 3 weeks. The doctor assessed his difficulties as chronic abdominal pain and acute sinusitis.

November 1, 2012: The applicant saw the doctor this date for a follow-up visit. The applicant had had a colonoscopy and a non endoscopically-removable polyp had been found. He was referred to a general surgeon.

February 12, 2013: The applicant was seen this date because of a complaint of back pain. The report notes that the applicant had surgery on January 20th. This was a colon resection. Cancer had been discovered. The applicant's back pain flared up during the time that he was bedridden following surgery. The applicant told the doctor that he was scheduled to return to work. The doctor recommended another month of disability. The doctor assessed the applicant’s problems as joint pain, lumbago, colon cancer and depression.

March 5, 2013: This was a follow-up visit for back pain. At this visit the assessment included cancer, backache and major depressive affective disorder.

March 14, 2013: The applicant was seen by the doctor on this date for a follow-up visit and to receive permission to return to work. The applicant reported that his back pain was doing better. He was released to return to work with a lifting restriction. At this time the applicant was assessed as having backache and depression.

July 26, 2013: The applicant was seen by the doctor this date for a follow-up visit for his back pain. He was back to work and reported to the doctor that his pain was manageable. The doctor’s assessment at this time was that the applicant suffered from backache and depression.

October 25, 2013: The applicant was seen for a follow-up visit. The assessment was that the applicant suffered from backache and joint pain.

January 15, 2014: The applicant was seen this date for a follow-up visit. The doctor assessed him as suffering from acute gastroenteritis and backache.

April 7, 2014. The applicant saw the doctor on this date for evaluation of back and leg problems. He complained of pain in his lower back and a burning sensation in his leg. The doctor ordered an MRI and assessed him as having pain in a joint.

May 2, 2014: The applicant was seen this date for a follow-up visit. He was complaining of problems with his back. He was assessed as suffering from backache and lumbago. Dr. Meyer requested a referral to a back specialist.

May 16, 2014: The applicant was seen for a follow-up visit. He had had an MRI performed and the doctor went over the results of the MRI with him. Mr. [Redacted] continued to have problems with his low back. The doctor's assessment was that the applicant suffered from lumbago. He was referred to a neurosurgeon.

July 7, 2014: This was a follow-up visit. The applicant continued to complain of back pain. There is a notation: "estimate that he will not be able to work for the next 3 months." It is unclear whose estimate this is. The doctor's assessment was that he suffered from backache.

September 30, 2014: The applicant was evaluated. The applicant reported that he suffered from whole body pain, his shoulders, his elbows, and hands, knees and ankles also hurt significantly. There is a notation "2 weeks ago he hurt his back worse." The doctor assessed the applicant as suffering from backache lumbago and chronic pain. There is a notation that the neurosurgeon mentioned that there is nothing surgical he could offer.

October 21, 2014: The applicant went to the doctor on this date for an evaluation. The applicant reported that he had ongoing back problems. The applicant stated that he has been on disability because of his back since July 1 and that he would not be able to perform his job, considering how much pain he is in. The doctor recommended continuing disability for the next 3 months and assessed the applicant as suffering from lumbago and rheumatoid arthritis.

November 13, 2014: The applicant was evaluated. Mr. [Redacted] reported that he had pain in his right upper side and upper back, and that it began the Friday before the appointment. The applicant was assessed as suffering from an abdominal mass, abdominal pain, and CVA tenderness.

November 19, 2014: This was a follow-up visit. The doctor noted that thoracic spine x-rays showed degenerative disc disease at multiple levels. The applicant reported that he was having right flank pain. Dr. Meyer assessed the applicant as suffering from a pinched thoracic nerve root.

December 12, 2014: The applicant was seen by the doctor for an evaluation. At this time the applicant reported that he had lower back pain, but that what hurt now more was his right mid thoracic pain. The doctor noted: "he is not even close to being able to function at work he needs pain medication constantly…we will keep him off work until March 1 at this point we still don't completely understand why he is in so much pain." The doctor assessed the applicant as suffering from chronic pain and thoracic back pain.

January 12, 2015: The applicant was seen on this date for an evaluation. The applicant complained of pain on his right side. The doctor's assessment was that the applicant suffered from thoracic back pain, lumbar degenerative disc disease, and anxiety state, unspecified. A pain management consultation was recommended.

February 3, 2015: The applicant was seen on this date for an evaluation. He had seen the pain management specialist. The applicant reported that he was no better than before and complained of low back and thoracic pain. The thoracic MRI did not show pinched nerves. The doctor noted: "the patient states his disability ended on 1/21/15" and "…he is not able to work…he says not even close I will recommend April 4th for extended disability." He was assessed as having CVA tenderness and chronic pain.

March 25, 2015: The applicant was seen on this date for an episodic visit. The applicant had recently applied for SSI benefits. Dr. Meyer noted that "…with the severity of his back pain and the higher dependence on pain medication…I am inclined to say that he will not be able to return to work." The doctor stated "I do believe 100% that he is in pain…and that it is real" and recommended continuing short-term disability until June 30, 2015. The doctor assessed him as having chronic pain, lumbago, and a history of colon cancer.

April 27, 2015: The applicant was seen on this date for an evaluation. The applicant continued to report low back pain and radicular symptoms. The doctor opined that the applicant's depression and back and chronic pain made him permanently disabled. The doctor assessed the applicant as suffering from anxiety state, chronic pain, lumbago with sciatica, and depression.

June 24, 2015: The applicant was seen on this date to review his medications. He was assessed as having chronic pain, lumbar degenerative disc disease, and major depressive affective disorder.

Dr. Meyer wrote a letter dated June 24, 2015, to the Social Security Administration. In this letter he recapitulated the applicant's many medical problems and expressed the opinion that the applicant was permanently disabled from his regular job, mainly because of his chronic back issues.

July 20, 2015: The applicant was seen on this date for an episodic visit. The doctor opined that he was permanently disabled and that the doctor did not expect improvement over the next 12 months. He was assessed by the doctor as suffering from lumbago with sciatica and chronic pain.

Dr. Meyer wrote a letter dated July 21, 2015, concerning the origin of the applicant's back problems. The letter, in pertinent part, reads as follows: "[Redacted] asked me today whether his significant back injuries could be related to a car accident from 2001. He reports being T-boned. He says that he did not have any back difficulties before the accident, but he has had chronic issues since. It seems very probable that his current degenerative disc issues stem from that accident."

September 14, 2015: The applicant was seen for an evaluation and a referral. He was assessed as having a history of colon cancer, chronic back pain, other chronic pain and acute depression.

November 6, 2015: The applicant was seen for an evaluation. It was noted that he suffered from chronic anxiety and major depression. The doctor's assessment was that he suffered from conjunctival hemorrhage and anxiety at the time of this visit.

January 29, 2016: The applicant was seen by the doctor on this date for an evaluation. His complaints were the same as on previous visits. He was assessed by the doctor as suffering from anxiety, recurrent major depressive disorder and rheumatoid arthritis.

February 29, 2016: On this date the applicant was seen for an evaluation. His problems were the same as previously noted. The doctor assessed him as having major depressive disorder, anxiety, rheumatoid arthritis involving multiple sites with positive rheumatoid factor and degenerative disc disease, lumbar.

Stephanie Greger, M.D.

December 11, 2014: The applicant was seen by Dr. Greger in consultation, having been referred by Dr. Meyer. Dr. Greger is a rheumatologist. Dr. Greger assessed the applicant as suffering from chronic back pain and osteoarthritis, multiple sites. She investigated whether he was suffering from rheumatoid arthritis.

February 5, 2015: The applicant was seen in a follow-up visit. Dr. Greger assessed the applicant as suffering from osteoarthritis, multiple sites. The doctor questioned whether the applicant may have early rheumatoid arthritis.

May 21, 2015: The applicant was seen for a follow-up visit. The doctor assessed the applicant as suffering from chronic back pain and osteoarthritis at multiple sites. The doctor was of the opinion that there was no clear evidence of rheumatoid arthritis.

November 19, 2015: The applicant was seen for a follow-up visit. The doctor assessed the applicant as suffering from an abnormal immunological finding in his serum, chronic back pain, and tobacco dependence.

February 25, 2016: The applicant was seen on this date for a follow-up visit. The applicant was assessed as having chronic back pain, polyarthralgia, and tobacco dependence. The doctor noted that there was no clear evidence of rheumatoid arthritis.

Spanish Hills Interventional Pain Specialists

February 3, 2015: The applicant was seen by Marc D. Wolfsohn, M.D., having been referred by Dr. Meyer for complaints of chronic severe waist, back, hand and bilateral shoulder pain with no numbness, tingling or weakness. Dr. Wolfsohn is a pain management specialist. Dr. Wolfsohn took over pain management for the applicant. He described the applicant as having chronic musculoskeletal pain. He stated that the applicant's medical history is basically negative as far as trauma with slowly worsening pain symptoms over the last five years.

February 17, 2015: The applicant was seen on this date by Dr. Wolfsohn for a follow-up visit. The doctor continued to manage the applicant's pain medications and recommended a psychological evaluation.

March 3, 2015: The applicant was seen by Dr. Wolfsohn this date for a follow-up visit. Dr. Wolfsohn continued to manage the applicant's pain medications.

March 26, 2015: The applicant was seen by Dr. Wolfsohn this day for a follow-up visit. Dr. Wolfsohn continued to manage the applicant's pain medications. The doctor again referred the applicant for a psychological evaluation.

April 6, 2015: On this date Dr. Wolfsohn treated the applicant at an outpatient surgery center and administered lumbar facet injections at L3, L4, and L5.

April 28, 2015: The applicant saw Dr. Nakasone on this date for a follow-up visit. The doctor evaluated the effectiveness of the treatment administered on April 6. The applicant stated that he obtained pain relief for about one day following the injections. The doctor continued to supervise the applicant's pain medication.

May 26, 2015: The applicant saw Dr. Nakasone this day for a follow-up visit. The doctor continued to manage the applicant's pain medication.

June 15, 2015: On this date Dr. Wolfsohn treated the applicant at an outpatient surgery center. He administered lumbar facet injections at L3, L4 and L5.

June 23, 2015: The applicant was seen by Dr. Nakasone this date. The doctor evaluated the effectiveness of the treatment administered on June 15. The applicant obtained relief for about one day following the procedure. The doctor continued to supervise the applicant's pain medication.

August 4, 2015, September 2, 2015, October 5, 2015 and November 2, 2015: The applicant saw Dr. Nakasone on these dates for office visits. The doctor continued to manage the applicant's pain medications.

November 9, 2015: The applicant was underwent an outpatient surgical procedure performed by Dr. Wolfsohn. The doctor performed radiofrequency neurotomy at L3, L4 and L5.

November 30, 2015: The applicant was seen by Dr. Nakasone this date for an office visit. The doctor evaluated the effectiveness of the surgical procedure performed on November 9. The doctor continued to manage the applicant's pain medications.

January 18, 2016: Dr. Wolfsohn performed outpatient surgery on the applicant this date. The procedure involved radiofrequency neurotomy at L3, L4, L5 and an injection at T9.

January 29, 2016, February 26, 2016, March 29, 2016, April 26, 2016 and May 24, 2016: The applicant was seen by Dr. Nakasone these dates for office visits. The doctor continued to manage the applicant's pain medications.

Other Medical Reports And Information

-X-ray report of the lumbar spine dated September 24, 2010.

-X-ray report of the abdomen dated January 19, 2011

-MRI of the lumbar spine dated February 7, 2011.

X-ray report of the left hand dated October 25, 2013.

-X-ray report of the right hand dated October 25, 2013.

-MRI of the lumbar spine dated May 9, 2014.

-X-ray report of both hands dated September 30, 2014.

-X-ray report of the chest dated November 13, 2014.

-X-ray report of the thoracic spine dated November 13, 2014.

-X-ray report of the right shoulder dated January 28, 2015.

-X-ray reports of the right and left foot dated January 28, 2015.

-X-ray report of the sacroiliac joints dated January 28, 2015.

-Operative report for epidural steroid injection dated July 14, 2011.

-Operative report for epidural steroid injection dated August 12, 2011.

-Operative report or epidural steroid injection dated September 7, 2011.

-Laboratory reports from November 1, 2013 through February 22, 2016.

Applicant's Exhibit 1

Exhibit 1 is a letter from Dr. Alex Meyer, dated June 24, 2015. Dr. Meyer stated that the applicant had been a patient of his for 10 years. He stated that the applicant was diagnosed as having rheumatoid arthritis, anxiety and depression. Dr. Meyer states his opinion that the patient is unable to function at his regular job due to his chronic back issues. The doctor closes by stating "this has been his condition for several years, and there is no indication that he will get better within 12 months or 12 years."

Applicant's Exhibit 2

Exhibit 2 is a letter from Dr. Alex Meyer dated July 21, 2015. It is another copy of the same letter submitted by VCERA as page 135 of Hearing Officer's Exhibit 1. This letter is quoted earlier in this report.

Applicant's Exhibit 3

Exhibit 3 is a radiology report from Rolling Oaks Radiology. The report is dated September 21, 2017. It is a report of an MRI of the lumbar spine. The doctor's impressions are that the MRI shows mild degenerative disc changes and a far right foraminal herniated disc at the L4-L5 level.

Respondent’s Exhibit 1

A set of 211 pages of documents was submitted as evidence in the hearing and marked collectively as Respondent’s Exhibit 1. Each of the documentary exhibits summarized below is a sub-exhibit within Respondent’s Exhibit 1.

Exhibit-A The Deposition Of the Applicant

The applicant was deposed on March 21, 2017 and testified as follows:

He began employment with the County of Ventura in April 1999. He was hired to work as a human services officer, which was formerly called an eligibility worker. In this job he took cases to determine eligibility for the clients to see if they were eligible for food stamps, Medi-Cal, or cash aid. The applicant estimated that he would normally sit for about six hours out of every workday. At other times he would be getting up to make copies or perform other tasks. During the last 1-1/2 to 2 years of his employment with the County he was doing mostly eligibility determinations and answering questions on the telephone. During this period the heaviest thing that he would normally have to lift or carry would be no heavier than 5 to 10 pounds. During this time his job caused problems with his back when he stood up, sat down or turned around.

During the last year of the applicant’s County employment he did not work, but was on state disability. He had hoped to get better and get back to work, but that didn't happen. He had to submit his request to retire from the County. He last worked for the County on June 30, 2014.

Dr. Meyer signed the applicant’s paperwork for state disability. The applicant explained to Dr. Meyer that the reason he was going on state disability went back to an auto accident in which he was involved in 2001, while he was working for the County. The applicant did not file a workers’ compensation case for his back injury because he was hoping to be okay and to be able to get back to work. He first missed work for at least a week starting around 2004 or 2005. That's when his back started hurting.

On his disability retirement application the applicant stated that the date of his injury or illness that caused the disability retirement was October 18, 2001, the date of his traffic accident. After the accident the applicant was examined by a doctor. The applicant told the doctor that he felt fine and was not injured. The applicant did not receive any medical treatment or miss any time from work as a result of the accident. It was about three years after the traffic accident that the applicant first saw Dr. Meyer for his complaints about back pain. At that time the applicant told Dr. Meyer that he thought he had pulled a muscle in his back. This was around 2004. By this time the applicant had forgotten about the accident.

Dr. Meyer prescribed some Vicodin for the applicant, which he took. The applicant continued to work and the back pain went away. Between 6 and 18 months later the applicant suffered back pain again, again saw Dr. Meyer, and was again prescribed Vicodin. The applicant was also taking Aleve during this time for his back pain before he saw the doctor.

The applicant believed that he was physically unable to work in any sort of job or occupation, unless he were lying down.

He stated that he was unable to work because of his back problems and because of depression, with the main problem being his back.

The applicant had multiple epidural injections and RFI's, which did not provide him with lasting relief.

The applicant sought back surgery from Dr. Covington. Dr. Covington declined to perform surgery because the pain was not centrally located. The applicant sometimes gets numbness in his right and left legs.

The applicant testified that he is able to sit for 30 to 45 minutes. He would then need to stand or change position. He could walk 100 yards, but “would pay for it” later with pain. He could probably lift 20 to 25 pounds, but would have consequences later. There are a lot of things he could do, but when he does he experiences worsening pain until he takes medication. He could use a computer keyboard, answer the telephone and converse normally with others. He drove himself to the deposition, a trip which took about 40 to 45 minutes.

The applicant takes 6 oxycodone tablets each day for pain. He sometimes takes more, but never fewer than 6.

When the applicant left County service he began receiving regular retirement benefits.

In addition to his back problems the applicant was suffering from depression. The depression was caused by the circumstances of his life being changed by his back trouble. Also contributing to the applicant’s depression or anxiety were concerns about his mother’s health.

When he was assigned to work at the Clinicas office on Wells Road in Ventura the applicant was assigned to a workspace, about which he complained. This was in 2009 or 2010. After he returned to work at that location from a period of disability the office had been completely changed. What he did not like about the office was that he had to split his legs to get to the computer and keep turning back to get things. It is the applicant's opinion that this workstation probably got him to the point where he was at the time of the deposition.

The applicant had surgery for colon cancer in 2012. He was off work for that for about three months, and made a full recovery.

Exhibit B

Exhibit B is a report by Stephen L. G. Rothman, M.D., dated January 25, 2017. Dr. Rothman evaluated two MRIs of the applicant's lumbar spine. The first MRI was dated February 7, 2011. It is the doctor's opinion that the MRI showed no significant pathology nor evidence of injury. He stated that there is nothing on this MRI scan which was caused by any trauma and that there was no significant pathology. The second MRI was dated May 9, 2014. It is the doctor's opinion that this MRI shows no significant pathology, only minor age-related changes of the lumbar spine. The doctor opined that that this MRI scan is remarkably normal for a patient of the applicant's age.

Exhibit C

Exhibit C is the report of Richard C. Rosenberg, M.D., an orthopedic surgeon. Dr. Rosenberg conducted an evaluation of the applicant for the Respondent on July 13, 2017. Dr. Rosenberg took a history from the applicant, evaluated the physical requirements of the applicant's job with the County welfare department, reviewed the applicant's medical records, and performed a physical examination.

At the conclusion of his evaluation Dr. Rosenberg had the impression that the applicant had a history of a being in a vehicular collision in October, 2001, that he had progressively worsening lower back pain secondary to "chronic degenerative musculoskeletal pain," rheumatoid arthritis, a remarkably normal MRI scan of the lumbar spine, frequent opioid use for treatment of chronic pain, and a history of depression.

Dr. Rosenberg stated that he did not find any convincing evidence that the applicant had a work-related injury due to his employment with the County of Ventura. He expressed the opinion that there was no connection between the car accident of October 2001 and the chronic lower back pain that the applicant subsequently developed. The doctor opined that Mr. [Redacted] could return to his usual and customary occupation without any restrictions.

Exhibit D

Exhibit D consists of copied records from the Employment Development Department concerning claims for disability insurance.

The first document in exhibit D is a claim for disability insurance form completed by Dr. Meyer on July 9, 2014. Dr. Meyer diagnosed the applicant as suffering from back pain. On the form, in response to question B29, Dr. Meyer indicated that the disabling condition was not caused or aggravated by the patient's regular or customary work.

Supplementary certificates were completed by Dr. Meyer on October 21, 2014, February 10, 2015, April 8, 2015, And July 20, 2015. These certificates all documented the applicant's status as disabled.

The last document in exhibit D is entitled “Request for Medical Information”. This document was completed by Dr. Meyer. It appears to have been sent to the doctor by EDD on July 10, 2015. The space for the doctor to indicate when he signed the form is blank, but he stated that he attended his patient from “07/07/2014 to present.” The doctor indicated on this form that he thought that the applicant's disability was permanent and that the doctor did not anticipate releasing the applicant to return to his regular work. In response to the question in paragraph 8 the doctor stated that he did not think the disability was the result of the applicant's occupation either as an industrial accident or occupational disease.

Exhibit E

Exhibit E is a form entitled “Resignation Of Employment & Notice Of Acceptance” signed by the applicant on June 24, 2015. The applicant stated that he was resigning from his job effective June 30, 2015 for the reason of retirement.

Exhibit F

Exhibit F is a copy of the traffic collision report prepared by the California Highway Patrol for the accident which occurred on October 18, 2001. This is an identical copy of the report which was received as part of Hearing Officer's Exhibit 1.

Exhibit G

Exhibit G contains copies of records of Alex Meyer, M.D. The first document Is Dr. Meyer's report of his examination and evaluation of he applicant on May 25, 2016. At the conclusion of the report the doctor assessed the applicant as having major depressive disorder, rheumatoid arthritis involving multiple sites, other chronic pain and a BMI of 27 to 27.9.

The remaining documents in this exhibit are Dr. Meyer’s reports of his examination and evaluation of the applicant on February 29, 2016, January 29, 2016, November 6, 2015 and July 20, 2015. These have been previously addressed as part of Hearing Officer’s Exhibit 1.

Exhibit H

Exhibit H is a copy of psychotherapy notes, dated March 1 and March 8, 2013 from the County of Ventura Employee Assistance Program. These have been previously addressed as part of Hearing Officer’s Exhibit 1.

Exhibit I

Exhibit I is a report from Rolling Oaks Radiology of an MRI performed on the applicant on May 9, 2014. The MRI was of the lumbar spine. The doctor’s impression was that the applicant had broad-based disc bulges demonstrating annular tears at the L2-three, L4-five and L5-S1 levels. Dr. found there to be no central canal stenosis or evidence of nerve root impingement. This was previously addressed as part of Hearing Officer’s Exhibit 1.

Exhibit J

Exhibit J is the report of Stephanie C. Greger, M.D. of her examination and evaluation of the applicant on December 11, 2014. This was previously addressed as part of Hearing Officer's Exhibit 1.

Exhibit K

Exhibit K is comprised of two photocopied pages. The first page is a postoperative visit report by Isaac Lowe, M.D., following up on the applicant's surgery for colon cancer. The report is dated January 3, 2013. The second page is a pathology report by Gary N. Pontrelli, M.D. The report documents the examination of the surgical specimen submitted to the pathologist following the applicant's colon cancer surgery.

Exhibit L

Exhibit L is a copy of the application for disability retirement submitted by the applicant on March 21, 2016. This is a duplicate of a copy of the application which was submitted as part of Hearing Officers Exhibit 1.

Exhibit M

Exhibit M is a copy of a document entitled "Employee's Claim for Workers' Compensation Benefits", dated October 18, 2001. Paragraph 6 of this document indicates that the employee (the applicant) was not injured in the traffic accident. It was signed by the applicant at line 8.

Exhibit N

Exhibit N is a form entitled "Report of Occupational Injury or Illness" submitted by the applicant's supervisor in connection with the traffic accident on October 18, 2001. The form is marked "No Injuries" and was signed by the supervisor, Linda Marquez.

Exhibit O

Exhibit O is a leave of absence request is submitted by the applicant to the County of Ventura. The date of the document is obscured in handwriting, but it was stamped in on March 30, 2015. It appears to have been signed by the applicant and states that the reason for the requested leave was a non-work-related employee illness or injury.

Exhibit P

Exhibit P is the job description for the position of "HS Client Benefits Specialist III".

Exhibit Q

Exhibit Q is a record of the meeting between the applicant and Carrie Morales of the County's human resources department. It is essentially an exit interview conducted by Ms. Morales of the applicant on June 24, 2015.

Respondent's Exhibit 2

During his testimony witness Rothman showed the referee and the parties a PowerPoint presentation containing MRI images which he used to explain his opinion testimony. The MRI images were copied onto an optical disk, marked as Respondent's Exhibit 2, and received in evidence.

Summary Of The Relevant Hearing Testimony

[Redacted] testified as follows:

Direct: He did not come forward right away after the traffic accident of October of 2001 after he got T-boned. He was taken to a physician by his lead after the accident and he told the doctor that he had no pain.

As time went by, about 2 or 3 years later, he was taking Aleve in the mornings. He thought he had a pulled muscle. He went to the doctor in 2004 or 2005. He received Vicodin and that took care of it for about a year. He went back about a year later, thinking it was a pulled muscle. After a few more visits the doctor got an MRI.

When he got moved to Clinicas, the office was "not set up" His co-workers, not he, told the supervisor about the problems with the office because he is the type of man who, if you give him something, he runs with it.

Unfortunately, the office ruined his health because the way the office was set up he had to stretch and lean in different ways because the office was not set up appropriately for somebody to work in.

He went on disability for three months at a time. He did not intend to retire at that time. His life changed from that point forward.

Cross: Exhibit L is the application for disability retirement, which he submitted. In it he stated that October 18, 2001 was the date of injury or illness. This is the date of the auto accident.

In his deposition the applicant testified that he was not injured in the accident. He saw a doctor the day of the accident. He told the doctor he was not injured. He told the County he did not need to see a doctor that day because he was not injured.

He told the police officer who wrote the accident report that he was not injured in the accident.

He missed no time from work as a result of the accident.

The applicant told the County on Exhibit N that he had no injuries.

The applicant signed Exhibit M and indicated on that form that he had no injuries.

In Exhibit L the applicant stated that the reason for his application for disability retirement was his depression and physical condition just got worse following the death of his stepdaughter, [Redacted], in July, 2015.

He resigned from County employment on June 30, 2015, after a year's leave for disability.

The witness was shown Exhibit D, page 7. The applicant was aware that Dr. Meyer stated that the problem was not caused nor aggravated by his work. The applicant disagreed with the doctor on this point. The applicant did not file a workers' compensation claim during his disability leave.

The applicant had forgotten about his car accident and did not recall it until close to the date Dr. Meyer wrote the letter stating that the car accident could have been part of the reason for his injury.

In his work for the County the applicant performed a desk job where he sat at a desk, used the telephone, answered questions for people, and could stand or sit as desired. At his deposition he stated he could walk more than 100 yards, sit for 30 to 45 minutes, stand for 5 to 10 minutes. He testified that he could pick up 20 to 25 pounds from the floor and carry it 30 to 40 feet. The applicant could use a computer, converse and use the phone with no problem. At the time of the deposition the applicant was of the opinion that he was not employable in any capacity.

The applicant had colon cancer in 2012 and missed work for 2 to 3 months due to that.

The applicant began taking medicine for depression or psychiatric conditions since 2004 or 2005. He began taking such medicine due to worry about his back.

Mr. [Redacted] was told that he might have rheumatoid arthritis around 2010.

His back pain has continued to worsen since he stopped working for the County.

The work location at which the applicant thought the work station was not set up properly was at Clinicas del Camino Real on Wells Road. He worked there maybe 1 to 1-1/2 years. The work station was made better about 3 months before he changed work locations and went back to Santa Paula around 2011.

Redirect: The applicant feels that his time at Clinicas aggravated his injury and it was around that time he asked the doctor whether the car accident could have anything to do with his back, and the doctor wrote that it was possible that it could.

Stephen L. Gabriel Rothman testified as follows:

Direct: He is a Neuroradiologist and has been practicing as such since 1973. The witness set forth his education, qualifications and academic activities. He is a board-certified radiologist.

The witness was retained as an expert in this matter by the respondent.

The witness reviewed the MRI of the applicant's lumbar spine from February 7, 2011. The images reviewed by the witness show the health of the applicant's intervertebral discs. The scan shows one narrowed disc space.

The witness testified that aging causes changes to all persons' discs. Fissures occur with aging within the annulus portions of the discs. Sometimes these fissures will extend from the nucleus of a disc through the annulus.

The witness testified that the applicant has a bulging disc on the right side and slightly narrowed at L4-5. The witness was of the opinion that the applicant's spine is remarkably normal for his age - within the top 5 to 10 percent of his age group. There is nothing on the images which indicates that the applicant suffered trauma to his lumbar spine. These are typical age-related changes.

The witness reviewed the MRI of the applicant's lumbar spine from May 9, 2014. He testified that, at L5-S1, there is a small white spot which represents abnormal tissue in the disc around a small fissure. This is an age-related change of the disc. Viewing a cross-section at L4-5 shows sagging off to the right, as in the earlier images. The left is normal.

The witness compared the images from 2011 and 2014. The witness noted a difference in the written descriptions of the images. The images are similar, but not identical. It is theoretically impossible to make identical MRI scans, due to patient placement. The witness was of the opinion that the scans show the same conditions. There is no evidence that the abnormalities shown were caused by trauma. The witness testified that these are age-related changes.

The witness testified that the images from May 9, 2014 show that the applicant is within the top 5 to 10 percent for his age group.

Cross: The witness testified that what he sees on the films is not caused by any specific trauma, it is very unlikely.

Carrie Morales testified:

Direct: She works in HR for the County Human Services Agency. She is the return to work specialist. She is to identify work restrictions and reasonable accommodations for employees who are getting ready to return to work after a disability absence. The County has an active return to work program. If they receive work restrictions for an employee the County tries to place an employee into a job the employee can do.

The applicant worked for HSA. Exhibit O is a leave of absence request form. The applicant had received an extension on his current leave of absence to June 30, 2015. The applicant checked the form requesting leave for a non-work related employee illness or injury.

Exhibit E is the applicant's resignation. It was signed by the witness and the applicant on June 24, 2015. The applicant showed up at the witness's office with a retirement notice, which she reviewed with him. He told the witness that he was going to retire effective June 30, 2015, the same day his leave of absence was up. The applicant's last day of employment was June 30, 2015.

The witness asked the applicant if he had any work restrictions and he said that he did not, that he was just ready to retire due to his medical. She asked if there was anything the County could do before he left and said no, that he was just ready to retire and did not need any accommodations.

Cross: The witness and the applicant met personally in room 185 in HR. He told her that he was ready to retire due to his medical.

<u>[Redacted] testified:</u>

Direct: He is retired from County service, on a non-disability basis. He received about $1,500 per month, gross.

<u>[Redacted] testified:</u>

Direct: She is the wife of the applicant.

She covered Clinicas while the applicant was out. While he was out several of the people there had to cover for him during his leave of absence. She spent 6-7 hours per day in the office. It was a small, windowless office. The witness indicated that it was about 8 by 10 feet square. The office was cramped. There was an older computer with hardly any space to do writing. The computer desk chair was very small, wobbly and broken and really hard in the middle. The witness reported that something had to be done about the office because it was hard on the workers. A report was filed about the office and it was fixed after a month or so.

One could not sit properly because of metal things which were in the way. It was very uncomfortable.

<u>Analysis Of The Evidence</u>

The applicant has the burden of proving, by a preponderance of the evidence, that he suffers from a medical condition, arising out of and in the course of his employment, which has caused a disability which incapacitates him from performing his normal duties. *Government Code §31720.* There must be substantial evidence of some connection between the disability and the job. *<u>Bowen v. Board of Retirement</u> (1986) 42 Cal.3d 572, 578.* Additionally, if a disabled employee can be retained by the employer by being given a modified job which is within his abilities, or some other accommodation, he should not be retired with a disability pension. *Schrier v. San Mateo County Employees' Retirement Association (1983) 143 Cal.App.3d 957, 962*.

There are two issues which are presented in this matter. The first is whether the applicant has proven that he suffers from a medical condition causing a permanent disability which precludes him from engaging in his employment. The second is whether the applicant has proven, if he is disabled, that his disability arose from his employment.

The Applicant Has Proven That He Suffers From Chronic Pain. He Has Not Proven That He Has A Medical Condition Which Is Causing Permanent Disability

The evidence supports a finding that the applicant suffers from chronic pain.

The evidence presented in the hearing established that the applicant was seen by Dr. Meyer, his primary care physician, for an extended period of time for chronic back and other pain. The applicant's letter to Ms. Edwards of the VCERA is ambiguous as to when he first saw Dr. Meyer for these complaints. He stated that the first visit was either three years after the auto accident in 2001, or three years after a time in 2003 when the applicant's health insurance changed. Dr. Meyer's records are in evidence detailing his examination and treatment of the applicant for the period from June, 2010 to February, 2016. He has examined and treated the applicant for a longer period of time than has any other expert whose evidence was received in the case. As noted above in the summary of these records, Dr. Meyer is of the opinion that the complaints of pain expressed by the applicant are real.

The applicant complained of pain to Dr. Greger, who saw him in consultation as a rheumatologist. He also complained of pain to the pain management specialists, Drs. Wolfsohn and Nakasone. He complained of pain to Dr. Rosenberg, the orthopedic surgeon who evaluated him at the request of the respondent.

The applicant's complaints of pain are unaccompanied by any objective findings, except for some arthritic changes and an abnormality of a lumbar disc, as shown on MRI. Proof of the existence of the pain derives from the applicant's subjective reports of pain to the various examining and treating doctors. The applicant has been complaining of pain for years. He has been prescribed strong narcotic pain medication for years, and has also received surgical treatment for these complaints of chronic pain. Dr. Meyer is the primary doctor who documents the applicant's complaints of pain. Dr. Meyer is also a witness who has very significant credibility problems, particularly on the question of whether the applicant's pain was caused by his work, as is more fully discussed below. Nevertheless, given the longstanding nature of the complaints, and that they are documented by multiple physicians, the reasonable inference from the evidence is that the applicant has proven by a preponderance of substantial evidence that, as Dr. Meyer put it, his pain is real.

The determination that the applicant suffers from chronic pain does not, however, answer the question of whether his pain disables him from performing the work he once did for the County of Ventura or some other, modified, work.

There are five sources of evidence in the record which bear on this question. They are the reports and records of Dr. Meyer, the statements and testimony of the applicant, the report of Dr. Rosenberg, the report and testimony of Dr. Rothman, and the testimony of Carrie Morales.

Dr. Meyer:

Dr. Meyer expressed the opinion that the applicant was disabled from performing his normal job on five occasions beginning in 2011 and ending in 2015. One of these episodes of disability was caused by stomach problems and another was secondary to recuperation from cancer surgery. The rest of the disability recommendations were due to the applicant's back and depression problems.

Dr. Meyer expressed the opinion that Mr. [Redacted] is disabled because of his back pain, however his records and reports do not show that this is a conclusion reached after a careful and systematic evaluation of the applicant's abilities, coupled with an understanding of the physical demands of the job. Dr. Meyer did not testify, instead various statements he made in office records, in letters and on official forms were received in evidence. It would be speculative to assume that Dr. Meyer had any more information or conducted any type of disability evaluation which is not shown in the records.

Dr. Meyer's medical record entries which state that the applicant was disabled due to complaints of back pain appear to simply be instances of the doctor noting the opinion of Mr. [Redacted] as to whether Mr. [Redacted] believed that he was disabled. It appears that when the applicant told Dr. Meyer that he had disabling pain, the doctor opined that he was disabled. Conversely, when the applicant told Dr. Meyer that he was ready to return to work, the doctor released him to do so. Beyond listening to and noting the complaints related to him by the applicant there is little in these records to suggest that Dr. Meyer was exercising independent medical judgment in making disability determinations. Dr. Meyer's opinion on the question of whether the applicant suffers from a disability which prevents him from working should therefore be accorded little, if any, weight.

The Applicant:

In his application the applicant stated that he cannot stand or sit for too long because of his back pain. In his letter to Donna Edwards of July 11, 2016, the applicant stated generally that he was having pain at work, without stating specifically why it prevented him from doing his job. He stated that he intended to return to work until he realized that he would not be able to and requested retirement on June 30, 2015.

In his deposition the applicant said he was physically unable to work in any sort of job or occupation, unless he were lying down. He also testified that he was unable to work because of his back problems and because of depression, with the main problem being his back.

In his testimony at the hearing the applicant stated that in his work for the County he performed a desk job where he sat at a desk, used the telephone, answered questions for people, and could stand or sit as desired. He admitted that at his deposition he stated he could walk more than 100 yards, sit for 30 to 45 minutes, stand for 5 to 10 minutes. He testified that he could pick up 20 to 25 pounds from the floor and carry it 30 to 40 feet. The applicant could use a computer, converse, and use the phone with no problem. At the time of the deposition the applicant was of the opinion that he was not employable in any capacity.

Dr. Rosenberg:

The report of Dr. Rosenberg, Exhibit 3 within respondent's Exhibit 1, is summarized above in this report. As to the question of disability Dr. Rosenberg stated: "Based on Mr. [Redacted]'s history, his physical examination, and the findings on his MRI scan, it is my opinion that he could return to his usual and customary occupation without any restrictions. Furthermore, I do not find any restrictions on a nonindustrial basis."

Dr. Rothman:

The report and testimony of Dr. Rothman are summarized above. He reported and testified that the applicant does not have evidence of any traumatic injuries to his spine. The witness saw normal age-related changes in the MRI images he viewed. He stated that the applicant's spine appeared remarkably normal and within the top 5 to 10 percent of persons in his age group.

Carrie Morales:

Carrie Morales' testimony is summarized above. When she met with the applicant on June 24, 2015 he told her that he did not have any work restrictions, required no accommodations from his employer to be able to stay on, and just wanted to retire.

Discussion:

The opinions expressed by Dr. Rosenberg are, in my judgment, more credible and reliable than those of the applicant and Dr. Meyer. Dr. Rosenberg's conclusions were reached after he performed a systematic and thorough evaluation of the applicant and the physical demands of his job. Dr. Rosenberg's opinion was that Mr. [Redacted] could return to his usual and customary occupation without any restrictions. This conclusion is supported by the objective MRI findings related by Dr. Rothman. It is also supported by the applicant's admissions concerning his physical abilities during his deposition. It is also supported by the applicant's statements to Ms. Morales on June 24, 2015 that he had no work restrictions, required no accommodations from the employer, and was just ready to retire.

Taking all the available evidence into account, the evidence preponderates in favor of a finding that, although he does have chronic back pain, the applicant is not disabled from performing the duties which he once performed for the HSA. Moreover, he declined the employer's offer to accommodate any disability or work restrictions that he might have claimed to have. In short, the applicant has failed to prove that he is disabled. The respondent has established by a preponderance of the evidence that he is not.

The Applicant Has Not Proven That He Has Any Disability Arising From His Employment

If the record supported the finding that the applicant does suffer from a disability which prevents him from performing his former job with the Human Service Agency, the issue to be addressed would then be whether the applicant has proven that he suffered a work-related injury or illness which at least partially caused the condition. It is the undersigned's conclusion that he has not. The applicant has articulated two theories as to why his claimed disability is work-related: He first asserts that his problems were caused by the auto accident of 2001. The second assertion is that he was injured and disabled by the conditions of his work area while he was assigned to the Clinicas office in 2009 or 2010.

The Traffic Accident Of 2001

The only medical evidence in the record which supports the theory that the traffic accident of 2001 caused the applicant's back pain is the opinion of Dr. Meyer, as set forth in his letter dated July 21, 2015. This letter was part of Hearing Officer's Exhibit 1 and was resubmitted as Applicant's Exhibit 2.

This opinion was expressed by Dr. Meyer after the applicant asked him whether the accident might be the cause of his back problems. There is nothing in this record to show that Dr. Meyer had any information about the accident beyond what was related by the applicant. It appears that Dr. Meyer did not know that the applicant stated that he was not hurt in the accident. Dr. Meyer's opinion is not accompanied by an explanation as to how Mr. [Redacted] could function normally without unusual back pain for an interval of 3 or more years if the car accident caused spinal disc problems.

Thus there is a lack of any showing in the records of Dr. Meyer that he was in possession of information which would support a conclusion that the car accident of 2001 had anything to do with the back pain being reported by the applicant. It appears that the only thing the doctor knew about the accident was what the applicant had told him on June 27, 2011. The record is as follows: "He did mention that he had a pretty significant car accident in 2001 although he did not have significant pain with that probably that's not directly related…although it's hard to say." As noted below, the applicant did not believe the accident to have been significant at the time it occurred.

Thus there is an absence of evidence from Dr. Meyer as to why he would opine that the car accident had anything to do with the applicant's back pain. The applicant suffered no injuries which were noticeable to anyone, including the applicant, at the time the accident occurred. The evidence is not just that the applicant did not suffer a back injury - the evidence is that he suffered no injury whatsoever. Dr. Meyer's supposition that the accident caused a back injury is without factual support.

Juxtaposed with Dr. Meyer's supposition that the applicant's complaints of pain are related to his on-the-job car accident are multiple inconsistent statements on the same subject by Dr. Meyer. One of these is the doctor's report of June 27, 2011, quoted above. The other inconsistent statements are found in the records of the Employment Development Department, which paid disability benefits to the applicant at the order of Dr. Meyer.

On July 9, 2014, on a form entitled "Part B – Physician/Practitioner's Certificate", contained within Respondent's Exhibit D, Dr. Meyer checked a box indicating that the applicant's disability was not caused by his work. Dr. Meyer's statements on this form were sworn.

After this Dr. Meyer signed a series of supplementary forms attesting that the applicant was disabled.

In July of 2015, Dr. Meyer sent the form within Exhibit D entitled "Request For Medical Information" to the Employment Development Department. Again he checked the box indicating that the applicant's disability was not the result of the applicant's occupation, either as an industrial accident or occupational disease. This sworn statement to the EDD was made in the same month in which Dr. Meyer authored the letter in Applicant's Exhibit 2, opining that that job-related car accident of 2001 is a probable cause of the applicant's disc issues, which are the basis for the alleged disability.

Not to put too fine a point on it, Dr. Meyer lacks any reliability and credibility as a medical expert on the subject of whether the cause of the applicant's back pain is an on-the-job injury. Dr. Meyer's opinion lacks a reasonable medical basis, is contradicted by his own prior statements on the subject, some of which were sworn, and is contradicted by the statements of the applicant at the time of the accident. Dr. Meyer's opinion does not constitute substantial evidence on this issue for these reasons.

The applicant's statements at the time of the accident in 2001 are more credible than those of Dr. Meyer made 14 years later. At that time Mr. [Redacted] stated that he was not hurt in the accident. He saw a doctor the day of the accident at his employer's behest and told the doctor that he was not injured. He told the police officer who took the report that he was not injured. He missed no time from work due to the accident. He signed a form stating that he was not hurt. He testified that he had forgotten about the accident until shortly before Dr. Meyer wrote the letter in July of 2015 attempting to link his back pain to the accident.

The applicant's denial of any traumatic injury in the accident is corroborated by the findings of Dr. Rothman, who found no evidence of trauma in the images of the applicant's spine.

In accord is the report of Dr. Rosenberg, who stated that he did not find any convincing evidence that the applicant had a work-related injury due to his employment with the County of Ventura.

The evidence from Drs. Rosenberg and Rothman and the admissions of the applicant are substantial and credible evidence. Taken together, these items of evidence prove that the applicant did not suffer a work related injury in the auto accident in 2001. The evidence that the applicant did not suffer a work related injury in the accident rises at least to the level of clear and convincing evidence – a greater quantum of proof than the preponderance of evidence standard needed for the proof of facts in this matter.

The Office At Clinicas del Camino Real

With respect to the working conditions at the applicant's desk at Clinicas del Camino Real it is undisputed that his desk was cramped and uncomfortable. The chair was hard and uncomfortable and the applicant had to "split his legs" to use the desk, and twist and turn to manipulate things in the office. In his deposition the applicant stated that this office was a problem in 2009 or 2010. After he returned to work at that location from a period of disability the office had been completely changed. It was his opinion that this workstation probably got him to the point where he was at the time of the deposition.

The applicant complained about the issue to Dr. Meyer, who noted it in his report of June 27, 2011. Mr. [Redacted] complained that the chair in which he was sitting at work was very awkward, that he had a very small desk and had to separate his legs and lean forward to do his work. The doctor prescribed an ergonomic evaluation of the workplace.

In the hearing Mr. [Redacted] testified that, when he got moved to Clinicas, the office was "not set up." He did not report any problems with the working conditions, however. It was his co-workers, not he, who told the supervisor about the problems with the office. Mr. [Redacted] did not complain because he is the type of man who, if you give him something, he runs with it. He testified that, unfortunately, the office ruined his health because the way the office was set up he had to stretch and lean in different ways because the office was not set up appropriately for somebody to work in.

The hearing testimony of [Redacted] corroborated the applicant's testimony that the office was unsuitable for work and was uncomfortable. A complaint was made and the problem was corrected after a month or so.

Although it is the opinion of Mr. [Redacted] that working in this office caused or aggravated his back problem, there is no medical evidence establishing a causal connection between the two. The applicant had been complaining of, and being treated for, back pain some years before he was placed at this uncomfortable desk. The applicant's opinion that the workstation at Clinicas caused his problem, no matter how sincere it may be, is not competent evidence that the Clinicas workstation deficiencies caused him to have any medical problems nor permanent disability. There is no substantial evidence which supports the applicant's contention that he was in some way injured or disabled by his workstation, or that it contributed to some injury or disability.

Proposed Findings Of Fact:

Based on all of the foregoing the undersigned recommends that the Ventura County Employees' Retirement Association Board of Retirement make the following factual findings:

1. The applicant has failed to prove, by a preponderance of substantial evidence, that he has a medical condition which renders him permanently disabled.

2. The applicant has failed to prove, by a preponderance of substantial evidence, that he suffers from any disability arising from his employment with the County of Ventura.

Proposed Conclusion Of Law:

The undersigned further recommends that the Ventura County Employees' Retirement Association Board of Retirement reach the legal conclusion that applicant [Redacted] is not entitled to a service-connected disability retirement.

Respectfully submitted,

____

James P. Cloninger
Attorney At Law

FROM THE DESK OF ROBERT KLEPA
2801 Oceanpark Blvd. #238 • Santa Monica, Ca. 90405 • (310) 486-5792 • rklepa@ucla.edu

November 23, 2018

Orange County Employees Retirement System
Attention: William Singleton, Paralegal
2223 E. Wellington Avenue, Suite 100
Santa Ana, California 92701

RE: Response to RFP by OCERS for Hearing Officers

Dear Mr. Singleton,

I hereby enclose with this letter two copies of my Response to Request for Proposal To Become An Administrative Hearing Officer for the Orange County Employee Retirement System. In addition, I am enclosing two copies of the curriculum vitae/resume and writing sample you requested. If you require anything further to complete my response, please contact the undersigned at your earliest possible convenience.

Sincerely,

Robert Klepa

RK:rk
Attachments

RECEIVED
NOV 26 2018
Orange County Employees
Retirement System

Robert Klepa
2801 Oceanpark Blvd., #238, Santa Monica, Ca. 90405; 310-486-5792

RESPONSE TO REQUEST FOR PROPOSAL TO BECOME AN ADMINISTRATIVE HEARING OFFICER FOR THE ORANGE COUNTY EMPLOYEE RETIREMENT SYSTEM

Robert Klepa submits the following response to the Request for Proposal (RFP) asserted by the Orange County Employee Retirement System (OCERS) to obtain the services of Hearing Officers. The following responses are submitted to the proposal requirements contained in Section 7 of the RFP:

1. A current curriculum vitae/resume is attached to this response;

2. If selected to serve as a Hearing Officer, the undersigned will be independent of OCERS and not related in any way to OCERS' business operations. Further, the undersigned is not currently involved in litigation with OCERS, the County of Orange, the OCERS Board of Retirement, the Orange County Board of Supervisors, or any Orange County agency described in Section 1 of the RFP.

3. The undersigned has not given a gift or political campaign contribution to any officer, Board member, or employee of OCERS in the past 24-months.

4. The undersigned is an active member of the State Bar of California and is in good standing with that organization. Further, the undersigned has been practicing law as a licensed member of the State Bar of California for a minimum of five years under bar number 143302.

5. The undersigned has not had a legal malpractice claim or case brought against him in the last five years. Further, the undersigned has not been sanctioned by a court in the last five years. Moreover, the undersigned has never been disciplined by the State Bar of California or any State Bar of any jurisdiction.

6. The undersigned has extensive experience deciding cases as a Judge Pro Tem, Arbitrator, Referee, and Hearing Officer in all manner of cases including CERL cases. The relevant experience is further described below.

7. The undersigned has never previously worked for OCERS in any capacity.

8. The undersigned has previously performed work for a retirement system, but not a pension plan. The relevant experience is further described below.

9. The undersigned has never advocated in the workers compensation system or judged a workers' compensation case in that system. However, the undersigned has litigated multiple personal injury cases in which liens were asserted by insurance companies relating to worker's compensation claims made in separate proceedings.

10. The undersigned has extensive experience judging cases as a Judge Pro Tem, Arbitrator, Referee, and Neutral. The relevant experience is further described below.

11. The undersigned is not aware of any current work he performs that would create a potential conflict of interest with any work he hopes to perform for OCERS as a Hearing Officer. Further, the undersigned does not now, nor does he currently intend, to represent OCERS' plan sponsors or retirement system members in actions against OCERS.

12. A writing sample is attached to this RFP response.

13. The undersigned has stated some additional information that he believes relevant to OCERS' selection process below and in the attached resume.

14. The relevant experience referenced above is as follows.

A. Relevant Experience As An Advocate, Hearing Officer, Arbitrator, Referee and Judge Pro Tem

I have been a California licensed attorney for the last 29 years and a judicial officer in various capacities for the last 16 years. My training and experience in these areas allows me to better understand the challenges faced by witnesses testifying in hearings for the first time, and helps me draw facts out of witnesses that are needed to fairly decide a case.

As an advocate, the undersigned litigated hundreds of cases to verdict in arbitrations, bench trials and jury trials. In my work as a Hearing Officer, Judge Pro Tem, Mediator, Referee, and Arbitrator, I have successfully completed hearings for and issued decisions in more than 100 cases. Specifically, I am one of two Hearing Officers allowed to decide CERL disability cases for the Los Angeles County Chief Executive Office's Disability Division and Section 8 housing cases for the Los Angeles County Housing Authority. I have worked for the Housing Authority since 2009 and the Disability Division since 2011. In addition, I am one of a small number of Referees allowed to decide CERL disability appeals for Ventura County. I have held the Ventura County position since 2016.

In addition to the above, I have decided civil service employee discipline cases as a Hearing Officer for the Los Angeles County Civil Service Commission since 2002. I also began deciding building code and regulatory enforcement cases for the City of Los Angeles this year. Further, I spent six years deciding cases involving administrative code violations for the City of Santa Monica and have been approved to decide code violation cases for the City of Long Beach since 2006.

Beyond my work as a Hearing Officer, I served as an Arbitrator and Judge Pro Tem for the Los Angeles County Superior Courts from 1998 to 2015. In these volunteer positions, I decided cases involving personal injury, regulatory violations, and contract breach.

The many cases I have decided as a Hearing Officer, Arbitrator, Referee, and Judge Pro Tem, have shown me capable of consistently controlling a hearing room, taking clear and usable witness testimony, determining the admissibility of exhibits, and rendering a fair and impartial written verdict. The undersigned further notes that in deciding his cases, he has variously applied City codes, County regulations, state statutes, state regulations, federal statutes, federal regulations and both state and federal constitutional provisions. Further, the undersigned's verdicts are generally considered to be fair and just by the litigants in his cases, as shown by his being consistently chosen by the litigants themselves, year after year, to decide Los Angeles County Civil Service cases. In the remainder of the undersigned's cases for other municipal entities, he is selected on a rotating basis from a list of approved Hearing Officers.

B. Philosophy And Approach To Conducting Hearings

My philosophy as a Hearing Officer/Referee/Arbitrator/Judge Pro Tem is to make all of the parties understand that I have heard their evidence and intend to render a fair decision in their case. I do this by beginning hearings with an orientation that describes the nature of the hearing and the rules that apply to such hearings. I then allow the parties to make short opening and closing statements, present their evidence as efficiently as possible and submit all exhibits to be included in the case record. If the appellant is self-represented, inexperienced with the process or otherwise unable to clearly express his or her position (as often happens in disability cases), the appellant is many times asked, in a non-threatening manner, one or more questions by the undersigned Hearing Officer. The questions are intended to draw out the appellant's position and allow the Hearing Officer to gain a clearer understanding of the appellant's position and evidence. The Hearing Officer then fairly applies the facts and law to the case to render the fairest decision possible.

Moreover, the Hearing Officer uses his calm and open demeanor in hearings, as well as the careful attention he pays to each side's position during the hearing, to not only ensure that a fair and impartial decision is reached in the case, but that each side perceives it as such. In undertaking these actions, the Hearing Officer always applies a fundamental rule of judicial ethics which states that a Hearing Officer should never exhibit even the appearance of impropriety.

Once the hearing is over, the Hearing Officer carefully explains to the parties what will happen next and ensures that they understand the steps. The Hearing Officer does not give legal advice to any side, but does answer questions submitted by a party if doing so is consistent with the Hearing Officer's role in that hearing. In this way, the Hearing Officer is able to ensure that each party trusts in the hearing process and leaves the hearing knowing that their evidence and arguments received the full and fair consideration they deserved.

This approach to hearings has been developed and applied by the undersigned Hearing Officer over the last 16 years in successfully deciding more than 100 cases for various government agencies. This process has also been continually improved through the Hearing Officer's successful completion of a multi-day Mediation training program presented by UCLA Extension and numerous training classes provided for this and other Hearing Officers by the Los Angeles County Civil Service Commission, the City of Los Angeles Housing and Community Investment Department, and the Los Angeles County Housing Authority. The undersigned believes that the above listed background, training, experience and hearing philosophy will help him succeed as a referee for your organization.

C. Client references

As client references, the Applicant recommends contacting the following persons with personal knowledge of the undersigned's experience and character as a Hearing Officer:

1. Alyssa Williamson – Los Angeles County Civil Service Commission – 213-974-2414; awilliamson@bos.lacounty.gov;
2. Tammy Usher – Chief Executive Office's Disability Division – 213-738-2143; tusher@hr.lacounty.gov; and
3. Miriam Herrera – Los Angeles County Housing Authority – 626-586-1574; miriam.herrera@hacola.org.

The Applicant will be happy to provide additional references upon request.

I hereby submit the above as my response to the specified Request for Proposal.

Robert Klepa

11/23/2018
Dated

ROBERT KLEPA
2801 Oceanpark Blvd., Suite 238
Santa Monica, California 90405
(310) 486-5792

HEARING OFFICER/ JUDGING

Los Angeles City Housing & Community Invest. Department– 2018 - Present
Hearing Officer conducting administrative hearings regarding violations of building codes and City regulations relating to privately owned apartments.

Ventura County Employees Retirement Association – 2016 – Present
Hearing Officer conducting administrative hearings on appeals relating to the requests of Ventura County employees for disability retirement payments.

Los Angeles County Chief Exec. Office's Disability Division– 2011 – Present
Hearing Officer conducting administrative hearings on appeals relating to the requests of Los Angeles County employees for disability retirement payments.

Los Angeles County Housing Authority - 2009 – Present
Hearing Officer conducting administrative hearings on housing issues involving the federal Section 8 housing program.

City of Long Beach - 2006 to Present
Hearing Officer for administrative code violations of various types.

Los Angeles County Civil Service Commission - 2002 - Present
Hearing Officer conducting administrative hearings on employment issues.

City of Santa Monica - 2008 to 2014
Hearing Officer for administrative code violations of various types

Los Angeles County Superior Courts - 1998 - Present
Judge Pro Tem deciding Small Claims cases involving damages from defects in products, automobiles, and real property, breach of a lease, breach of a service contract, breach of a product contract, breach of a loan agreement, construction defect, and other inter-personal issues.

Los Angeles County Superior Courts - 1998 - Present
Arbitrator deciding civil cases involving personal injury and contract breach.

Los Angeles County Superior Courts - 1998 - Present
Mediator facilitating the resolution of civil cases involving personal injury and contract breach.

United States District Court/Central District of California - 1998 - 2018
Pre-sentence Officer writing tentative criminal sentencing decisions in cases from all of the court's judges. The tentative sentencing decisions were 30 or more pages long and included the procedural history of the case, the defendant's personal history, his/her prior criminal history, the federal law applicable to sentencing that defendant on his/her federal crime, and a detailed analysis of how these laws and facts supported my recommended criminal sentence.

CONSULTING/ TEACHING/ LAWYERING

Santa Monica College and its Small Busin. Develop. Center-2002- Present
Consultant/Adjunct professor teaching contracts, employment law, intellectual property, debt collection, and the advantages and disadvantages of each form of corporate entity to owners of small businesses.

University of California at Los Angeles/Extension Program - 1998 - Present
Instructor teaching paralegals, foreign lawyers, graduate students, and business owners about legal ethics, the elements of a contract, defenses to breach of contract, steps to take in resolving a contractual dispute, legal research skills, motion writing, court skills, and jurisdiction and venue.

University of Phoenix - 2004 - 2009
Adjunct professor teaching criminal justice courses to working professionals.

Three midsize to large law firms - 1989 - 1998
First chair trial attorney who tried to verdict numerous high-value cases involving racial discrimination in employment, gender discrimination in employment, sexual harassment on the job, personal injury from consumer products, personal injury from industrial products, personal injury from property defects, condominium construction defects, single-family-home construction defects, and failures to provide services under a contract.

PROFESSIONAL LICENSES

California Bar, Federal District Court (Central) and
Federal District Court of Appeals (Ninth Circuit) - 1989

EDUCATION

UNIVERSITY OF SOUTHERN CALIFORNIA/AACSB - 2007
Certificate - Learning Graduate Business School Instructor Skills

UCLA and UNIVERSITY OF PHOENIX, LOS ANGELES - 2000 and 2003
Certificate - Learning On-line Instructor Skills

LOYOLA LAW SCHOOL - 1989
Los Angeles, California - Juris Doctorate

UNIVERSITY OF CALIFORNIA, LOS ANGELES - 1986
Bachelor of Arts - Political Science (Minor - Economics)

ADDITIONAL ACHIEVEMENTS

Coordinator of the PATH, homeless outreach program - 1992 to 2008.
Author of multiple articles in Los Angeles Lawyer magazine on the state court system (2002) and legal ethics (2007).
Paralegal Advisor for the American Bar Association approved, West Los Angeles Community College Paralegal Program - 2004 to present.
Paralegal Advisor to the Los Angeles Community College Paralegal Program - 2004 to 2006.
Contributor to Smith and Roberson's Business Law textbook - 2009
Designer and co-presenter of a contract/credit score education course for foster youth - 2013.
Designer and co-presenter of Ready-To-Work program that teaches job search skills to soon-to-be-released inmates in the federal prison system - 2010 to Present.

CHIEF EXECUTIVE OFFICE
LOS ANGELES COUNTY

STACY XXXXXXX, Claimant Employee, v. LOS ANGELES COUNTY THROUGH SEDGWICK CLAIMS MANAGEMENT AND THE LONG TERM DISABILITY AND SURVIVOR BENEFIT PLAN THEY ADMINISTER Respondent.	LTD Claim No. XXXXXX FINDINGS AND DECISION IN LONG TERM DISABILITY CASE Pre-Hearing Date: May 24, XXXX Final Hearing Date: August 10, XXXX Hearing Officer: Robert Klepa

APPEARANCES

For Claimant: Stacy XXXXXXX, Pro Per; and her husband Donald XXXXXXX

For Respondent: Michael Brown

Sedgwick Claims Management Services

INTRODUCTION/BACKGROUND/PROCEDURAL HISTORY

General Information

The County of Los Angeles (County) uses a Third Party Administrator name Sedgwick Claims Management Services (Sedgwick), to evaluate and process claims for disability under The Long-Term Disability and Survivor Benefit Plan. The responsibilities of Sedgwick include receiving medical information from doctors and determining whether an employee should be placed on disability status. Sedgwick is a private contractor for The County of Los Angeles.

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Stacy L. XXXXXXX (XXXXXXX) began working for Los Angeles County on July 6, XXXX. On or about July 23, XXXX, she stopped working as a Los Angeles County worker due to back pain as well as psychological conditions. The injuries arose from automobile accidents occurring on February 22, XXXX, and May 19, XXXX, that were related to XXXXXXX's job working in a library bookmobile. The Long Term Disability and Survivor Benefit Plan applicable to XXXXXXX states that benefit payments are to begin for disabled County workers six months after that worker becomes disabled. Based on the date of XXXXXXX's claimed period of disability, payments were to begin to her on January 23, XXXX, as long as XXXXXXX had been disabled from her employment during the six month qualifying period from July 23, XXXX, to January 22, XXXX. XXXXXXX subsequently requested disability benefits, had her claim denied and appealed the denial. Both XXXXXXX and Sedgwick agreed that Robert Klepa would be the Hearing Officer in this matter in determining whether she was eligible to receive disability benefits for the period including and subsequent to January 23, XXXX, onward.

Pre-Hearing

On May 24, XXXX, a pre-hearing conference was held in front of Hearing Officer Robert Klepa to determine the issues to be decided at XXXXXXX's final hearing, to preview the evidence asserted by Sedgwick/County in support of the County's denial of XXXXXXX's disability benefits claim, and discuss the types of evidence needed by XXXXXXX to justify her request for benefits. The participants in the Pre-Hearing were Michael Brown (Brown) for Sedgwick, as well as XXXXXXX and her husband Donald XXXXXXX for XXXXXXX.

During the pre-hearing conference, the hearing process was discussed, potential procedural problems addressed, the issue to be decided by the Hearing Officer was agreed to by XXXXXXX and Brown/County, a schedule was agreed to for the exchange of information, evidence, and documents between the Claimant and Sedgwick prior to the final hearing, and special instructions were given to XXXXXXX on how to prepare the written response that she must provide to Sedgwick (and through it the Hearing Officer) prior to scheduling the final hearing. The Claimant was provided with a copy of Sedgwick's pre-hearing statement and its nine exhibits at the pre-hearing. No documents were submitted by the Claimant at that time.

During the pre-hearing, XXXXXXX was advised of the requirement to provide a hearing statement in duplicate to Sedgwick within 60 days of the pre-hearing's completion. The statement was to contain all of the documents that supported her case. During the document exchange period, XXXXXXX's pre-hearing statement and its 22 pages of exhibits were submitted to Sedgwick and subsequently to the Hearing Officer, allowing for a final hearing to be scheduled.

Final Hearing

On August 10, XXXX, a final hearing was held. Present were XXXXXXX, her husband Donald XXXXXXX and Brown. Brown was present on behalf of Los Angeles County and the Los Angeles County Long-Term Disability and Survivor Benefit Plan (LTD), pursuant to County Ordinance, Chapter 5.38, et. seq.

At the final hearing, XXXXXXX and Brown were afforded the opportunity to provide relevant testimony and rebuttal evidence in support of their position. The parties were also granted an opportunity for cross examination of witnesses and to present closing arguments and/or a summary statement.

During the hearing, XXXXXXX and her husband provided testimony, as did Brown. XXXXXXX's hearing statement and documents were submitted into evidence, along with the County's hearing statement and documents.

Post-Final-Hearing Submission

None.

ISSUE PRESENTED

On May 24, XXXX, XXXXXXX and Brown agreed that the issue to be decided by the Hearing Officer was: Is Stacy XXXXXXX entitled to receive Long Term Disability Benefits effective January 23, XXXX?

RELEVANT RULES/CODE PROVISIONS

Rules Generally Applied In Evaluating The Evidence And Deciding This Case

Section 5.38.020, sub-section A of the Los Angeles County Code states that once the qualifying period expires, a totally disabled employee is entitled to disability benefits until his/her disability ceases.

Section 5.38.010, sub-section N of the Los Angeles County Code provides a definition of "Total disability." "Total Disability" is defined to mean that the employee is completely and continually unable to perform the duties of his or her position with the County, during the six month qualifying period and the subsequent 24 month period for which the employee might be eligible to receive benefits under the Plan.

Section 5.38.050, sub-section A of the Los Angeles County Code states that total disability benefits are not paid unless they are justified by "prevailing medical evidence and treatment" (See also the Long Term Disability and Survivor Benefit Plan Booklet). The County has previously provided sworn testimony from its representatives in prior hearings indicating that it interprets the phrase "prevailing medical evidence" to mean objective evidence of the employee's total disability. The Hearing Officer has adopted this interpretation in rendering his opinion.

Section 5.38.030, sub-section F of the Los Angeles County Code states that a claimant may appeal a denial of benefits by filing a written notice of appeal with the Chief Administrative Officer which will then be "...reviewed by a Hearing Officer designated by the county. The Hearing Officer shall conduct a full and fair hearing and render a decision, which shall be final."

The hearing officer also notes that a discretionary determination of eligibility by a plan administrator who is also responsible for paying benefits to the disabled employee, creates an inherent conflict of interest requiring that such a decision be reviewed under either a de novo or abuse of discretion standard (See generally 29 U.S.C § 1132 (a) (1) (B), Firestone Tire and Rubber Co. et al. v. Bruch et al., 489 U.S. 101, 115 (1989), and Montour vs. Hartford Life and Accident Insurance Co., 588 F.3d 623, 630 (9th Cir. XXXX)). Unless the terms of a benefit plan clearly confer discretionary authority on a plan administrator, the standard of review is de novo (Abatie v. Alta Health and Life Insurance Co., 458 F. 3d 955 (9th Cir. XXXX)). For an abuse of discretion standard to apply, the text must unambiguously grant the administrator power to interpret the terms of the plan and make full and final benefit determinations (Id. at 963). Simply paying benefits and administrating a plan without the power to interpret its terms or apply that interpretation in making an eligibility determination, does not constitute discretionary authority (Id.; See also Ingram v. Martin Marrietta Long Term Disability Income Plan, 244 F.3d 1109, 1112-13 (9th Cir. 2001).

Specifically, plan language indicating that the entity will review claims and "make all decisions" on those claims is insufficient for an abuse of discretion standard to apply; instead, a de novo standard of review is used (Id. at Abatie, page 964).

In Los Angeles County cases, Los Angeles County Code section 5.38.030 states that disability benefits will only be paid if the chief administrative officer is satisfied that s/he has received sufficient proof from the employee's medical examination and other sources, indicating that the employee is totally disabled (Los Angeles County Code sections 5.38.030(E)(2) and (3)). The Chief Administrative Officer cannot deny benefits to a claimant if a final decision of the Social Security Administration indicates that the claimant is totally disabled (Id. at (E)(2)).

In evaluating the standards applied by the Chief Administrative Officer in Los Angeles County disability cases, the Hearing Officer notes that the Chief Administrative Officer need not grant benefits until s/he is "satisfied" by the evidence received, but must pay them if the Social Security Administration (SSA) has found the employee disabled. As the Chief Administrative Officer has no discretion to refuse benefits once the SSA has issued a disability finding, the County Code has not "unambiguously" granted him/her the power to make full and final benefits determination required to apply an abuse of discretion standard. This determination is further confirmed by Los Angeles County regulation 5.38.030(F), which requires that an appeal be decided by a Hearing Officer after a "full and fair hearing," suggesting that all case issues should be reviewed anew by the Hearing Officer. For both of these reasons, the Hearing Officer has applied a de novo standard in reviewing the County's denial of XXXXXXX's disability benefits application.

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In making a de novo determination of whether the County properly denied XXXXXXX's disability application, the Hearing Officer must not only consider the evidence of the claim itself, but also whether the evidence suggests the County has previously given inconsistent reasons for denying other claims, has inadequately investigated this or other claims, failed to ask this or other appellants to provide necessary evidence, failed to credit this or others claimants' credible relevant evidence, repeatedly denied deserving claimants due to an incorrect plan interpretation or previously made claims decisions that went against the weight of the evidence (Abatie v. Alta Health Life Insurance Co., 458 F.3d 955, 968 to 969 (9th Cir. en banc, XXXX)). Similarly, the Hearing Officer should review the quality and quantity of the medical evidence, determine whether the plan administrator subjected the claimant to an in-person medical examination or relied solely on a paper review of medical records, determine whether the independent medical experts received all of the relevant evidence, and determine whether the conclusions of the Social Security Administration (SSA) report were taken into account in rendering a decision (Montour vs. Hartford Life and Accident Insurance Co., 588 F.3d 623, 630 (9th Cir. XXXX)).

Further, s/he should determine if the benefit determination was 1) illogical 2) implausible, or 3) without the support of inferences that may be properly drawn from the facts in the record (See generally Salomaa v. Honda Long Term Disability Plan, 642 F.3d 666, 676 (9th Cir. XXXX)). In doing so, the Hearing Officer should consider whether a treating physician's opinion supports the total disability claim, whether objective medical tests were available or used to measure a plaintiff's claims of pain or disabling symptoms, and whether the reasons for denial were supported by the evidence in the medical file (Id.).

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In making this determination, the Hearing Officer must keep in mind prior court decisions that improperly denied a claimant's disability benefits because the evaluator relied on independent medical experts who discounted the plaintiff's pain and discomfort testimony without sufficient basis and failed to explain how their opinion was still valid in spite of reports from other experts that contradicted the relied upon expert's opinion (Montour vs. Hartford Life and Accident Insurance Co., 588 F.3d 623 (9th Cir. XXXX)). This point was illustrated in the Metropolitan Life Insurance Company case, when the court reinstated a claimant's disability benefits because a plan administrator failed to reconcile the differences between his/her finding that the claimant was not disabled and the Social Security Administration's finding that the appellant was totally disabled (Metropolitan Life Insurance Co., et al. v. Glenn, 554 U.S. 105 (XXXX)). The Hearing Officer is also guided by a Federal District Court case from the Central District of California, in which the court awarded a claimant benefits because a benefits provider "ignored" a plaintiff's subjective complaint of pain and relied instead on a doctor's opinion that did not say why benefits should be denied (Saffron v. Wells Fargo and Co. Long Term Disability Plan, XXXX WL 2969687 (C.D.Cal., XXXX, unpublished in F. Supp. 2d)).

However, the Hearing Officer also notes that in determining whether the County's decision denying benefits to the appellant is valid, the Hearing Officer is not required to give greater weight to the opinion of treating physicians (See generally Black and Decker v. Nord, 538 U.S. 822, 834 (2003)). Nevertheless, if that doctor or other sources provide significant new evidence that the benefits provider had not yet considered in making its determination, the "best practice" might be to remand the case back to the initial decider for further consideration, though this is not always necessary (See Generally Curtis v. Board of Retirement, 177 Cal. App. 3d 293, 299 (1986)).

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Rules Applied in Determining The Effect of Possible HIPPA and CMIA Violations In This Case

As amended and codified at 42 U.S.C § 1320 d-5 and C.F.R. § 160.401 et seq., the Dept. of Health and Human Services (DHSS) can fine violators from $100 to $50,000 per violation of the Health Insurance Portability and Accountability Act (HIPAA). However, federal courts have found that the statute does not specify sanctions for violations during the discovery or trial (Crenshaw v. Mony Life Insurance Co., 318 F. Supp. 2d 1015, 1030 (S.D.Cal. 2004)). Moreover, some courts have specifically refused to exclude evidence obtained in violation of HIPAA, because HIPAA does not provide parties with a private right of action (Webb v. Smart Solutions, LLC, 499 F.3d 1078,1081 (9th Cir. XXXX)). Nevertheless, some trial courts have gone on to craft equitable remedies for violations of HIPPA (Crenshaw v. Mony Life Insurance Co., 318 F. Supp. 2d 1015, 1030 (S.D.Cal. 2004)). Just as importantly, the statute and regulations indicate that HIPAA only supersedes state law if state law has less stringent requirements than HIPPA (42 U.S.C. § 1302d-7 (a)(2)(B) and 45 C.F.R. § 160.203).

The California Medical Information Act (CMIA) provides more stringent punishments than HIPPA for the wrongful disclosure of private medical records (California Civil Code § 56.35). An individual whose privacy has been violated can recover damages if s/he has suffered an economic loss or personal injury as a result of the disclosure (Id.). Compensatory and punitive damages are not to exceed $3,000, attorney's fees are not to exceed $1,000, and if no actual damages are shown, nominal damages of $1,000 may be awarded (Id. at (c)(1)).

The Hearing Officer also notes that sanctions can be imposed for submitting filings for an improper purpose such as to harass or delay a proceeding (See generally Federal Rule of Civil Procedure Rule 11 (b), California Government Code § 11450.10 and California Code of Civil Procedure § 128.7). Both federal and State statutes limit sanctions to those that would be sufficient to deter repeated misconduct (Id.). The sections also require the court to show cause for the sanction and afford the violator the opportunity to present evidence defending the conduct in question (Id.).

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RELEVANT FACTS

Sedgwick submitted a three page statement and nine exhibits, that were admitted into evidence at the final hearing (Exhibits 1 to 9). XXXXXXX submitted a three-page statement and various exhibits that included: A report from Dr. Jalil XXXX, M.D., dated June 12, XXXX; three pages of photographs of XXXXXXX's accident; three patient status reports from Allied Chiropractor showing that she had been disabled from February 7, XXXX, through June 28, XXXX; a July 24, XXXX, written statement from Dr.XXXX, M.D. stating that XXXXXXX is suffering from "full-blown Fibromyalgia;" a May 5, XXXX, report from Maegan XXXX, PhD., stating that XXXXXXX remains disabled from work due to her psychological conditions; a report of Robert C. XXXX M.D. dated May 17, XXXX, stating that XXXXXXX still suffers from pain and has some cognitive difficulties; a form from Dr. Eric XXXX, D.C. stating that as or about April 17, XXXX, XXXXXXX remained disabled from work due to physical pain as well as anxiety and depression; and an April 27, XXXX, letter from Dr. Eric XXXX, D.C. indicating why XXXXXXX should be granted disability benefits. The statement and all of the exhibits were entered into evidence.

The evidence of XXXXXXX and her treating doctors was that she was involved in a traumatic automobile accident on February 22, XXXX. The accident involved an impact between her book-mobile and an embankment at a speed of between 45 and 55 miles per hour. The book mobile became airborne, landed on its side and slid some distance. XXXXXXX apparently returned to work on March 30, XXXX. A second work-related automobile accident occurred on May 19, XXXX, and involved a rear-end collision. The results of these impacts were multiple disc herniations, continuing pain, and an aversion to driving. XXXXXXX stopped working for the County on July 23, XXXX.

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XXXXXXX indicates that she wakes up with fatigue, pain and stress. She suffers from palpitations, flashbacks, muscle spasms, headaches, and a fear of accidents when driving even short distances. Her physical and psychological responses to driving are occasionally so serious that she has to pull her vehicle over and stop, occasionally leave the vehicle for a period of time and in extreme circumstances, return home. XXXXXXX takes a muscle relaxant that makes her feel lethargic and makes it difficult to focus. Her back pain makes it difficult for her to sit, get up off the floor, lift heavy objects, feel items with her right hand, support herself with her left knee, lift her head, easily open and close a car door, buckle her safety belt in a car, or have sufficient energy for everyday tasks. XXXXXXX also has headaches and irritable bowel syndrome on a daily basis. She has trouble talking (slurred words), remembering things, and a fear of driving on busy streets which can cause her to flashback to her accidents. XXXXXXX also has a continuing inability to concentrate, and suffers from confusion, depression, and insomnia (caused by pain and teeth clenching). Symptoms that seem to suggest the existence of many of these conditions were confirmed by XXXXXXX's husband.

The Hearing Officer received a document signed by a Supervisor with the County entitled County of Los Angeles XXXXX Job Description. The handwritten document states that XXXXXXX's position as a XXXXXX working in the specified location involves sitting for 2 hours and 30 minutes; walking for 1 hour; standing for 4 hours; squatting for 20 minutes; kneeling for 10 minutes; bending, twisting and lifting 15 pound boxes for 30 minutes; using her right hand on a device for 2 hours and 30 minutes; 1 to 2 hours of driving; 15 minutes of rolling a cart to load a vehicle; 1 hour of writing; 1 hour of holding a pencil or telephone in her right hand; and 15 minutes of reaching to shelve books.

The Hearing Officer also reviewed over 2,000 pages of medical records and reports. The most relevant are described below.

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Orthopedic Examinations and Recommendations

The independent medical examination of XXXXXXX by Dr. Pierre XXXX, M.D. occurred on August 24, XXXX. As part of this evaluation, Dr. XXXX reviewed the medical records of Dr. Eric XXXX D.C., Eric XXXX for her MRIs, Ken XXXX for the shoulder MRI, Stanton XXXX, MD, for her MRIs, and an unidentified Acupuncture Therapist. During her examination by the doctor, XXXXXXX stated that she worked in a book mobile that would customarily travel an average of 70 miles per day. In doing her job, she would lift up to 40 pounds at her three stops (she only felt comfortable lifting 20 pounds at the time of her examination). XXXXXXX last worked on July 23, XXXX, and was anxious about driving the bookmobile again. Dr. XXXX found that XXXXXXX had mild problems in her left hand that were not causing her impairment and that her cervical strain as well as left wall contusion had healed. However, Dr. XXXX also found that XXXXXXX had a cervical impairment involving a 4.6 millimeter disc herniation which effected her ability to lift, carry and perform prolonged repetitive cervical motions.

Nevertheless, Dr. XXXX concluded that XXXXXXX was capable of performing light to medium work including sitting continuously for three hours over a seven to eight hour day, drive two continuous hours during a six hour day, standing for three continuous hours over a seven to eight hour day, and walking for three continuous hours during a seven to eight hour day. He also found her able to carry up to 35 pounds, frequently carry 20 pound loads, and push loads of up to 75 pounds on occasion. The doctor did not explain how his conclusions could apply in light of the cervical impairment he found or how the other information he obtained supported these conclusions.

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Dr. XXXX did not possess or review XXXXXXX's pre-July 23, XXXX, medical records or apparently any of the medical records created by treating doctors with opinions that differed from Dr. XXXX. Specifically, Dr. XXXX did not have or review the detailed testing results set forth in the Accurate Medical Assessment Rating Center report created by Dr. Christopher XXXX, D.C., on February 2, XXXX, the medical report of Dr. Chester XXXX, M.D. created on March 28, XXXX or the medical reports of Dr. R.C. XXXX M.D. created between September XXXX and January 13, XXXX.

On the other hand, David C. XXXX, M.D. created a record review report on February 29, XXXX, that did review many of these treating doctor reports. Dr. XXXX reports reviewing the Accurate Medical Assessment Rating Center report of Dr. Christopher XXXX, D.C., and the specific tests conducted there. However, Dr. XXXX fails to discuss these test results or the effect of the physical limitations identified in those tests on his opinions. Dr. XXXX also reviewed the report of neurologist Robert XXXX, M.D., and its conclusion that XXXXXXX should return to work in XXXX. However, Dr. XXXX fails to mention that the return to work recommendation involves XXXXXXX working in a different County position that does not involve the following aspects of her current job: Driving a large vehicle, standing for long periods of time, loading boxes of books, or pulling a cart. Dr. XXXX also reviewed the AME report of Dr. Chester XXXX, M.D., which the Hearing Officer could not find in the materials provided at the hearing.

Dr. XXXX notes that Dr. XXXX recommends work restrictions for XXXXXXX that prevent her from doing any heavy lifting, repetitive squatting or kneeling with the left knee, or prolonged work that involves reaching above her shoulder. Dr. XXXX further notes that Dr. XXXX finds XXXXXXX to have a 90% impairment of her cervical and lumbar spines and a 100% impairment of her left shoulder and knee. However, Dr. XXXX fails to mention the effect of these findings had on his opinions or why his opinion is not contradicted by these findings.

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Dr. XXXX also reports reviewing a psychiatric AME report by a Dr. Howard XXXX, M.D., which was not provided to the Hearing Officer at the hearing. Dr. XXXX apparently states that XXXXXXX's psychiatric disorder exists and this condition was permanent and stationary on or before April of XXXX. However, no conclusions about whether or when XXXXXXX should return to work are described. Instead, the only two return-to-work recommendations noted by Dr. XXXX in his report involve: Dr. XXXX's recommendation on March 23, XXXX, and Dr. XXXX recommendation on August 24, XXXX, that XXXXXXX return to work in the same position she held prior to her injury. The only exception to this point of view, is a statement by Chiropractor Eric XXXX, who Dr. XXXX describes as "maintain(ing) (XXXXXXX) in an off-work status" for an unspecified period of time in XXXX.

Dr. XXXX summarily concludes his report by stating that there is "no objective evidence of disability that would prevent (XXXXXXX) from returning to her regular unrestricted job." While his finding that no disability exists is consistent with that of Drs. XXXX and XXXX, Dr. XXXX does not explain why this recommendation should be followed instead of those of Drs. XXXX, XXXX and XXXX., who found XXXXXXX to be disabled from completing all or some of her job. Moreover, Dr. XXXX did explain how the information he obtained about XXXXXXX from her examining doctors supported his recommendation.

The Hearing Officer received a report from the Accurate Medical Assessment Rating Center (Dr. Christopher XXXX D.C.) dated February 2, XXXX. Dr. XXXX indicates at page 23 of his report that XXXXXXX's job involved occasionally lifting and carrying of 45 to 50 pounds, and frequently sitting, standing, grasping, and carrying between 20 and 40 pounds. She was also required to drive a vehicle at work. Dr. XXXX also determined that XXXXXXX was unable to safely lift the weight required for her job in five out of six tests, despite giving a consistent effort in attempting to do so (page 28). Instead, she was found to be able to safely lift no more than 11 pounds on a frequent basis and 21 pounds on an occasional basis (page 29). Dr. XXXX further determined that XXXXXXX had a moderate deficit in gripping objects with her left hand and a mild deficit in gripping objects with her right hand (page 31). In addition, Dr. XXXX determined that XXXXXXX could squat, sit, stand and walk as her job required (pages 31 to 33).

Dr. XXXX's report concluded that as of the date of the report, XXXXXXX could not meet the lifting requirements of her job (page 8). Instead, she could only lift a maximum of 36 pounds from the floor, 29 pounds from a bench, carry 15 pounds and push/pull 15 pounds (page 8). Dr. XXXX further concluded that XXXXXXX had suffered a permanent disability (page 11). This report was given a fair amount of weight by the Hearing Officer, because it was based on a personal examination of XXXXXXX, involved objective tests of XXXXXXX's conditions, provided useful explanations of the test results and supported the doctor's opinions with specific references to objective findings and test results.

As noted above, the Hearing Officer also reviewed the January 13, XXXX, report of Robert C. XXXX M.D., QME, which found XXXXXXX's condition to be improving. However, Dr. XXXX recommended that XXXXXXX not return to her prior job. Also noted is his report of May 17, XXXX, in which Dr. XXXX indicates that XXXXXXX still suffers from headaches, subjective neck and low back pain, and occasionally drops objects from her right hand. No conclusion is provided about whether she should return to work in this report.

The Hearing Officer received various reports (including one dated April 27, XXXX) from Dr. Eric XXXX D.C., which indicated that XXXXXXX's continuing pain meant she was still disabled from her job. Dr. XXXX's reports were given somewhat less weight than that of others described above, because of the limited number of objective tests he performed on XXXXXXX and the limited training he apparently has in determining whether a patient is disabled from her position of employment.

Psychological Examinations and Findings

On February 6, XXXX, Maegan XXXX, Ph.D., submitted a comprehensive psychological report which described various psychological tests she conducted on XXXXXXX and her examination of XXXXXXX. The tests found that XXXXXXX was suffering from moderate to severe anxiety, moderate symptoms of hopelessness, and moderate depression. The doctor diagnosed XXXXXXX as suffering from post-traumatic stress disorder and sleep disturbance and concluded that XXXXXXX was "temporarily totally disabled" from work.

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On February 29, XXXX, Michael XXXX M.D. prepared a record review report on XXXXXXX's psychiartric conditions. He summarizes the records of Dr. XXXX by indicating that the doctor's January 13, XXXX, report states that XXXXXXX is improving and should return to work by February 1, XXXX. However, Dr. XXXX fails to note that Dr. XXXX is recommending that XXXXXXX return to work in a different position involving different requirements than XXXXXXX's old job. According to Dr. XXXX, XXXXXXX should no longer drive, stand for long periods of time, load boxes of books, pack book carts or pull them.

Dr. XXXX also reviewed the report of Dr. XXXX, only one of which was provided to the Hearing Officer during the hearing. Dr. XXXX apparently noted in one of his reports that XXXXXXX tested in the "severe range" on the depression, anxiety and hopelessness scores on an unspecified date in XXXX. However, a later examination on December 16, XXXX, found her to be "staying positive," though she was still anxious around trucks. The April 14, XXXX, examination found XXXXXXX to be moderately depressed, anxious, and feeling moderately hopeless, with no significant functional impairment. Dr. XXXX also noted the report of Dr. XXXX, which he contained findings of moderate depression, anxiety, and hopelessness.

However, Dr. XXXX did not note Dr. XXXX's recommendation that XXXXXXX remain disabled from work. As noted above, Dr. XXXX report was not provided to the Hearing Officer during the hearing. However, Dr. XXXX reviewed it and found that XXXXXXX was reporting her anxiety and depression levels on or about March 2, XXXX, to be a 2 on a 5 scale. She also reported having normal memory.

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Dr. XXXX concluded his record review report by finding that XXXXXXX was not disabled from her regular unrestricted job on July 23, XXXX, and should return to work. Dr. XXXX appeared to base his recommendation on XXXXXXX being found to have had normal cognitive function in one report he reviewed, the failure of any treating doctor to further evaluate XXXXXXX's multiple reports of fatigue, and a description in one Dr. XXXX's reports that XXXXXXX was "staying positive." XXXXXXX's "positive" outlook is described by Dr. XXXX as being inconsistent with her expressed feelings of depression or anxiety and apparently the sole basis for his discounting that these conditions are continuing. However, this and other justifications of his seem to be taken out of context for the sole purpose of justifying his opinion that XXXXXXX should return to work. His cherry-picking of a limited number of facts to support his opinion and essentially ignoring opinions and facts that are inconsistent with his determination, have led the Hearing Officer to give Dr. XXXX's report less weight than other reviewed by the Hearing Officer.

On May 5, XXXX, Dr. XXXX created a new report describing a May 3, XXXX, evaluation. The doctor did not conduct any additional objective tests, though she did examine XXXXXXX. Dr. XXXX concluded that XXXXXXX still suffers from Post-Traumatic Stress Disorder and sleep disorder that prevent XXXXXXX from returning to work.

The Hearing Officer received a May 17, XXXX, report from Dr. XXXX, which indicates that XXXXXXX still suffers from difficulties in choosing her words, though her memory is better. No conclusion is provided about whether she should return to work.

The Hearing Officer received a medical report from Dr. Glenn A. XXXX, M.D., dated September 29, XXXX. Dr. XXXX described the results of a sleep test and indicate that XXXXXXX exhibits objective symptoms of gastroesophageal reflux disease, irritable bowel syndrom, palpitations, chest discomfort, sleep disturbance, anxiety, and depression. The doctor appeared to find that XXXXXXX was disabled from work, though this was only indirectly stated.

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The Hearing Officer received a November 4, XXXX, medical report from Dr. Marc XXXX, M.D., which states that XXXXXXX was still in some pain and taking Zoloft for her depression, fatigue, anxiety, irritability, and poor concentration. XXXXXXX was also feeling withdrawn. The doctor noted that XXXXXXX suffers pain during long drives and is temporarily totally disabled from work. This was the only report contained in the materials received by the Hearing Officer and did not contain the reference to "staying positive" that was referenced by Dr. XXXX.

Private Medical Records Of The Following Persons And Types Were Provided To The Hearing Officer In the Package of Documents He Received

The following documents were mistakenly provided to me by Sedgwick, on behalf of the County, during the pre-hearing and hearing in the XXXXXXX case: Letter to Jesus XXXX on Sedgwick letterhead involving his disability claim; Letter to Morvarid XXXX on Sedgwick letterhead involving her disability claim; Letter to Lon L. XXXX on Sedgwick letterhead regarding his claim for disability benefits; letter to Penny L. XXXX on Sedgwick letterhead regarding her claim for disability benefits; letter to Katherine XXXX on Sedgwick letterhead regarding her claim for disability benefits; letter to Matthew XXXX on Sedgwick letterhead regarding an overpayment on his account; a Work Comp Coversheet in the name of Kristina XXXX describing her claim; a form from Jessica Lopez's treating doctor; a physician's progress report for Jessica XXXX; and a physical rehabilitation prescription for Michael XXXX. The Hearing Officer only reviewed enough of these documents to confirm that they were irrelevant to XXXXXXX's claim and put them aside for eventual return to Sedgwick.

During her hearing, XXXXXXX complained about receiving unspecified, multiple medical records from other claimants in the documents she received from Sedgwick during the pre-hearing. XXXXXXX indicated that receiving these documents upset her and increased her anxiety level, due to worries that her medical records would be mistakenly distributed to other claimants.

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Sedgwick's Position/Claimant's Position/Discussion of Evidence

Sedgwick concluded that XXXXXXX was not entitled to benefits under the Long Term Disability Plan because no objective medical evidence indicated that she was disabled from work during her six month qualifying period between July 23, XXXX and January 23, XXXX, as well as her disability period from January 23, XXXX, until today. XXXXXXX's position is that the medical evidence, and her and her husband's testimony show she was disabled during this period.

As noted above, the Hearing Officer was only provided with some of the medical reports described in the record reviews done by the County. Moreover, the records provided to the Hearing Officer show that the County's doctors either quoted only those parts of reports that supported their opinions, or pointedly ignored medical facts that appeared to contradict their opinions. More important still, the County's doctors provided very little information on why their opinions were supported by the information they had or were preferable to the opposing opinions of XXXXXXX's treating doctors.

For example, County doctors Pierre XXXX, M.D. and David C. XXXX, M.D., both indicate that XXXXXXX can and should return to her library assistant position without restriction. However, they do not specifically say what elements of the reports they saw (Dr. XXXX and Dr. XXXX) or the examination of XXXXXXX they made (Dr. XXXX) support this opinion. This is especially troubling because one or both of the County doctors expressly noted the reports of Drs. XXXX, XXXX and XXXX, in their own reports, but made no effort to explain why these doctors found that XXXXXXX was disabled from her old job when the County doctors did not.

Similarly, the Hearing Officer received reports from Maegan XXXX, Ph.D. dated February 6, XXXX, and May 5, XXXX, stating that XXXXXXX is psychologically disabled from working and giving objective test results that support this opinion. In response, Michael XXXX M.D. reviewed XXXX's earlier report and a report from Dr. XXXX, yet concluded that XXXXXXX should return to work in her same position. As noted above, Dr. XXXX developed his position from reviewing records alone and his opinion not only contradicts that of the two doctors (XXXX and XXXX) that personally examined XXXXXXX, but appears to be supported by selected excerpts from various doctor's reports that are at best misleading.

The failure of the County doctors to indicate why their opinions should be followed instead of those of XXXXXXX's treating doctors and their selective and in some cases misleading use of facts from those treating doctors reports in rendering their opinions, made their opinions less credible to the Hearing Officer than those of the treating doctors. Moreover, these actions and omissions made the County's reasons for denying XXXXXXX her benefits look to be illogical, implausible and insufficient, which would normally support a granting of XXXXXXX's appeal (Id. at the Salomaa, Saffron, and Montour cases).

However, the missing medical records from XXXXXXX's treating doctors and the less than credible evaluations of the known records and reports by the County's doctors have left the Hearing Officer with insufficient information to render a decision in this case. As sufficient evidence apparently exists to meet this standard but was not provided by either side at the hearing, the Hearing Officer must remand the matter to the County to re-evaluate its position in light of this decision and hopefully with more credible evaluations from its doctors.

In this regard, the County should also evaluate XXXXXXX's diagnosis of Fibromyalgia, which was raised for the first time at her hearing. The County should determine in particular what effect, if any, this diseases would have on XXXXXXX's ability to return to work; the Hearing Officer was provided with almost no evidence on this point at the hearing. For these reasons, the Hearing Officer is remanding this matter to the County for it to reconsider its denial of benefits in light of the facts and findings set forth in this decision.

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Lastly, the Hearing Officer is greatly disturbed by having to remove private medical documents involving nine separate claimants from the XXXXXXX materials provided by the County. The inclusion of this material in the XXXXXXX documents is a negligent violation of both HIPAA and the California Medical Information Act, which potentially subjects the County to penalties or sanctions. While these statutes do not themselves specify penalties for the Hearing Officer to impose for such violations, the Hearing Officer has nevertheless considered imposing such penalties and/or sanctions under the privacy statutes, the sanction sections described above, and California Civil Code Section 3523 (i.e. for every wrong there is a remedy). However, in light of the Hearing Officer's decision to remand this case to the County for further evaluation of its issues, the sanction determination will be held in abeyance until this case is once again (if ever) submitted to a Hearing Officer for consideration.

DECISION/CONCLUSION

The Hearing Officer recommends that XXXXXXX's case be remanded back to the County for further evaluation and other actions consistent with this ruling.

Dated: September 24, XXXX

Robert Klepa
Hearing Officer

SEDGWICK CMS STATEMENT AND EXHIBITS - all admitted into evidence:

A. Sedgwick CMS Pre-Hearing Statement;

1. County of Los Angeles Long Term Disability Booklet and sections of the Los Angeles County Code involving the Survivor Benefit Plan and Long Term Disability benefits/procedures;

2. Copies of medical records received from all treating physicians disclosed in the course of the evaluation of the claim, as well as all additional medical records provided by Ms. XXXXXXX in connection with her appeal;

3. A copy of the Independent Medical Examination Report completed by Peter XXXX, M.D., dated August 24, XXXX;

4. A copy of the Job Description for the position of Library Assistant/Bookmobile Assistant as well as the Job History form that was completed by Ms. XXXXXXX;

5. A copy of Sedgwick CMS's letter dated December 16, XXXX, denying the appeal of the claim decision;

6. A copy of XXXXXXX's appeal letter received on February 8, XXXX;

7. A copy of Independent Physician Review reports completed by David C. XXXX M.D., and Michael A. XXXX, M.D.;

8. A copy of Sedgwick's appeal decision letter dated April 5, XXXX; and

9. A copy of XXXXXXX's hearing request received on April 30, XXXX, and accompanying form and letter from Dr. XXXX.

CLAIMANT XXXXXXX'S EXHIBITS - all admitted into evidence:

A. XXXXXXX's hearing statement;

1. A three-page statement;

2. A report from Dr. XXXX, M.D., dated June 12, XXXX;

3. Three pages of photographs of XXXXXXX's accident;

4. Three patient status reports from Allied Chiropractic showing that XXXXXXX had been disabled from February 7, XXXX, through June 28, XXXX;

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5. A July 24, XXXX, written statement from Dr.XXXX, M.D. stating that XXXXXXX is suffering from "full-blown Fibromyalgia;"

6. A May 5, XXXX, report from Maegan XXXX, PhD., stating that XXXXXXX remains disabled from work due to her psychological conditions;

7. A report of Robert C. XXXX M.D. dated May 17, XXXX, stating that XXXXXXX still suffers from pain and has some cognitive difficulties;

8. A form from Dr. Eric XXXX, D.C. stating that as or about April 17, XXXX, XXXXXXX remained disabled from physical pain as well as anxiety and depression; and

9. An April 27, XXXX, letter from Dr. Eric XXXX, D.C. indicating why XXXXXXX should be granted disability benefits.

A-7

Memorandum

DATE: June 17, 2019

TO: Members of the Board

FROM: Suzanne Jenike, Assistant CEO, External Operations

SUBJECT: **GOVERNANCE COMMITTEE OUTCOMES FROM MAY 21, 2019 COMMITTEE MEETING - MASTER FINAL AVERAGE SALARY PROJECT**

Recommendation

Approve the Master Final Average List of pay items, including pensionable pay attribute determinations, for Legacy and PEPRA members.

Background/Discussion

On December 11, 2018, the Governance Committee considered four board policies, an internal administrative staff procedure (OAP), an employer procedure document and revised new pay item request form and procedures. These documents support the process of requesting new pay items and making pensionable attribute determinations as pay items are negotiated and added to the system. The Committee directed staff to bring the board policies back to the Committee for a second reading and to commence using the new staff and employer procedures. On March 1, 2019, the Governance Committee considered the four Board policies for a second reading and recommended that staff forward the policies to the Board for approval. On March 18, 2019, the Board approved the policies as recommended by the Committee and staff. The policies have been published on the OCERS website and are currently in use.

On May 14, 2019 the Governance Committee considered the comprehensive pay item list, with all pensionable pay attribute determinations made for Legacy and PEPRA members, and directed staff to bring it forward for the Board to consider and approve.

This list is a culmination of many months of work and collaboration between the OCERS Member Services team the Legal staff as well as a concerted effort by representatives at each employer organization. The list is comprehensive and documents all pay items applicable to all of OCERS employers and members by bargaining group at this time. Staff worked with the OCERS legal team to determine the correct pensionable attributes for each pay item based on Legacy and PEPRA member status[1]. There were instances where the pay item was being reported incorrectly. For example, as pensionable for both Legacy and PEPERA members when the pay item was only pensionable for Legacy, as well as instances of pay items that were no longer in use and therefore not needed. All of the pay items that are not being used have been deactivated and therefore removed from the

[1] See the appendix for a list of the questions applied to each pay item as part of the legal analysis.

master list. Employers have been directed to update any configuration changes applicable to their pay item list no later than pay period 15, 2019.

Annual Reporting

Beginning pay period 15, 2019 OCERS staff will follow the analysis process that is outlined in the new *Pay Item Review Policy* (Policy) (approved by the Board March 18, 2019) consisting of answering the questions in the attached Appendix to determine if the requested pay item is pensionable for Legacy and/or PEPRA members. In accordance with the Policy the staff determination will be communicated to the employer and unless disputed will be added to our database, put into use and added to the Master List. In the event the employer disagrees with the staff determination, the dispute procedures in the Policy will be followed and the issue will be brought forward to the Board for a determination. All pay items added to the Master List after Board of Retirement approval on June 17, 2019 will be reported to the Governance Committee and Board on an annual basis.

The Governance Committee and Staff recommend that that Board approve the Master Pay Item list, including pensionable pay determinations for all Legacy and PEPRPA members as presented.

Submitted by:

Suzanne Jenike
Assistant CEO, External Operations

Appendix

PEPRA PENSIONABLE COMPENSATION CRITERIA – PER GC SECTION 7522.34(a)		Qualifier	YES	NO	N/A
1.	Normal Monthly Rate of Pay or Base Pay:	YES	☐	☐	☐
2.	Payable to Similarly Situated:	YES	☐	☐	☐
3.	In Public Pay Schedule:	YES	☐	☐	☐
4.	If Premium Pay or Special Pay, is the assignment, certification or license: i. part of a member's regularly assigned responsibilities, ii. an essential, normal or traditional function of the job, and iii. part of the regular assignment of other members in the same group or class	YES	☐	☐	☐
5.	Earned for Normal Working Hrs:	YES	☐	☐	☐
6.	Allowance, Reimbursement or Previously Paid In-Kind:	NO	☐	☐	☐
7.	Bonus, one-time ad hoc payment:	NO	☐	☐	☐
8.	Severance or Terminal Pay:	NO	☐	☐	☐
9.	Overtime other than Section 207(k) time:	NO	☐	☐	☐
10.	Payment for any Unused Leave:	NO	☐	☐	☐
11.	Employer contribution to deferred comp:	NO	☐	☐	☐
	PEPRA Pensionable?:				

Notes & Comments Regarding Decisions

COMPENSATION EARNABLE CRITERIA – PER GC SECTION 31461		Qualifier	YES	NO	N/A
1.	Compensation at Same Pay Rate as Persons in Same Grade or Class	YES	☐	☐	☐
2.	One-Time or Ad Hoc Payment Paid to All Similarly Situated	YES	☐	☐	☐
3.	Leave/Vacation Payout Earned & Payable in 12 Month Period	YES	☐	☐	☐
4.	Terminal Pay Earned & Payable in 12 Month Period	YES	☐	☐	☐
5.	Compensation Previously Paid In Kind & Now as Cash	NO	☐	☐	☐
6.	Payment for Services Rendered Outside Normal Working Hours	NO	☐	☐	☐
	Comp Earnable?				

Notes & Comments Regarding Decisions

Master Pay Item Spreadsheet

				Current Configuration		Analysis Results		
Emp Code	Employer	Pay Code	Pay Code Description	Pensionable	Plan Class	Pensionable PEPRA	Pensionable LEGACY	Plan Class
102	Cemetery	ALAPY	Annual Leave Payoff - Annual	NO	BOTH	NO	**YES**[2]	LEGACY
102	Cemetery	AUTO$	Automobile Allowance	YES	LEGACY	NO	YES	LEGACY
102	Cemetery	CELL	Cell Phone Allowance	YES	LEGACY	NO	YES	LEGACY
102	Cemetery	CPPAY	Comp Payoff	NO	BOTH	NO	**YES**[2]	LEGACY
102	Cemetery	CPTPY	Track FCOMP bucket payout when employee separates	NO	BOTH	NO	NO	BOTH
102	Cemetery	HCPAY	Mandatory Holiday Comp Payout	NO	BOTH	NO	**YES**[2]	LEGACY
102	Cemetery	HHPAY	Holiday Pay	YES	LEGACY	YES	YES	BOTH
102	Cemetery	MCPAY	Comp Payoff	NO	BOTH	NO	**YES**[2]	LEGACY
102	Cemetery	MCTPY	Track COMP bucket payout when employee separates	NO	BOTH	NO	NO	BOTH
102	Cemetery	MI$NT	Mileage Reimbursement Non-Taxable	NO	PEPRA	NO	NO	BOTH
102	Cemetery	OTPAY	Overtime Mandatory Payoff - Exceeds Comp Allowable	NO	BOTH	NO	NO	BOTH
102	Cemetery	RE	Retroactive Pay	YES	LEGACY	YES	YES	BOTH
102	Cemetery	SOT	Straight Overtime	NO	BOTH	NO	NO	BOTH
118	Children and Families	AUTO$	Automobile Allowance	YES	LEGACY	NO	YES	LEGACY
118	Children and Families	CPPAY	Comp Payoff	NO	LEGACY	NO	**YES**[2]	LEGACY
118	Children and Families	CPTPY	Track FCOMP bucket payout when employee separates	NO	BOTH	NO	NO	BOTH
118	Children and Families	GHLTQ	Sharewell - General	YES	LEGACY	YES	YES	BOTH
118	Children and Families	HCPAY	Mandatory Holiday Comp Payout	NO	BOTH	NO	**YES**[2]	BOTH
118	Children and Families	HHPAY	Holiday Pay	YES	LEGACY	YES	YES	BOTH
118	Children and Families	LSB	Lump Sum Bonus Payment - Legacy Employees	YES	LEGACY	NO	YES	LEGACY
118	Children and Families	LSBP	Lump Sum Bonus Payment - PEPRA Employees	NO	PEPRA	NO	NO	PEPRA
118	Children and Families	MCPAY	Comp Payoff	NO	LEGACY	NO	**YES**[2]	LEGACY
118	Children and Families	MCTPY	Track COMP bucket payout when employee separates	NO	BOTH	NO	NO	BOTH
118	Children and Families	OTPAY	Overtime Mandatory Payoff - Exceeds Comp Allowable	NO	LEGACY	NO	NO	BOTH
118	Children and Families	RE	Retroactive Pay	YES	LEGACY	YES	YES	BOTH
118	Children and Families	VACPY	Vacation Payoff	NO	LEGACY	NO	**YES**[2]	LEGACY
118	Children and Families	VPTPY	Vacation Payoff - Termination	NO	LEGACY	NO	NO	BOTH
101	County of Orange	ACP	Advance Certification Pay	YES	LEGACY	YES	YES	BOTH
101	County of Orange	ALAPY	Annual Leave Payoff - Annual	NO	BOTH	NO	**YES**[2]	LEGACY
101	County of Orange	ALTPY	Annual Leave Payoff - Termination	NO	BOTH	NO	NO	BOTH
101	County of Orange	ARMA	Armed Assignment Pay	YES	LEGACY	YES	YES	BOTH
101	County of Orange	AS	Attorney Special Duty Pay	YES	LEGACY	NO	YES[1]	LEGACY
101	County of Orange	ASE4	Auto Srvc Excln 4-7	YES	BOTH	YES	YES	BOTH
101	County of Orange	ASE8	Auto Srvc Excln 8+	YES	BOTH	YES	YES	BOTH
101	County of Orange	ASOP	Air Support Operations Pay	YES	BOTH	YES	YES	BOTH
101	County of Orange	AUTO$	Automobile Allowance	YES	LEGACY	NO	YES	LEGACY
101	County of Orange	AUTO1	Automobile Allowance	YES	LEGACY	NO	YES	LEGACY
101	County of Orange	BC	Bilingual Pay for Counselors	YES	BOTH	YES	YES	BOTH
101	County of Orange	BCP1	Board Certification Pay	YES	BOTH	YES	YES	BOTH
101	County of Orange	BCP2	Board Certification Pay	YES	LEGACY	YES	YES	BOTH

Master Pay Item Spreadsheet

				Current Configuration		Analysis Results		
Emp Code	Employer	Pay Code	Pay Code Description	Pensionable	Plan Class	Pensionable PEPRA	Pensionable LEGACY	Plan Class
101	County of Orange	BCP3	Board Certification Pay	YES	BOTH	YES	YES	BOTH
101	County of Orange	BCP4	Board Certification Pay	YES	BOTH	YES	YES	BOTH
101	County of Orange	BFCP	Backflow Certification Pay for Craft and Plant emp	YES	BOTH	YES	YES	BOTH
101	County of Orange	BL	Bilingual Pay for Counselors	YES	BOTH	YES	YES	BOTH
101	County of Orange	BS	Bilingual Pay (BS)	YES	BOTH	YES	YES	BOTH
101	County of Orange	BX	Bilingual Pay (BX)	YES	BOTH	YES	YES	BOTH
101	County of Orange	BXEW	EW Exception Bilingual Pay	YES	BOTH	YES	YES	BOTH
101	County of Orange	BZ	Community Services Bilingual Pay	YES	BOTH	YES	YES	BOTH
101	County of Orange	BZSW	Bilingual Social Worker	YES	BOTH	YES	YES	BOTH
101	County of Orange	CAPP1	Ride Share Incentive	NO	BOTH	NO	NO	BOTH
101	County of Orange	CBA	Call Back	NO	LEGACY	NO	NO	BOTH
101	County of Orange	CC	Communications Coordinator Supplemental Pay	YES	BOTH	YES	YES	BOTH
101	County of Orange	CDL	Commercial Drivers License	YES	BOTH	YES	YES	BOTH
101	County of Orange	CEP	Confidential Executive Pay	YES	BOTH	YES	YES	BOTH
101	County of Orange	CESP	Confidential Executive Secretary Pay	YES	LEGACY	YES	YES	BOTH
101	County of Orange	CF	Confined Space Pay	YES	LEGACY	YES	YES	BOTH
101	County of Orange	CFCP	Confined Space Pay for Craft and Plant employees	YES	LEGACY	YES	YES	BOTH
101	County of Orange	CFOS	Confined Space Unit OS	YES	LEGACY	YES	YES	BOTH
101	County of Orange	CO	Helicopter Pilot Pay	YES	LEGACY	YES	YES	BOTH
101	County of Orange	CPPAY	Comp Payoff	NO	BOTH	NO	**YES**[2]	LEGACY
101	County of Orange	CPTPY	Track FCOMP bucket payout when employee separates	NO	BOTH	NO	NO	BOTH
101	County of Orange	CW	Water Craft Pay	YES	BOTH	YES	YES	BOTH
101	County of Orange	CY	Motorcycle Officer Pay	YES	LEGACY	YES	YES	BOTH
101	County of Orange	DFTO	DA Training Officer Pay	YES	BOTH	YES	YES	BOTH
101	County of Orange	DP	Diver Pay	YES	BOTH	YES	YES	BOTH
101	County of Orange	EDIP	Education Incentive Pay	YES	BOTH	YES	YES	BOTH
101	County of Orange	EW	Elevated Work Differential	YES	LEGACY	YES	YES	BOTH
101	County of Orange	FWPO	Fixed Wing Pilot/Observer Pay	YES	BOTH	YES	YES	BOTH
101	County of Orange	GHLTQ	Sharewell - General	YES	BOTH	YES	YES	BOTH
101	County of Orange	GRV	Grievance Settlement Pay	YES	BOTH	YES	YES	BOTH
101	County of Orange	GRVNR	Grievance Settlement Pay	YES	BOTH	NO	NO	BOTH
101	County of Orange	HA	Height Premium Pay	YES	LEGACY	YES	YES	BOTH
101	County of Orange	HAP	Harbor Assignment Pay	YES	LEGACY	YES	YES	BOTH
101	County of Orange	HCPAY	Mandatory Holiday Comp Payout	NO	BOTH	NO	**YES**[2]	LEGACY
101	County of Orange	HD	Hazardous Devices	YES	LEGACY	YES	YES	BOTH
101	County of Orange	HLP	High Lift Pay	YES	BOTH	YES	YES	BOTH
101	County of Orange	HM	Hazardous Materials	YES	LEGACY	YES	YES	BOTH
101	County of Orange	HSN	Hostage Negotiator Pay	YES	BOTH	YES	YES	BOTH
101	County of Orange	IT	Inmate Transportation Pay	YES	LEGACY	YES	YES	BOTH
101	County of Orange	JA	Jail Assignment Pay	YES	BOTH	YES	YES	BOTH

Master Pay Item Spreadsheet

				Current Configuration		Analysis Results		
Emp Code	Employer	Pay Code	Pay Code Description	Pensionable	Plan Class	Pensionable PEPRA	Pensionable LEGACY	Plan Class
101	County of Orange	JFTO	Jail Training Officer Pay	YES	BOTH	YES	YES	BOTH
101	County of Orange	JS	Jail Assignment Supplemental Pay	YES	BOTH	YES	YES	BOTH
101	County of Orange	K9PAY	Sheriff's Canine Pay	YES	BOTH	NO	**YES**[1]	LEGACY
101	County of Orange	LD	Licensure Differential Pay	YES	BOTH	YES	YES	BOTH
101	County of Orange	LDP	Licensure Differential Pay	YES	BOTH	YES	YES	BOTH
101	County of Orange	LSB	Lump Sum Bonus Payment - Legacy Employees	YES	BOTH	NO	YES	LEGACY
101	County of Orange	LSBP	Lump Sum Bonus Payment - PEPRA Employees	NO	BOTH	NO	NO	BOTH
101	County of Orange	MA	Mounted Assignment	YES	LEGACY	YES	YES	BOTH
101	County of Orange	MCPAY	Comp Payoff	NO	BOTH	NO	**YES**[2]	BOTH
101	County of Orange	MCTPY	Track COMP bucket payout when employee separates	NO	BOTH	NO	NO	BOTH
101	County of Orange	MDSA	Special Assignment Pay for MD	YES	BOTH	YES	YES	BOTH
101	County of Orange	MFTO	Master Field Training Officer Pay	YES	BOTH	YES	YES	BOTH
101	County of Orange	MI$NT	Mileage Reimbursement	NO	LEGACY	NO	NO	BOTH
101	County of Orange	MI$TX	Taxable Mileage Reimbursement	NO	LEGACY	NO	NO	BOTH
101	County of Orange	ML	Military Leave	YES	LEGACY	YES	YES	BOTH
101	County of Orange	MLOPY	Military Leave Without pay	NO	LEGACY	NO	NO	BOTH
101	County of Orange	MR	Major Accident Reconstruction/Resp Pay	YES	LEGACY	YES	YES	BOTH
101	County of Orange	NJ	Nurse - Jail	YES	BOTH	YES	YES	BOTH
101	County of Orange	NL	Nurse - Late Shift	YES	BOTH	YES	YES	BOTH
101	County of Orange	NP	Nurse Premium	YES	BOTH	YES	YES	BOTH
101	County of Orange	OBPAD	OBP Payment For AD&D Insurance	NO	LEGACY	NO	NO	BOTH
101	County of Orange	OBPDC	OBP Lump Sum Payment	NO	LEGACY	NO	NO	BOTH
101	County of Orange	OBPLS	Opt Ben Plan Lump Sum Payment	NO	LEGACY	NO	NO	BOTH
101	County of Orange	OC	On Call	YES	BOTH	NO	**YES**[1]	LEGACY
101	County of Orange	OCDR	On Call for Doctors	YES	LEGACY	NO	**YES**[1]	LEGACY
101	County of Orange	OR	FLSA Premium OT Rate Adj	NO	LEGACY	NO	NO	BOTH
101	County of Orange	OT	OVERTIME	NO	LEGACY	NO	NO	BOTH
101	County of Orange	OTPAY	Overtime Mandatory Payoff - Exceeds Comp Allowable	NO	BOTH	NO	NO	BOTH
101	County of Orange	OV	Helicopter Observer Pay	YES	LEGACY	YES	YES	BOTH
101	County of Orange	PAC	Plant Air Conditioning Mechanic Pay	YES	LEGACY	YES	YES	BOTH
101	County of Orange	PFTO	Patrol Training Officer Pay	YES	BOTH	YES	YES	BOTH
101	County of Orange	PIPPO	PIP Leave Payoff	YES	LEGACY	NO	YES	LEGACY
101	County of Orange	PIPPY	Performance Incentive Pay	NO	LEGACY	NO	NO	BOTH
101	County of Orange	PIPTR	PIP Leave Payoff - Termination	YES	LEGACY	NO	YES	LEGACY
101	County of Orange	PLS	Professional Land Surveyor License Pay	YES	BOTH	YES	YES	BOTH
101	County of Orange	PM	PM Shift Differential	YES	BOTH	YES	YES	BOTH
101	County of Orange	POST	Post Pay	YES	BOTH	YES	YES	BOTH
101	County of Orange	PSC	Police Services Chief Premium	YES	LEGACY	YES	YES	BOTH
101	County of Orange	RO	Relief Operator Pay	YES	LEGACY	YES	YES	BOTH
101	County of Orange	SOT	Straight Overtime	NO	BOTH	NO	NO	BOTH

Master Pay Item Spreadsheet

				Current Configuration		Analysis Results		
Emp Code	Employer	Pay Code	Pay Code Description	Pensionable	Plan Class	Pensionable PEPRA	Pensionable LEGACY	Plan Class
101	County of Orange	SPA	Specialty Assignment Pay	YES	BOTH	YES	YES	BOTH
101	County of Orange	SXPAY	Sick leave Payoff - Termination	NO	LEGACY	NO	NO	BOTH
101	County of Orange	SZPAY	Sick leave Payoff	NO	LEGACY	NO	**YES**[2]	LEGACY
101	County of Orange	TC	Tactical Support Team Pay	YES	LEGACY	YES	YES	BOTH
101	County of Orange	TI	Toxic Investigator	YES	LEGACY	YES	YES	BOTH
101	County of Orange	TO	Training Officer - Sheriff	YES	BOTH	YES	YES	BOTH
101	County of Orange	TOJ	Training Officer - Jail Assignment	YES	BOTH	YES	YES	BOTH
101	County of Orange	TTU	Taxable Tuition Reimbursement	NO	LEGACY	NO	NO	BOTH
101	County of Orange	UGSTO	Underground Storage Tank Op Certification Pay	YES	LEGACY	YES	YES	BOTH
101	County of Orange	VACPY	Vacation Payoff	NO	BOTH	NO	**YES**[2]	LEGACY
101	County of Orange	VOTE	Invalid pay item - people who work on elections	NO	LEGACY	NO	NO	BOTH
101	County of Orange	VPTPY	Vacation Payoff - Termination	NO	BOTH	NO	NO	BOTH
119	LAFCO	AUTO$	Automobile Allowance	YES	LEGACY	NO	YES	LEGACY
119	LAFCO	CPTPY	Track FCOMP bucket payout when employee separates	NO	BOTH	NO	NO	BOTH
119	LAFCO	GHLTQ	Sharewell - General	YES	LEGACY	YES	YES	BOTH
119	LAFCO	HHPAY	Holiday Pay	YES	LEGACY	YES	YES	BOTH
119	LAFCO	MCPAY	Comp Payoff	NO	LEGACY	NO	**YES**[2]	LEGACY
119	LAFCO	MCTPY	Track COMP bucket payout when employee separates	NO	BOTH	NO	NO	BOTH
119	LAFCO	RE	Retroactive Pay	YES	LEGACY	YES	YES	BOTH
119	LAFCO	VACPY	Vacation Payoff	NO	LEGACY	NO	**YES**[2]	LEGACY
119	LAFCO	VPTPY	Vacation Payoff - Termination	NO	LEGACY	NO	NO	BOTH
103	Law Library	ALAPY	Annual Leave Payoff - Annual	NO	LEGACY	NO	**YES**[2]	LEGACY
103	Law Library	BL	Bilingual Pay for Counselors	YES	BOTH	YES	YES	BOTH
103	Law Library	GHLTQ	Sharewell - General	YES	LEGACY	YES	YES	BOTH
103	Law Library	SS	Shift Supervision	YES	BOTH	YES	YES	BOTH
105	OCERS	ALAPY	Annual Leave Payoff - Annual	NO	BOTH	NO	**YES**[2]	LEGACY
105	OCERS	ALTPY	Annual Leave Payoff - Termination	NO	BOTH	NO	NO	BOTH
105	OCERS	AUTO$	Automobile Allowance	YES	LEGACY	NO	YES	LEGACY
105	OCERS	CAPP1	Ride Share Incentive	NO	BOTH	NO	NO	BOTH
105	OCERS	CPPAY	Comp Payoff	NO	BOTH	NO	**YES**[2]	LEGACY
105	OCERS	CPTPY	Track FCOMP bucket payout when employee separates	NO	BOTH	NO	NO	BOTH
105	OCERS	ECP	Employee Certification Pay	YES	BOTH	YES	YES	BOTH
105	OCERS	GHLTQ	Sharewell - General	YES	BOTH	YES	YES	BOTH
105	OCERS	HCPAY	Mandatory Holiday Comp Payout	NO	BOTH	NO	**YES**[2]	LEGACY
105	OCERS	HHPAY	Holiday Pay	YES	LEGACY	YES	YES	BOTH
105	OCERS	LSB	Lump Sum Bonus Payment - Legacy Employees	YES	LEGACY	NO	YES	LEGACY
105	OCERS	MCPAY	Comp Payoff	NO	BOTH	NO	**YES**[2]	LEGACY
105	OCERS	MCTPY	Track COMP bucket payout when employee separates	NO	BOTH	NO	NO	BOTH
105	OCERS	OTPAY	Overtime Mandatory Payoff - Exceeds Comp Allowable	NO	BOTH	NO	NO	BOTH
105	OCERS	SOT	Straight Overtime	NO	BOTH	NO	NO	BOTH

ORANGE COUNTY OCERS EMPLOYEES RETIREMENT SYSTEM

Master Pay Item Spreadsheet

Emp Code	Employer	Pay Code	Pay Code Description	Current Configuration: Pensionable	Current Configuration: Plan Class	Analysis Results: Pensionable PEPRA	Analysis Results: Pensionable LEGACY	Analysis Results: Plan Class
105	OCERS	ZMT	Mgr's Incentive Pay Based on Performance	YES	LEGACY	NO	YES	LEGACY
106	OCFA	1AR	Staff Aircraft Rescue	YES	LEGACY	YES	YES	BOTH
106	OCFA	1BE	Staff Firefighter Bilingual/Spanish Pay	YES	BOTH	YES	YES	BOTH
106	OCFA	1BF	Staff Bilingual Firefighter	YES	BOTH	YES	YES	BOTH
106	OCFA	1BM	Staff FM Bilingual (Bilingual pay for Fire Mgmt in	YES	LEGACY	YES	YES	BOTH
106	OCFA	1CO	Crane Operator Pay - Staff	YES	BOTH	YES	YES	BOTH
106	OCFA	1EM	Staff EMT Bonus	YES	BOTH	YES	YES	BOTH
106	OCFA	1HM	Staff Hazmat Pay	YES	BOTH	YES	YES	BOTH
106	OCFA	1HP	Staff Hazmat Medic Pay	YES	LEGACY	YES	YES	BOTH
106	OCFA	1HS	Staff Hazmat Specialty Pay	YES	BOTH	YES	YES	BOTH
106	OCFA	1MP	Staff Manpower Coordinator Pay - 7.5%	YES	BOTH	YES	YES	BOTH
106	OCFA	1PI	Paramedic Incentive Pay - Staff FAE	YES	LEGACY	YES	YES	BOTH
106	OCFA	1PT	Staff Paramedic Pay	YES	LEGACY	YES	YES	BOTH
106	OCFA	1TT	Staff Tech Rescue Truck Pay	YES	BOTH	YES	YES	BOTH
106	OCFA	1UM	USAR Medic Pay	YES	LEGACY	YES	YES	BOTH
106	OCFA	1US	USAR - Staff Bonus	YES	LEGACY	YES	YES	BOTH
106	OCFA	2HS	Staff Overtime Hazmat Specialty Pay	YES	BOTH	NO	NO	BOTH
106	OCFA	2TT	Staff Overtime Tech Rescue Truck Pay	YES	BOTH	NO	NO	BOTH
106	OCFA	AP	Supplementary Assignment Pay	YES	LEGACY	YES	YES	BOTH
106	OCFA	APC	Supp Assign Pay - Staff BC	YES	LEGACY	YES	YES	BOTH
106	OCFA	ARF	Aircraft Rescue Firefighter	YES	LEGACY	YES	YES	BOTH
106	OCFA	BFM	Bilingual Fire Management	YES	LEGACY	YES	YES	BOTH
106	OCFA	BS	Bilingual Pay (BS)	YES	BOTH	YES	YES	BOTH
106	OCFA	BSE	Field Firefighter Bilingual/Spanish Pay	YES	BOTH	YES	YES	BOTH
106	OCFA	CC	Comp Time Conversion	YES	LEGACY	NO	NO	BOTH
106	OCFA	CDS	Canine Disaster Search Specialist	YES	BOTH	YES	YES	BOTH
106	OCFA	CE	Comp. Earnable for FLSA	YES	BOTH	YES	YES	BOTH
106	OCFA	CO	Crane Operator Pay - Shift	YES	BOTH	YES	YES	BOTH
106	OCFA	CPE	California Professional Engineer Specialty Pay	YES	BOTH	YES	YES	BOTH
106	OCFA	CPO	California Professional Engineer Specialty Pay - Overtime	NO	BOTH	NO	NO	BOTH
106	OCFA	DO	DUTY OFFICER PAY - DC ONLY	YES	LEGACY	YES	YES	BOTH
106	OCFA	DT	Dispatcher Trainer Pay	YES	BOTH	YES	YES	BOTH
106	OCFA	E6	Education Pay FF - 2.5%	YES	BOTH	YES	YES	BOTH
106	OCFA	E9	Education Pay FF - 5%	YES	BOTH	YES	YES	BOTH
106	OCFA	EM	Equipment Mechanic Pay/Fire EMT	YES	BOTH	YES	YES	BOTH
106	OCFA	EMD	Emergency Medical Dispatch	YES	BOTH	YES	YES	BOTH
106	OCFA	ES1	Education Pay SEIU $25.00	YES	BOTH	YES	YES	BOTH
106	OCFA	FOM	ECC Forced OT Meal Stipend	NO	BOTH	NO	NO	BOTH
106	OCFA	FS5	FSS Supp Assignment Pay - 5%	YES	LEGACY	YES	YES	BOTH
106	OCFA	FS7	FSS Sup Assignment Pay - 7.5%	YES	LEGACY	YES	YES	BOTH

Master Pay Item Spreadsheet

Emp Code	Employer	Pay Code	Pay Code Description	Current Configuration: Pensionable	Current Configuration: Plan Class	Analysis Results: Pensionable PEPRA	Analysis Results: Pensionable LEGACY	Analysis Results: Plan Class
106	OCFA	GE6	Education Pay - GE - 2.5%	YES	BOTH	YES	YES	BOTH
106	OCFA	GE9	Education Pay - GE - 5%	YES	BOTH	YES	YES	BOTH
106	OCFA	GME	Education Pay - ME - 5.5%	YES	BOTH	YES	YES	BOTH
106	OCFA	HC	Holiday Comp	YES	BOTH	**YES[2]**	**YES[2]**	BOTH
106	OCFA	HCP	Fire Holiday Pay/Earnable	YES	BOTH	**YES[2]**	**YES[2]**	BOTH
106	OCFA	HEM	Hand Crew Firefighter Emergency Medical Technical	YES	BOTH	YES	YES	BOTH
106	OCFA	HH	OCFA Invalid Pay Item	NO	LEGACY	NO	**YES[2]**	LEGACY
106	OCFA	HM	Hazardous Materials	YES	BOTH	YES	YES	BOTH
106	OCFA	HP	Field Hazmat Medic Pay	YES	BOTH	YES	YES	BOTH
106	OCFA	HS	Field Hazmat Specialty Pay	YES	BOTH	YES	YES	BOTH
106	OCFA	HSO	Field Overtime Hazmat Specialty Pay	YES	BOTH	NO	NO	BOTH
106	OCFA	K9	Canine Pay	YES	LEGACY	YES	**YES[1]**	LEGACY
106	OCFA	MCA	EXECUTIVE MGMT CAR ALLOWANCE	YES	LEGACY	NO	YES	LEGACY
106	OCFA	ME	EDUCATION PAY - 7.5%	YES	BOTH	YES	YES	BOTH
106	OCFA	MPC	Manpower Coordinator Pay	YES	BOTH	YES	YES	BOTH
106	OCFA	MPO	Manpower Coordinator OT	NO	BOTH	NO	NO	BOTH
106	OCFA	MU	Move-Up for Dispatchers	YES	LEGACY	YES	YES	BOTH
106	OCFA	OC	On Call	YES	LEGACY	NO	**YES[1]**	LEGACY
106	OCFA	PI	Paramedic Incentive Pay - Shift FAE	YES	LEGACY	YES	YES	BOTH
106	OCFA	PT	Paramedic Pay	YES	BOTH	YES	YES	BOTH
106	OCFA	RHC	Retro Holiday Comp	YES	BOTH	YES	**YES[2]**	BOTH
106	OCFA	RHP	Retro Holiday Comp	YES	BOTH	YES	**YES[2]**	BOTH
106	OCFA	RMP	Reimbursement of medical premium	NO	BOTH	NO	NO	BOTH
106	OCFA	RVE	Retro Vacation Earnings	NO	BOTH	NO	YES	LEGACY
106	OCFA	SC	Sick Leave Conversion - Annualized Rate	NO	LEGACY	NO	NO	BOTH
106	OCFA	SH	Staff Hazmat Incentive Pay	YES	BOTH	YES	YES	BOTH
106	OCFA	SHO	Staff Overtime Hazmat Incentive Pay	NO	BOTH	NO	NO	BOTH
106	OCFA	SI	Staff Incentive Pay	YES	BOTH	YES	YES	BOTH
106	OCFA	SIO	Staff Overtime Incentive Pay	NO	BOTH	NO	NO	BOTH
106	OCFA	SM	Staff Medic Incentive Pay	YES	BOTH	YES	YES	BOTH
106	OCFA	SMO	Staff Overtime Medic Incentive Pay	NO	BOTH	NO	NO	BOTH
106	OCFA	SPP	Spring Premium Pay (Comp)	YES	BOTH	YES	YES	BOTH
106	OCFA	SU	Staff USAR Medic Incentive Pay	YES	BOTH	YES	YES	BOTH
106	OCFA	SUO	Staff Overtime USAR Medic Incentive Pay	NO	BOTH	NO	NO	BOTH
106	OCFA	SX	Sick Leave Payoff - Termination	NO	LEGACY	NO	NO	BOTH
106	OCFA	TRT	Field Tech Rescue Truck Pay	YES	BOTH	YES	YES	BOTH
106	OCFA	TTO	Field Overtime Tech Rescue Truck Pay	YES	BOTH	NO	NO	BOTH
106	OCFA	UM	USAR MEDIC BONUS	YES	LEGACY	YES	YES	BOTH
106	OCFA	US	USAR Bonus	YES	LEGACY	YES	YES	BOTH
106	OCFA	VC	Vacation Conversion - Annualized Rate	NO	LEGACY	NO	**YES[2]**	LEGACY

Master Pay Item Spreadsheet

Emp Code	Employer	Pay Code	Pay Code Description	Current Configuration: Pensionable	Current Configuration: Plan Class	Analysis Results: Pensionable PEPRA	Analysis Results: Pensionable LEGACY	Analysis Results: Plan Class
106	OCFA	VE	Vacation Payoff (Excess)	NO	BOTH	NO	YES	LEGACY
106	OCFA	VP3	Vacation Payoff	NO	BOTH	NO	**YES**[2]	LEGACY
106	OCFA	VPT	Vacation PayOff - Termination	NO	BOTH	NO	NO	BOTH
106	OCFA	WSS	Workers Comp Safety Supp	YES	LEGACY	YES	YES	BOTH
112	OCTA	AT	ASE cert pay on holiday hours worked	YES	BOTH	YES	YES	BOTH
112	OCTA	AU	ASE- Non Overtime	YES	BOTH	YES	YES	BOTH
112	OCTA	CA	Car Allowance	YES	LEGACY	NO	YES	LEGACY
112	OCTA	CM	Commuter Club	YES	LEGACY	NO	YES	LEGACY
112	OCTA	CP	Cell Phone Allowance	YES	LEGACY	NO	YES	LEGACY
112	OCTA	DLS	Lump Sum Payments	YES	LEGACY	NO	YES	LEGACY
112	OCTA	ER	Employee Referral	YES	LEGACY	NO	YES	LEGACY
112	OCTA	GR	Grievance Settlement	YES	BOTH	YES	YES	BOTH
112	OCTA	HN	HOL - NO RETIRE	YES	BOTH	YES	YES	BOTH
112	OCTA	HW	Holiday Worked	YES	BOTH	YES	YES	BOTH
112	OCTA	IN	Instruction Pay	YES	BOTH	YES	YES	BOTH
112	OCTA	LP	Lead Pay	YES	BOTH	YES	YES	BOTH
112	OCTA	LS2	Lump Sum Payments	YES	LEGACY	NO	YES	LEGACY
112	OCTA	ML	Military Leave	YES	BOTH	YES	YES	BOTH
112	OCTA	NS	Night Shift Differential	YES	BOTH	YES	YES	BOTH
112	OCTA	OS	Scheduled - Overtime	YES	BOTH	YES	YES	BOTH
112	OCTA	PB	Productivity Bonus	YES	LEGACY	NO	YES	LEGACY
112	OCTA	PM	PM Shift Differential	YES	BOTH	YES	YES	BOTH
112	OCTA	RB	RETRO BEREAVE	YES	BOTH	YES	YES	BOTH
112	OCTA	RC	Retro Commute	YES	BOTH	YES	YES	BOTH
112	OCTA	RF	Retro Administrative Leave	YES	BOTH	YES	YES	BOTH
112	OCTA	RG	Regular Hours	YES	BOTH	YES	YES	BOTH
112	OCTA	RH	RETRO HOL - RET	YES	BOTH	YES	YES	BOTH
112	OCTA	RHP	Retro Holiday Pay	YES	BOTH	YES	YES	BOTH
112	OCTA	RHW	Retro Holiday Hours Worked	YES	BOTH	YES	YES	BOTH
112	OCTA	RI	Retro Scheduled Travel Overtime	YES	BOTH	YES	YES	BOTH
112	OCTA	RJ	Retro Jury Duty	YES	BOTH	YES	YES	BOTH
112	OCTA	RL	Retro Long Term Disability - 80%	YES	BOTH	YES	YES	BOTH
112	OCTA	RM	Retro Military	YES	BOTH	YES	YES	BOTH
112	OCTA	RN	Retro Holiday	YES	BOTH	YES	YES	BOTH
112	OCTA	RO	RETRO SCHED OT	YES	BOTH	YES	YES	BOTH
112	OCTA	RP	RETRO SK PAYOFF	YES	LEGACY	NO	NO	BOTH
112	OCTA	RQ	Retro Vacation Payoff	YES	LEGACY	NO	NO	BOTH
112	OCTA	RR	Retro Regular	YES	BOTH	YES	YES	BOTH
112	OCTA	RS	RETRO SICK	YES	BOTH	YES	YES	BOTH
112	OCTA	RU	Retro Unprovoked Attack	YES	BOTH	YES	YES	BOTH

Master Pay Item Spreadsheet

				Current Configuration		Analysis Results		
Emp Code	Employer	Pay Code	Pay Code Description	Pensionable	Plan Class	Pensionable PEPRA	Pensionable LEGACY	Plan Class
112	OCTA	RV	Retro Vacation	YES	BOTH	YES	YES	BOTH
112	OCTA	SP	SICK PAYOFF - Termination	YES	LEGACY	NO	NO	BOTH
112	OCTA	SPO	Sick Leave Payout - Annual Pay Option	NO	LEGACY	NO	**YES**[2]	LEGACY
112	OCTA	SW	Special Merit	YES	LEGACY	NO	YES	LEGACY
112	OCTA	SW2	Special Merit	YES	LEGACY	NO	YES	LEGACY
112	OCTA	TS	Scheduled Travel Overtime	YES	BOTH	YES	YES	BOTH
112	OCTA	VAN	VAN POOL INCENTIVE	YES	LEGACY	NO	NO	BOTH
112	OCTA	VP	VACATION PAYOFF - Termination	NO	BOTH	NO	NO	BOTH
112	OCTA	VSB	Vacation Sell Back - Hardship	NO	LEGACY	NO	**YES**[2]	LEGACY
110	San Juan Capistrano	015	Overtime	NO	BOTH	NO	NO	BOTH
110	San Juan Capistrano	020	Double Overtime	NO	BOTH	NO	NO	BOTH
110	San Juan Capistrano	023	Standby	YES	BOTH	NO	YES[1]	LEGACY
110	San Juan Capistrano	101	Bilingual Pay	YES	BOTH	YES	YES	BOTH
110	San Juan Capistrano	105	Car Allowance	YES	BOTH	NO	YES	LEGACY
110	San Juan Capistrano	137	Cell Phone Allowance	YES	LEGACY	NO	YES	LEGACY
110	San Juan Capistrano	140	Uniform Allowance	YES	BOTH	NO	YES	LEGACY
110	San Juan Capistrano	141	Utility Certification	YES	BOTH	YES	YES	BOTH
110	San Juan Capistrano	142	General Certification Pay	YES	BOTH	YES	YES	BOTH
110	San Juan Capistrano	144	Sewer Certification Pay	YES	BOTH	YES	YES	BOTH
110	San Juan Capistrano	202	Vacation Cashout	YES	LEGACY	NO	**YES**[2]	LEGACY
110	San Juan Capistrano	203	Vacation Pay-out	NO	BOTH	NO	**YES**[2]	LEGACY
110	San Juan Capistrano	205	Sick Leave Cashout	YES	LEGACY	NO	**YES**[2]	LEGACY
110	San Juan Capistrano	206	Sick Pay-out	NO	LEGACY	NO	**YES**[2]	LEGACY
110	San Juan Capistrano	212	Comp Time Cashout	NO	BOTH	NO	**YES**[2]	LEGACY
110	San Juan Capistrano	220	Management Cashout	YES	LEGACY	NO	NO	BOTH
110	San Juan Capistrano	221	Management Payout	NO	BOTH	NO	NO	BOTH
111	Sanitation	ACT	Acting Pay	YES	BOTH	YES	YES	BOTH
111	Sanitation	AUTO1	Auto Allowance - Executive Management	YES	LEGACY	NO	YES	LEGACY
111	Sanitation	CPPAY	Comp Payoff	NO	LEGACY	NO	**YES**[2]	LEGACY
111	Sanitation	CTERM	CTERM	NO	BOTH	NO	NO	BOTH
111	Sanitation	DB	Development Benefits	YES	BOTH	YES	YES	BOTH
111	Sanitation	GRV	Grade V Certification Pay	YES	BOTH	YES	YES	BOTH
111	Sanitation	IISF	Investment Incentive Salary - Fixed	YES	BOTH	YES	YES	BOTH
111	Sanitation	IISP	Investment Incentive Salary - Percent	YES	BOTH	YES	YES	BOTH
111	Sanitation	OC	On Call	YES	BOTH	NO	YES[1]	LEGACY
111	Sanitation	OT	OVERTIME	NO	BOTH	NO	NO	BOTH
111	Sanitation	PLPY	Personal Leave Payoff	YES	BOTH	NO	**YES**[2]	LEGACY
111	Sanitation	PM	PM Shift Differential	YES	BOTH	YES	YES	BOTH
111	Sanitation	PTERM	PTERM	NO	BOTH	NO	NO	BOTH
111	Sanitation	RETRN	RETRN	NO	BOTH	NO	NO	BOTH

Master Pay Item Spreadsheet

Emp Code	Employer	Pay Code	Pay Code Description	Current Configuration		Analysis Results		
				Pensionable	Plan Class	Pensionable PEPRA	Pensionable LEGACY	Plan Class
111	Sanitation	RETRP	Retro Pay	YES	BOTH	YES	YES	BOTH
111	Sanitation	RETRS	Non-Base Building Lump Sum Payment	YES	BOTH	NO	YES	LEGACY
111	Sanitation	RO	Relief Operator Pay	YES	BOTH	YES	YES	BOTH
111	Sanitation	SO	Scheduled Overtime Amount	YES	BOTH	YES	YES	BOTH
111	Sanitation	STERM	STERM	NO	LEGACY	NO	NO	BOTH
111	Sanitation	SZPAY	Sick Leave Payoff	YES	LEGACY	NO	**YES**[2]	LEGACY
111	Sanitation	VACPY	Vacation Payoff	YES	BOTH	NO	**YES**[2]	LEGACY
111	Sanitation	VTERM	VTERM	NO	BOTH	NO	NO	BOTH
121	Superior Court	BL	Bilingual Pay for Counselors	YES	BOTH	YES	YES	BOTH
121	Superior Court	BX	Bilingual Pay (BX)	YES	BOTH	YES	YES	BOTH
121	Superior Court	BXC	Court Exceptional Bilingual Pay	YES	BOTH	YES	YES	BOTH
121	Superior Court	CAPP1	Ride Share Incentive	NO	BOTH	NO	NO	BOTH
121	Superior Court	CPPAY	Comp Payoff	NO	BOTH	NO	**YES**[2]	LEGACY
121	Superior Court	CPTPY	Track FCOMP bucket payout when employee separates	NO	BOTH	NO	NO	BOTH
121	Superior Court	CRR	Real Time Certified Reporters Pay	YES	BOTH	YES	YES	BOTH
121	Superior Court	GHLTQ	Sharewell - General	YES	BOTH	YES	YES	BOTH
121	Superior Court	HCPAY	Mandatory Holiday Comp Payout	NO	BOTH	NO	**YES**[2]	LEGACY
121	Superior Court	HHPAY	Holiday Pay	YES	LEGACY	YES	YES	BOTH
121	Superior Court	LONG	Longevity	NO	LEGACY	NO	NO	BOTH
121	Superior Court	MCPAY	Comp Payoff	NO	BOTH	NO	**YES**[2]	LEGACY
121	Superior Court	MCTPY	Track COMP bucket payout when employee separates	NO	BOTH	NO	NO	BOTH
121	Superior Court	OBPDC	Optional Benefit Plan Bonus Payment	NO	LEGACY	NO	NO	BOTH
121	Superior Court	OBPLS	Opt Ben Plan Lump Sum Payment	NO	LEGACY	NO	NO	BOTH
121	Superior Court	OC	On Call	YES	BOTH	NO	**YES**[1]	LEGACY
121	Superior Court	OTPAY	Overtime Mandatory Payoff - Exceeds Comp Allowable	NO	BOTH	NO	NO	BOTH
121	Superior Court	PM	PM Shift Differential	YES	BOTH	YES	YES	BOTH
121	Superior Court	QRR	REAL TIME QUALIFIED REPORTERS PAY	YES	BOTH	YES	YES	BOTH
121	Superior Court	SOT	Straight Overtime	NO	BOTH	NO	NO	BOTH
121	Superior Court	VACPY	Vacation Payoff	NO	BOTH	NO	**YES**[2]	LEGACY
121	Superior Court	VPTPY	Vacation Payoff - Termination	NO	BOTH	NO	NO	BOTH
109	TCA	ALAN4	Annual Leave Payoff	YES	BOTH	NO	**YES**[2]	LEGACY
109	TCA	ALTPY	Annual Leave Payoff - Termination	NO	LEGACY	NO	NO	BOTH
109	TCA	AUTO1	Automobile Allowance	YES	BOTH	NO	YES	LEGACY
109	TCA	HHPAY	Holiday Pay	YES	BOTH	YES	YES	BOTH
109	TCA	HPS	Holiday Work Straight	YES	LEGACY	YES	YES	BOTH
109	TCA	RE	Retroactive Pay	YES	BOTH	YES	YES	BOTH
109	TCA	SB	Stand-by Statistical	YES	BOTH	NO	YES[1]	LEGACY
109	TCA	SM	Special Merit	YES	LEGACY	NO	YES	LEGACY

Master Pay Item Spreadsheet

Emp Code	Employer	Pay Code	Pay Code Description	Current Configuration: Pensionable	Current Configuration: Plan Class	Analysis Results: Pensionable PEPRA	Analysis Results: Pensionable LEGACY	Analysis Results: Plan Class

FOOTNOTES:

[1] This type of pay has historically been Compensation Earnable. Amendments to the definition enacted as part of PEPRA potentially alter that classification. A final determination will be made after pending litigation regarding PEPRA is resolved.

[2] Based on the legal criteria, the final decision is Comp Earnable = YES, however, the pay code will be configured in V3 so there will be no contributions expected on these pay items. - Current Configuration should be equal to Pensionable = NO, Plan Class = BOTH

A-8

Memorandum

DATE: June 17, 2019

TO: Members of the Board of Retirement

FROM: Suzanne Jenike, Assistant CEO, External Operations, and Gina M. Ratto, General Counsel

SUBJECT: **GOVERNANCE COMMITTEE OUTCOMES FROM MAY 21, 2019 COMMITTEE MEETING**

Recommendation

The Governance Committee recommends that the Board of Retirement:

(1) Approve revisions to the ***Committee Chair Charter*** as presented by staff; and
(2) Approve revisions to the ***Indemnity and Defense Policy*** as presented by staff.

Background/Discussion

The Governance Committee met on May 21, 2019, approved, and now recommends the Board approve, revisions to the Committee Chair Charter and the Indemnity and Defense Policy, all as further detailed below.

(1) Committee Chair Charter

On May 21, 2019, the Governance Committee conducted its triennial review of and approved revisions to the Committee Chair Charter as presented by staff and as reflected in the attached redlined Charter. The approved changes, which are now presented by the Committee to the Board for approval, include the following:

1. Update Paragraph 1 to reflect that the Vice Chair of the Board as of the end of October of any year now appoints the members, chairs and vice chairs of the committees;
2. Add, in Paragraph 2.c., the duty of the Chair to approve committee meeting agendas as prepared by the CEO; and
3. Other non-substantive changes.

(2) Indemnity and Defense Policy

On May 21, 2019, the Governance Committee conducted its triennial review of and approved revisions to the Indemnity and Defense Policy as presented by staff and as reflected in the attached redlined Policy. The approved changes, which are now presented by the Committee to the Board for approval, include the following:

1. Deleting from Paragraph 2.a. the words, "arising within the course and scope of their duties to OCERS";
2. Deleting from Paragraph 3.a. the words, "based on acts or omissions arising out of the performance of retirement system duties"; and
3. Deleting from Paragraph 3.l. the words, "arising out of their former duties for OCERS".

All of the above noted changes are for the purpose of ensuring that ***all*** claims are reported to OCERS; and that OCERS then makes the determination if the claim is indemnifiable because it arose in the course and scope of the performance of duties to OCERS. In other words, the OCERS employee or Board member should not make the determination regarding "course and scope of duties" before notifying OCERS of the claim, but rather, should report all claims.

A draft of the minutes of the May 21, 2019 Governance Committee meeting is attached. The Committee has not yet approved these minutes.

Attachments

Submitted by:

Gina M. Ratto

Gina M. Ratto
General Counsel

ORANGE COUNTY
OCERS
EMPLOYEES RETIREMENT SYSTEM

OCERS Board Charter

Committee Chair Charter

Introduction

1. The person holding the office of Vice Chair of the Board as of the end of October of the year will appoint the members of each of the committees of the Board (with the exception of the Investment Committee) and the chair and vice chair of all of the committees ~~will appoint Committees~~ of the Board ~~as prescribed in OCERS By-Laws and designate Board members to serve on those Committees. One Board member shall be appointed as Committee Chairperson~~. The Committee Chairs will ~~coordinate the affairs of their assigned committees with the assistance of OCERS Administration~~exercise the powers and perform the duties and functions specified herein.

Duties and Responsibilities

2. With regard to their assigned committees, Committee Chairs will:

   a. Preside at all meetings, ensuring that meetings are conducted in an efficient manner and in accordance with The Ralph M. Brown Act~~,~~ (“California Government Code Section 54950, *et. seq*.”) and ~~the principles embodied in~~ the OCERS Rules of Parliamentary Procedure;

   b. Guide the committee in achieving a harmonious atmosphere while allowing full and open debate;

   c. Approve committee meeting agendas as prepared by the CEO;

   ~~c.~~d. Ensure coordination of meetings, agendas, schedules, presentations, and consultation with the OCERS Administration;

   ~~d.~~e. Work to ensure that committee deliberations are conducted with respect and professionalism;

   ~~e.~~f. Work to ensure that the committee discharges its duties and responsibilities as set forth in the County Employees Retirement Law of 1937, the committee’s~~its~~ charter, the By-Laws, and the governance policies of the Board;

   ~~f.~~g. Facilitate effective and open communications between the committee, the Board and the CEO;

   ~~g.~~h. On behalf of the committee, report to the Board on the activities of the committee; and

   ~~h.~~i. Carry out such other functions and duties that may be prescribed by the Board or the Board Chair.

Charter Review

3. The Governance Committee will review this charter at least once every three (3) years and recommend any amendments to the Board for approval as necessary to ensure that the charter remains relevant and appropriate.

Charter History

~~4.~~ This charter was adopted by the Board of Retirement on November 18, 2002 and revised on July 20, 2015~~, and~~ April 18, 2016 and June 17, 2019.

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 ~~4/18/16~~ 06/17/2019

Steve Delaney, Secretary of the Board Date

Committee Chair Charter

Introduction

1. The person holding the office of Vice Chair of the Board as of the end of October of the year will appoint the members of each of the committees of the Board (with the exception of the Investment Committee) and the chair and vice chair of all of the committees of the Board. The Committee Chairs will exercise the powers and perform the duties and functions specified herein.

Duties and Responsibilities

2. With regard to their assigned committees, Committee Chairs will:

    a. Preside at all meetings, ensuring that meetings are conducted in an efficient manner and in accordance with The Ralph M. Brown Act (California Government Code Section 54950, *et. seq*.) and the OCERS Rules of Parliamentary Procedure;

    b. Guide the committee in achieving a harmonious atmosphere while allowing full and open debate;

    c. Approve committee meeting agendas as prepared by the CEO;

    d. Ensure coordination of meetings, agendas, schedules, presentations, and consultation with the OCERS Administration;

    e. Work to ensure that committee deliberations are conducted with respect and professionalism;

    f. Work to ensure that the committee discharges its duties and responsibilities as set forth in the County Employees Retirement Law of 1937, the committee's charter, the By-Laws, and the governance policies of the Board;

    g. Facilitate effective and open communications between the committee, the Board and the CEO;

    h. On behalf of the committee, report to the Board on the activities of the committee; and

    i. Carry out such other functions and duties that may be prescribed by the Board or the Board Chair.

Charter Review

3. The Governance Committee will review this charter at least once every three (3) years and recommend any amendments to the Board for approval as necessary to ensure that the charter remains relevant and appropriate.

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This charter was adopted by the Board of Retirement on November 18, 2002 and revised on July 20, 2015, April 18, 2016 and June 17, 2019.

Secretary's Certificate

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

06/17/2019

Steve Delaney, Secretary of the Board

Date

Indemnity and Defense Policy

Purpose and Background

1. In general, OCERS provides indemnification and defense to OCERS' employees and Board members for claims arising out of their conduct occurring within the course and scope of their duties to the retirement system. OCERS' provision of indemnity and defense is required by state law. In certain circumstances other employing public agencies are also responsible for indemnifying and/or defending OCERS' employees and Board members.

   The purpose of this policy is to establish the manner in which OCERS shall process and manage such claims, and to assure covered employees and Board members of the indemnity and defense to which they are entitled.

   For purposes of this Policy, "employees" includes OCERS' direct employees and employees of the County of Orange who work at OCERS; provided, however, that OCERS reserves subrogation rights against the County of Orange in any cases where OCERS steps in to provide an indemnity or defense for an employee or Board member, but the County, in fact, would be the responsible entity under applicable law for indemnifying and defending the employee or Board member

Policy Objectives

2. The objectives of this policy are to:

   a. Provide a mechanism for reporting claims against Board members and employees ~~arising within the course and scope of their duties to OCERS~~;

   b. Ensure claims are appropriate for indemnification and/or defense (*i.e.,* that the alleged conduct is not fraudulent, criminal or due to wrongful personal gain; or is otherwise excluded from indemnity and/or defense under law);

   c. Identify the appropriate agency responsible for indemnifying and/or defending OCERS' Board members and employees for actions arising within the course and scope of their retirement system duties;

   d. Coordinate processing of claims between OCERS and other employing agencies as necessary; and

   e. Provide for the payment of attorneys' fees and costs incurred from inception to and including the date on which OCERS determines whether to indemnify and/or accept the defense of the claims on behalf of the affected Board member or employee.

Policy Guidelines

3. The Board adopts the following approach for all indemnity and/or defense claims made by Board members or employees arising within the course and scope of their retirement system duties:

   a. As soon as practicable after a claim is made against a Board member or employee ~~based on acts or omissions arising out of the performance of retirement system duties~~, such individual shall notify the Legal Department and provide the Legal Department with all documents provided by the claimant.

b. The Legal Department will review the claim, in conjunction with fiduciary counsel where appropriate, determine whether it is proper for a recommendation to the Board for indemnification and/or defense, and identify the appropriate indemnifying/defending agency.

c. If the Legal Department determines that the claim is not appropriate for a recommendation of indemnification and/or defense, the Legal Department will promptly notify the individual of the reasons indemnification and/or defense is not proper. If the individual wishes to contest the determination of the Legal Department, the matter shall be agendized during a closed session at the next regular Board meeting, and the Board shall comply in all respects with the requirements of the Brown Act.

d. If the Legal Department determines that the claim is appropriate for indemnification and/or defense, the Legal Department will promptly notify the individual of its recommendation to the Board. The Board shall agendize consideration of the matter during a closed session held at the next regular Board meeting and shall comply in all respects with requirements of the Brown Act.

e. The Board will have sole and exclusive authority to determine whether the individual should be indemnified and/or defended. That determination shall consider whether indemnity and/or defense is/are (a) mandatory, (b) discretionary or (c) prohibited under law. If the Board determines that OCERS will not indemnify and/or defend the individual against the claim, the Board will notify the individual in writing within 72 hours of making the determination. The individual will then have the right to seek recourse as permitted by law. If the individual commences a legal action challenging the Board's determination, and until a final determination on the right to indemnification and/or defense is made, OCERS will advance defense costs on behalf of the individual on terms satisfactory to OCERS.

f. If the Board determines to indemnify and/or defend against the claim on behalf of the individual, the Legal Department, in conjunction with Administrative Services, will undertake the necessary steps to ensure that the claim is properly resolved.

g. The Legal Department and/or Administrative Services will communicate with the individual involved in the claim throughout the defense and resolution process.

h. All Board members and employees who seek indemnification and/or defense from OCERS shall fully cooperate throughout the defense and resolution process.

i. Prior to the determination of indemnification and/or defense (as further set forth in the following subparagraph) and thereafter if OCERS accepts the defense, OCERS shall select capable and competent legal counsel, subject to approval of the individual to be indemnified which approval shall not be unreasonably withheld, at the expense of OCERS. Alternatively, the Board of Retirement may permit the individual to select his or her own counsel under circumstances OCERS deems appropriate.

j. Prior to the determination of indemnification and/or defense, OCERS shall advance all funds necessary to enable the subject individual to obtain effective defense to the claim, including attorneys' fees and costs reasonably incurred prior to such determination, subject to such recourse as is provided by law or contract. In the event that it is ultimately determined that OCERS correctly denied indemnity and/or defense of the individual under this policy, OCERS and the individual shall meet and confer to arrange the repayment of any such sums advanced to or on behalf of the individual. Failing an amicable resolution being reached within 60 days of the determination, either party may commence legal action to resolve the dispute.

k. In the event that OCERS obtains third party fiduciary insurance covering claims against Board members, employees, and OCERS itself, OCERS will timely and appropriately tender such claims and take all necessary actions in order to preserve the benefits of such insurance for the insureds.

l. Board members and employees who have ceased their duties with OCERS prior to receiving a claim ~~arising out of their former duties for OCERS~~ shall be entitled to the determination of indemnity and/or defense of the claim as set forth under this policy and at law in the same manner as if they had continued in their duties with OCERS. In the event that OCERS obtains third party fiduciary insurance covering claims against Board members and employees, OCERS shall secure continuing coverage as well for Board members and employees who have ceased their duties with OCERS, on commercially reasonable terms.

4. Notwithstanding this policy, OCERS reserves all rights under law (including subrogation rights against the County of Orange in cases where the County is the appropriate agency responsible for indemnifying and/or defending OCERS' Board members and employees) and any applicable employment contract with regard to the terms and conditions of its acceptance of indemnification and/or defense of Board members and employees. In the event of any conflict between such laws, contracts and this policy, the law shall prevail.

Policy Review

5. The Board will review this policy at least every three years to ensure that it remains relevant and appropriate.

Policy History

6. The Board adopted this policy on April 16, 2007. The Board amended this policy on January 18, 2011, March 17, 2014, ~~and~~ January 19, 2016 and June 17, 2019.

Secretary's Certificate

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

~~01/19/2016~~ 06/17/2019

Steve Delaney
Secretary of the Board

Date

Indemnity and Defense Policy

Purpose and Background

1. In general, OCERS provides indemnification and defense to OCERS' employees and Board members for claims arising out of their conduct occurring within the course and scope of their duties to the retirement system. OCERS' provision of indemnity and defense is required by state law. In certain circumstances other employing public agencies are also responsible for indemnifying and/or defending OCERS' employees and Board members.

   The purpose of this policy is to establish the manner in which OCERS shall process and manage such claims, and to assure covered employees and Board members of the indemnity and defense to which they are entitled.

   For purposes of this Policy, "employees" includes OCERS' direct employees and employees of the County of Orange who work at OCERS; provided, however, that OCERS reserves subrogation rights against the County of Orange in any cases where OCERS steps in to provide an indemnity or defense for an employee or Board member, but the County, in fact, would be the responsible entity under applicable law for indemnifying and defending the employee or Board member

Policy Objectives

2. The objectives of this policy are to:
   a. Provide a mechanism for reporting claims against Board members and employees;
   b. Ensure claims are appropriate for indemnification and/or defense (*i.e.,* that the alleged conduct is not fraudulent, criminal or due to wrongful personal gain; or is otherwise excluded from indemnity and/or defense under law);
   c. Identify the appropriate agency responsible for indemnifying and/or defending OCERS' Board members and employees for actions arising within the course and scope of their retirement system duties;
   d. Coordinate processing of claims between OCERS and other employing agencies as necessary; and
   e. Provide for the payment of attorneys' fees and costs incurred from inception to and including the date on which OCERS determines whether to indemnify and/or accept the defense of the claims on behalf of the affected Board member or employee.

Policy Guidelines

3. The Board adopts the following approach for all indemnity and/or defense claims made by Board members or employees arising within the course and scope of their retirement system duties:
   a. As soon as practicable after a claim is made against a Board member or employee, such individual shall notify the Legal Department and provide the Legal Department with all documents provided by the claimant.
   b. The Legal Department will review the claim, in conjunction with fiduciary counsel where appropriate, determine whether it is proper for a recommendation to the Board for indemnification and/or defense, and identify the appropriate indemnifying/defending agency.

c. If the Legal Department determines that the claim is not appropriate for a recommendation of indemnification and/or defense, the Legal Department will promptly notify the individual of the reasons indemnification and/or defense is not proper. If the individual wishes to contest the determination of the Legal Department, the matter shall be agendized during a closed session at the next regular Board meeting, and the Board shall comply in all respects with the requirements of the Brown Act.

d. If the Legal Department determines that the claim is appropriate for indemnification and/or defense, the Legal Department will promptly notify the individual of its recommendation to the Board. The Board shall agendize consideration of the matter during a closed session held at the next regular Board meeting and shall comply in all respects with requirements of the Brown Act.

e. The Board will have sole and exclusive authority to determine whether the individual should be indemnified and/or defended. That determination shall consider whether indemnity and/or defense is/are (a) mandatory, (b) discretionary or (c) prohibited under law. If the Board determines that OCERS will not indemnify and/or defend the individual against the claim, the Board will notify the individual in writing within 72 hours of making the determination. The individual will then have the right to seek recourse as permitted by law. If the individual commences a legal action challenging the Board's determination, and until a final determination on the right to indemnification and/or defense is made, OCERS will advance defense costs on behalf of the individual on terms satisfactory to OCERS.

f. If the Board determines to indemnify and/or defend against the claim on behalf of the individual, the Legal Department, in conjunction with Administrative Services, will undertake the necessary steps to ensure that the claim is properly resolved.

g. The Legal Department and/or Administrative Services will communicate with the individual involved in the claim throughout the defense and resolution process.

h. All Board members and employees who seek indemnification and/or defense from OCERS shall fully cooperate throughout the defense and resolution process.

i. Prior to the determination of indemnification and/or defense (as further set forth in the following subparagraph) and thereafter if OCERS accepts the defense, OCERS shall select capable and competent legal counsel, subject to approval of the individual to be indemnified which approval shall not be unreasonably withheld, at the expense of OCERS. Alternatively, the Board of Retirement may permit the individual to select his or her own counsel under circumstances OCERS deems appropriate.

j. Prior to the determination of indemnification and/or defense, OCERS shall advance all funds necessary to enable the subject individual to obtain effective defense to the claim, including attorneys' fees and costs reasonably incurred prior to such determination, subject to such recourse as is provided by law or contract. In the event that it is ultimately determined that OCERS correctly denied indemnity and/or defense of the individual under this policy, OCERS and the individual shall meet and confer to arrange the repayment of any such sums advanced to or on behalf of the individual. Failing an amicable resolution being reached within 60 days of the determination, either party may commence legal action to resolve the dispute.

k. In the event that OCERS obtains third party fiduciary insurance covering claims against Board members, employees, and OCERS itself, OCERS will timely and appropriately tender such claims and take all necessary actions in order to preserve the benefits of such insurance for the insureds.

l. Board members and employees who have ceased their duties with OCERS prior to receiving a claim shall be entitled to the determination of indemnity and/or defense of the claim as set forth under this policy and at law in the same manner as if they had continued in their duties with OCERS. In the event that OCERS obtains third party fiduciary insurance covering claims against Board members and employees, OCERS shall secure continuing coverage as well for Board members and employees who have ceased their duties with OCERS, on commercially reasonable terms.

4. Notwithstanding this policy, OCERS reserves all rights under law (including subrogation rights against the County of Orange in cases where the County is the appropriate agency responsible for indemnifying and/or defending OCERS' Board members and employees) and any applicable employment contract with regard to the terms and conditions of its acceptance of indemnification and/or defense of Board members and employees. In the event of any conflict between such laws, contracts and this policy, the law shall prevail.

Policy Review

5. The Board will review this policy at least every three years to ensure that it remains relevant and appropriate.

Policy History

6. The Board adopted this policy on April 16, 2007. The Board amended this policy on January 18, 2011, March 17, 2014,January 19, 2016 and June 17, 2019.

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 | **06/17/2019**

Steve Delaney
Secretary of the Board

Date

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM
2223 E. WELLINGTON AVENUE, SUITE 100
SANTA ANA, CALIFORNIA 92701

GOVERNANCE COMMITTEE MEETING
May 21, 2019
9:00 a.m.

MINUTES

The Chair called the meeting to order at 9:13 a.m. Attendance was as follows:

Present: Shawn Dewane, Chair; Roger Hilton, Vice Chair; David Ball; Chris Prevatt

Staff: Steve Delaney, Chief Executive Officer; Gina Ratto, General Counsel; Suzanne Jenike, Assistant CEO, External Operations; Sonal Sharma, Recording Secretary; Anthony Beltran, Audio Visual Technician

CONSENT AGENDA

C-1 APPROVE GOVERNANCE COMMITTEE MEETING MINUTES

Governance Committee Meeting Minutes March 1, 2019

A **motion** was made by Mr. Ball, **seconded** by Mr. Prevatt to approve the Minutes. The motion passed **unanimously.**

ACTION ITEMS

A-1 INDIVIDUAL ACTION ON ANY ITEM TRAILED FROM THE CONSENT AGENDA

A-2 MASTER FINAL AVERAGE SALARY PROJECT UPDATE AND MASTER PAY ITEM LIST
Presented by Suzanne Jenike, Assistant Chief Executive Officer, External Operations

Recommendation: Approve, and recommend that the Board approve the Master Final Average list of pay items, including pensionable attribute determinations for Legacy and PEPRA members.

Suzanne Jenike, Assistant CEO of External Operations, presented a comprehensive master list applicable to all OCERS employers and members by bargaining group. Member Services and legal staff determined the correct pension attributes for each pay item based on Legacy and PEPRA member status. Staff updated the master list after discovering some inconsistencies with the pay items.

The Committee Members had questions and comments regarding this item and suggested a few changes for the purposes of clarity.

Following discussion, a **motion** was made by Mr. Hilton, **seconded** by Mr. Ball to approve, and recommend that the Board approve, the Master Final Average list of pay items, including pensionable attribute determinations for Legacy and PEPRA members.

The motion passed **unanimously.**

A-3 TRIENNIAL REVIEW OF THE COMMITTEE CHAIR CHARTER
Presented by Steve Delaney, Chief Executive Officer

Recommendation: Approve, and recommend that the Board approve, revisions to the Committee Chair Charter as presented.

A **motion** was made by Mr. Prevatt, **seconded** by Mr. Hilton to approve, and recommend that the Board approve, revisions to the Committee Chair Charter as presented.

The motion passed **unanimously.**

.A-4 TRIENNIAL REVIEW OF THE INDEMNITY AND DEFENSE POLICY
Presented by Gina M. Ratto, General Counsel

Recommendation: Approve, and recommend that the Board approve, revisions to the Indemnity and Defense Policy as presented.

A **motion** was made by Mr. Ball, **seconded** by Mr. Prevatt to approve, and recommend that the Board approve, revisions to the Indemnity and Defense Policy as presented.

The motion passed **unanimously.**

COMMITTEE MEMBER COMMENTS
None.

CHIEF EXECUTIVE OFFICER/STAFF COMMENTS
None.

COUNSEL COMMENTS
None.

ADJOURNMENT
The meeting adjourned at 9:41a.m.

Submitted by:	**Approved by:**
___________________________	______________________________
Steve Delaney Secretary to the Board	Shawn Dewane, Chair

I-1

Orange County Employees Retirement System
Retirement Board Meeting
June 17, 2019
Application Notices

Member Name	Agency/Employer	Retirement Date
Abu-Shaban, Ossama	Health Care Agency	3/29/2019
Acosta, Robert	Fire Authority (OCFA)	3/29/2019
Allevato, Dean	Sheriff's Dept	3/29/2019
Ambrose, Cynthia	Sanitation District	3/29/2019
Anaya, Nora	Social Services Agency	3/29/2019
Arroyo, Kathleen	Health Care Agency	3/29/2019
Avelar, Frank	Probation	3/29/2019
Avila, Ramona	Child Support Services	3/29/2019
Avilez, Rose	Social Services Agency	3/29/2019
Baca, Fred	Fire Authority (OCFA)	3/29/2019
Bahra, Ronald	Sheriff's Dept	3/29/2019
Beal, Anna	OC Public Works	3/31/2019
Beeler, David	Sheriff's Dept	3/29/2019
Benitez, Veronica	Health Care Agency	3/29/2019
Berndt, Jay	OCTA	3/30/2019
Binz, Randolph	OCTA	3/30/2019
Birdsell, Richard	Sanitation District	3/29/2019
Borba, Verona	Health Care Agency	3/29/2019
Brittingham, Gary	Probation	3/29/2019
Broussard, Anne	Social Services Agency	3/29/2019
Brown, Christopher	Fire Authority (OCFA)	3/29/2019
Bruce-Casares, Mark	Superior Court	3/29/2019
Burrel, Martha	Social Services Agency	3/29/2019
Buse, Edward	Sheriff's Dept	3/29/2019
Butler, Julie	District Attorney	3/29/2019
Cabale, Flerida	Health Care Agency	3/29/2019
Campbell, Martha	County Executive Office (CEO)	3/29/2019
Casas, Linda	Auditor Controller	3/29/2019
Cavallo, Andrea	Probation	3/29/2019
Chavez, Arnold	Sanitation District	3/29/2019
Chen, Gloria	County Executive Office (CEO)	3/29/2019
Chiappone, Arlene	Superior Court	3/29/2019
Clay, Michael	Health Care Agency	3/16/2019
Coalson, Timothy	County Executive Office (CEO)	3/29/2019
Constantino, Raul	Social Services Agency	5/21/2018
Corderman, Cynhia	OC Community Resources	3/29/2019
Cota, Jesus	Social Services Agency	3/29/2019
Craycroft, Danielle	Health Care Agency	3/29/2019
Cunningham, David	Fire Authority (OCFA)	3/29/2019
Curiel, Cynthia	Fire Authority (OCFA)	3/29/2019
Dawson, Janeanne	Human Resources Dept	3/29/2019
De Azambuja, Reina	Social Services Agency	3/29/2019
Demauro, Kenneth	Sheriff's Dept	3/29/2019
Dennis, Gail	County Executive Office (CEO)	3/29/2019
Desens, Henry	Sheriff's Dept	3/29/2019
Dieckman, Karl	Fire Authority (OCFA)	3/29/2019
Dinh, Hoa	Assessor	3/29/2019
Do, Tuoi	Social Services Agency	3/29/2019
Dodson, Diane	OCWR	3/29/2019

Member Name	Agency/Employer	Retirement Date
Doran, Julie	Superior Court	3/30/2019
Du Pont, Nancy	District Attorney	3/29/2019
Dubois, Marcus	Sanitation District	3/29/2019
Duong, Ty	Social Services Agency	3/29/2019
Duran, John	Registrar of Voters	3/29/2019
Eckermann, Susan	District Attorney	3/29/2019
Edmond, Richard	County Executive Office (CEO)	3/11/2019
Edwards, Steve	Fire Authority (OCFA)	3/29/2019
Esquer, Mark	Sanitation District	3/15/2019
Esslinger, Lorence	Sheriff's Dept	3/29/2019
Eubanks, Rachel	Child Support Services	3/29/2019
Feery, Anne Marie	Sanitation District	3/29/2019
Fernandez, Nora	Probation	3/29/2019
Ferrell, Bessy	Probation	3/29/2019
Field, Carlos	District Attorney	3/29/2019
Flores, Edward	District Attorney	4/1/2019
Foroughi, Hossein	Social Services Agency	3/29/2019
Fowler, Guadalupe	Health Care Agency	3/29/2019
Franco, Jaime	Social Services Agency	3/29/2019
Gamino, Dorothy	Sheriff's Dept	3/29/2019
Garber, Gregory	OCWR	3/29/2019
Geagan, Raymond	Fire Authority (OCFA)	3/29/2019
Goetz, Jodee	OC Public Works	3/29/2019
Goetz, John	John Wayne Airport	3/29/2019
Gohil, Reshma	Social Services Agency	3/29/2019
Golden, John	County Counsel	3/15/2019
Graf, Carole	Health Care Agency	3/29/2019
Grechuta, Evelyn	OCWR	3/29/2019
Guillen, Jason	Social Services Agency	3/29/2019
Gutierrez, Thuy	OC Public Works	3/30/2019
Hamer, Andrew	Probation	3/29/2019
Harabedian, Dick	OCWR	3/29/2019
Hatch, Stephen	Health Care Agency	3/29/2019
Hays, Donald	Fire Authority (OCFA)	3/29/2019
Hesketh, Nancy	Health Care Agency	3/30/2019
Hochgurtel, Linda	OC Public Works	3/28/2019
Hoklotubbe, Thomas	Fire Authority (OCFA)	3/29/2019
Hudzinski, Richard	Transportation Corridor Agency (TCA)	4/1/2019
Hunter, Robert	Probation	3/29/2019
Hussey, Joanne	Social Services Agency	3/29/2019
Igo, Jodi	Child Support Services	3/29/2019
Inouye, Denise	OC Community Resources	4/1/2019
Jackson, Janet	Health Care Agency	4/1/2019
Jean, Charlotte	Health Care Agency	3/29/2019
Jimenez, Cirilo	OC Community Resources	3/29/2019
Jimenez, Maria	Sanitation District	3/29/2019
Johnson, Brian	Probation	3/29/2019
Johnson, Charles	Sheriff's Dept	3/29/2019
Johnson, Laura	Probation	3/29/2019
Johnston, Angelina	Superior Court	3/30/2019
Joves, Merly	Social Services Agency	3/29/2019
Kanto, Daniel	OC Public Works	3/29/2019
Kashani, Akbar	OCWR	3/29/2019
Kenney, Shiela	Child Support Services	3/29/2019
Kerckhoff, Carl	Health Care Agency	3/29/2019
Kharrat, Cristela	Social Services Agency	3/29/2019
Khoshaba, Richard	Fire Authority (OCFA)	3/29/2019

Member Name	Agency/Employer	Retirement Date
Khoutsavanh, Judy	Social Services Agency	3/29/2019
King, Marykay	Social Services Agency	3/29/2019
Klingaman, Stephanie	Superior Court	3/29/2019
Konkol, Julie	County Executive Office (CEO)	3/29/2019
Korkos, Andrew	OC Public Works	3/29/2019
Korkos, Rachel Theresa	OC Public Works	2/12/2019
Kovacs, Andy	Fire Authority (OCFA)	3/29/2019
La Fleur, Joyce	OCWR	3/29/2019
Labreche, Marc	District Attorney	3/29/2019
Lancaster, Carol	Fire Authority (OCFA)	3/29/2019
Lane, Nedenia	Health Care Agency	3/29/2019
Lee, Tony	Sanitation District	3/29/2019
Livingston, Linnea	Human Resources Dept	3/29/2019
Livingston, Maria	Superior Court	3/29/2019
Livingston, Peter	OCWR	3/29/2019
Lockhart, William	Fire Authority (OCFA)	3/29/2019
Long, Cindy	Superior Court	3/29/2019
Low, Lance	Fire Authority (OCFA)	3/29/2019
Loya, Paul	OCWR	3/29/2019
Lozano, Kathi	Health Care Agency	3/29/2019
Luna, Maria	Assessor	3/29/2019
Madrid, Luz	Social Services Agency	3/29/2019
Magana, Elaine	Superior Court	3/29/2019
Mai, Lien	Auditor Controller	3/29/2019
Marks, Karen	Health Care Agency	3/29/2019
Marraccini, Rossana	Social Services Agency	3/29/2019
Martinez, Adelina	Health Care Agency	4/22/2019
Martinez, Carlos	Social Services Agency	3/29/2019
Martinez, Vincent	OC Public Works	3/29/2019
Mc Candless, Christine	OCTA	3/30/2019
Mc Combs, Tony	OCWR	3/29/2019
Mc Rae, Bruce	Sheriff's Dept	3/29/2019
Mckinnon, Cynthia	Social Services Agency	3/29/2019
Mclellan, Pamela	Child Support Services	3/29/2019
Meehan, Joseph	Sheriff's Dept	4/12/2019
Merchant, Tim	Fire Authority (OCFA)	3/29/2019
Messinger, Edward	District Attorney	4/21/2019
Mikkelsen, Elizabeth	Social Services Agency	3/29/2019
Miller, Douglas	County Executive Office (CEO)	3/29/2019
Miller, Nancy	OC Community Resources	3/29/2019
Miller, Suzan	Superior Court	3/29/2019
Missel, Daniel	Sheriff's Dept	3/29/2019
Mittelstaedt, Michael	Sheriff's Dept	3/29/2019
Morfin, Lupe	Health Care Agency	3/6/2019
Mullin , Peter	Sheriff's Dept	3/29/2019
Ng, Bill	Assessor	3/29/2019
Ngo, Vinh	Social Services Agency	3/29/2019
Nguyen, Hoang	Social Services Agency	3/29/2019
Nguyen, Julia	Social Services Agency	3/29/2019
Nguyen, Quynh	Social Services Agency	3/29/2019
Nguyen, Tram	Social Services Agency	3/29/2019
Nguyen, Van	Social Services Agency	3/29/2019
Nicholson, Joyce	Social Services Agency	3/29/2019
Nitchman, Sherry	Probation	3/29/2019
Nong, Chymolra	Social Services Agency	3/29/2019
Nwufo, Gladys	Health Care Agency	3/28/2019
Olivas, Gustavo	Social Services Agency	3/29/2019

Member Name	Agency/Employer	Retirement Date
Olson, Todd	Social Services Agency	3/29/2019
O'Neill, Warren	Public Defender	3/29/2019
Ortiz, Sylvia	Superior Court	3/29/2019
Paakkonen, Kelly	Sheriff's Dept	3/29/2019
Parker, Shannon	Sheriff's Dept	3/29/2019
Pattillo, Glenn	OCWR	3/29/2019
Peace, Ron	Superior Court	3/29/2019
Pease, William	Sanitation District	3/29/2019
Peeples, Katherine	Social Services Agency	3/29/2019
Peters, Adrena	OC Community Resources	3/29/2019
Pham, Kim	Social Services Agency	3/29/2019
Pham, Le-Hoa	Child Support Services	3/29/2019
Pham, Sandy	Probation	3/29/2019
Phan, Kim	Health Care Agency	3/29/2019
Phelps, Charlotte	Fire Authority (OCFA)	3/29/2019
Prickett, La Rena	OCTA	3/26/2019
Prophet, Bradley	Fire Authority (OCFA)	3/29/2019
Puente, Florence	Social Services Agency	3/29/2019
Quenbengco, Amelia	Auditor Controller	3/29/2019
Rae, Cindy	Superior Court	3/29/2019
Rahman, Zeenat	Health Care Agency	3/29/2019
Ramos, Genaro	County Executive Office (CEO)	3/29/2019
Rex, Kimberly	Superior Court	3/29/2019
Reynoso, Sylvia	Health Care Agency	3/29/2019
Riddle, Sandi	Child Support Services	3/29/2019
Rigoni, Kari	John Wayne Airport	3/29/2019
Rinderknecht, Carol	Sheriff's Dept	3/29/2019
Ritter, Kent	Child Support Services	3/29/2019
Robinett, Chad	Sheriff's Dept	3/29/2019
Robles, Pamela	Public Defender	3/29/2019
Rojas, Elsa	Auditor Controller	3/29/2019
Romanofsky, Evelyn	Health Care Agency	3/29/2019
Rondini, Cecilia	Social Services Agency	3/29/2019
Rondon, Cheryl	Social Services Agency	3/29/2019
Rosario, Virgenmina	Social Services Agency	3/29/2019
Rosen, Norma	Social Services Agency	4/22/2019
Rosin, Philip	OCTA	4/1/2019
Rowan-Barton, Julia	Superior Court	3/29/2019
Salamack, Bart	Social Services Agency	3/29/2019
Saleh, Sultan	OCWR	3/29/2019
Sanchez-Nunez, Aida	Health Care Agency	3/29/2019
Saycocie, Manivone	Sheriff's Dept	3/29/2019
Scaff, Vilma	Child Support Services	3/29/2019
Schwenke, Cynthia	Sheriff's Dept	3/29/2019
Scott, Larry	District Attorney	3/29/2019
Scott, Sandra	Health Care Agency	3/29/2019
Scott-Moody, Joyce	Sheriff's Dept	3/29/2019
Serafin, Raymond	OCWR	3/29/2019
Simmerer, Carl	Health Care Agency	3/31/2019
Simon, Charles	Sheriff's Dept	3/29/2019
Slomanson, Jeanne	Social Services Agency	3/29/2019
Sotelo, Sharon	Social Services Agency	3/29/2019
Stacklin, Christopher	Sanitation District	3/29/2019
Stanford, Mary	Sheriff's Dept	3/29/2019
Stothers, Jason	Sheriff's Dept	3/29/2019
Ta, Krystine	Social Services Agency	3/29/2019
Taban, Osman	Health Care Agency	3/29/2019

Member Name	Agency/Employer	Retirement Date
Talbert, David	Fire Authority (OCFA)	3/29/2019
Taylor, Christopher	District Attorney	3/29/2019
Taylor, Marjorie	Probation	3/29/2019
Teng, Jeannie	Social Services Agency	3/29/2019
Thomas, Kevin	District Attorney	3/29/2019
Thompson, Robert	Sheriff's Dept	3/29/2019
Titterud, Catherine	District Attorney	4/3/2019
To, Phan	Social Services Agency	3/29/2019
Tran, Linda	Health Care Agency	3/29/2019
Tran, Paul	Social Services Agency	3/29/2019
Truesdell Iii, John	Public Defender	3/29/2019
Turner, Tamara	Social Services Agency	3/29/2019
Usigbe, Matthew	Probation	3/28/2019
Vallercamp, Stacy	Sheriff's Dept	3/29/2019
Valverde, Michelle	Social Services Agency	4/26/2019
Velez, Ivonne	Social Services Agency	3/29/2019
Verdugo, Gloria	OCTA	3/30/2019
Villacorta, Alfonso	OCTA	3/31/2019
Vo, Thieu	County Executive Office (CEO)	3/29/2019
Vreeken, Marcia	Social Services Agency	3/29/2019
Vu, David	Health Care Agency	3/29/2019
Vu, Stephanie	County Executive Office (CEO)	3/30/2019
Vuong, Michael	Sanitation District	3/29/2019
Waldram, David	OCTA	3/31/2019
Walker, Marie	Health Care Agency	4/15/2019
Washington, Mark	Sheriff's Dept	3/29/2019
Washington, Virgil	Sheriff's Dept	3/29/2019
Welch, Patricia	Child Support Services	3/29/2019
Wells, Raymond	Sheriff's Dept	3/29/2019
Winterrowd, Lorna	Probation	3/30/2019
Wong, Aida	Superior Court	3/29/2019
Wood, Ruena	Social Services Agency	3/29/2019
Yancey, Bob	John Wayne Airport	3/29/2019
Ybarra, Frank	Fire Authority (OCFA)	3/29/2019
Young, Stephanie	OC Public Works	3/29/2019
Yu, Windy	Health Care Agency	3/29/2019

Member Name	Agency/Employer	Retirement Date

Orange County Employees Retirement
Retirement Board Meeting
June 17, 2019
Death Notices

Retired Members	*Agency/Employer*
Baca, Thomas	OC Public Works
Brooks, James	District Attorney
Bulle, Stanley	Sheriff's Dept
Chavez, Joseph	Social Services Agency
Eason, Robert	Sheriff's Dept
Escalera, Evelyn	Social Services Agency
Fuske, Richard	OC Public Works
Goodbrand, Ronald	Probation
Guerra, Eva	Sanitation District
Johnson, Marguerite	Health Care Agency
Karagah, Mohammed	Auditor Controller
Kim, John	OCTA
Laughon, Mary Kay	UCI
Layman, Garry	Fire Authority (OCFA)
Mays, Michael	Probation
McDonald, La Rene	Health Care Agency
Meehan, Ronald	Superior Court
Ricarte, Myrna	Health Care Agency
Ripley, Mary Lynne	Health Care Agency
Selleck, Edna	District Attorney
Smith, Donald	OC Public Works
Veal-Hudson, Veronica	County Clerk/Recorder
Verbeck, Florence	Health Care Agency
Ward, Sandra	OC Waste & Recycling
Weinheimer, La Vonne	Superior Court
Wilson, Donald	OC Public Works
Woolf, Stanley	Probation

Surviving Spouses	
Baldwin, Arta	
Bergeson, Garth	
Bumstead, Irene	
Cook, Nancy	
Gallegos, Juana	
Hartranft, Joyce	
Hines, Maralee	
Shafer, Robert	
Wilson, Jackquelynn	

I-2

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM

BOARD OF RETIREMENT
2223 WELLINGTON AVENUE, SUITE 100
SANTA ANA, CA 92701

AUDIT COMMITTEE MEETING
March 26, 2019
1:00 p.m.

Members of the Committee
Frank Eley, Chair
Charles Packard, Vice Chair
Jeremy Vallone
Shari Freidenrich

MINUTES

OPEN SESSION

The Chair called the meeting to order at 1:01 p.m.

Attendance was as follows:

Committee Members: Frank Eley, Chair; Charles Packard, Vice Chair; Jeremy Vallone; Shari Freidenrich

Staff: David Kim, Director of Internal Audit; Brenda Shott, Assistant CEO of Internal Operations; Suzanne Jenike, Assistant CEO External Operations; Mark Adviento, Internal Auditor; Jim Doezie, Contracts Administrator; Sonal Sharma, Recording Secretary; Javier Lara, IT Manager

PUBLIC COMMENT
None.

CONSENT AGENDA

C-1 APPROVE AUDIT COMMITTEE MINUTES

Audit Committee Meeting Minutes **February 7, 2019**

A **motion** was made by Mr. Packard, **seconded** by Ms. Freidenrich to approve the minutes.

I-1 2018 FINANCIAL STATEMENT AUDIT – ENTRANCE CONFERENCE
Presentation by Linda Hurley and Amy Chiang, Macias Gini & O'Connell

I-2 OPERATIONAL RISK MANAGEMENT PROGRAM UPDATE
Presentation by Brenda Shott, Assistant CEO of Internal Operations, OCERS and David Kim, Director, Internal Audit

A-3 IIA EXTERNAL QUALITY PEER REVIEW REPORT

Presentation by George Shemo, IIA Quality Services (via teleconference)

Recommendation: Receive and file.

IIA External Auditor, George Shemo, noted the rating of Generally Conforms is the highest rating that can be achieved in a Quality Review. Mr. Shemo highlighted the details from the report, including findings and best practice recommendations. Specifically for findings, OCERS Internal Audit to begin formally verifying management's action plans. Mr. Shemo also noted that the audit profession has progressed beyond assurance functions and can provide advisory services. However, in an assurance capacity, Internal Audit is expected to evaluate and improve the effectiveness of management's controls as opposed to acting in the capacity of management's control.

A **motion** was made by Mr. Packard, **seconded** by Ms. Freidenrich to receive and file.

A-2 HOTLINE UPDATE
Presentation by David Kim, Director of Internal Audit

Recommendation: Receive and file.

A **motion** was made by Mr. Packard, **seconded** by Mr. Vallone to receive and file.

I-3 STATUS UPDATE OF 2019 AUDIT PLAN
Written Report

COMMITTEE MEMBER COMMENTS
None.

CHIEF EXECUTIVE OFFICER/STAFF COMMENTS
None.

COUNSEL COMMENTS

None.

ADJOURNMENT

The Chair adjourned the meeting at 2:46pm.

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM
BOARD OF RETIREMENT
2223 E. WELLINGTON AVENUE, SUITE 100
SANTA ANA, CALIFORNIA

PERSONNEL COMMITTEE MEETING
April 23, 2019
1:00 p.m.

Members of the Committee
Chris Prevatt, Chair
Wayne Lindholm, Vice Chair
Roger Hilton

MINUTES

Attendance was as follows:

Present: Chris Prevatt, Chair; Wayne Lindholm, Vice Chair; Roger Hilton

Also
Present: Steve Delaney, Chief Executive Officer; Brenda Shott, Assistant CEO, Internal Operations; Suzanne Jenike, Assistant CEO, External Operations; Gina Ratto, General Counsel; Cynthia Hockless, Director of Administrative Services; Anthony Beltran, Visual Technician; Brittany Cleberg, Recording Secretary; and Nichol Forbes, Temporary Assistant Recording Secretary

The Chair called the meeting to order at 1:37 p.m.

ACTION ITEMS

NOTE: Public comment on matters listed in this agenda will be taken at the time the item is addressed, prior to the Committee's discussion of the item.

A-1 2019 OCERS PERSONNEL COMMITTEE PLANNING SESSION AND MEETING CALENDAR
Presentation by Steve Delaney, Chief Executive Officer

Recommendation: Approve the 2019 OCERS Personnel Committee Meeting Calendar.

Mr. Delaney presented the upcoming items requiring the Committees' attention. The Committee will receive the outcome of the Compensation Study specific to OCERS Direct Employees.

Mr. Hilton arrived at 1:39 p.m.

Mr. Delaney discussed the Employee Handbook for OCERS Direct staff. The Governance Committee previously discussed this handbook and it was decided to be a matter for the Personnel Committee.

Mr. Delaney reviewed the Classification Study of County Staff assigned to OCERS. Previously, OCERS executive staff met with Brenda Diederichs, Chief Human Resources Officer, County of Orange, who agreed to include OCERS assigned County staff in their classification and compensation study process. The goal would be to have OCERS specific classifications for all County staff assigned to OCERS. Ms. Diederichs has since left her position with the County of Orange. A meeting with Tom Hatch, the current Chief Human Resources Officer, County of Orange; is scheduled for April 24, 2019.

Mr. Prevatt requested an Employee Handbook for Mr. Lindholm to review.

Mr. Delaney discussed how the Board previously handled OCERS Direct Staff related topics.

The Committee discussed the 2019 proposed meeting dates month by month. The agreed upon dates were May 20, 2019; June 17, 2019; July 11, 2019; July 31, 2019; August 19, 2019; October 31, 2019; November 18; 2019; November 25, 2019; December 16, 2019; and December 19, 2019. The executive staff will bring forth a proposed schedule at the next meeting for approval.

COMMITTEE MEMBER/CEO /STAFF/COUNSEL COMMENTS
None

ADJOURNMENT: The Chair adjourned the meeting at 1:56 p.m.

Submitted by:

Steve Delaney
Secretary to the Committee

Approved by:

Chris Prevatt
Chair

I-3

ORANGE COUNTY OCERS EMPLOYEES RETIREMENT SYSTEM

Memorandum

DATE: June 17, 2019

TO: Members of the Board of Retirement

FROM: Steve Delaney, Chief Executive Officer

SUBJECT: **CEO FUTURE AGENDAS AND 2019 OCERS BOARD WORK PLAN**

Written Report

AGENDA TOPICS FOR THE OCERS BOARD OF RETIREMENT

JULY

The Cloud – OCERS' Approach – Matt Eakin

Travel and Training Expense Report

Strategic Planning Workshop – Final Agenda

Consideration of Early Payment of Employer Contributions for Fiscal Year 2020 – 2021

Segal Cost Projections

AUGUST

OCFA Update – Lori Zeller

San Diego City Employees Retirement – Gregg Rademacher

OCERS by the Numbers

The Evolution of the OCERS UAAL

Employer Employee Contribution Matrix

Annual Succession Planning Report

SEPTEMBER

2019 OCERS Board

Strategic Planning Workshop

Proposed Board Meeting schedule for 2020

Submitted by:

Steve Delaney

Steve Delaney
Chief Executive Officer

OCERS RETIREMENT BOARD - 2019 Work Plan

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep (Offsite)	Oct	Nov	Dec
System Oversight		STAR COLA Posting **(I)**	Approve 2019 STAR COLA **(A)**	SACRS Board of Directors Election **(A)**	Preliminary December 31, 2018 Valuation **(I)**	Mid-Year Review of 2019 Business Plan Progress **(I)**	Approve Early Payment Rates for Fiscal Year 2018-19 **(A)**	Review 2nd Quarter Budget to Actuals Financial Report **(I)**	Strategic Planning Workshop **(I)**	Overview of 2020 Administrative Budget and Investment (Workshop) **(I)**	Review 3rd Quarter Budget to Actuals Financial Report **(I)**	
		Approve 2019 COLA **(A)**	Quarterly 2019-2021 Strategic Plan Review **(A)**			Approve December 31, 2018 Actuarial Valuation & Funded Status of OCERS **(A)**		Receive OCERS by the Numbers **(I)**		Approve 2020-2022 Strategic Plan **(A)**	Approve 2020 Administrative (Operating) Budget **(A)**	
						Approve 2018 CAFR **(A)**		Receive Evolution of the UAAL **(I)**		Approve 2020 Business Plan **(A)**	Annual CEO Performance Review and Compensation **(A)**	
						Quarterly 2019-2021 Strategic Plan Review **(A)**		Employer & Employee Pension Cost Comparison **(I)**				
												Adopt 2020 Board Meeting Calendar **(A)**
Board Governance				Brown Act Training **(I)**				Annual Review of Succession Plan **(I)**				Adopt Annual Work Plan for 2020 **(A)**
				Conflict of Interest Training **(I)**								Vice-Chair Election **(A)**
Regulation / Policies	Communication Policy Fact Sheet **(I)**											
Compliance				Form 700 Due **(A)**		Receive Financial Audit **(I)**			State of OCERS **(A)**		Status of Board Education Hours for 2019 **(I)**	

(A) = Action **(I) = Information**

I-4

ORANGE COUNTY OCERS EMPLOYEES RETIREMENT SYSTEM

Memorandum

DATE: June 4, 2019

TO: Members of the Board of Retirement

FROM: Jim Doezie, Contracts, Risk and Performance Administrator

SUBJECT: **QUIET PERIOD – NON-INVESTMENT CONTRACTS**

Written Report

Background/Discussion

1. Quiet Period Policy Guidelines

The following guidelines established by the Quiet Period Policy, section 3.c, will govern a search process for any contract to be awarded by OCERS:

"…Board Members and OCERS staff shall not knowingly communicate with any party financially interested in any prospective contract with OCERS regarding the contract, the services to be provided under the contract or the selection process;"

2. Quiet Period Guidelines

In addition, the following language is included in all distributed RFP's:

"From the date of issuance of this RFP until the selection of one or more respondents is completed and announced, respondents are not permitted to communicate with any OCERS staff member or Board Members regarding this procurement, except through the Point of Contact named herein. Respondents violating the communications prohibition may be disqualified at OCERS' discretion. Respondents having current business with OCERS must limit their communications to the subject of such business."

Distributed RFP's

The RFP's noted below are subject to the quiet period until such time as a contract(s) is finalized.

- An RFP was distributed for Hearing Officer Services in October, 2018. Submissions deadline was December 4th, 2018. Interviews have been conducted and final evaluations are in progress.
- An RFP for a Unified Commutations & Contact Center Solution (Telephone System) was distributed May 15th. Pending receipt of bids/proposals.
- An RFP for Mail House Services is currently being drafted. The plan is to distribute the RFP in late June or July.

Submitted by:

Jim Doezie
Contracts, Risk and Performance Administrator

I-5

ORANGE COUNTY OCERS EMPLOYEES RETIREMENT SYSTEM

Memorandum

DATE: June 17, 2019

TO: Members of the Board of Retirement

FROM: Gina M. Ratto, General Counsel

SUBJECT: **LEGISLATIVE UPDATE**

Written Report

Background/Discussion

The California Legislature convened on December 3, 2018 to commence the 2019 – 2020 legislative session. May 31, 2019 was the last day for bills to pass out of their houses of origin.

A comprehensive list and description of the pending bills that staff is monitoring is attached. Below is a brief summary of the bills that may be of greater interest to the Board. **New or updated information since the last report to the Board are indicated in bold text.**

SACRS Sponsored Bills

- **SB 783 (Senate Committee on Labor, Public Employees and Retirement)**
  The CERL authorizes counties to establish retirement systems pursuant to its provisions for the purpose of providing pension and death benefits to county and district employees. This bill would correct several erroneous and obsolete cross-references within CERL.
  (STATUS: Introduced 03/07/19. **Passed out of Senate and ordered to the Assembly on 05/02/19. In Assembly. Read first time. Held at desk on 05/02/19. Referred to Committee on P.E. & R. on 05/16/19.)**

Bills That Would Amend the CERL or Other Laws That Apply to OCERS

- **AB 249 (Choi)**
  This bill would prohibit a public employer from deterring or discouraging a public employee or an applicant to be a public employee from opting out of becoming or remaining a member of an employee organization. The bill would prohibit a public employer from taking adverse action against a public employee or applicant to be a public employee who opts out of becoming or remaining a member of an employee organization and would specify that adverse action includes reducing a public employee's current level of pay or benefits.
  (STATUS: Introduced 01/22/19. Referred to Committee on P.E. & R on 02/07/19. In Committee: Set, first hearing. Failed Passage 04/03/19.)

- **AB 287 (Voepel)**
  Existing law requires each state and local public pension or retirement system, on and after the 90th day following the completion of the annual audit of the system, to provide a concise annual report on the investments and earnings of the system, as specified, to any member who makes a request and pays a fee, if required, for the costs incurred in preparation and dissemination of that report. This bill would also require each state and local pension or retirement system to post a concise annual audit of the information described above on that system's internet website no later than the 90th day following the audit's completion. By imposing new duties on local retirement systems, the bill would impose a state-mandated local program. The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement. This bill would provide that, if the Commission on State Mandates determines that the bill contains costs mandated by the state, reimbursement for those costs shall be made pursuant to the statutory provisions noted above.
  (STATUS: Introduced 01/28/19. Referred to the Committee on P.E. & R on 02/07/19.)

- **AB 472 (Voepel)**
  PEPRA establishes various limits on retirement benefits generally applicable to a public employee retirement system, as defined. The act prescribes, among other things, limits on service after retirement without reinstatement into the applicable retirement system. This bill would make non-substantive changes to that provision.
  (STATUS: Introduced 02/11/19. Pending committee assignment.)

- **AB 664 (Cooper)** Amended 03/13/19 to apply only to Sacramento County.
  The CERL provides that a member who is permanently incapacitated shall be retired for disability despite age if, among other conditions, the member's incapacity is a result of injury or disease arising out of and in the course of the member's employment, and that employment contributes substantially to that incapacity or the member has completed 5 years of service and not waived retirement in respect to the particular incapacity or aggravation thereof, as specified. This bill would require, for purposes of determining permanent incapacity of certain members employed as peace officers in the County of Sacramento, that those members be evaluated by the retirement system to determine if they can perform all of the usual and customary duties of a peace officer who is described under Section 830 of the Penal Code. The bill would apply to members who file applications for disability on or after the effective date of the act, except for cases on appeal at that time. The bill would require the board of retirement to develop a method of tracking the costs of providing permanent disability retirement to the members who become eligible for disability retirement pursuant to the bill's provisions. The bill would repeal these provisions on December 31, 2024.
  (STATUS: Introduced 02/15/19. **Read third time. Passed. Ordered to the Senate on 05/13/19. In Senate. Read first time. To Committee on RLS. for assignment on 05/14/19. Referred to Committees on L., P.E. & R. and APPR on 05/22/19.)**

- **AB 992 (Mullin)** Amended 04/22/19.
  The Brown Act generally requires that the meetings of legislative bodies of local agencies be conducted openly. That act defines "meeting" for purposes of the act and prohibits a majority of the members of a legislative body, outside a meeting authorized by the act, from using a series of communications of any kind to discuss, deliberate, or take action on any item of business that is within the subject matter jurisdiction of the legislative body**.** This bill would provide that the prohibition described above does not apply to the, participation, as defined, in an internet-based social media platform, as defined, by a majority of the members of a legislative body, provided that a majority of the members do not discuss among themselves, as defined, business of a specific nature that is within the subject matter jurisdiction of the legislative body of the local agency**.**
  (STATUS: Introduced 02/21/19. **In committee: Set, first hearing. Failed passage. Reconsideration granted on 05/01/19.)**

- **AB 1184 (Gloria) Amended 05/16/19.**
  The California Public Records Act requires a public agency, defined to mean any state or local agency, to make public records available for inspection, subject to certain exceptions. Existing law specifies that public records include any writing containing information relating to the conduct of the public's business, including writing transmitted by electronic mail. The act requires any agency that has any information that constitutes a public record not exempt from disclosure, to make that public record available in accordance with certain provisions and authorizes every agency to adopt regulations stating the procedures to be followed when making its records available, if the regulations are consistent with those provisions. Existing law authorizes cities, counties, and special districts to destroy or to dispose of duplicate records that are less than two years old when they are no longer required by the city, county, or special district, as specified.

  This bill would, unless a longer retention period is required by statute or regulation, require a public agency for purposes of the California Public Records Act to retain and preserve for at least 2 years every writing containing information relating to the conduct of the public's business prepared, owned, or used by any public agency that is transmitted by electronic mail ~~**or other similar messaging system.**~~
  (STATUS: Introduced 02/21/19. **Amended, and passed out of committee as amended on 05/16/19. Read second time and amended. Ordered returned to second reading on 05/16/19. Read second time. Ordered to third reading on 05/20/19. Read third time. Passed. Ordered to the Senate on 05/28/19. In Senate. Read first time. To Com. on RLS. for assignment on 05/29/19.)**

- **AB 1198 (Stone**) Amended 03/21/19.
  PEPRA, among other things, establishes new retirement formulas, which are generally applicable to employees first employed on or after January 1, 2013, and which a public employer offering a defined benefit pension plan is prohibited from exceeding. PEPRA excepts certain public employees from its provisions, including certain transit workers whose interests are protected by specified federal law until a federal district court ruled that a United States Department of Labor determination that the application of PEPRA to these workers violated federal law was in error, or until January 1, 2016, as

specified. A district court ruling to this effect occurred on December 31, 2014. This bill would except transit workers hired before January 1, 2016, from PEPRA by removing the federal district court contingency language from the provision excepting certain transit workers from PEPRA, as described above.
(STATUS: Introduced 02/21/19. Set for first hearing in committee; hearing cancelled at the request of author on 04/24/19.)

- **AB 1212 (Levine) Amended 05/16/19.**
  Existing law authorizes the boards of CalPERS, CalSTRS, and the '37 Act systems, consistent with their fiduciary duties and investment standards, to prioritize investment in an in-state infrastructure project over a comparable out-of-state infrastructure project. This bill would require a state agency, **as defined,** that is responsible for infrastructure projects to produce a list of priority infrastructure projects for funding consideration by the retirement boards, as described above, and to provide the list to those boards. The state agency would be required to provide further project information to a board upon request.
  (STATUS: Introduced 02/21/19. **Amended and passed out of committee as amended on 05/16/19. Read second time and amended. Ordered returned to second reading on 05/16/19. Read second time. Ordered to third reading on 05/20/19. Read third time. Passed. Ordered to the Senate on 05/29/19.)**

- **AB 1819 (Committee on Judiciary)** Amended 04/11/19.
  The California Public Records Act requires state and local agencies to make public records available upon receipt of a request that reasonably describes an identifiable record not otherwise exempt from disclosure, and upon payment of fees to cover costs. This bill would grant the requester the right to use the requester's equipment, without being charged any fees or costs, to photograph or otherwise copy or reproduce any record upon inspection and on the premises of the agency, unless the means of copy or reproduction would result in damage to the record, or unauthorized access to a computer system of the agency or secured network, as specified. The bill would authorize the agency to impose any reasonable limits on the use of the requester's equipment that are necessary to protect the safety of the records or to prevent the copying of records from being an unreasonable burden to the orderly function of the agency and its employees. The bill would authorize the agency to impose any limit that is necessary to maintain the integrity of, or ensure the long-term preservation of**,** historic or high-value records~~,~~. By imposing additional duties and responsibilities upon local agencies in connection with requests for inspection of records, this bill constitutes a state-mandated local program.
  (STATUS: Introduced 03/26/19. **Passed out of Assembly. Ordered to the Senate on 05/06/19. In Senate. Read first time. To Committee on RLS. for assignment on 05/06/19.)**

- **SB 430 (Wieckowski) Amended 05/17/19.**
  PEPRA prohibits a public employer offering a defined benefit pension plan from exceeding specified retirement formulas for new members and prohibits an enhancement of a public employee's retirement formula or benefit adopted after January 1, 2013, from applying to service performed prior to the operative date of the enhancement. PEPRA defines "new member" to ~~**include**~~ **mean, among other**

things, an individual who becomes a member of any public retirement system for the first time on or after January 1, 2013, and who was not a member of any other public retirement system prior to that ~~**date; an individual who becomes a member of a public retirement system for the first time on or after January 1, 2013, and who was a member of another public retirement system prior to that date, but who was not subject to reciprocity under specified law; or an individual who was an active member in a retirement system and who, after a break in service of more than 6 months, returned to active membership in that system with a new employer.**~~ **date. Existing law creates the Judges' Retirement System II, which is administered by the Board of Administration of the Public Employees' Retirement System, for the provision of retirement and other benefits to specified judges and their beneficiaries.**

This bill would ~~**specifically exclude from the definition of "new member" a judge, as defined in specified existing law, elected to office before January 1, 2013.**~~ **grant a judge who was elected to office in 2012, but did not take office until on or after January 1, 2013, the option of making a one-time, irrevocable election to have a pre-January 1, 2013, membership status in the Judges' Retirement System II for service accrued after on and after July 1, 2020. The bill would require the election to be made during a 30-day period beginning March 1, 2020. A judge making this election would no longer be a new member under specified provisions of PEPRA. The election would apply prospectively only, and membership rights and obligations that accrued based on service subject to PEPRA prior to July 1, 2020, would remain unchanged. The bill would specify that the Public Employees' Retirement System is not obligated to inform or locate a person who may be eligible to make the election and that its provisions do not affect the Legislature's reserved right to increase contributions or reduce benefits for purposes of the Judges' Retirement System II.**
(STATUS: Introduced 02/21/19. **Passed out of committee as amended on 05/17/19. Read second time and amended. Ordered to second reading on 05/17/19. Read second time. Ordered to third reading on 05/20/19. Read third time. Passed. Ordered to the Assembly on 05/21/19. In Assembly. Read first time. Held at Desk on 05/22/19.)**

- **SB 518 (Wieckowski)**
  The California Public Records Act requires a public agency to make its public records available for public inspection and to make copies available upon request and payment of a fee, unless the public records are exempt from disclosure. The act makes specified records exempt from disclosure and provides that disclosure by a state or local agency of a public record that is otherwise exempt constitutes a waiver of the exemptions. This bill, for purposes of the award of court costs and reasonable attorney's fees pursuant to the above provisions, would specifically notwithstand a provision of existing law that prescribes the withholding or augmentation of costs if an offer is made before judgment or award in a trial or arbitration.
  (STATUS: Introduced 02/21/19. **Passed out of committee on 05/16/19. Read second time. Ordered to third reading on 05/16/19. Read third time. Passed. Ordered to the Assembly on 05/23/19. In Assembly. Read first time. Held at Desk on 05/24/19.)**

- **SB 615 (Hueso)**
  The California Public Records Act requires a public agency to make its public records available for public inspection and to make copies available upon request and payment of a fee, unless the public records are exempt from disclosure. The act makes specified records exempt from disclosure and provides that disclosure by a state or local agency of a public record that is otherwise exempt constitutes a waiver of the exemptions. The act permit any person to institute proceedings for injunctive or declaratory relief or a writ of mandate to enforce the right to receive a copy of any public record covered by the act. This bill would require a person to meet and confer in good faith with the agency in an attempt to informally resolve each issue before instituting any proceeding for injunctive or declarative relief or writ of mandate. The bill would require the person or their attorney to file a declaration stating that this has occurred at the time that proceedings are instituted. Because the declaration would be made under penalty of perjury, the bill would expand the definition of a crime and impose a state-mandated local program. This bill contains other related provisions and other existing laws.
  (STATUS: Introduced 02/22/19. Referred to Committee on JUD. on 03/14/19.)

- **SB 749 (Durazo) Amended 05/23/19.**
  The California Public Records Act provides that nothing in the act requires the disclosure of corporate proprietary information including trade secrets, among other things. This bill would provide that records relating to wages, benefits, working hours, and other employment terms and conditions of employees working for a private industry employer pursuant to a contract with a state or local agency **are public records and** shall not be deemed to be trade secrets under the ~~act~~.**act if the records are prepared, owned, used, or retained by a state or local agency.** The bill would also provide that records of compliance with local, state, or federal domestic content requirements and records of a private industry employer's compliance with job creation, job quality, or job retention obligations contained in a contract or agreement with a state or local agency **are public records and** shall not be deemed trade secrets under the ~~act.~~**act if the records are prepared, owned, used, or retained by a state or local agency.**
  (STATUS: Introduced 02/22/19. **Passed out of committee on 05/16/19. Read second time. Ordered to third reading on 05/16/19. Read third time and amended on 05/23/19. Ordered to second reading on 05/23/19. Read second time. Ordered to third reading on 05/24/19.**

Other Bills of Interest

- **AB 1332 (Bonta)** Amended 04/29/19.
  This bill, the Sanctuary State Contracting Act, would, among other things, require the Department of Justice, commending on January 1, 2020, and quarterly thereafter, to publish a list on its internet website, based on specified criteria, of each person or entity that, in the opinion of the Department of Justice, is providing data broker, extreme vetting, or detention facilities support to any federal immigration agency, as specified. The bill would prohibit a state or local agency from entering into a new, amended, or extended contract or agreement with any person or entity that appears on the list published by the Department of Justice unless the state or local agency has made a finding that no reasonable alternative exists, as specified. The bill would exempt certain contracts or agreements from these provisions related to provisions the administration of retirement benefits and investment of

moneys for retirement benefits, as specified. This bill would authorize the Department of Justice to initiate, and require the department to receive and investigate, all complaints regarding violations of these provisions, and would require the department to issue findings regarding any alleged violation and notify any affected state or local agency. By increasing the duties of local officials, this bill would impose a state-mandated local program. Additionally, this bill would make a violation of these provisions subject to civil and criminal penalties, thereby imposing a state-mandated local program.
(STATUS: Introduced 02/22/19. **Re-referred to Com. on APPR. on 4/30/19. In committee: Set, first hearing. Referred to APPR. suspense file on 05/08/19. In committee: Held under submission on 05/16/19.**

- **SB 53 (Wilk)** Amended 03/05/19.
  The Bagley-Keene Open Meeting Act requires that all meetings of a state body, as defined, be open and public and that all persons be permitted to attend and participate in a meeting of a state body, subject to certain conditions and exceptions. This bill would specify that the definition of "state body" includes an advisory board, advisory commission, advisory committee, advisory subcommittee, or similar multimember advisory body of a state body that consists of 3 or more individuals, as prescribed, except a board, commission, committee, or similar multimember body on which a member of a body serves in his or her official capacity as a representative of that state body and that is supported, in whole or in part, by funds provided by the state body, whether the multimember body is organized and operated by the state body or by a private corporation. This bill would declare that it is to take effect immediately as an urgency statute.
  (STATUS: Introduced 12/10/18. **Referred to the Committee on G.O. on 05/06/19.)**

- **SB 715 (Galgiani)** Amended 03/28/19.
  The California Constitution establishes the University of California as a public trust with full powers of organization and government, subject only to specified limitations. Under this independent constitutional authority, the University of California established retirement systems to provide various retirement benefits to its members. Existing law prohibits the University of California from contracting for services unless a contractor certifies that the services will be performed solely by workers within the United States or if the contractor's bid describes any work that will be performed by workers outside the United States. This bill would prohibit the University of California from contracting for services with an asset manager for a defined contribution plan if that plan is a stand-alone optional plan that is not a complement to a defined benefit pension plan. The bill would apply this prohibition to a contract entered into on or after January 1, 2015.
  (STATUS: Introduced 02/22/19. Failed to pass out of committee. Reconsideration granted 04/24/19.)

Bills that Apply to CalPERS and/or CalSTRS Only:

- **AB 181 (Rodriguez)** Amended 03/25/19.
  This bill would require CalPERS and CalSTRS to each provide a report to the Legislature, commencing March 1, 2021, and annually thereafter, on the status of achieving appropriate objectives and initiatives**,** to be defined by the boards**,** regarding participation of emerging managers responsible for asset

management within each system's portfolio of investments. The bill would require that the report be based on contracts that the system enters into on and after January 1, 2020, and be based on information from the prior fiscal year. The bill would require each report to include certain elements and would require the boards to define "emerging manager" for purposes of these provisions.
(STATUS: Introduced 01/09/19. **Passed out of committee on 05/16/19. Read second time. Ordered to third reading on 05/20/19. Read third time. Passed. Ordered to the Senate on 05/28/19. In Senate. Read first time. To Committee on RLS. for assignment on 05/29/19.)**

- **AB 462 (Rodriguez) Amended 05/21/19.**
  This bill would require the boards of CalPERS and CalSTRS to each provide a report to the Legislature, commencing March 1, 2021, and annually thereafter, on the status of achieving appropriate objectives and initiatives, to be defined by the boards, regarding participation of emerging managers responsible for asset management within each system's portfolio of investments. The bill would require that the report be based on contracts that the system enters into on and after January 1, 2020, and be based on information from the prior fiscal year. The bill would require each report to include certain elements and would require the boards to define emerging manager for purposes of these provisions. **~~CalPERS provides defined benefits to members of the system based on final compensation, credited service, and age at retirement, subject to certain variations. PERL defines terms for its purposes, including a county peace officer. PERL prescribes, among other things, the disability allowance for a state miscellaneous member upon industrial disability retirement as 50% of the member's final compensation, unless otherwise provided. PERL also defines a county police officer for PERS purposes. This bill would make non-substantive changes to the provisions defining a county peace officer and prescribing the disability allowance for a state miscellaneous member upon industrial disability retirement.~~**
  (STATUS: Introduced 02/11/19. **Referred to Committee on RLS. on 05/01/19. From committee chair, with author's amendments: Amended and re-referred to committee. Read second time, amended, and re-referred to Com. on RLS. on 05/21/19.)**

- **AB 644 (Committee on Public Employment and Retirement)** Amended 03/25/19.
  Existing law applicable to CalSTRS defines compensation earnable for the purpose of benefit calculations as the creditable compensation a person could earn in a school year for creditable service performed on a full time basis, and defines creditable compensation as remuneration paid in cash by an employer to all persons in the same class of employees for performing creditable service in that position. Existing law also requires employers to make contributions to the CalSTRS system based on the member's creditable compensation. This bill would revise the definition of compensation earnable for the purposes of CalSTRS to be the sum of the average annualized pay rate, as defined, paid in a school year divided by the service credited for that school year and the remuneration paid in addition to salary or wages. The bill would make various conforming changes in accordance with the revised definition of compensation earnable.

  Existing law applicable to CalSTRS requires an employer to certify that the member's employment has been terminated, unless the member's termination of employment occurred 12 consecutive months or more prior to the date the application for a termination of benefits is received by the system. This bill would require the employer certification to be in a format prescribed by CalSTRS and would specify that the application for a termination benefit must be received at the system's headquarters office.

Existing law authorizes specified CalSTRS members who, on January 1, 1976, are in state service positions or are employees of the Trustees of the California State University, to elect to not continue as members of CalSTRS and to transfer to CalPERS. This bill would repeal these provisions.
(STATUS: Introduced 02/15/19. **Passed out of committee to Consent Calendar on 05/01/19. Read second time. Ordered to Consent Calendar on 05/02/19. Read third time. Passed. Ordered to the Senate on 05/09/19. In Senate. Read first time. To Committee on RLS. for assignment on 05/09/19. Referred to Committee on L., P.E. & R. on 05/22/19.)**

- **AB 672 (Cervantes)**
  CalPERS provides pension and other benefits to members of the system and prescribes conditions for service after retirement. PERL and PEPRA establish various limits on retirement benefits generally applicable to a public employee retirement system, and prescribes, among other things, limits on service after retirement without reinstatement into the applicable retirement system. This bill would prohibit a person who has retired for disability from being employed by any employer without reinstatement from retirement if the position is the position from which the person retired or if the position includes duties or activities that the person was previously restricted from performing at the time of retirement, unless an exception applies. The bill would require, if a person retired for disability is employed by an employer without reinstatement, an employer to provide to the board the nature of the employment and the duties and activities the person will perform.
  (STATUS: Introduced 02/15/19. **Passed out of committee to Consent Calendar on 05/01/19. Read second time. Ordered to Consent Calendar on 05/02/19. Read third time. Passed. Ordered to the Senate on 05/09/19. In Senate. Read first time. To Com. on RLS. for assignment 05/09/19. Referred to Com. on L., P.E. & R on 05/22/19.)**

- **AB 1452 (O'Donnell)** Amended 03/26/19.
  Existing law also creates the CalSTRS Cash Balance Benefit Program, which is administered by the CalSTRS board, to provide a retirement plan for the benefit of participating employees who provide creditable service for less than 50% of full time. This bill would prohibit aggregating creditable service in more than one position for the purpose of determining mandatory membership on a part-time basis for 50% or more of the time the employer requires for a full-time position, as specified. This bill contains other related provisions and other existing laws.
  (STATUS: Introduced 02/22/19. **Passed out of committee to Consent Calendar on 05/01/19. Read second time. Ordered to Consent Calendar on 05/02/19. Read third time. Passed. Ordered to the Senate 05/09/19. In Senate. Read first time. To Com. on RLS. for assignment on 05/09/19. Referred to Com. on L., P.E. & R. on 05/22/19.)**

- **SB 266 (Leyva**) **Amended 05/17/19.**
  Under existing law, CalPERS is responsible for correcting errors and omissions in the administration of the system and the payment of benefits. Existing law requires the board to correct all actions taken as a result of errors or omissions of the state or a contracting agency, in accordance with certain procedures. This bill would establish new procedures under PERL for cases in which CalPERS determines that the benefits of a member or annuitant are, or would be, based on **disallowed** compensation that conflicts with PEPRA and other specified laws and thus impermissible under PERL. The bill would also apply these procedures retroactively to determinations made on or after January 1, 2017, if an appeal has been filed and the employee member, survivor, or beneficiary has not exhausted their administrative or legal remedies. At the threshold, after determining that compensation for an employee member reported by the state, school employer, or a contracting agency is disallowed, the bill would require the applicable employer to discontinue the reporting of the disallowed compensation. The bill would require that contributions made on the disallowed compensation, for active members, be credited against future contributions on behalf of the state, school employer, or contracting agency that reported the disallowed compensation and would require that the ~~**state**~~ **state,** school employer, or contracting agency ~~**to**~~ return to the member any contributions paid by the member or on the member's behalf.
  (STATUS: Introduced 02/12/19. **Passed out of committee as amended on 05/17/19. Read second time and amended. Ordered to second reading on 05/17/19. Read second time. Ordered to third reading on 05/20/19. Read third time. Passed. Ordered to the Assembly on 05/21/19. In Assembly. Read first time. Held at Desk on 05/22/19)**

- **SB 341 (Morell)**
  Existing law requires the CalPERS and CalSTRS retirement boards to provide annual reports to the Legislature and the Governor with regard to investment returns on assets of CalPERS and CalSTRS, respectively. As part of these reports, the boards are required to calculate and report on the rate of return on investments based on different assumptions. This bill would require the Board of Administration of CalPERS to report a calculation of liabilities based on a discount rate equal to the yield on a 10-year United States Treasury note in the year prior to the report. The bill would require the CalSTRS Retirement Board to provide a description of the discount rate the board uses for reporting liabilities, a calculation of liabilities based on a discount rate that is 2% below the long-term rate of return assumed by the board, and a calculation of liabilities based on a discount rate equal to the yield on a 10-year United States Treasury note in the year prior to the report. This bill would also appropriate $1 billion from the General Fund for transfer to the Teachers' Retirement Fund to reduce the unfunded liability of the STRS defined benefit program, and appropriate another $1 billion to the Teachers' Retirement Fund if the Legislative Analyst determines in the May Revision of the 2019-20 Budget that the State has collected more than $1 billion in unanticipated General Fund revenue. This bill contains other related provisions and amendments other existing laws.
  (STATUS: Introduced 02/19/19. Referred to Committee on L., P.E. & R on 02/28/19. Set for hearing on 03/27/19. Failed passage in committee. Reconsideration granted.)

Divestment Proposals (CalPERS and CalSTRS Only)

- **AB 33 (Bonta)**
  This bill would prohibit the CalPERS and CalSTRS from making new investments or renewing existing investments of public employee retirement funds in a private prison company, as defined. This bill would require the boards to liquidate investments in private prison companies on or before July 1, 2020, and would require the boards, in making a determination to liquidate investments, to constructively engage with private prison companies to establish whether the companies are transitioning their business models to another industry. The bill would provide that it does not require a board to take any action unless the board determines in good faith that the action is consistent with the board's fiduciary responsibilities established in the constitution. The bill would provide that board members and other officers and employees shall be held harmless and be eligible for indemnification in connection with actions taken pursuant to the bill's requirements, as specified. The bill would make related legislative findings and declarations.
  (STATUS: Introduced 12/03/18. Referred to Committee on P.E. & R on 01/17/19. Second hearing cancelled at the request of author 04/24/19.)

- **AB 1320 (Nazarian) *Revised* 05/16/19.**
  This bill, upon the passage of a federal law that imposes sanctions on **the government of** Turkey for failure to ~~acknowledge~~ **officially acknowledge its responsibility for** the Armenian Genocide, would prohibit the boards of administration of CalPERS and CalSTRS from making additional or new investments, or renewing existing investments, of public employee retirement funds in an investment vehicle in **the government of** Turkey that is issued by the government of Turkey or that is owned, controlled, or managed by the government of Turkey. The bill would require the boards to liquidate existing investments in ~~**Turkey in these types of investment vehicles within 6 months of the passage of a federal law imposing those sanctions on Turkey.**~~ **the government of Turkey within 18 months of the passage of the above-describe federal law.** The bill would require these ~~**boards, within one year of the passage of a federal law imposing those sanctions on Turkey, to make a specified report**~~ **boards to make specific reports** to the Legislature and the Governor regarding these ~~**actions.**~~ **actions within one year of passage of a federal law imposing those sanctions on the government of Turkey and on or before January 1, 2024.** The bill would specify that its provisions do not require a board to take any action that the board determines in good faith is inconsistent with its constitutional fiduciary responsibilities to the retirement system. The bill would indemnify from the General Fund and hold harmless the present, former, and future board members, officers, and employees of, and investment managers under contract with, the boards, in connection with actions relating to these investments. The bill would repeal these provisions **on January 1, 2025, or** if a determination is made by the Department of State or the Congress of the United States, or another appropriate federal agency, that the government of Turkey has officially acknowledged its responsibility for the Armenian ~~Genocide.~~ **Genocide, whichever occurs first.**
  (STATUS: Introduced 02/22/19. **Coauthors revised on 05/16/19. Passed out of committee on 05/16/19. Read second time. Ordered to third reading on 05/20/19. Read third time. Passed. Ordered to the Senate on 05/23/19. In Senate. Read first time. To Com. on RLS. for assignment on 05/24/19.**

Attachments

Submitted by:

Gina M. Ratto

Gina M. Ratto
General Counsel

2019 - 2020 LEGISLATIVE SESSION BILLS OF INTEREST
LEGISLATIVE UPDATE (JUNE 17, 2019) – ATTACHMENT

New or updated information in bold text

AB 33 (Bonta)

This bill would prohibit the CalPERS and CalSTRS from making new investments or renewing existing investments of public employee retirement funds in a private prison company, as defined. This bill would require the boards to liquidate investments in private prison companies on or before July 1, 2020, and would require the boards, in making a determination to liquidate investments, to constructively engage with private prison companies to establish whether the companies are transitioning their business models to another industry. The bill would provide that it does not require a board to take any action unless the board determines in good faith that the action is consistent with the board's fiduciary responsibilities established in the constitution. The bill would provide that board members and other officers and employees shall be held harmless and be eligible for indemnification in connection with actions taken pursuant to the bill's requirements, as specified. The bill would make related legislative findings and declarations.

(STATUS: Introduced 12/03/18. Referred to Committee on P.E. & R on 01/17/19. Second hearing canceled at request of author on 04/24/19.)

AB 181 (Rodriguez) Amended 03/25/19.

This bill would require CalPERS and CalSTRS to each provide a report to the Legislature, commencing March 1, 2021, and annually thereafter, on the status of achieving appropriate objectives and initiatives**,** to be defined by the boards, regarding participation of emerging managers responsible for asset management within each system's portfolio of investments. The bill would require that the report be based on contracts that the system enters into on and after January 1, 2020, and be based on information from the prior fiscal year. The bill would require each report to include certain elements and would require the boards to define "emerging manager" for purposes of these provisions.

(STATUS: Introduced 01/09/19. **Passed out of committee on 05/16/19. Read second time. Ordered to third reading on 05/20/19. Read third time. Passed. Ordered to the Senate on 05/28/19. In Senate. Read first time. To Committee on RLS. for assignment on 05/29/19.)**

AB 249 (Choi)

This bill would prohibit a public employer from deterring or discouraging a public employee or an applicant to be a public employee from opting out of becoming or remaining a member of an employee organization. The bill would prohibit a public employer from taking adverse action against a public employee or applicant to be a public employee who opts out of becoming or remaining a member of an employee organization and would specify that adverse action includes reducing a public employee's current level of pay or benefits.

(STATUS: Introduced 01/22/19. Referred to Committee on P.E. & R on 02/07/19. In Committee: Set, first hearing. Failed Passage 04/03/19.)

AB 287 (Voepel)

Existing law requires each state and local public pension or retirement system, on and after the 90th day following the completion of the annual audit of the system, to provide a concise annual report on the investments and earnings of the system, as specified, to any member who makes a request and pays a fee, if required, for the costs incurred in preparation and dissemination of that report. This bill would also require each state and local pension or retirement system to post a concise annual audit of the information described above on that system's internet website no later than the 90th day following the audit's completion. By imposing new duties on local retirement systems, the bill would impose a state-mandated local program. The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement. This bill would provide that, if the Commission on State Mandates determines that the bill contains costs mandated by the state, reimbursement for those costs shall be made pursuant to the statutory provisions noted above.
(STATUS: Introduced 01/28/19. Referred to the Committee on P.E. & R on 02/07/19.)

AB 346 (Cooper)

Existing law establishes a workers' compensation system, administered by the Administrative Director of the Division of Workers' Compensation, to compensate an employee for injuries sustained in the course of employment. Existing law provides that certain peace officers, firefighters, and other specified state and local public employees are entitled to a leave of absence without loss of salary while disabled by injury or illness arising out of and in the course of employment. The leave of absence is in lieu of temporary disability payments or maintenance allowance payments otherwise payable under the workers' compensation system. This bill would add police officers employed by a school district, county office of education, or community college district to the list of public employees entitled to a leave of absence without loss of salary, in lieu of temporary disability payments, while disabled by injury or illness arising out of and in the course of employment.
(STATUS: Introduced 02/04/19. **Referred to Committee on L., P.E. & R. and APPR. on 05/08/19.**)

AB 462 (Rodriguez) Amended 05/21/19.

This bill would require the boards of CalPERS and CalSTRS to each provide a report to the Legislature, commencing March 1, 2021, and annually thereafter, on the status of achieving appropriate objectives and initiatives, to be defined by the boards, regarding participation of emerging managers responsible for asset management within each system's portfolio of investments. The bill would require that the report be based on contracts that the system enters into on and after January 1, 2020, and be based on information from the prior fiscal year. The bill would require each report to include certain elements and would require the boards to define emerging manager for purposes of these provisions.
~~CalPERS provides defined benefits to members of the system based on final compensation, credited service, and age at retirement, subject to certain variations. PERL defines terms for its purposes, including a county peace officer. PERL prescribes, among other things, the disability allowance for a state miscellaneous member~~

~~**upon industrial disability retirement as 50% of the member's final compensation, unless otherwise provided. PERL also defines a county police officer for PERS purposes. This bill would make non-substantive changes to the provisions defining a county peace officer and prescribing the disability allowance for a state miscellaneous member upon industrial disability retirement.**~~
(STATUS: Introduced 02/11/19. **Referred to Committee on RLS. on 05/01/19. From committee chair, with author's amendments: Amended and re-referred to committee. Read second time, amended, and re-referred to Com. on RLS. on 05/21/19.)**

AB 472 (Voepel)
PEPRA establishes various limits on retirement benefits generally applicable to a public employee retirement system, as defined. The act prescribes, among other things, limits on service after retirement without reinstatement into the applicable retirement system. This bill would make non-substantive changes to that provision.
(STATUS: Introduced 02/11/19. Pending committee assignment.)

AB 510 (Cooley)
Existing law authorizes the head of a department of a county or city, or the head of a special district to destroy recordings of routine video monitoring maintained by that county, city, or special district after one year if that person receives approval from the legislative body and the written consent of the agency attorney. Existing law authorizes the head of a department of a county or city, or the head of a special district to destroy recordings of telephone and radio communications maintained by that county, city, or special district after 100 days if that person receives approval from the legislative body and the written consent of the agency attorney. This bill would exempt the head of a department of a county or city, or the head of a special district from these recording retention requirements if the county, city, or special district adopts a records retention policy governing recordings of routine video monitoring and recordings of telephone and radio communications.
(STATUS: Introduced 02/13/19. Referred to Committee on L. Gov. on 02/21/19.)

AB 644 (Committee on Public Employment and Retirement) Amended 03/25/19.
Existing law applicable to CalSTRS defines compensation earnable for the purpose of benefit calculations as the creditable compensation a person could earn in a school year for creditable service performed on a full time basis, and defines creditable compensation as remuneration paid in cash by an employer to all persons in the same class of employees for performing creditable service in that position. Existing law also requires employers to make contributions to the CalSTRS system based on the member's creditable compensation. This bill would revise the definition of compensation earnable for the purposes of CalSTRS to be the sum of the average annualized pay rate, as defined, paid in a school year divided by the service credited for that school year and the remuneration paid in addition to salary or wages. The bill would make various conforming changes in accordance with the revised definition of compensation earnable.

Existing law applicable to CalSTRS requires an employer to certify that the member's employment has been terminated, unless the member's termination of employment occurred 12 consecutive months or more prior to the date the application for a termination of benefits is received by the system. This bill would require the employer certification to be in a format prescribed by CalSTRS and would specify that the application for a termination benefit must be received at the system's headquarters office.

Existing law authorizes specified CalSTRS members who, on January 1, 1976, are in state service positions or are employees of the Trustees of the California State University, to elect to not continue as members of CalSTRS and to transfer to CalPERS. This bill would repeal these provisions.
(STATUS: Introduced 02/15/19. **Passed out of committee to Consent Calendar on 05/01/19. Read second time. Ordered to Consent Calendar on 05/02/19. Read third time. Passed. Ordered to the Senate on 05/09/19. In Senate. Read first time. To Committee on RLS. for assignment on 05/09/19. Referred to Committee on L., P.E. & R. on 05/22/19.)**

AB 664 (Cooper) Amended 03/13/19 to apply only to Sacramento County.
The CERL provides that a member who is permanently incapacitated shall be retired for disability despite age if, among other conditions, the member's incapacity is a result of injury or disease arising out of and in the course of the member's employment, and that employment contributes substantially to that incapacity or the member has completed 5 years of service and not waived retirement in respect to the particular incapacity or aggravation thereof, as specified. This bill would require, for purposes of determining permanent incapacity of certain members employed as peace officers in the County of Sacramento, that those members be evaluated by the retirement system to determine if they can perform all of the usual and customary duties of a peace officer who is described under Section 830 of the Penal Code. The bill would apply to members who file applications for disability on or after the effective date of the act, except for cases on appeal at that time. The bill would require the board of retirement to develop a method of tracking the costs of providing permanent disability retirement to the members who become eligible for disability retirement pursuant to the bill's provisions. The bill would repeal these provisions on December 31, 2024.
(STATUS: Introduced 02/15/19. **Read third time. Passed. Ordered to the Senate on 05/13/19. In Senate. Read first time. To Committee on RLS. for assignment on 05/14/19. Referred to Committees on L., P.E. & R. and APPR on 05/22/19.)**

AB 672 (Cervantes)
CalPERS provides pension and other benefits to members of the system and prescribes conditions for service after retirement. PERL and PEPRA establish various limits on retirement benefits generally applicable to a public employee retirement system, and prescribes, among other things, limits on service after retirement without reinstatement into the applicable retirement system. This bill would prohibit a person who has retired for disability from being employed by any employer without reinstatement from retirement if the position is the position from which the person retired or if the position includes duties or activities that the person was previously restricted from performing at the time of retirement, unless an exception applies. The bill would require, if a person retired for disability is employed by an employer without reinstatement, an employer to provide to the board the nature of the employment and the duties and activities the person will perform.
(STATUS: Introduced 02/15/19. **Passed out of committee to Consent Calendar on 05/01/19. Read second time. Ordered to Consent Calendar on 05/02/19. Read third time. Passed. Ordered to the Senate on 05/09/19. In**

Senate. Read first time. To Com. on RLS. for assignment 05/09/19. Referred to Com. on L., P.E. & R on 05/22/19.)

AB 979 (Reyes)
Existing law establishes the Judges' Retirement System II, which CalPERS administers. Existing law authorizes a judge who is a member of the system and who retires upon attaining both 65 years of age and 20 or more years of service, or upon attaining 70 years of age with a minimum of 5 years of service, to elect from specified retirement benefits including a monthly pension. Existing law requires a judge who leaves judicial office after accruing 5 or more years of service, but who has not reached the applicable age of retirement, to be paid a lump sum equal to monetary credits that accrued while in office, as specified. Existing law authorizes a judge who, among other things, separates from office after accruing 5 or more years of service and has not reached 65 years of age to continue health care benefits if the judge assumes certain payments. Existing law specifies benefits provided to a surviving spouse or other beneficiary in relation to these provisions.

This bill would authorize a judge who is a member of the system to retire upon attaining both 63 years of age and 15 or more years of service, or when a judge who has accrued at least 5 years of service and who has not received specified discipline is defeated for reelection. The bill would authorize a judge who is not otherwise eligible to retire and who has either attained 60 years of age with a minimum of 5 years of service or accrued 15 or more years of service to leave the judge's monetary credits on deposit with the system, to retire, and upon reaching retirement age, as specified, to receive a retirement allowance, as provided. The bill would prescribe procedures to apply if the judge fails to elect within 30 days of separation and would authorize the board to charge an administrative fee, as specified, to a judge who elects to apply these provisions. The bill would specify the monthly allowance provided to a surviving spouse or other beneficiary and would make other conforming changes in relation to these provisions. This bill contains other related provisions and other existing laws. (STATUS: Introduced 02/21/19. Set for first hearing in committee; hearing canceled at request of author on 04/24/19.)

AB 992 (Mullin) Amended 4/22/19.
The Brown Act generally requires that the meetings of legislative bodies of local agencies be conducted openly. That act defines "meeting" for purposes of the act and prohibits a majority of the members of a legislative body, outside a meeting authorized by the act, from using a series of communications of any kind to discuss, deliberate, or take action on any item of business that is within the subject matter jurisdiction of the legislative body**.** This bill would provide that the prohibition described above does not apply to the, participation, as defined, in an internet-based social media platform, as defined, by a majority of the members of a legislative body, provided that a majority of the members do not discuss among themselves, as defined, business of a specific nature that is within the subject matter jurisdiction of the legislative body of the local agency**.**
(STATUS: Introduced 02/21/19. **In committee: Set, first hearing. Failed passage. Reconsideration granted on 05/01/19.)**

AB 1184 (Gloria) Amended 05/16/19.
The California Public Records Act requires a public agency, defined to mean any state or local agency, to make public records available for inspection, subject to certain exceptions. Existing law specifies that public records include any writing containing information relating to the conduct of the public's business, including writing transmitted by electronic mail. The act requires any agency that has any information that constitutes a public record not exempt from disclosure, to make that public record available in accordance with certain provisions and authorizes every agency to adopt regulations stating the procedures to be followed when making its records available, if the regulations are consistent with those provisions. Existing law authorizes cities, counties, and special districts to destroy or to dispose of duplicate records that are less than two years old when they are no longer required by the city, county, or special district, as specified.

This bill would, unless a longer retention period is required by statute or regulation, require a public agency for purposes of the California Public Records Act to retain and preserve for at least 2 years every writing containing information relating to the conduct of the public's business prepared, owned, or used by any public agency that is transmitted by electronic mail ~~**or other similar messaging system**~~**.**

(STATUS: Introduced 02/21/19. **Amended, and passed out of committee as amended on 05/16/19. Read second time and amended. Ordered returned to second reading on 05/16/19. Read second time. Ordered to third reading on 05/20/19. Read third time. Passed. Ordered to the Senate on 05/28/19. In Senate. Read first time. To Com. on RLS. for assignment on 05/29/19.)**

AB 1198 (Stone) Amended 03/21/19.
PEPRA, among other things, establishes new retirement formulas, which are generally applicable to employees first employed on or after January 1, 2013, and which a public employer offering a defined benefit pension plan is prohibited from exceeding. PEPRA excepts certain public employees from its provisions, including certain transit workers whose interests are protected by specified federal law until a federal district court ruled that a United States Department of Labor determination that the application of PEPRA to these workers violated federal law was in error, or until January 1, 2016, as specified. A district court ruling to this effect occurred on December 31, 2014. This bill would except transit workers hired before January 1, 2016, from PEPRA by removing the federal district court contingency language from the provision excepting certain transit workers from PEPRA, as described above.
(STATUS: Introduced 02/21/19. Set for first hearing in committee; hearing canceled at request of author on 04/24/19.)

AB 1212 (Levine) Amended 05/16/19.
Existing law authorizes the boards of CalPERS, CalSTRS, and the '37 Act systems, consistent with their fiduciary duties and investment standards, to prioritize investment in an in-state infrastructure project over a comparable out-of-state infrastructure project. This bill would require a state agency, **as defined,** that is responsible for infrastructure projects to produce a list of priority infrastructure projects for funding consideration by the retirement boards, as described above, and to provide the list to those boards. The state agency would be required to provide further project information to a board upon request.

(STATUS: Introduced 02/21/19. **Amended and passed out of committee as amended on 05/16/19. Read second time and amended. Ordered returned to second reading on 05/16/19. Read second time. Ordered to third reading on 05/20/19. Read third time. Passed. Ordered to the Senate on 05/29/19.)**

AB 1320 (Nazarian) Revised 05/16/19.

This bill, upon the passage of a federal law that imposes sanctions on **the government of** Turkey for failure to ~~acknowledge~~ **officially acknowledge its responsibility for** the Armenian Genocide, would prohibit the boards of administration of CalPERS and CalSTRS from making additional or new investments, or renewing existing investments, of public employee retirement funds in an investment vehicle in **the government of** Turkey that is issued by the government of Turkey or that is owned, controlled, or managed by the government of Turkey. The bill would require the boards to liquidate existing investments in ~~**Turkey in these types of investment vehicles within 6 months of the passage of a federal law imposing those sanctions on Turkey.**~~ **the government of Turkey within 18 months of the passage of the above-describe federal law.** The bill would require these ~~**boards, within one year of the passage of a federal law imposing those sanctions on Turkey, to make a specified report**~~ **boards to make specific reports** to the Legislature and the Governor regarding these ~~**actions.**~~ **actions within one year of passage of a federal law imposing those sanctions on the government of Turkey and on or before January 1, 2024.** The bill would specify that its provisions do not require a board to take any action that the board determines in good faith is inconsistent with its constitutional fiduciary responsibilities to the retirement system. The bill would indemnify from the General Fund and hold harmless the present, former, and future board members, officers, and employees of, and investment managers under contract with, the boards, in connection with actions relating to these investments. The bill would repeal these provisions **on January 1, 2025, or** if a determination is made by the Department of State or the Congress of the United States, or another appropriate federal agency, that the government of Turkey has officially acknowledged its responsibility for the Armenian ~~Genocide.~~ **Genocide, whichever occurs first.**

(STATUS: Introduced 02/22/19. **Coauthors revised on 05/16/19. Passed out of committee on 05/16/19. Read second time. Ordered to third reading on 05/20/19. Read third time. Passed. Ordered to the Senate on 05/23/19. In Senate. Read first time. To Com. on RLS. for assignment on 05/24/19.**

AB 1332 (Bonta) Amended 04/29/19.

This bill**,** the Sanctuary State Contracting Act, would, among other things**,** require the Department of Justice, commending on January 1, 2020, and quarterly thereafter, to publish a list on its internet website, based on specified criteria, of each person or entity that, in the opinion of the Department of Justice, is providing data broker, extreme vetting, or detention facilities support to any federal immigration agency, as specified. The bill would prohibit a state or local agency from entering into a new, amended, or extended contract or agreement with any person or entity that appears on the list published by the Department of Justice unless the state or local agency has made a finding that no reasonable alternative exists, as specified. The bill would exempt certain contracts or agreements from these provisions related to provisions the administration of retirement benefits and investment of moneys for retirement benefits, as specified. This bill would authorize the Department of Justice to initiate, and require the department to receive and investigate, all complaints regarding violations of these provisions, and would require the department to issue findings regarding any

alleged violation and notify any affected state or local agency. By increasing the duties of local officials, this bill would impose a state-mandated local program. Additionally, this bill would make a violation of these provisions subject to civil and criminal penalties, thereby imposing a state-mandated local program.
(STATUS: Introduced 02/22/19. **Re-referred to Com. on APPR. on 4/30/19. In committee: Set, first hearing. Referred to APPR. suspense file on 05/08/19. In committee: Held under submission on 05/16/19.**

AB 1452 (O'Donnell) Amended 03/26/19.
Existing law also creates the CalSTRS Cash Balance Benefit Program, which is administered by the CalSTRS board, to provide a retirement plan for the benefit of participating employees who provide creditable service for less than 50% of full time. This bill would prohibit aggregating creditable service in more than one position for the purpose of determining mandatory membership on a part-time basis for 50% or more of the time the employer requires for a full-time position, as specified. This bill contains other related provisions and other existing laws.
(STATUS: Introduced 02/22/19. **Passed out of committee to Consent Calendar on 05/01/19. Read second time. Ordered to Consent Calendar on 05/02/19. Read third time. Passed. Ordered to the Senate 05/09/19. In Senate. Read first time. To Com. on RLS. for assignment on 05/09/19. Referred to Com. on L., P.E. & R. on 05/22/19.)**

AB 1819 (Committee on Judiciary) Amended 04/11/19.
The California Public Records Act requires state and local agencies to make public records available upon receipt of a request that reasonably describes an identifiable record not otherwise exempt from disclosure, and upon payment of fees to cover costs. This bill would grant the requester the right to use the requester's equipment, without being charged any fees or costs, to photograph or otherwise copy or reproduce any record upon inspection and on the premises of the agency, unless the means of copy or reproduction would result in damage to the record, or unauthorized access to a computer system of the agency or secured network, as specified. The bill would authorize the agency to impose any reasonable limits on the use of the requester's equipment that are necessary to protect the safety of the records or to prevent the copying of records from being an unreasonable burden to the orderly function of the agency and its employees. The bill would authorize the agency to impose any limit that is necessary to maintain the integrity of, or ensure the long-term preservation of, historic or high-value records. By imposing additional duties and responsibilities upon local agencies in connection with requests for inspection of records, this bill constitutes a state-mandated local program.
(STATUS: Introduced 03/26/19. **Passed out of Assembly and ordered to the Senate on 05/06/19. In Senate. Read first time. To Committee on RLS. for assignment on 05/06/19.)**

SB 53 (Wilk) Amended 03/05/19.
The Bagley-Keene Open Meeting Act requires that all meetings of a state body, as defined, be open and public and that all persons be permitted to attend and participate in a meeting of a state body, subject to certain conditions and exceptions. This bill would specify that the definition of "state body" includes an advisory board, advisory commission, advisory committee, advisory subcommittee, or similar multimember advisory body of a state body that consists of 3 or more individuals, as prescribed, except a board, commission, committee, or similar multimember body on which a member of a body serves in his or her official capacity as a representative of that state body and that is supported, in whole or in part, by funds provided by the state body, whether the

multimember body is organized and operated by the state body or by a private corporation. This bill would declare that it is to take effect immediately as an urgency statute.
(STATUS: Introduced 12/10/18. **Referred to the Committee on G.O. on 05/06/19.)**

SB 184 (Moorlach) Amended 05/17/19

Existing law establishes the Judges' Retirement System II, which CalPERS administers. Existing law authorizes a judge who is a member of the system and who retires upon attaining both 65 years of age and 20 or more years of service, or upon attaining 70 years of age with a minimum of 5 years of service, to elect from specified retirement benefits including a monthly pension. Existing law requires a judge who leaves judicial office after accruing 5 or more years of service, but who has not reached the applicable age of retirement, to be paid a lump sum equal to monetary credits that accrued while ~~**he or she was**~~ in office, as specified. Existing law authorizes a judge who, among other things, separates from office after accruing 5 or more years of service and has not reached 65 years of age to continue health care benefits if ~~**he or she**~~ **the judge** assumes certain payments. Existing law specifies benefits provided to a surviving spouse or other beneficiary in relation to these provisions.

This bill would authorize a judge who is not otherwise eligible to retire and who has either attained 60 years of age with a minimum of 5 years of service or accrued 20 or more years of service to leave ~~**his or her**~~ **the judge's** monetary credits on deposit with the system, to retire, and upon reaching retirement age, as specified, to receive a retirement allowance, as provided. The bill would prescribe procedures to apply if the judge fails to elect within 30 days of separation and would authorize the board to charge an administrative fee, as specified, to a judge who elects to apply these provisions. The bill would specify the monthly allowance provided to a surviving spouse or other beneficiary and would make other conforming changes in relation to these provisions. The bill would also provide, for the purposes of the Judges' Retirement System II, and for a judge first appointed or elected to office on or after January 1, 2020, that a surviving spouse is a spouse who was married to the judge continuously ~~**from**~~ **for a period beginning one year prior to** the date of **the judge's** retirement until the judge's death.

Existing law establishes the Public Employees' Medical and Hospital Care Act (PEMHCA) for the purpose of providing health care benefits to employees and annuitants, as defined. PEMHCA defines an annuitant for purposes of receiving postretirement health benefits as including, among others, a person who retires within 120 days of separation from public employment and a judge who receives the above-described lump sum payment of monetary credits. Contributions and premiums paid under PEMHCA are deposited in the Public Employees' Contingency Reserve Fund, which is continuously appropriated.

This bill would authorize a judge who elects to retire as described above, but is not yet receiving ~~**his or her**~~ **a** retirement allowance, to continue health care benefits upon separation from office if ~~**he or she**~~ **the judge** assumes specified payments. The bill would include these ~~**judges**~~ **judges, and specified surviving spouses**, within the definition of annuitant upon commencement of the judge's retirement allowance, thereby authorizing the judge **or a surviving spouse** to receive applicable postretirement health benefits. By authorizing the use of continuously appropriated funds for a new purpose, and by depositing additional amounts into a continuously appropriated fund, this bill would make an appropriation.

(STATUS: Introduced 01/30/19. **From committee: Passed as amended on 05/17/19. Read second time and amended. Ordered to second reading on 05/17/19. Read second time. Ordered to third reading on 05/20/19. Read third time. Passed. Ordered to the Assembly on 05/21/19. In Assembly. Read first time. Held at Desk on 05/22/19.)**

SB 266 (Leyva) Amended 05/17/19.

Under existing law, CalPERS is responsible for correcting errors and omissions in the administration of the system and the payment of benefits. Existing law requires the board to correct all actions taken as a result of errors or omissions of the state or a contracting agency, in accordance with certain procedures. This bill would establish new procedures under PERL for cases in which CalPERS determines that the benefits of a member or annuitant are, or would be, based on **disallowed** compensation that conflicts with PEPRA and other specified laws and thus impermissible under PERL. The bill would also apply these procedures retroactively to determinations made on or after January 1, 2017, if an appeal has been filed and the employee member, survivor, or beneficiary has not exhausted their administrative or legal remedies. At the threshold, after determining that compensation for an employee member reported by the state, school employer, or a contracting agency is disallowed, the bill would require the applicable employer to discontinue the reporting of the disallowed compensation. The bill would require that contributions made on the disallowed compensation, for active members, be credited against future contributions on behalf of the state, school employer, or contracting agency that reported the disallowed compensation and would require that the **~~state~~ state,** school employer, or contracting agency **~~to~~** return to the member any contributions paid by the member or on the member's behalf.

(STATUS: Introduced 02/12/19. **Passed out of committee as amended on 05/17/19. Read second time and amended. Ordered to second reading on 05/17/19. Read second time. Ordered to third reading on 05/20/19. Read third time. Passed. Ordered to the Assembly on 05/21/19. In Assembly. Read first time. Held at Desk on 05/22/19.)**

SB 341 (Morell)

Existing law requires the CalPERS and CalSTRS retirement boards to provide annual reports to the Legislature and the Governor with regard to investment returns on assets of CalPERS and CalSTRS, respectively. As part of these reports, the boards are required to calculate and report on the rate of return on investments based on different assumptions. This bill would require the Board of Administration of CalPERS to report a calculation of liabilities based on a discount rate equal to the yield on a 10-year United States Treasury note in the year prior to the report. The bill would require the CalSTRS Retirement Board to provide a description of the discount rate the board uses for reporting liabilities, a calculation of liabilities based on a discount rate that is 2% below the long-term rate of return assumed by the board, and a calculation of liabilities based on a discount rate equal to the yield on a 10-year United States Treasury note in the year prior to the report. This bill would also appropriate $1 billion from the General Fund for transfer to the Teachers' Retirement Fund to reduce the unfunded liability of the STRS defined benefit program, and appropriate another $1 billion to the Teachers' Retirement Fund if the Legislative Analyst determines in the May Revision of the 2019-20 Budget that the State

has collected more than $1 billion in unanticipated General Fund revenue. This bill contains other related provisions and amendments other existing laws.
(STATUS: Introduced 02/19/19. Referred to Committee on L., P.E. & R on 02/28/19. Set for hearing on 03/27/19. Failed passage in committee. Reconsideration granted.)

SB 430 (Wieckowski) Amended 05/17/19.
PEPRA prohibits a public employer offering a defined benefit pension plan from exceeding specified retirement formulas for new members and prohibits an enhancement of a public employee's retirement formula or benefit adopted after January 1, 2013, from applying to service performed prior to the operative date of the enhancement. PEPRA defines "new member" to ~~**include**~~ **mean, among other things,** an individual who becomes a member of any public retirement system for the first time on or after January 1, 2013, and who was not a member of any other public retirement system prior to that ~~**date; an individual who becomes a member of a public retirement system for the first time on or after January 1, 2013, and who was a member of another public retirement system prior to that date, but who was not subject to reciprocity under specified law; or an individual who was an active member in a retirement system and who, after a break in service of more than 6 months, returned to active membership in that system with a new employer.**~~ **date. Existing law creates the Judges' Retirement System II, which is administered by the Board of Administration of the Public Employees' Retirement System, for the provision of retirement and other benefits to specified judges and their beneficiaries.**

This bill would ~~**specifically exclude from the definition of "new member" a judge, as defined in specified existing law, elected to office before January 1, 2013.**~~ **grant a judge who was elected to office in 2012, but did not take office until on or after January 1, 2013, the option of making a one-time, irrevocable election to have a pre-January 1, 2013, membership status in the Judges' Retirement System II for service accrued after on and after July 1, 2020. The bill would require the election to be made during a 30-day period beginning March 1, 2020. A judge making this election would no longer be a new member under specified provisions of PEPRA. The election would apply prospectively only, and membership rights and obligations that accrued based on service subject to PEPRA prior to July 1, 2020, would remain unchanged. The bill would specify that the Public Employees' Retirement System is not obligated to inform or locate a person who may be eligible to make the election and that its provisions do not affect the Legislature's reserved right to increase contributions or reduce benefits for purposes of the Judges' Retirement System II.**
(STATUS: Introduced 02/21/19. **Passed out of committee as amended on 05/17/19. Read second time and amended. Ordered to second reading on 05/17/19. Read second time. Ordered to third reading on 05/20/19. Read third time. Passed. Ordered to the Assembly on 05/21/19. In Assembly. Read first time. Held at Desk on 05/22/19.)**

SB 518 (Wieckowski)
The California Public Records Act requires a public agency to make its public records available for public inspection and to make copies available upon request and payment of a fee, unless the public records are exempt from disclosure. The act makes specified records exempt from disclosure and provides that disclosure by

a state or local agency of a public record that is otherwise exempt constitutes a waiver of the exemptions. This bill, for purposes of the award of court costs and reasonable attorney's fees pursuant to the above provisions, would specifically notwithstand a provision of existing law that prescribes the withholding or augmentation of costs if an offer is made before judgment or award in a trial or arbitration.
(STATUS: Introduced 02/21/19. **Passed out of committee on 05/16/19. Read second time. Ordered to third reading on 05/16/19. Read third time. Passed. Ordered to the Assembly on 05/23/19. In Assembly. Read first time. Held at Desk on 05/24/19.)**

SB 615 (Hueso)
The California Public Records Act requires a public agency to make its public records available for public inspection and to make copies available upon request and payment of a fee, unless the public records are exempt from disclosure. The act makes specified records exempt from disclosure and provides that disclosure by a state or local agency of a public record that is otherwise exempt constitutes a waiver of the exemptions. The act permit any person to institute proceedings for injunctive or declaratory relief or a writ of mandate to enforce the right to receive a copy of any public record covered by the act. This bill would require a person to meet and confer in good faith with the agency in an attempt to informally resolve each issue before instituting any proceeding for injunctive or declarative relief or writ of mandate. The bill would require the person or their attorney to file a declaration stating that this has occurred at the time that proceedings are instituted. Because the declaration would be made under penalty of perjury, the bill would expand the definition of a crime and impose a state-mandated local program. This bill contains other related provisions and other existing laws.
(STATUS: Introduced 02/22/19. Referred to Committee on JUD. on 03/14/19.)

SB 715 (Galgiani) Amended 03/28/19.
The California Constitution establishes the University of California as a public trust with full powers of organization and government, subject only to specified limitations. Under this independent constitutional authority, the University of California established retirement systems to provide various retirement benefits to its members. Existing law prohibits the University of California from contracting for services unless a contractor certifies that the services will be performed solely by workers within the United States or if the contractor's bid describes any work that will be performed by workers outside the United States. This bill would prohibit the University of California from contracting for services with an asset manager for a defined contribution plan if that plan is a stand-alone optional plan that is not a complement to a defined benefit pension plan. The bill would apply this prohibition to a contract entered into on or after January 1, 2015.
(STATUS: Introduced 02/22/19. Failed to pass out of committee; reconsideration granted on 04/24/19.)

SB 749 (Durazo) Amended 05/23/19.
The California Public Records Act provides that nothing in the act requires the disclosure of corporate proprietary information including trade secrets, among other things. This bill would provide that records relating to wages, benefits, working hours, and other employment terms and conditions of employees working for a private industry employer pursuant to a contract with a state or local agency **are public records and** shall not be deemed to be trade secrets under the ~~act~~.**act if the records are prepared, owned, used, or retained by a state or local agency.** The bill would also provide that records of compliance with local, state, or federal domestic

content requirements and records of a private industry employer's compliance with job creation, job quality, or job retention obligations contained in a contract or agreement with a state or local agency **are public records and** shall not be deemed trade secrets under the ~~act.~~**act if the records are prepared, owned, used, or retained by a state or local agency.**
(STATUS: Introduced 02/22/19. **Passed out of committee on 05/16/19. Read second time. Ordered to third reading on 05/16/19. Read third time and amended on 05/23/19. Ordered to second reading on 05/23/19. Read second time. Ordered to third reading on 05/24/19.**

SB 783 (Senate Committee on Labor, Public Employees and Retirement)
The CERL authorizes counties to establish retirement systems pursuant to its provisions for the purpose of providing pension and death benefits to county and district employees. This bill would correct several erroneous and obsolete cross-references within CERL.
(STATUS: Introduced 03/07/19. **Passed out of Senate and ordered to the Assembly on 05/02/19. In Assembly. Read first time. Held at desk on 05/02/19. Referred to Committee on P.E. & R. on 05/16/19.)**

2019 TENTATIVE LEGISLATIVE CALENDAR

COMPILED BY THE OFFICE OF THE SECRETARY OF THE SENATE AND THE OFFICE OF THE CHIEF CLERK
October 31, 2018 (revised)

DEADLINES

JANUARY						
S	M	T	W	TH	F	S
		1	2	3	4	5
6	**7**	8	9	**10**	11	12
13	14	15	16	17	18	19
20	**21**	22	23	24	**25**	26
27	28	29	30	31		

Jan. 1 Statutes take effect (Art. IV, Sec. 8(c)).

Jan. 7 Legislature **reconvenes** (J.R. 51(a)(1)).

Jan. 10 Budget must be submitted by Governor (Art. IV, Sec. 12(a)).

Jan. 21 Martin Luther King, Jr. Day.

Jan. 25 Last day to submit **bill requests** to the Office of Legislative Counsel

FEBRUARY						
S	M	T	W	TH	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	**18**	19	20	21	**22**	23
24	25	26	27	28		

Feb. 18 Presidents' Day.

Feb. 22 Last day for **bills to be introduced** (J.R. 61(a)(1)), (J.R. 54(a)).

MARCH						
S	M	T	W	TH	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	**29**	30
31						

Mar. 29 Cesar Chavez Day observed.

APRIL						
S	M	T	W	TH	F	S
	1	2	3	4	5	6
7	8	9	10	**11**	12	13
14	15	16	17	18	19	20
21	**22**	23	24	25	**26**	27
28	29	30				

Apr. 11 **Spring recess** begins upon adjournment of this day's session (J.R. 51(a)(2)).

Apr. 22 **Legislature reconvenes** from Spring recess (J.R. 51(a)(2)).

Apr. 26 Last day for **policy committees** to hear and report to **fiscal committees** **fiscal bills** introduced in their house (J.R. 61(a)(2)).

MAY						
S	M	T	W	TH	F	S
			1	2	**3**	4
5	6	7	8	9	**10**	11
12	13	14	15	16	**17**	18
19	20	21	22	23	24	25
26	**27**	**28**	**29**	**30**	**31**	

May 3 Last day for **policy committees** to hear and report to the Floor **nonfiscal bills** introduced in their house (J.R. 61(a)(3)).

May 10 Last day for **policy committees** to meet prior to June 3 (J.R. 61(a)(4)).

May 17 Last day for **fiscal committees** to hear and report to the Floor bills introduced in their house (J.R. 61(a)(5)). Last day for **fiscal committees** to meet prior to June 3 (J.R. 61(a)(6)).

May 27 Memorial Day.

May 28-31 **Floor Session Only.**
No committees, other than conference or Rules committees, may meet for any purpose (J.R. 61(a)(7)).

May 31 Last day for bills to be **passed out of the house of origin** (J.R. 61(a)(8)).

*Holiday schedule subject to Rules committee approval.

2019 TENTATIVE LEGISLATIVE CALENDAR

COMPILED BY THE OFFICE OF THE SECRETARY OF THE SENATE AND THE OFFICE OF THE CHIEF CLERK
October 31, 2018 (revised)

JUNE						
S	M	T	W	TH	F	S
						1
2	**3**	4	5	6	7	8
9	10	11	12	13	14	**15**
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

Jun. 3 Committee meetings may resume (J.R. 61(a)(9)).

Jun. 15 **Budget Bill** must be **passed** by **midnight** (Art. IV, Sec. 12(c)(3)).

JULY						
S	M	T	W	TH	F	S
	1	2	3	**4**	5	6
7	8	9	**10**	11	**12**	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Jul. 4 Independence Day.

Jul. 10 Last day for **policy committees** to hear and report **fiscal bills** to **fiscal committees** (J.R. 61(a)(10)).

Jul. 12 Last day for **policy committees** to meet and report bills (J.R. 61(a)(11)). **Summer recess** begins upon adjournment of this day's session, provided Budget Bill has been passed (J.R. 51(a)(3)).

AUGUST						
S	M	T	W	TH	F	S
				1	2	3
4	5	6	7	8	9	10
11	**12**	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	**30**	31

Aug. 12 **Legislature reconvenes** from Summer recess (J.R. 51(a)(3)).

Aug. 30 Last day for **fiscal committees** to meet and report bills to Floor (J.R. 61(a)(12)).

SEPTEMBER						
S	M	T	W	TH	F	S
1	**2**	**3**	**4**	**5**	**6**	7
8	**9**	**10**	**11**	**12**	**13**	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

Sep. 2 Labor Day.

Sep. 3-13 **Floor Session Only.** No committees, other than conference and Rules committees, may meet for any purpose (J.R. 61(a)(13)).

Sep. 6 Last day to **amend bills on the floor** (J.R. 61(a)(14)).

Sep. 13 Last day for **each house to pass bills** (J.R. 61(a)(15)). **Interim Study Recess** begins upon adjournment of this day's session (J.R. 51(a)(4)).

*Holiday schedule subject to Senate Rules committee approval.

IMPORTANT DATES OCCURRING DURING INTERIM STUDY RECESS

2019

Oct. 13 Last day for Governor to sign or veto bills passed by the Legislature on or before Sep. 13 and in the Governor's possession after Sep. 13 (Art. IV, Sec.10(b)(1)).

2020

Jan. 1 Statutes take effect (Art. IV, Sec. 8(c)).

Jan. 6 Legislature reconvenes (J.R. 51 (a)(4)).

I-6

Memorandum

DATE: June 17, 2019

TO: Members of the Board of Retirement

FROM: Steve Delaney, Chief Executive Officer

SUBJECT: **BOARD COMMUNICATIONS**

Written Report

Background/Discussion

To ensure that the public has free and open access to those items that could have bearing on the decisions of the Trustees of the Board of Retirement, the OCERS Board has directed that all written communications to the entire Board during the interim between regular Board meetings be included in a monthly communications summary.

News Links

The various news and informational articles that have been shared with the full Board are being provided to you here by web link address. By providing the links in this publicly available report, we comply with both the Brown Act public meeting requirements, as well as avoid any copyright issues.

The following news and informational item was provided by staff and the CEO for distribution to the entire Board:

Steve Delaney:

Placentia may create its own fire department, breaking away from OCFA

http://www.ocregister.com/placentia-may-create-its-own-fire-department-breaking-away-from-ocfa

Attached: OCERS Activities and Updates for March 2019.

Submitted by:

Steve Delaney
Chief Executive Officer

I-7

ORANGE COUNTY OCERS EMPLOYEES RETIREMENT SYSTEM

Memorandum

DATE: June 17, 2019

TO: Members of the Board of Retirement

FROM: Steve Delaney, Chief Executive Officer

SUBJECT: **TRAVEL REPORT – MILKEN INSTITUTE GLOBAL CONFERENCE 2019**

Written Report

Background/Discussion

From April 28 - May 1, 2019, Molly A. Murphy, CFA, Chief Investment Officer; Reginald D. Tucker, Managing Director; and Shanta Chary, Director of Investments, attended the Milken Institute Global Conference 2019 in Beverly Hills, California.

The total cost includes the following:

Meals	Taxi/Car/Shuttle	Hotel	Mileage	Total
$95	**$499**	**$4,215**	**$109**	**$4,918**

As the Milken Institute Global Conference is not presently a pre-approved conference, OCERS' Travel Policy, Section 19, states:

"Board Members and staff who travel to conference or seminars that are not automatically authorized in paragraphs 8 and 12 shall file with the Chief Executive Officer a report that briefly summarizes the information and knowledge gained that may be relevant to other Board members, provides an evaluation of the conference or seminar, and provides a recommendation concerning future participation. Reports by a Board Member or staff will be made on the Conference / Seminar Report form shown in the appendix. The Chief Executive Officer shall cause a copy of the report to be distributed to each Board Member and to the Chief Investment Officer."

A report summarizing the conference is attached.

Submitted by:

Steve Delaney
Chief Executive Officer

ORANGE COUNTY OCERS EMPLOYEES RETIREMENT SYSTEM

Form

Report of Attendance at Conference or Seminar

Name of Member Attending: ___Molly A. Murphy, Reginald D. Tucker, & Shanta Chary_______________

Name of Conference/Seminar: ____Milken Institute Global Conference 2019_______________________

Location of Conference/Seminar: _Beverly Hills, CA____

Conference/Seminar Sponsor: _Various________________

Dates of Attendance: __April 28 - May 1, 2019________________________________

Total Cost of Attendance: _$4,918 ($1,639 per person for 3 hotel nights)____________________________

Brief Summary of Information and Knowledge Gained:

In addition to the investment sessions (capital markets, investment outlooks on China, Africa, Latin America and Europe), the conference also hosted conversations with Christine Lagarde, Mick Mulvaney, Ivanka Trump, Jared Trump and Wilbur L. Ross. Other conference sessions included FinTech space exploring the challenges of integrating cutting-edge technology and how innovative technologies can push financial inclusion and open trade; role of philanthropy in the 21st century; how to measure success in the R&D investments; discussions by university heads and political leaders on the path forward for higher education and what the system needs to do to regain the public trust in the 21st century; collaboration among military, civilian, and governmental personnel and entities to face a significant ongoing cyber threat to the global economy; increased emphasis on exercise, nutrition, and social connectivity to reduce disparities and improve health; discussion by CEOs who are driving the AI and data revolution and the adaptive responses to these changes, as well as policies that encourage and support worker education and training for industries of the future; America's ability to retire; AI & Machine learning in cancer medicine and how to engage and deal with issues like rising populism and winner takes it all that could unsettle society?

Evaluation of the Conference or Seminar:

The conference continues to be extremely dynamic and rich in content. The conference is focused on integrating the capital markets to solve urgent social and economic challenges. Milken explores the intersection of finance, business, philanthropy and policy to determine how public and private investment can drive progress. The conference attendees were from all over the global and investor community representing various sectors including public, corporate, family offices, endowments, foundations, SWF, etc.). There were over 4,000 attendees and the program is built to cater to different interests. OCERS_

Form

Report of Attendance at Conference or Seminar

received three invites as part of the Global Capital Markets Advisory Council, otherwise, the registration fee is highly prohibitive. Attendance at the conference was worth the time and is highly recommended._

Recommendation Concerning Future Attendance:

Conference is heavily attended by individuals from various businesses providing a wonderful opportunity to network as well as enhance knowledge in various areas outside of the norm. Staff has the ability to attend a number of panel discussions and also set up one-on-one meetings with a number of GPs.

Signature

Return to: Executive Assistant

Copies to: Board Members
Chief Executive Officer
Assistant Chief Executive Officers

MILKEN INSTITUTE

2019 GLOBAL CONFERENCE

DRIVING SHARED PROSPERITY

#MIGLOBAL

AGENDA | LOS ANGELES | APRIL 28 - MAY 1

/904

Milken Institute Global Conference

AT YOUR FINGER TIPS

To find complete speaker biographies, panel descriptions and up-to-date programming information, download the Global Conference mobile app **MIGlobal** from the App Store or Google Play.

SEE: the full agenda, panel descriptions, speaker biographies, and venue maps

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CUSTOMIZE: your profile and personal schedule

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MILKEN INSTITUTE

Welcome to the 22nd Annual Milken Institute Global Conference

In 1931, in the midst of the Great Depression, James Truslow Adams—a Pulitzer-winning writer and historian and the son of a Venezuelan immigrant—published his most important book, *The Epic of America*. He sought no less than to capture the nation's history and the unique American experience, and in doing so, he coined a new phrase:

> The American Dream is that dream of a land in which life should be better and richer and fuller for everyone, with opportunity for each according to ability or achievement.

Nearly a century later, the Dream endures—in the US and around the world—but it faces new challenges. As just one example, a recent study suggests that the probability of a 30-year-old earning more than his or her parents dropped from 70 percent in 1970 to 50 percent in 2014. Preserving the spirit of the Dream is core to the Milken Institute's three-decade mission of driving shared prosperity by widening access to capital, creating jobs, and improving health.

Over the next several days, you'll interact with 5,000 leaders and decision-makers from more than 60 nations and nearly every US state. Participants include heads of state; members of the US Administration and Congress; CEOs and heads of private equity firms; members of our Global Capital Markets Advisory Council as well as money managers who, together, oversee more than $50 trillion in assets; current and past military and diplomatic leaders; philanthropists and Giving Pledgers; current and former heads of government health agencies; entertainers and media figures; athletes; artists; and more.

Our 800 speakers will address topics spanning 12 tracks: finance, government, medical research/public health, nutrition/food sustainability, equality, energy/environment, philanthropy, technology/media, education/jobs/human capital, aging/longevity, industry and regions.

Each session is designed to focus on solutions rather than a recitation of challenges, and our speakers and researchers have come prepared to offer their best ideas and supporting data. This is a not a forum for rehearsed speeches, but rather a marketplace of ideas to help attendees refine their own positions—and then to go out into the world and make them reality.

And with as many as many as 15 concurrent sessions and countless opportunities to visit with fellow participants in the corridors and in private meetings, no two Global Conference experiences are the same. You choose your own adventure.

Choose well, enjoy your time, and thank you for joining us. We wish you a productive and stimulating experience.

Michael Milken
Chairman

Michael L. Klowden
Chief Executive Officer

MILKEN INSTITUTE 2019 GLOBAL CONFERENCE

CONFERENCE NOTES

Name Badge Identification

You are required to wear your Global Conference credential at all times during the conference for admittance to meals and sessions. The conference credential is not transferable. There is a **replacement fee** for lost credentials.

Session Seating

Seating for sessions is filled on a first-come, first-served basis. Sessions—especially in the Executive Center—tend to fill quickly and are monitored to ensure attendees have seats; there is no standing. Once a session is full, no one else will be admitted. This includes meal sessions. Pre-selection of a session does not guarantee you entrance to that session. If a session is full, you may attend any other session where space is available.

Meal Seating

Tickets will be required for lunch sessions. Attendees who have completed the Global Conference session selection tool will be guaranteed meals.

Everyone who completed the online panel selection tool and included their lunch attendance will receive tickets at registration. Those tickets will indicate seating assignments in the International Ballroom or the simulcasts in the Beverly Hills Ballroom, Pavilion, and Wilshire Garden. Reserved seats in the International Ballroom are held until 15 minutes after the published meal time. Seats that are released will be filled from the General Admission line on a first-come, first-served basis.

Please return lunch tickets to the desk if you're not planning to attend the meal session.

Sessions and Slides Online

Recordings of individual sessions will be available for viewing online at **www.milkeninstitute.org**. Information as to how to view recordings will be sent to all conference attendees. Slides created specifically for the event will also be available on the Institute's website after the conference concludes.

Program Changes

There may be last-minute changes to the program. All changes will be updated on the Global Conference mobile app. Search for MIGlobal in the app store.

Conference Bookstore

Please visit the conference bookstore, located in the Milken Institute Global Conference Pavilion. You will find books by conference panelists, as well as a host of business and financial best-sellers.

Bookstore Hours

Monday, 7:00 a.m. – 6:00 p.m.
Tuesday, 7:00 a.m. – 7:30 p.m.
Wednesday, 7:30 a.m. – 5:30 p.m.

Invitation-Only Sessions

Some sessions are by invitation only and require pre-registration. These sessions are marked on the agenda.

Cell Phones and Mobile Devices

As a courtesy to our panelists and guests, please set cell phones and mobile devices to silent mode during the conference.

Exhibits

We invite you to visit the sponsor exhibits.

Milken Institute Executive Lounge

This private lounge, located next to the Lobby Bar, is an exclusive benefit for Members of the Milken Institute Associates at the Contributing Level and above, as well as Sponsors. It provides a comfortable quiet space where Institute supporters can conduct private meetings and utilize business center amenities.

Lost and Found

Please place your business card in the slot provided in your conference bag to help identify the bag in case it is misplaced. Found items may be turned in to registration for claim.

ATTENTION: YOU MAY BE RECORDED

The Global Conference is being videotaped and/or audio taped for broadcast over the air, on the Internet or otherwise. As a member of the audience, you may be recorded. By attending this program, you grant permission to the Milken Institute to utilize your appearance, likeness and/or voice in connection with any photographing, video/audio taping and/or rebroadcast of the program. If you have any questions, please direct them to any employee of the Institute.

SATURDAY APRIL 27, 2019

5:30 PM - 10:00 PM

BEVERLY WILSHIRE HOTEL

Milken Institute Presents
GLOBAL GOURMET GAMES 2019

PRIVATE, BY INVITATION ONLY

Global Gourmet Games Reception and Dinner. To learn more, please visit www.globalgourmetgames.org.

SUNDAY APRIL 28, 2019

8:30 AM - 12:00 PM

INTERNATIONAL GALLERY

Forum for Family Asset Management: Networking and Discussion

OPENING REMARKS

Alexandra Schueler, Director, Business and Program Development, Milken Institute

PRIVATE, BY INVITATION ONLY

9:30 AM - 11:30 AM

STARDUST

East and West: Philanthropy Symposium

INTRODUCTION BY

Laura Deal Lacey, Executive Director, Asia Center, Milken Institute

MODERATOR

Richard Ditizio, President and Chief Operating Officer, Milken Institute

PRIVATE, BY INVITATION ONLY

12:00 PM - 4:30 PM

BEVERLY HILLS BALLROOM

What Matters Now

WELCOME REMARKS

Sean Sandbach, Senior Director, Business and Program Development, Milken Institute

PANELISTS

Ernesto Araújo, Minister of Foreign Affairs, Brazil
Bruce Broussard, CEO and President, Humana
Roberto Campos Neto, Governor, Central Bank of Brazil
Carlos da Costa, Special Secretary for Productivity, Employment and Competitiveness, Federal Government of Brazil
Bob Dudley, Group Chief Executive, BP
Marcelo Luis Ebrard Casaubón, Secretary of Foreign Affairs, Mexico
Jared Kushner, Assistant to the President and Senior Advisor, The White House
Christine Lagarde, Managing Director and Chairwoman, International Monetary Fund
Steven, Mnuchin, Secretary, U.S. Department of the Treasury

MODERATORS

Maria Bartiromo, Anchor and Global Markets Editor, FOX Business Network
Richard Ditizio, President and Chief Operating Officer, Milken Institute
Dan Houston, Chairman, President and CEO, Principal Financial Group
Michael Milken, Chairman, Milken Institute
Michael Piwowar, Executive Director, Center for Financial Markets, Milken Institute
Clifford Sobel, Managing Partner, Valor Capital Group LLC; Former U.S. Ambassador to Brazil
Daniel Yergin, Vice Chairman, IHS Markit

PRIVATE, BY INVITATION ONLY

12:30 PM - 2:30 PM

PAVILION

Leaders in Finance: A Conversation to Strengthen America's Economy

PRIVATE, BY INVITATION ONLY

12:30 PM - 4:45 PM

STARDUST

Food Leaders' Retreat

PRIVATE, BY INVITATION ONLY

3:00 PM - 4:30 PM

PAVILION

Leaders in Health: A Conversation to Improve America's Health

PRIVATE, BY INVITATION ONLY

4:00 PM - 5:00 PM

WILSHIRE GARDEN

Ambassadors' Reception

PRIVATE, BY INVITATION ONLY

4:30 PM - 6:00 PM

BEVERLY CANON GARDENS

Welcome Reception

presented by WORLDQUANT

PRIVATE, BY INVITATION ONLY

5:00 PM - 7:00 PM

WILSHIRE GARDEN

Welcome Reception

6:00 PM - 9:00 PM

NEIMAN MARCUS BEVERLY HILLS

Milken Institute Young Leaders Circle Welcome Reception

hosted by Neiman Marcus

PRIVATE, BY INVITATION ONLY

836/904

MONDAY

APRIL 29, 2019

6:00 AM - 8:30 AM

Continental Breakfast

Available in the Wilshire Garden and the Executive Center Foyer starting at 6:00 am.

6:15 AM - 7:30 AM

STARDUST

Associates Breakfast

SPEAKER

James G. Stavridis, Operating Executive, The Carlyle Group; Supreme Allied Commander at NATO (2009-2013)

MODERATOR

Nicholas Kristof, Columnist, The New York Times

PRIVATE, BY INVITATION ONLY

6:30 AM - 7:45 AM

INTERNATIONAL GALLERY

Military Leadership Circle: Bridging the Civilian-Military Divide

INTRODUCTION BY

Kevin Klowden, Executive Director, Center for Regional Economics and California Center, Milken Institute

MODERATOR

Matt Driskill, Founder, Military Leadership Circle

PANELISTS

Michèle Flournoy, Co-Founder and Managing Partner, WestExec Advisors; Former CEO, Center for a New American Security; Former U.S. Under Secretary of Defense for Policy

Jake Frenz, Founder and CEO, SmithRx

Kenneth Hersh, President and CEO, George W. Bush Presidential Center

Pamela Powers, Chief of Staff, U.S. Department of Veterans Affairs

PRIVATE, BY INVITATION ONLY

7:30 AM - 8:30 AM

MAPLE

AI's Transformation of Health Tech and Pharmaceuticals

PANELISTS

Joshua Hoffman, CEO, Zymergen

Sanjiv Patel, President and CEO, Relay Therapeutics, Inc.

Vivek Ramaswamy, Founder and CEO, Roivant Sciences

MODERATOR

Robert Nelsen, Co-Founder and Managing Director, ARCH Venture Partners

PRIVATE, BY INVITATION ONLY

7:45 AM - 9:15 AM

INTERNATIONAL BALLROOM

Time of Transition | Part 1: A Conversation With Christine Lagarde | Part 2: The Investors' View

GUEST

Christine Lagarde, Managing Director and Chairwoman, International Monetary Fund

PANELISTS

Tom Finke, Chairman and CEO, Barings

David Hunt, President and CEO, PGIM, The Investment Management Business of Prudential

Scott Minerd, Co-founder, Chairman of Investments, and Global Chief Investment Officer, Guggenheim Partners

Ronald O'Hanley, President and CEO, State Street Corporation

Lara Warner, Group Chief Risk Officer, Credit Suisse

OPENING REMARKS

Michael Klowden, CEO, Milken Institute

MODERATOR

Gerard Baker, Editor-at-Large, The Wall Street Journal

MODERATOR

Stephanie Flanders, Senior Executive Editor, Bloomberg News; Head, Bloomberg Economics

7:45 AM - 9:15 AM

BEVERLY HILLS BALLROOM

Toward a Healthier Future

PANELISTS

Francis Collins, Director, National Institutes of Health

Susan Desmond-Hellmann, CEO, Bill & Melinda Gates Foundation

Bernard J. Tyson, Chairman and CEO, Kaiser Permanente

Seema Verma, Administrator, Centers for Medicare and Medicaid Services, U.S. Department of Health and Human Services

OPENING REMARKS

Tanisha Carino, Executive Director, *FasterCures*, a center of the Milken Institute

MODERATOR

Michael Milken, Chairman, Milken Institute

8:00 AM - 9:00 AM

STARDUST

Local and State-Led Toolkits for Maximizing Impact of Opportunity Zone Investments

SPEAKER

Rick Jacobs, CEO, Accelerator for America

Kiran Jain, Chief Operating Officer and General Counsel, Neighborly

David Lynn, CEO, Mission Driven Finance

Curt Meier, Treasurer, State of Wyoming

MODERATOR

Matt Horton, Associate Director, California Center, Milken Institute

PRIVATE, BY INVITATION ONLY

9:30 AM - 10:30 AM

INTERNATIONAL BALLROOM

Shifting Tides: How CEOs Navigate Today's Challenges

PANELISTS

Robert Bakish, President and CEO, Viacom Inc.

Carmine Di Sibio, Global Chairman and CEO-elect and Global Managing Partner-Client Service, EY

Jeffrey L. Harmening, Chairman of the Board and CEO, General Mills

Barbara Humpton, CEO, Siemens USA

David M. Solomon, Chairman and CEO, Goldman Sachs

MODERATOR

Andy Serwer, Editor-in-Chief, Yahoo Finance

BEVERLY HILLS BALLROOM

Global Capital Markets

PANELISTS

Mark Attanasio, Co-Founder and Managing Partner, Crescent Capital Group LP

Elif Bilgi Zapparoli, Co-Head of Global Capital Markets, Bank of America Merrill Lynch

Sir Michael Hintze, Group Executive Chairman and Senior Investment Officer, CQS

Mark Machin, President and CEO, Canada Pension Plan Investment Board

Joseph Naggar, Partner and Head of Structured Products, GoldenTree Asset Management LP

MODERATOR

Alison Mass, Global Head, Financial and Strategic Investors Group, Goldman Sachs

WILSHIRE BALLROOM

A Conversation With Kai-Fu Lee and David Siegel

PANELISTS

Kai-Fu Lee, Chairman and CEO, Sinovation Ventures

David Siegel, Co-Founder and Co-Chairman, Two Sigma

MODERATOR

Joel Weber, Editor, Bloomberg Businessweek

PAVILION

Inside a Blockbuster Franchise: "Avengers: Endgame"

PANELISTS

Anthony Russo, Director, "Avengers: Endgame"

Joe Russo, Director, "Avengers: Endgame"

MODERATOR

Julia Boorstin, Senior Media and Entertainment Correspondent, CNBC

9:30 AM - 10:30 AM

INTERNATIONAL TERRACE

Investing in a New Generation of China

PANELISTS

Goodwin Gaw, Chairman, Managing Principal, Member of Investment Committee and Founder, Gaw Capital Partners
Jin Qiu, Chief Investment Officer, Wealth Service Centre, CICC
Jason Tan, Partner and Chief Investment Officer, Jeneration Capital
Jonathan Woetzel, Director, McKinsey Global Institute; Senior Partner, McKinsey & Company
Yibing Wu, Joint Head, Enterprise Development Group; Head, China, Temasek

MODERATOR

Timothy Dattels, Co-Managing Partner, TPG Capital Asia; Chairman, Asia Center, Milken Institute

WHITTIER

Reinventing Financial Services

PANELISTS

Asheesh Birla, Senior Vice President, Product, Ripple
Christian Lanng, Co-Founder and CEO, Tradeshift
Simon Paris, CEO, Finastra
John R. Shrewsberry, Senior Executive Vice President and Chief Financial Officer, Wells Fargo Bank
Josh Stein, Co-Founder and CEO, Harbor

MODERATOR

Aaron Packles, Head of Financial Institutions Investment Banking Group Americas, Jefferies

BRIGHTON

Philanthropy and Democracy in the 21st-Century

PANELISTS

Chuck Harris, Managing Director and Chief Operating Officer, Blue Meridian Partners
George Pavlov, CEO, Bayshore Global Management
Rob Reich, Author, "Just Giving: Why Philanthropy is Failing Democracy and How it Can Do Better"; Professor, Stanford University
Amy Smith, Chief Giving Officer, TOMS

MODERATOR

LaTese Briggs, Senior Director, Center for Strategic Philanthropy, Milken Institute

DAYTON

Getting More From Biomedical Innovation

PANELISTS

Amitabh Chandra, McCance Family Professor of Business Administration, Harvard University
Kafui Dzirasa, K. Ranga Rama Krishnan Associate Professor, Psychiatry, Duke University
Pat Furlong, President and CEO, Parent Project Muscular Dystrophy
Christopher Hite, Vice Chairman, Global Head of Healthcare, Citi
Pablo Legorreta, Founder and CEO, Royalty Pharma

MODERATOR

Esther Krofah, Senior Director, *FasterCures*, a center of the Milken Institute

PALM

Higher Education and the Public Trust

PANELISTS

Daphne Kis, CEO, WorldQuant University
Paul LeBlanc, President, Southern New Hampshire University
Carol Quillen, President, Davidson College
Holden Thorp, Provost and Executive Vice Chancellor for Academic Affairs, Washington University in St. Louis

MODERATOR

Adam Harris, Staff Writer, The Atlantic

CANON

Women in Government: Creating More Pathways to Leadership

PANELISTS

Elaine Chao, Secretary, U.S. Department of Transportation
Karen Dunn Kelley, Deputy Secretary, U.S. Department of Commerce
Michèle Flournoy, Co-Founder and Managing Partner, WestExec Advisors; Former CEO, Center for a New American Security; Former U.S. Under Secretary of Defense for Policy
Jane Harman, Director, President, and CEO, the Wilson Center; Former Congresswoman

MODERATOR

Anna Palmer, Senior Washington Correspondent and Co-Author, Playbook, POLITICO

9:30 AM - 10:30 AM

STARDUST

Influencing Shareholder Votes: The Role of Proxy Advisory Firms

PANELISTS

Karen Barr, President and CEO, Investment Adviser Association
David Hirschmann, President and CEO, Center for Capital Markets Competitiveness, U.S. Chamber of Commerce
Patrick McGurn, Special Counsel and Head of Strategic Research and Analysis, Institutional Shareholder Services Inc.
Katherine Rabin, CEO, Glass Lewis & Co.
Chester Spatt, Pamela R. and Kenneth B. Dunn Professor of Finance, Tepper School of Business, Carnegie Mellon University; Senior Fellow, Center for Financial Markets, Milken Institute

MODERATOR

Michael Piwowar, Executive Director, Center for Financial Markets, Milken Institute

PRIVATE, BY INVITATION ONLY

OAKHURST

A Fireside Chat With Bruce Flatt and Howard Marks

PANELISTS

Bruce Flatt, CEO, Brookfield Asset Management
Howard Marks, Co-Chairman, Oaktree Capital Management

MODERATOR

Jason Kelly, New York Bureau Chief, Bloomberg; Co-Anchor, Bloomberg Businessweek TV and Radio

PRIVATE, BY INVITATION ONLY

INTERNATIONAL GALLERY

Investing in Latin America

PANELISTS

Marcelo Claure, Chief Operating Officer, SoftBank Group Corp; Executive Chairman, Sprint Corporation
Oscar Fahlgren, Head of Brazil, Mubadala Investment Company
Luis Alberto Moreno, President, Inter-American Development Bank
Clifford Sobel, Managing Partner, Valor Capital Group LLC; Former U.S. Ambassador to Brazil

MODERATOR

Scott Sobel, President, Valor Capital Group

PRIVATE, BY INVITATION ONLY

MAPLE

A Fireside Chat With John Demers: Confronting National Security Threats

PANELIST

John Demers, Assistant Attorney General, National Security Division, U.S. Department of Justice

MODERATOR

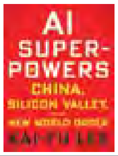
Dmitri Alperovitch, Co-Founder and Chief Technology Officer, CrowdStrike

PRIVATE, BY INVITATION ONLY

10:30 AM - 10:45 AM

PAVILION

Meet the Author: Kai-Fu Lee



BOOK SIGNING

Kai-Fu Lee, Chairman and CEO, Sinovation Ventures

PAVILION

Meet the Author: Eric Schmidt

BOOK SIGNING

Eric Schmidt, Technical Advisor, Alphabet Inc.

10:45 AM - 11:30 AM

INTERNATIONAL BALLROOM

Behind the Scenes: The Creators and Stars of "Ozark"

PANELISTS

Jason Bateman, Actor and Director, "Ozark"
Laura Linney, Actress, "Ozark"
Chris Mundy, Executive Producer, "Ozark"
Modi Wiczyk, Co-CEO, Valence Media and Media Rights Capital

MODERATOR

Matthew Belloni, Editorial Director, The Hollywood Reporter

10:45 AM - 11:45 AM

BEVERLY HILLS BALLROOM

Fulfilling the Promise of Opportunity Zones

PANELISTS

Phil Bryant, Governor, Mississippi
Manny Friedman, CEO and Co-Chief Investment Officer, EJF Capital LLC
Brent McIntosh, General Counsel, U.S. Department of the Treasury
Richard Ressler, Co-Founder and Principal, CIM Group

MODERATOR

Aron Betru, Managing Director, Center for Financial Markets, Milken Institute

WILSHIRE BALLROOM

Creating and Sustaining a Culture of Excellence

PANELISTS

George Hicks, Co-Founder and CEO, Värde Partners
Eileen Murray, Co-CEO, Bridgewater Associates
Xavier Rolet, CEO, CQS
Emmanuel Roman, CEO, PIMCO
Anthony Yoseloff, Co-Executive Managing Member, Davidson Kempner Capital Management

MODERATOR

David Faber, Journalist and Co-Anchor, CNBC

PAVILION

Consumer of the Future: Digitally Savvy and Environmentally Conscious

PANELISTS

Tom Bené, Chairman, President and CEO, Sysco Corporation
Chieh Huang, Co-Founder and CEO, Boxed
Christine McCarthy, Senior Executive Vice President and Chief Financial Officer, The Walt Disney Company
Joe Tsai, Executive Vice Chairman, Alibaba Group
Dirk Van de Put, Chairman and CEO, Mondelēz International

MODERATOR

Nelson Peltz, Founding Partner and CEO, Trian Fund Management, L.P.

INTERNATIONAL TERRACE

Flying High: A Private-Equity Overview

PANELISTS

Ignacio Jayanti, Managing Partner, Corsair Capital
Tatsuo Kawasaki, Co-Founder, Unison Capital
Dave Tayeh, Head of Private Equity North America, Investcorp
Wray Thorn, Chief Executive and Chief Investment Officer, Sightway Capital, a Two Sigma Company
Andrew Weinberg, Founder, Managing Partner and CEO, Brightstar Capital Partners

MODERATOR

Kiele Neas, Managing Director, UCSF Investment Company

WHITTIER

Cyber Attacks by Nation States: The View From Inside America's National Security Network

PANELISTS

John Demers, Assistant Attorney General, National Security Division, U.S. Department of Justice
Anne Neuberger, Senior Advisor to the Director, National Security Agency
Eric Rosenbach, Co-Director, Belfer Center for Science and International Affairs, Harvard Kennedy School

MODERATOR

Dmitri Alperovitch, Co-Founder and Chief Technology Officer, CrowdStrike

10:45 AM - 11:45 AM

BRIGHTON

Economic Prosperity in the Americas

PANELISTS

Kim Furlong, CEO, Canadian Venture Capital & Private Equity Association
John Kluge, Jr., Founder and Managing Director, Refugee Investment Network
Ed Royce, Policy Director, Brownstein Hyatt Farber Schreck; Former Chairman, Committee on Foreign Affairs, U.S. House of Representatives
His Excellency Francisco Santos, Ambassador of Colombia to the United States; Former Vice President of Colombia ('02-'10)
Jesús Seade, Undersecretary for North America, Ministry of Foreign Affairs, Mexico

MODERATOR

Matthew Kaminski, Editor-in-Chief, POLITICO

DAYTON

Investing in the Food Revolution

PANELISTS

Jordan Gaspar, Managing Partner, AccelFoods
Jeffrey Housenbold, Managing Partner, SoftBank Vision Fund
Jason Karp, Founder and CEO, HumanCo
Sanjeev Krishnan, Chief Investment Officer and Managing Director, S2G Ventures

MODERATOR

Kara Nortman, Partner, Upfront Ventures; Founding Member, AllRaise

OAKHURST

Game of Loans: America's Student Debt Crisis

PANELISTS

David Cooper, Chief Investment Officer, Purdue Research Foundation
Tonio DeSorrento, Co-Founder and CEO, Vemo Education
David Klein, CEO and Co-Founder, CommonBond
Tracy Palandjian, Co-Founder and CEO, Social Finance
Scott Pulsipher, President, Western Governors University

MODERATOR

Helaine Olen, Blogger, Opinions, The Washington Post; Author, "Pound Foolish: Exposing the Dark Side of the Personal Finance Industry"

PALM

An Ounce of Prevention: New Prescriptions for Healthy Longevity

PANELISTS

Freddy Abnousi, Head of Healthcare – Research, Facebook
Camilla Cavendish, Senior Fellow, Mossavar-Rahmani Center for Business and Government, Harvard Kennedy School; Baroness Cavendish of Little Venice (UK House of Lords)
Tom Croce, Vice President, Global Advocacy Relations, Amgen
Donato Tramuto, CEO, Tivity Health

MODERATOR

Paul Irving, Chairman, Center for the Future of Aging, Milken Institute; Chairman, Encore.org; Distinguished Scholar-in-Residence, University of Southern California Davis School of Gerontology

CANON

Walking the Talk: Are D&I Policies Shifting Corporate Culture?

PANELISTS

Raphael Arndt, Chief Investment Officer, Future Fund
Sekou Kaalund, Head of Advancing Black Pathways, JPMorgan Chase & Co.
Tony Prophet, Chief Equality Officer, Salesforce
Kathy Sayko, Chief Inclusion and Diversity Officer, PGIM, The Investment Management Business of Prudential
Ahu Yildirmaz, Head, ADP Research Institute

MODERATOR

Richard Ditizio, President and Chief Operating Officer, Milken Institute

10:45 AM - 11:45 AM

STARDUST

The Role of a CEO Amidst a Changing Workforce: Culture, Growth, and Innovation

PRIVATE, BY INVITATION ONLY

INTERNATIONAL GALLERY

C-Level: Obesity in the Workplace

PRIVATE, BY INVITATION ONLY

MAPLE

Mission Possible: From ESG to the SDGs

PANELISTS

Stefan Dunatov, Senior Vice President, Investment Strategy and Risk, British Columbia Investment Management Corporation
Jay Lipman, Co-Founder and President, Ethic
Bobby Turner, Principal and CEO, Turner Impact Capital, LLC

MODERATOR

Caitlin MacLean, Senior Director, Innovative Finance, Milken Institute

PRIVATE, BY INVITATION ONLY

12:00 PM - 2:00 PM

STARDUST

Education Lunch

PANELISTS

Bill Achtmeyer, Parthenon Founder and Senior Managing Director, EY-Parthenon
Jim Blew, Assistant Secretary for Planning, Evaluation and Policy Development, U.S. Department of Education
Gene Block, Chancellor, University of California, Los Angeles
Carol Lynn Folt, President, University of Southern California
Adam Harris, Staff Writer, The Atlantic
Candice McQueen, CEO, National Institute for Excellence in Teaching (NIET)
Nina Rees, President and CEO, National Alliance for Public Charter Schools

MODERATOR

Lowell Milken, Founder, National Institute for Excellence in Teaching (NIET); Chairman and Co-Founder, Milken Family Foundation

PRIVATE, BY INVITATION ONLY

INTERNATIONAL GALLERY

Behind the Scenes: Insiders' Views on China

PANELISTS

Kai-Fu Lee, Chairman and CEO, Sinovation Ventures
C.H. Tung, Vice Chairman, Chinese People's Political Consultative Conference; Founding Chairman, China-United States Exchange Foundation; Former Hong Kong Chief Executive
Yibing Wu, Joint Head, Enterprise Development Group; Head, China, Temasek

MODERATOR

Gary Liu, CEO, South China Morning Post

PRIVATE, BY INVITATION ONLY

MAPLE

Roll Up Your Sleeves Philanthropy Workshop: The Power of Narrative

PANELISTS

Andy Goodman, Co-Founder and Director, The Goodman Center

OPENING REMARKS

Cindy L. Citrone, Founder and CEO, Citrone 33 Foundation

PRIVATE, BY INVITATION ONLY

12:15PM - 2:00 PM

INTERNATIONAL BALLROOM

Lunch Program
Driving Shared Prosperity

PANELISTS

Marillyn Hewson, Chairman, President and CEO, Lockheed Martin Corporation
Alfred Kelly, Jr., CEO, Visa Inc.
Ivanka Trump, Advisor to the President, The White House; Co-Chair of the American Workforce Policy Advisory Board
Mark Weinberger, Global Chairman and CEO, EY

WELCOME REMARKS

Eric Garcetti, Mayor, City of Los Angeles

OPENING REMARKS

Michael Klowden, CEO, Milken Institute

MODERATOR

Eric Schmidt, Technical Advisor, Alphabet Inc.

SIMULCAST

Lunch Program Simulcast:
Beverly Hills Ballroom, Pavilion, & Wilshire Garden

2:30 PM - 3:30 PM

INTERNATIONAL BALLROOM

Investing in Cutting-Edge Technologies and Jobs of the Future

PANELISTS

Peggy Johnson, Executive Vice President, Business Development, Microsoft
Ravi Kumar, President, Infosys Limited
Chris Liddell, Assistant to the President and Deputy Chief of Staff for Policy Coordination, The White House
Douglas Merritt, President and CEO, Splunk Inc.
Jim Whitehurst, CEO, Red Hat

MODERATOR

Rich Karlgaard, Publisher and Futurist, Forbes Media

BEVERLY HILLS BALLROOM

Mega-Trends Shaping Asset Management

PANELISTS

Steven Goulart, Executive Vice President and Chief Investment Officer, MetLife; President, MetLife Investment Management
Paul Hamill, Global Head of Fixed Income, Currencies and Commodities, Citadel Securities
Jean Hynes, Managing Partner, Senior Managing Director and Global Industry Analyst, Wellington Management
Ted Truscott, CEO, Columbia Threadneedle Investments

MODERATOR

Matthew Brown, Founder and CEO, CAIS

WILSHIRE BALLROOM

Can America Afford to Retire?

PANELISTS

Andrew Biggs, Resident Scholar, American Enterprise Institute
Marcie Frost, CEO, CalPERS
Jarvis Hollingsworth, Chair, Board of Directors, Texas Teachers' Retirement System
Dan Houston, Chairman, President and CEO, Principal Financial Group

MODERATOR

Josh Barro, Business Columnist, New York Magazine; Host of Left, Right & Center, KCRW

PAVILION

Global Leadership in the New Era of Energy

PANELISTS

Bob Dudley, Group Chief Executive, BP
John Hess, CEO, Hess Corporation
Vicki Hollub, President and CEO, Occidental Petroleum Corporation
Michael Smith, Chairman and CEO, Freeport LNG

MODERATOR

Brian Sullivan, Anchor and Senior National Correspondent, CNBC

INTERNATIONAL TERRACE

Portfolio Risks: What Are You Ignoring?

PANELISTS

Christopher Ailman, Chief Investment Officer, California State Teachers' Retirement System; Co-Chair, Global Capital Markets Advisory Council, Milken Institute
Robert Gibbins, Chief Investment Officer, Autonomy Capital
Tim Romer, CEO, Fundamental Infrastructure Opportunities
Andrew Steel, Managing Director, Global Group Head, Sustainable Finance, Fitch Ratings

MODERATOR

Cheryl Alston, Executive Director and Chief Investment Officer, Dallas Employees' Retirement Fund

2:30 PM - 3:30 PM

WHITTIER

Advancing Inclusion and Addressing Inequality In Entertainment

PANELISTS

Gloria Calderón Kellett, Executive Producer, Co-Showrunner, Director and Actor, "One Day at a Time"
Jacqueline Coley, Editor, Rotten Tomatoes
Jody Gerson, Chairman and CEO, Universal Music Publishing Group
Jonathan King, President, Narrative Film and Television, Participant Media
Katie McGrath, Co-CEO, Bad Robot Productions
Stacy Smith, Founder and Director, Annenberg Inclusion Initiative, University of Southern California

MODERATOR

Alex Witt, Anchor, MSNBC's "Weekends with Alex Witt"; Correspondent, NBC News

BRIGHTON

AI and Machine Learning in Cancer Medicine

PANELISTS

Maurice Ferré, CEO and Chairman of the Board, INSIGHTEC
Colin Hill, Chairman, CEO and Co-Founder, GNS Healthcare
Mike Nohaile, Senior Vice President of Strategy, Commercialization and Innovation, Amgen
Susan Swetter, Professor of Dermatology and Director of the Pigmented Lesion and Melanoma Program, Stanford University Medical Center and Cancer Institute

MODERATOR

Marc Hurlbert, Chief Science Officer, Melanoma Research Alliance

DAYTON

The New Guard: Creating a Better Food Future

PANELISTS

Matt Barnard, CEO and Co-Founder, Plenty
Walter Robb, Principal, Stonewall Robb Advisors; Former Co-CEO, Whole Foods
Uma Valeti, CEO and Co-Founder, Memphis Meats
Carla Vernon, President of the Natural & Organic Operating Unit and Corporate Officer, General Mills

MODERATOR

Cathy Burns, CEO, Produce Marketing Association

OAKHURST

Building Mentally Resilient Youth

PANELISTS

Ted Bunch, Chief Development Officer and Co-Founder, A CALL TO MEN
Nadine Burke Harris, Surgeon General, State of California
Cynthia Germanotta, President and Co-Founder, Born This Way Foundation
Katie Hood, CEO, One Love Foundation
Sherrie Westin, President, Global Impact and Philanthropy, Sesame Workshop

MODERATOR

June Henton, Dean, College of Human Sciences, Auburn University

PALM

The Price of Dementia: Innovative Strategies to Reduce Risk

PANELISTS

Norma Coe, Associate Professor, Department of Medical Ethics and Health Policy, Perelman School of Medicine, University of Pennsylvania
Linda Elam, CEO and Plan President, Amerigroup District of Columbia, Inc.
Howard Fillit, Founding Executive Director and Chief Science Officer, Alzheimer's Drug Discovery Foundation
George Vradenburg, Chairman and Co-Founder, UsAgainstAlzheimer's

MODERATOR

Nora Super, Senior Director, Center for the Future of Aging, Milken Institute

2:30 PM - 3:30 PM

CANON

Taking Travel, Leisure, and Transportation to the Next Level

PANELISTS

Michael Flaskey, CEO, Diamond Resorts
Glenn Fogel, CEO, Booking Holdings
Josh Giegel, Co-Founder and Chief Technology Officer, Virgin Hyperloop One
Caryn Seidman-Becker, Chairman and CEO, CLEAR
Rob Wiesenthal, Founder and CEO, Blade

MODERATOR

Carol Massar, Co-Anchor, Bloomberg Businessweek TV and Radio

STARDUST

A Conversation With Steven A. Cohen

GUEST

Steven A. Cohen, Chairman and CEO, Point72; Co-Founder, Steven & Alexandra Cohen Foundation

MODERATOR

Joseph Dowling, CEO, Investment Office, Brown University

PRIVATE, BY INVITATION ONLY

INTERNATIONAL GALLERY

Opportunity Zones 102: An Update on the Mechanics

PANELISTS

Alfonso Costa, Deputy Chief of Staff, U.S. Department of Housing and Urban Development
Daniel Kowalski, Counselor to the Secretary, U.S. Department of Treasury
Michael Novogradac, Managing Partner, Novogradac & Company LLP
Robin Potts, Co-Head of Real Estate Investments and Director of Acquisitions, Canyon Partners Real Estate
Stephen Tomlinson, Partner, Real Estate Practice Group, Kirkland & Ellis LLP
Neal Wilson, Co-Founder and Chief Operating Officer, EJF Capital

MODERATOR

Aron Betru, Managing Director, Center for Financial Markets, Milken Institute

PRIVATE, BY INVITATION ONLY

MAPLE

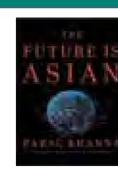
Driving Economic Growth: A Conversation With Private Equity Leaders

PRIVATE, BY INVITATION ONLY

3:30 PM - 3:45 PM

PAVILION

Meet the Author: Parag Khanna

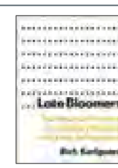


BOOK SIGNING

Parag Khanna, Founder and Managing Partner, FutureMap

PAVILION

Meet the Author: Rich Karlgaard



BOOK SIGNING

Rich Karlgaard, Publisher and Futurist, Forbes Media

3:45 PM - 4:45 PM

INTERNATIONAL BALLROOM

Credit Is a Cycle: Global Market Outlook

PANELISTS

Ilfryn Carstairs, Partner and Co-Chief Investment Officer, Värde Partners
Josh Friedman, Co-Founder, Co-Chairman and Co-CEO, Canyon Partners, LLC
Sir Michael Hintze, Group Executive Chairman and Senior Investment Officer, CQS

MODERATOR

Michael Milken, Chairman, Milken Institute

David Miller, Global Head of Credit and Head of Global Credit Products, Credit Suisse
Jim Zelter, Co-President, Apollo Global Management

BEVERLY HILLS BALLROOM

Venture Capital and the Year of the Unicorn IPOs

PANELISTS

Ibrahim Ajami, Head of Venture Capital, Mubadala Investment Company
Dan Levitan, Co-Founder and Partner, Venture Capital Investing, Maveron LLC
Anton Levy, Managing Director and Global Head of Technology, General Atlantic
Akshay Naheta, Managing Partner, SoftBank Investment Advisers
Kara Nortman, Partner, Upfront Ventures; Founding Member, AllRaise

MODERATOR

Dan Primack, Business Editor, Axios

WILSHIRE BALLROOM

Navigating ESG: What to Demand and What to Avoid

PANELISTS

Wendy Cromwell, Vice Chair, Senior Managing Director, Partner, Director, Sustainable Investment and Portfolio Manager, Wellington Management
Henry Fernandez, Chairman and CEO, MSCI Inc.
Lori Heinel, Deputy Global Chief Investment Officer, State Street Global Advisors
Scott Mather, Chief Investment Officer, Fixed Income, PIMCO
Bonnie Wongtrakool, Global Head of ESG Investments and Portfolio Manager, Western Asset

MODERATOR

Hiromichi Mizuno, Executive Managing Director and Chief Investment Officer, Government Pension Investment Fund, Japan; Co-Chair, Global Capital Markets Advisory Council, Milken Institute

PAVILION

Big Tech Under the Spotlight: Privacy, Transparency, and Regulation

PANELISTS

Michael Beckerman, President and CEO, Internet Association
Fadi Chehadé, Chairman, Chehadé & Company
Makan Delrahim, Assistant Attorney General of the Antitrust Division, U.S. Department of Justice
Tristan Harris, Co-Founder and Executive Director, Center for Humane Technology; Former Design Ethicist, Google
Luke Nosek, Managing Partner, Gigafund

MODERATOR

Julia Boorstin, Senior Media and Entertainment Correspondent, CNBC

INTERNATIONAL TERRACE

The Global Mental Health Pandemic

PANELISTS

Timothy Blevins, Senior Vice President, Behavioral Health Employer Channel, Optum
David Panzirer, Trustee, The Leona M. and Harry B. Helmsley Charitable Trust
Moitreyee Sinha, Founder and CEO, citiesRISE
Garen Staglin, Co-Founder, One Mind Initiative
Michael Turken, Medical Director, Omada Health

MODERATOR

Annalisa Jenkins, Special Advisor, *FasterCures*, a center of the Milken Institute

3:45 PM - 4:45 PM

WHITTIER

Drawdown: Changing the Food System to Save the Planet

PANELISTS

Nicolette Hahn Niman, Sustainable Food and Farming Expert
Paul Hawken, Founder, Project Drawdown; Author, "Drawdown"
David Lee, Chief Operating Officer and Chief Financial Officer, Impossible Foods Inc.
James Rogers, Founder and CEO, Apeel Sciences

MODERATOR

Mark Hyman, Director, Cleveland Clinic Center for Functional Medicine

BRIGHTON

Modernizing Financial Regulation to Facilitate Shared Economic Prosperity

PANELISTS

Kathy Kraninger, Director, Consumer Financial Protection Bureau
Eugene Ludwig, Founder and CEO, Promontory Financial Group; Former U.S. Comptroller of the Currency
Jelena McWilliams, Chairman, Federal Deposit Insurance Corporation
Joseph Otting, U.S. Comptroller of the Currency

MODERATOR

Michael Piwowar, Executive Director, Center for Financial Markets, Milken Institute

DAYTON

Connecting with the Next Generation of Consumers

PANELISTS

Jonathan Neman, Co-Founder and CEO, sweetgreen
Cecilia Qvist, Global Head of Markets, Spotify
Jen Rubio, Co-Founder and Chief Brand Officer, Away
Tina Sharkey, Co-Founder and Co-Chairperson, Brandless
Nola Weinstein, Global Head of Culture, Engagement and Experiential Marketing, Twitter

MODERATOR

Jenni Avins, Global Lifestyle Correspondent, Quartz

OAKHURST

Representation in American Art: Inclusion and Social Change

PANELISTS

Neil Bluhm, Managing Partner, LAMB Partners
Charles Gaines, Artist
Joanne Heyler, Founding Director, The Broad; Director and Chief Curator, The Broad Art Foundation
Kristin Sakoda, Executive Director, Los Angeles County Arts Commission

MODERATOR

Princess Alia Al-Senussi, Advisor, Arts and Culture, Milken Institute; UK and MENA Representative, Art Basel

PALM

Can the World's Biggest Companies Save Health Care?

PANELISTS

Tanisha Carino, Executive Director, *FasterCures*, a center of the Milken Institute
David Feinberg, Vice President of Healthcare, Google
Eric Lefkofsky, Co-Founder and CEO, Tempus
Alex Moazed, Founder and CEO, Applico; Co-Author, "Modern Monopolies"
Robert Nelsen, Co-Founder and Managing Director, ARCH Venture Partners
Marcus Osborne, Vice President, Health and Wellness Transformation, Walmart

MODERATOR

Margaret Anderson, Managing Director, Deloitte Consulting

3:45 PM - 4:45 PM

CANON

Global Development Through Women's Economic Empowerment

PANELISTS

Penny Abeywardena, Commissioner for International Affairs, Mayor's Office, City of New York; former Director of Girls and Women Integration, Clinton Global Initiative
Kathryn Kaufman, Managing Director, Global Women's Issues, OPIC
Chetna Sinha, Founder and Chair, Mann Deshi Bank and Mann Deshi Foundation
James G. Stavridis, Operating Executive, The Carlyle Group; Supreme Allied Commander at NATO (2009-2013)
Stephanie von Friedeburg, Chief Operating Officer, International Finance Corporation

MODERATOR

Mark Suzman, Chief Strategy Officer and President, Global Policy and Advocacy, Bill & Melinda Gates Foundation

CALIFORNIA TERRACE

Men and Women: Working Together to Advance Gender Equality

PANELISTS

Robert Bakish, President and CEO, Viacom Inc.
Jane Fraser, CEO of Latin America, Citi
Chieh Huang, Co-Founder and CEO, Boxed
Graves Tompkins, Global Head of Capital Partnering and Human Capital, General Atlantic

MODERATOR

Shelley Zalis, CEO, The Female Quotient; Founder, The Girls' Lounge

hosted by citi *and* The Female Quotient

STARDUST

Sports Ownership: The Investment Case

PANELISTS

Todd Boehly, Chairman and CEO, Eldridge Industries
Gerry Cardinale, Managing Partner and CEO, RedBird Capital Partners
Earvin "Magic" Johnson, Chairman and CEO, Magic Johnson Enterprises
Patrice Motsepe, Founder and Chairman, African Rainbow Minerals
Joe Tsai, Executive Vice Chairman, Alibaba Group

MODERATOR

Alan Mnuchin, Managing Principal, AGM Partners LLC

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INTERNATIONAL GALLERY

The Rise of Private Markets

PANELISTS

Clara Chan, Chief Investment Officer, Private Markets, Hong Kong Monetary Authority
Jonathan Coslet, Chief Investment Officer, TPG Global
Shane Feeney, Senior Managing Director and Global Head of Private Equity, Canada Pension Plan Investment Board
Danny Lee, Partner, Blue Pool Capital Limited
Kevin Lu, Partner and Chairman of Asia, Partners Group
John Vaske, Head, Americas; Head, Agribusiness, Temasek

MODERATOR

Alison Loat, Managing Director, FCLTGlobal

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MAPLE

Lowering the Price and Risk of Dementia: Policy Recommendations

PRIVATE, BY INVITATION ONLY

5:00 PM - 6:00 PM

INTERNATIONAL BALLROOM

Investing with Vision: A Conversation With SoftBank's Rajeev Misra

GUEST

Rajeev Misra, CEO, SoftBank Investment Advisers UK

MODERATOR

Michael Milken, Chairman, Milken Institute

BEVERLY HILLS BALLROOM

Leaders of Real Estate

PANELISTS

Thomas Barrack, Executive Chairman and CEO, Colony Capital
Jonathan Goldstein, CEO, Cain International
Brian Kingston, CEO, Real Estate, Brookfield Asset Management
Michael Meldman, Chairman and CEO, Discovery Land Company
Robert Morse, Chairman, Bridge Investment Group

MODERATOR

Carol Massar, Co-Anchor, Bloomberg Businessweek TV and Radio

WILSHIRE BALLROOM

What's Next for the World Ahead?

PANELISTS

Stephen Schwarzman, Co-Founder, Chairman and CEO, Blackstone
Joe Tsai, Executive Vice Chairman, Alibaba Group
C.H. Tung, Vice Chairman, Chinese People's Political Consultative Conference; Founding Chairman, China-United States Exchange Foundation; Former Hong Kong Chief Executive

MODERATOR

Parag Khanna, Founder and Managing Partner, FutureMap

PAVILION

Coming of Age: Women Rise to the Top

PANELISTS

Jane Harman, Director, President, and CEO, the Wilson Center; Former Congresswoman
Donna Karan, Founder, Urban Zen and Donna Karan International
Sherry Lansing, Founder and CEO, Sherry Lansing Foundation; Former Chairman and CEO, Paramount Pictures
Sylvia Rhone, Chairman and CEO, Epic Records
Anastasia Soare, Founder and CEO, Anastasia Beverly Hills

MODERATOR

Gayle King, Co-Host, CBS This Morning

AQUA STAR POOL

How Resilient Are You? A Human Performance Workshop In The Pool

SPEAKER

Andy Walshe, Founding Partner, Liminal Collective; Human Performance Expert

STARDUST

Enhancing Resource Mobilization to Meet Development Goals in Latin America

SPEAKER

Luis Alberto Moreno, President, Inter-American Development Bank

MODERATOR

Aron Betru, Managing Director, Center for Financial Markets, Milken Institute

PRIVATE, BY INVITATION ONLY

5:00 PM - 6:00 PM

INTERNATIONAL GALLERY

Resolving Fannie and Freddie: The Key to Housing Finance Reform

PANELISTS

Michael Calhoun, President, Center for Responsible Lending
Chrissi Johnson, Vice President, Federal Policy and External Affairs, Quicken Loans
Jeb Mason, Partner, The Cypress Group
Lisa Rice, President and CEO, National Fair Housing Alliance
Michael Stegman, Senior Fellow, Housing Finance Program, Center for Financial Markets, Milken Institute
Ted Tozer, Senior Fellow, Housing Finance Program, Center for Financial Markets, Milken Institute

MODERATOR

Eric Kaplan, Director, Center for Financial Markets, Milken Institute

PRIVATE, BY INVITATION ONLY

MAPLE

North American Trade: The Road to Ratification

PANELISTS

Daniel Barclay, CEO, BMO Capital Markets
Carlos Garcia de Alba Zepeda, Consul General, Consulate of Mexico in Los Angeles
Moisés R. Kalach Balas, Vice President, Grupo Kaltex; International Negotiations Coordinator for the Mexican Private Sector, Consejo Coordinador Empresarial (CCE)
Miguel Olea, Managing Partner, Colony LATAM Partners
Rana Sarkar, Consul General of Canada to Northern California

MODERATOR

Kevin Klowden, Executive Director, Center for Regional Economics and California Center, Milken Institute

PRIVATE, BY INVITATION ONLY

6:00 PM - 7:00 PM

LOBBY BAR

General Reception

WILSHIRE GARDEN

Reception for Speakers and Sponsors

PRIVATE, BY INVITATION ONLY

6:00 PM - 7:30 PM

POOLSIDE - WEST

Reception

hosted by BMO

PRIVATE, BY INVITATION ONLY

POOLSIDE - EAST

Reception

hosted by EY Building a better working world

PRIVATE, BY INVITATION ONLY

7:00 PM - 11:00 PM

Late Night at Soho House

Join us for hors d'oeuvres, cocktails and entertainment as part of the 22nd annual Global Conference.

- **Reception at 7:00pm**
- **Entertainment at 9:15pm**

Soho House West Hollywood
9200 Sunset Blvd.

TUESDAY

APRIL 30, 2019

6:00 AM - 8:30 AM

Continental Breakfast

Available in the Wilshire Garden and the Executive Center Foyer starting at 6:00 am

7:00 AM - 7:45 AM

PAVILION

Sleep Strategies for Peak Performance Workshop

SPEAKER

Michael Breus, Owner, The Sleep Doctor

7:00 AM - 9:00 AM

STARDUST

Global Capital Markets Advisory Council Roundtable

PRIVATE, BY INVITATION ONLY

8:00 AM - 9:15 AM

INTERNATIONAL BALLROOM

Part 1: A Conversation With Mick Mulvaney, Assistant to the President and Acting Chief of Staff, The White House

Part 2: Perspectives on the US Economy

GUEST

Mick Mulvaney, Assistant to the President and Acting Chief of Staff, The White House

PANELISTS

Aaron Klein , Fellow, Economic Studies, and Policy Director, Center on Regulation and Markets, Brookings Institution

Andrew Olmem, Deputy Director, National Economic Council, The White House

Alan Schwartz, Executive Chairman, Guggenheim Partners

MODERATOR

Maria Bartiromo, Anchor and Global Markets Editor, FOX Business Network

BEVERLY HILLS BALLROOM

Return of the Mean: An Asset Management Perspective

PANELISTS

Todd Jablonski, Chief Investment Officer, Principal Portfolio Strategies, Principal Global Investors

Catherine Keating, CEO, BNY Mellon Wealth Management

Carter Lyons, Managing Director, Two Sigma

Ron Mock, President and CEO, Ontario Teachers' Pension Plan

Cyrus Taraporevala, President and CEO, State Street Global Advisors

MODERATOR

Jason Kelly, New York Bureau Chief, Bloomberg; Co-Anchor, Bloomberg Businessweek TV and Radio

WILSHIRE BALLROOM

Global Energy Outlook

PANELISTS

Greg Beard, Global Head of Natural Resources and Senior Partner, Apollo Global Management

Spencer Dale, Group Chief Economist, BP

Daniel Yergin, Vice Chairman, IHS Markit

MODERATOR

Hadley Gamble, Reporter and Anchor, CNBC

8:00 AM - 9:15 AM

PAVILION

The Internationalization of the Business of Cannabis

PANELISTS

Daniel Barclay, CEO, BMO Capital Markets

Benjamin Bronfman, Co-Founder, Dioscorides Global Holdings LLC

Ben Kovler, Founder and CEO, Green Thumb Industries

Bruce Linton, CEO, Canopy Growth Corp.

Neil Mahapatra, Managing Partner, Kingsley Capital Partners; Chairman, Oxford Cannabinoid Technologies

MODERATOR

Jane Wells, Special Correspondent, CNBC

INTERNATIONAL TERRACE

Building Better Cities and Scaling Housing Solutions

PANELISTS

Ross DeVol, President and CEO, Heartland Forward; Fellow, Walton Family Foundation

Mary Mack, Senior Executive Vice President, Head of Consumer Banking, Wells Fargo Bank

Jonathan Rose, President, Rose Companies

Jesse Vaughan, Co-Founder, Landed

MODERATOR

Diane Helfrey, Vice President, Global Philanthropy, JPMorgan Chase & Co.

WHITTIER

Asia's Investment Zones: Opportunities for Expansion

PANELISTS

Yong-Hyun Kim, CEO, Hanwha Asset Management

Mitsumaru Kumagai, Executive Managing Director and Chief Economist, Daiwa Institute of Research Ltd.

Nazir Razak, Chairman, Ikhlas Capital

Enrique Razon, Chairman and CEO, International Container Terminal Services, Inc.

MODERATOR

Haslinda Amin, Anchor and Chief International Correspondent for Southeast Asia, Bloomberg Television

DAYTON

Wake Up With Late Late Night: A Conversation With James Corden and Ben Winston

GUEST

James Corden, Host, The Late Late Show; Partner, Fulwell73

Ben Winston, Executive Producer, The Late Late Show; Partner, Fulwell73

MODERATOR

Alex Witt, Anchor, MSNBC's "Weekends with Alex Witt"; Correspondent, NBC News

CANON

50 Ways to Leave Your LIBOR: Creating Alternative Benchmarks

PANELISTS

Tom Broughton, Chairman, President and CEO, ServisFirst Bank

Meredith Coffey, Executive Vice President, Research and Regulation, The Loan Syndications and Trading Association

Scott O'Malia, CEO, International Swaps and Derivatives Association, Inc.

Brian Quintenz, Commissioner, U.S. Commodity Futures Trading Commission

Richard Sandor, Chairman and CEO, American Financial Exchange LLC; Senior Fellow, Milken Institute

MODERATOR

Justin Baer, Senior Special Writer, The Wall Street Journal

CALIFORNIA TERRACE

The Business Case for Investing in Women

PANELISTS

Jesse Draper, Founding Partner, Halogen Ventures

Virginie Morgon, CEO, Eurazeo

Caryn Seidman-Becker, Chairman and CEO, CLEAR

Lisa Skeete Tatum, Founder and CEO, Landit

Shelley Zalis, CEO, The Female Quotient; Founder, The Girls' Lounge

MODERATOR

Leon Kalvaria, Chairman, Institutional Clients Group, Citigroup

hosted by citi *and* The Female Quotient

8:00 AM - 9:15 AM

INTERNATIONAL GALLERY

Reinvigorating Investments in Alzheimer's Drug Development

PANELISTS

David Dolby, Managing Director, Dolby Family Ventures; Board Member, Dolby Laboratories
Angus Grant, CEO, Dementia Discovery Fund
Laszlo Kiss, Executive Director, WRD and Principal, Pfizer Ventures
Frank Longo, Chairman of the Board and Founder, PharmatrophiX

OPENING REMARKS

LaTese Briggs, Senior Director, Center for Strategic Philanthropy, Milken Institute

MODERATOR

Howard Fillit, Founding Executive Director and Chief Science Officer, Alzheimer's Drug Discovery Foundation

PRIVATE, BY INVITATION ONLY

MAPLE

Driving Your Data: Personal Control in Finance and Health

PANELISTS

Christine Bechtel, Co-Founder, X4 Health
Richard Berner, Executive in Residence and Adjunct Professor, NYU Stern School of Business; Former Director, Office of Financial Research, U.S. Department of the Treasury
Tom Curry, Partner, Nutter, McClennen & Fish, LLP; Former U.S. Comptroller of the Currency

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9:30 AM - 10:30 AM

INTERNATIONAL BALLROOM

Artificial Intelligence Advances, and the Ethical Choices Ahead

PANELISTS

Pedro Domingos, Managing Director and Head of Machine Learning Research, The D. E. Shaw Group; Professor of Computer Science and Engineering, University of Washington
James Field, Founder and CEO, LabGenius
John Kelly III, Executive Vice President, IBM
Vivienne Ming, Co-Founder and Executive Chair, Socos Labs

MODERATOR

Henry Blodget, Co-Founder, Editorial Director and CEO, Insider Inc.

BEVERLY HILLS BALLROOM

Corner Office: Leading Organizations in an Era of Change

PANELISTS

Todd Boehly, Chairman and CEO, Eldridge Industries
Charles Scharf, Chairman and CEO, BNY Mellon
Igor Tulchinsky, Founder, Chairman and CEO, WorldQuant
Devin Wenig, President and CEO, eBay
Meg Whitman, CEO, Quibi

MODERATOR

David Faber, Journalist and Co-Anchor, CNBC

WILSHIRE BALLROOM

Global Overview: Measuring the Winds of Change

PANELISTS

Jane Harman, President and CEO, the Wilson Center; Former Congresswoman
His Excellency Paul Kagame, President of Rwanda
Lord Mandelson, Chairman, Global Counsel; former UK First Secretary of State and EU Trade Commissioner
Michael Pillsbury, Director, Center on Chinese Strategy, Hudson Institute; Author, "The Hundred-Year Marathon"

MODERATOR

Nicholas Kristof, Columnist, The New York Times

PAVILION

From Sports to Business: Creating a Winning Culture

GUEST

Alex Rodriguez, Founder and CEO, A-Rod Corp; 2009 World Series Champion, New York Yankees

MODERATOR

Erika Nardini, CEO, Barstool Sports

9:30 AM - 10:30 AM

INTERNATIONAL TERRACE

Credit Markets: Back to Neutral?

PANELISTS

Michael Buchanan, Deputy Chief Investment Officer, Western Asset
Mike Damaso, Co-Founder of CBAM Partners
Jude Driscoll, Senior Managing Director and Chief Investment Officer, Public Fixed Income, MetLife Investment Management
Justin Slatky, Executive Vice President and Co-Chief Investment Officer, Shenkman Capital Management
Anne Walsh, Chief Investment Officer, Fixed Income, Guggenheim Partners

MODERATOR

Mary Childs, Senior Reporter, Barron's

WHITTIER

Food as Medicine

PANELISTS

The Edge, Lead Guitarist, U2
William Li, President, Founder and Medical Director, The Angiogenesis Foundation; Author, "Eat to Beat Disease"
Tim Ryan, U.S. Representative, State of Ohio

MODERATOR

Ryan Shadrick Wilson, Senior Advisor, Center for Public Health, Milken Institute

BRIGHTON

Innovators Shaping Asia

PANELISTS

Swan Gin Beh, Chairman, Economic Development Board of Singapore
Tony Han, Co-Founder and CEO, WeRide
Ming Maa, President, Grab
Teddy Oetomo, Chief Strategy Officer, Bukalapak
Hua Fung Teh, Group President, ONE Championship

MODERATOR

Gary Liu, CEO, South China Morning Post

DAYTON

Outsmarting Superbugs: What Are the Alternatives?

PANELISTS

Matthew Hepburn, Program Manager, Biological Technologies Office, DARPA
Peter Jackson, Executive Director, AMR Centre
Nancy Knight, Director, Division of Global Health Protection, Centers for Disease Control and Prevention
Jeanette Mucha, Co-Founder and CEO, SciBac Inc.
Peter Piot, Director and Handa Professor of Global Health, London School of Hygiene & Tropical Medicine

MODERATOR

Margaret Hamburg, Foreign Secretary, National Academy of Medicine

OAKHURST

How Philanthropy's New Generation is Driving Shared Prosperity

PANELISTS

Rochel Leah Bernstein, Director and Founder, Child Safety Pledge
Gabriela Citrone, Director of Initiatives, Citrone 33 Foundation; Philanthropist
Ndaba Mandela, Co-Founder and Chairman, Africa Rising Foundation
Heidi Roddenberry, President, The Roddenberry Foundation

MODERATOR

Maura Donlan, Director, Center for Strategic Philanthropy, Milken Institute

PALM

The City for All Ages: Harnessing the Promise of Longevity

PANELISTS

Dan Buettner, Founder, Blue Zones, LLC.
Carol Coletta, President and CEO, Memphis River Parks Partnership; Senior Fellow, American Cities Practice, The Kresge Foundation
Rodney Slater, Co-Chairman, Transportation, Shipping and Logistics Practice, Squire Patton Boggs; Former Secretary, U.S. Department of Transportation
Jan Vapaavuori, Mayor, City of Helsinki

MODERATOR

James Anderson, Head of Government Innovation, Bloomberg Philanthropies

9:30 AM - 10:30 AM

CANON

Emerging Markets: Opportunities in a Crowded Trade

PANELISTS

Hani Buttikhi, Vice Chairman, KBBO Group; Chief Investment Officer and Executive Director, NMC Healthcare
Penny Foley, Group Managing Director, Emerging Markets, The TCW Group
Anita Marangoly George, Executive Vice-President, Strategic Partnerships and Growth Markets, CDPQ India
Bart Turtelboom, CEO and Executive Director, APQ Global

MODERATOR

William Lee, Chief Economist, Milken Institute

STARDUST

A Fireside Chat With Leon Black

GUEST

Leon Black, Chairman of the Board and CEO, Apollo Global Management

MODERATOR

Jase Auby, Deputy Chief Investment Officer, Teacher Retirement System of Texas

PRIVATE, BY INVITATION ONLY

INTERNATIONAL GALLERY

Corporate Governance and Activist Investing

PANELISTS

Scott Ferguson, Managing Partner, Sachem Head Capital Management
Belita Ong, CEO, Dalton Investments
Clifton S. Robbins, CEO, Blue Harbour Group
Alex Roepers, Founder and Chief Investment Officer, Atlantic Investment Management

MODERATOR

Jason Klein, Senior Vice President and Chief Investment Officer, Investments Office, Memorial Sloan Kettering Cancer Center

PRIVATE, BY INVITATION ONLY

MAPLE

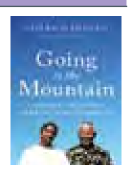
Are the Kids All Right? Building Healthy Minds and Hearts in Youth

PRIVATE, BY INVITATION ONLY

10:30 AM - 10:45 AM

PAVILION

Meet the Author: Ndaba Mandela



BOOK SIGNING

Ndaba Mandela, Co-Founder and Chairman, Africa Rising Foundation

10:45 AM - 11:30 AM

INTERNATIONAL BALLROOM

A Conversation With Ken Griffin and Michael Milken

GUEST

Ken Griffin, Founder and CEO, Citadel

MODERATOR

Michael Milken, Chairman, Milken Institute

10:45 AM - 11:45 AM

BEVERLY HILLS BALLROOM

The Age of Private Equity and Credit

PANELISTS

Glenn August, Founder and CEO, Oak Hill Advisors
Victor Khosla, Founder and Chief Investment Officer, SVPGlobal
Greg Lippmann, Chief Investment Officer, Libremax Capital
Virginie Morgon, CEO, Eurazeo
Raymond Svider, Chairman and Partner, BC Partners

MODERATOR

Jim Moglia, Vice Chair, BMO Capital Markets

10:45 AM - 11:45 AM

WILSHIRE BALLROOM

If We Do Nothing: Earth's Climate at the Tipping Point

PANELISTS

Edgar Bronfman Jr., Chairman, Endeavor Global
Robert Gibbins, Chief Investment Officer, Autonomy Capital
Paul Hawken, Founder, Project Drawdown; Author, "Drawdown"
Roland Hwang, Managing Director, Climate and Clean Energy Program, National Resources Defense Council
Matt Rogers, Senior Partner, McKinsey & Company

MODERATOR

Gillian Tett, Chairman Editorial Board, Editor-at-Large, U.S., Financial Times

PAVILION

Psychedelics: Mind-Enhancing Methods to Well-Being

PANELISTS

Christian Angermayer, Founder, Apeiron Investment Group
Robin Carhart-Harris, Head, Centre for Psychedelic Research, Department of Brain Sciences, Imperial College London
Matthew Johnson, Principal Investigator, Associate Professor, Johns Hopkins Psychedelic Research Unit, Johns Hopkins University School of Medicine
Ayelet Waldman, Author, "A Really Good Day: How Microdosing Made a Mega Difference in My Mood, My Marriage, and My Life"

MODERATOR

Tim Ferriss, Entrepreneur; Author, "Tools of Titans"

INTERNATIONAL TERRACE

The Macroeconomic Outlook: A Balancing Act

PANELISTS

James McCormack, Global Head, Sovereign and Supranational Group, Fitch Ratings
Seema Shah, Senior Global Investment Strategist, Principal Global Investors
Nathan Sheets, Chief Economist and Head of Global Macroeconomic Research, PGIM Fixed Income
Christopher Smart, Head, Barings Investment Institute
Bryan Whalen, Group Managing Director, U.S. Fixed Income, The TCW Group

SPECIAL GUEST

Komal Sri-Kumar, Senior Fellow, Milken Institute; President, Sri-Kumar Global Strategies, Inc.

WHITTIER

Partnerships in Humanitarian Response: Bringing Hope and Opportunity to Refugee Children

PANELISTS

Cecilia Conrad, CEO, Lever for Change; Managing Director, 100&Change, John D. and Catherine T. MacArthur Foundation
Sarah Smith, Senior Director of Education, International Rescue Committee
Sherrie Westin, President, Global Impact and Philanthropy, Sesame Workshop

SPECIAL GUEST

Elmo, Everyone's furry, red friend from Sesame Street

MODERATOR

Sheryl WuDunn, Co-Founder, FullSky Partners; Co-Author, "China Wakes" and "A Path Appears"

10:45 AM - 11:45 AM

BRIGHTON

Not Your Average Clinic Visit: Data Science for Health

PANELISTS

Deborah Scher, Executive Advisor to the Secretary, Center for Strategic Partnerships, U.S. Department of Veterans Affairs
John Tsai, Head of Global Drug Development and Chief Medical Officer, Novartis
Jenni Vargas, Chief Strategy Officer, One Medical
D.A. Wallach, Managing Partner, Inevitable Ventures

MODERATOR

Rebecca Robbins, San Francisco Correspondent, STAT

DAYTON

Finding Common Ground: Getting What Works Into the Classroom

PANELISTS

Stephen Heyneman, Professor Emeritus, International Education Policy, Department of Leadership, Policy, and Organizations, Vanderbilt University
Candice McQueen, CEO, National Institute for Excellence in Teaching (NIET)
Matthew Springer, Robena and Walter E. Hussman, Jr. Distinguished Professor of Education Reform, University of North Carolina - Chapel Hill
Kate Walsh, President, National Council on Teacher Quality
Randi Weingarten, President, American Federation of Teachers

MODERATOR

Lowell Milken, Founder, National Institute for Excellence in Teaching (NIET); Chairman and Co-Founder, Milken Family Foundation

OAKHURST

The Future of Stock Exchanges

PANELISTS

Jonathan Kellner, CEO, Members Exchange
Jose Oriol Bosch Par, CEO, BMV Group
Nandini Sukumar, CEO, World Federation of Exchanges
Alex Yavorsky, Joint Global Head of Financial Institutions and Global Head of Market Structure and Technology, Jefferies

MODERATOR

Gina Chon, Columnist, Reuters Breakingviews

PALM

A Good Man: What's Happened to American Masculinity?

PANELISTS

Ted Bunch, Chief Development Officer and Co-Founder, A CALL TO MEN
Wade Davis, Former NFL Player, Corporate Inclusion Advisor and Educator
David French, Senior Writer, National Review
Matthew McGorry, Co-Founder and Co-CEO, Inspire Justice, LLC

MODERATOR

Michelle Kydd Lee, Chief Innovation Officer, CAA

CANON

The Long-Term Outlook for Asia-Pacific's Institutional Investors

PANELISTS

David Atkin, CEO, Cbus
Heenam Choi, Chairman and CEO, Korea Investment Corporation
Damian Graham, Chief Investment Officer, First State Super
Dong-Hun Jang, Chief Investment Officer, Public Officials Benefit Association
Rohit Sipahimalani, Joint Head, Investment Group; Joint Head, Portfolio Strategy & Risk Group, Temasek

MODERATOR

Anita Marangoly George, Executive Vice-President, Strategic Partnerships and Growth Markets, CDPQ India

10:45 AM - 11:45 AM

STARDUST

Europe in the Emerging World Order

PRIVATE, BY INVITATION ONLY

INTERNATIONAL GALLERY

Diversifying Past Your Portfolio: Investment as a Tool for Change

PANELISTS

Afsaneh Beschloss, Founder and CEO, Rock Creek Group
Ed Garden, Chief Investment Officer and Founding Partner, Trian Fund Management, L.P.
Charles Scharf, Chairman and CEO, BNY Mellon
Debra Smith, Chief Operating Investment Officer, CalSTRS
Joel Wittenberg, Vice President and Chief Investment Officer, W. K. Kellogg Foundation

MODERATOR

Richard Ditizio, President and Chief Operating Officer, Milken Institute

PRIVATE, BY INVITATION ONLY

MAPLE

China and the US: the Art Market and Cultural Cooperation

PANELISTS

Klaus Biesenbach, Director, Museum of Contemporary Art
Dominic Ng, Chairman and CEO, East West Bank
Philip Tinari, Director and CEO, UCCA Center for Contemporary Art

MODERATOR

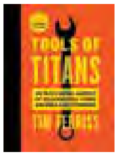
Princess Alia Al-Senussi, Advisor, Arts and Culture, Milken Institute; UK and MENA Representative, Art Basel

PRIVATE, BY INVITATION ONLY

11:45 AM - 12:00 PM

PAVILION

Meet the Author: Tim Ferriss



BOOK SIGNING

Tim Ferriss, Entrepreneur; Author, "Tools of Titans"

PAVILION

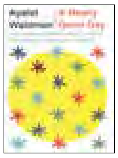
Meet the Author: Paul Hawken

BOOK SIGNING

Paul Hawken, Founder, Project Drawdown; Author, "Drawdown"

PAVILION

Meet the Author: Ayelet Waldman



BOOK SIGNING

Ayelet Waldman, Author, "A Really Good Day: How Microdosing Made a Mega Difference in My Mood, My Marriage, and My Life"

12:00 PM - 2:00 PM

STARDUST

CEO Roundtable: The Future of Finance

PRIVATE, BY INVITATION ONLY

INTERNATIONAL GALLERY

Finding Alpha

PANELISTS

Marcus Frampton, Chief Investment Officer, Alaska Permanent Fund
Sharmila Kassam, Deputy Chief Investment Officer, Employees Retirement System of Texas
Paul Murray, Head of Portfolio Management, Victorian Funds Management Corporation
Alyssa Rieder, Vice President and Chief Investment Officer, Dignity Health

INTRODUCTION BY

Petra Freddi, Director, Business and Program Development, Asia, Milken Institute

MODERATOR

John Claisse, CEO, Albourne Group

PRIVATE, BY INVITATION ONLY

MAPLE

Untying the Invisible Hand in Biomedical R&D

PRIVATE, BY INVITATION ONLY

12:15 PM - 2:00 PM

INTERNATIONAL BALLROOM

Lunch Program
The Known Unknowns of Election 2020

WELCOME REMARKS

Sarah Sandler, Senior Director, Business and Program Development, Milken Institute

PANELISTS

Jim Messina, CEO, The Messina Group; Obama 2012 Campaign Manager; International Political Consultant
Mark Penn, President and Managing Partner, The Stagwell Group
Karl Rove, Former Senior Advisor and Deputy Chief of Staff, Bush Administration
Neera Tanden, President and CEO, Center for American Progress

MODERATOR

Willow Bay, Dean and Walter H. Annenberg Chair in Communication, USC Annenberg School for Communication and Journalism

SIMULCAST

Lunch Program Simulcast:
Beverly Hills Ballroom, Pavilion, & Wilshire Garden

2:30 PM - 3:30 PM

INTERNATIONAL BALLROOM

The Hedge-Fund Shakeout

PANELISTS

Gerald Beeson, Chief Operating Officer, Citadel
Eddie Fishman, Managing Director and Executive Committee Member, The D. E. Shaw Group
John McCormick, President and CEO, Hedge Fund Solutions Group, Blackstone Group
Jeremy Schiffman, Founder and Managing Partner, Palestra Capital Management
Ilana Weinstein, Founder and CEO, The IDW Group LLC

MODERATOR

Erik Schatzker, Editor-at-Large, Bloomberg Television

BEVERLY HILLS BALLROOM

Part 1: A Conversation With Wilbur L. Ross, Jr., Secretary, U.S. Department of Commerce
Part 2: The American Workforce

PANELISTS

Bernard Harris, Jr., CEO, National Math and Science Initiative; Former NASA Astronaut
Barbara Humpton, CEO, Siemens USA
Jonathan Sokoloff, Managing Partner, Leonard Green & Partners, L.P.

GUEST

Wilbur L. Ross, Jr., Secretary, U.S. Department of Commerce

MODERATOR

Gerard Baker, Editor-at-Large, The Wall Street Journal

2:30 PM - 3:30 PM

WILSHIRE BALLROOM

Brexit: How Long Does This Carry On?

PANELISTS

Charles Falconer, Partner, Gibson, Dunn; Former Secretary of State for Justice, United Kingdom
Jo Johnson, Member of Parliament for Orpington; Former Minister for Transport and Minister for London
Denise Kingsmill, Baroness, House of Lords
Hugh Powell, Former UK Deputy National Security Adviser
Howard Shore, Executive Chairman, Shore Capital Group

MODERATOR

Andrew Edgecliffe-Johnson, U.S. Business Editor, Financial Times

PAVILION

The Future of Human Performance

PANELISTS

Joe Dumars, Three-time NBA Champion; Former President of Basketball Operations, Detroit Pistons
Jessica Green, CEO and Co-Founder, Phylagen, Inc.
Colin O'Brady, Professional Athlete and 4x World Record Holder
Gene Simmons, Co-Founder, KISS; Chief Evangelist Officer, Invictus
Andy Walshe, Founding Partner, Liminal Collective; Human Performance Expert

MODERATOR

Paul von Zielbauer, Director, Global Programming, Milken Institute

INTERNATIONAL TERRACE

Mentoring and Motivating the Next Generation of Leaders

PANELISTS

Beth Breger, Executive Director, Leadership Enterprise for a Diverse America (LEDA)
Kevin O'Leary, Chairman, O'Shares ETFs; Television Personality, "Shark Tank"
Joel Peterson, Chairman of the Board, JetBlue
David Simas, CEO, Obama Foundation

MODERATOR

Richard Ditizio, President and Chief Operating Officer, Milken Institute

WHITTIER

Navigating the New Paradigm in International Investment and Trade

PANELISTS

Chris Campbell, Chief Strategist, Duff & Phelps
Eric Cantor, Vice Chairman and Managing Director, Moelis & Company; Former Majority Leader, U.S. House of Representatives
Kevin Klowden, Executive Director, Center for Regional Economics and California Center, Milken Institute
Ian McKay, CEO, Invest in Canada
Heath Tarbert, Acting Under Secretary for International Affairs, U.S. Department of the Treasury

MODERATOR

Gillian Tett, Chairman Editorial Board, Editor-at-Large, U.S., Financial Times

BRIGHTON

Big Other's Watching: A Conversation With Roger McNamee and Shoshana Zuboff

PANELISTS

Roger McNamee, Founding Partner, Elevation Partners; Author, "Zucked: Waking Up to the Facebook Catastrophe"
Shoshana Zuboff, Professor of Business Administration, Harvard Business School; Author, "The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontiers of Power"

MODERATOR

Jared Carney, Founder and CEO, Lightdale, LLC

2:30 PM - 3:30 PM

DAYTON

The African Century: A Road Map for Market-led Growth

PANELISTS

David Bohigian, Acting President and CEO, Overseas Private Investment Corporation (OPIC)
Youssef Boutros-Ghali, Chairman, Nationbuilders Capital; Former Minister of Finance, Egypt; Former Chairman, IMF Committee
Dore Gold, President, Jerusalem Center for Public Affairs; Former Director-General Ministry of Foreign Affairs, State of Israel; Former Ambassador of Israel to the United Nations
Patrice Motsepe, Founder and Chairman, African Rainbow Minerals
His Highness Emir Muhammadu Sanusi II, Emir of Kano; Former Governor, Central Bank of Nigeria

MODERATOR

Staci Warden, Executive Director, Global Market Development, Milken Institute

OAKHURST

The Power of Place-Based Philanthropy

PANELISTS

Cindy L. Citrone, Founder and CEO, Citrone 33 Foundation
Shirley Franklin, Executive Board Chair, Purpose Built Communities; Former Mayor, City of Atlanta
Wes Moore, CEO, Robin Hood
La June Montgomery Tabron, President and CEO, W.K. Kellogg Foundation

MODERATOR

Diana Bucco, President, The Buhl Foundation

PALM

Getting to Better Solutions for Children's Health

PANELISTS

Simon Davies, Executive Director, Teen Cancer America
Vasum Peiris, Chief Medical Officer, Pediatrics and Special Populations, Center for Devices and Radiological Health, Food and Drug Administration
Alex Silver, Partner, P2 Capital Partners; Chairman, EB Research Partnership
Vera Tait, Chief Medical Officer, American Academy of Pediatrics

MODERATOR

Mali Locke, Director, Center for Strategic Philanthropy, Milken Institute

CANON

Undercapitalization: Closing the Gender Growth Gap Across Industries

PANELISTS

Jesse Draper, Founding Partner, Halogen Ventures
David Jeffrey, Partner, Head of Europe, StepStone Global
Megan McDonald, Global Head of Investment Banking and Debt Capital Markets, Standard Bank Group
Mina Pacheco Nazemi, Managing Director, Barings
David Warren, CEO, Chief Investment Officer and Founding Partner, DW Partners

MODERATOR

Katie O'Reilly, Executive Director, Business and Program Development, Milken Institute

2:30 PM - 4:30 PM

MAPLE

Meeting: Center for the Future of Aging Business Council and Academic and Policy Advisory Board

PANELISTS

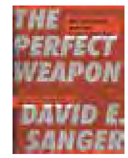
Ric Edelman, Founder and Chairman, Financial Education and Client Experience, Edelman Financial Engines
Bob Kramer, Founder and Strategic Advisor, National Investment Center for Seniors Housing & Care
Patricia (Pat) Milligan, Senior Partner and Global Leader, Multinational Client Group, Mercer; Global Leader, When Women Thrive
Michael Monson, Senior Vice President, Medicaid and Complex Care, Centene Corporation

PRIVATE, BY INVITATION ONLY

3:30 PM - 3:45 PM

PAVILION

Meet the Author: David Sanger

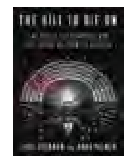


BOOK SIGNING

David Sanger, National Security Correspondent, The New York Times

PAVILION

Meet the Author: Anna Palmer and Jake Sherman



BOOK SIGNING

Anna Palmer, Senior Washington Correspondent and Co-Author, Playbook, POLITICO
Jake Sherman, Senior Writer and Co-Editor of Playbook, POLITICO

3:45 PM - 4:45 PM

INTERNATIONAL BALLROOM

Common Sense from Uncommon Investors

PANELISTS

Jonathan Coslet, Chief Investment Officer, TPG Global
John Danhakl, Managing Partner, Leonard Green & Partners, L.P.
Mitchell Julis, Co-Founder, Co-Chairman and Co-CEO, Canyon Partners, LLC
Brian Sheth, Co-Founder and President, Vista Equity Partners
Steven Tananbaum, Founding Partner and Chief Investment Officer, GoldenTree Asset Management LP

MODERATOR

Michael Milken, Chairman, Milken Institute

BEVERLY HILLS BALLROOM

Bank on It: Companies That Are Changing the Rules, and the World

PANELISTS

Bom Kim, Founder and CEO, Coupang
Hakan Koç, Co-Founder and Co-CEO, AUTO1 Group
Ming Maa, President, Grab
Abhinav Sinha, Chief Operating Officer, OYO

MODERATOR

Caroline Fairchild, Managing News Editor, LinkedIn

WILSHIRE BALLROOM

Filling the Global Infrastructure Gap

PANELISTS

David Bohigian, Acting President and CEO, Overseas Private Investment Corporation (OPIC)
Jim Yong Kim, Partner and Vice Chairman, Global Infrastructure Partners; Former President, World Bank Group
Raymond J. McGuire, Vice Chairman, Citigroup; Chairman of Citi Banking, Capital Markets and Advisory
Hiromichi Mizuno, Executive Managing Director and Chief Investment Officer, Government Pension Investment Fund, Japan; Co-Chair, Global Capital Markets Advisory Council, Milken Institute
Angela Rodell, CEO, Alaska Permanent Fund Corporation

MODERATOR

Brian Sullivan, Anchor and Senior National Correspondent, CNBC

3:45 PM - 4:45 PM

PAVILION

Town Hall | Will Technology Save or Subvert Civility and Society?

PANELISTS

Fadi Chehadé, Chairman, Chehadé & Company
Tristan Harris, Co-Founder and Executive Director, Center for Humane Technology; Former Design Ethicist, Google
Gabriel Stricker, Vice President of Communications, Niantic

MODERATOR

Frank Luntz, Founder and President, Luntz Global

INTERNATIONAL TERRACE

Global Dealmakers: Show Me the M&A

PANELISTS

Jason Greenberg, Managing Director, Head of Global Tech Advisory, Jefferies
Leon Kalvaria, Chairman, Institutional Clients Group, Citigroup
Michał Krupiński, CEO, Bank Pekao SA
Kevin Sherlock, Co-Head of Global Financial Sponsors Investment Banking, Bank of America Merrill Lynch

MODERATOR

Steve Krouskos, Global Vice Chair, Transaction Advisory Services, EY

WHITTIER

First Step, and Not the Last: Criminal Justice Reform

PANELISTS

Phil Bryant, Governor, Mississippi
Susan Burton, Founder, A New Way of Life Reentry Project
Mark Holden, Senior Vice President and General Council, Koch Industries, Inc.
Valerie Jarrett, Senior Advisor, Obama Foundation; Author, "Finding My Voice: My Journey to the West Wing and the Path Forward"
Nicholas Turner, President and Director, Vera Institute of Justice
Clara Wu Tsai, Social Entrepreneur and Founder, Clara and Joe Tsai Foundation

MODERATOR

Nicholas Kristof, Columnist, The New York Times

BRIGHTON

Can Health Data Fuel Global Collaboration for Cures?

PANELISTS

Vivian Lee, President, Health Platforms, Verily Life Sciences
Ning Li, Vice President, BGI Group; Executive Vice President, BGI Global Development
Don Rucker, National Coordinator for Health Information Technology (ONC), U.S. Department of Health and Human Services
Varda Shalev, Director, Institute for Health Research and Innovation, Maccabi Healthcare Services
Beth Thompson, Head of UK and EU Policy, Wellcome Trust

MODERATOR

Edison Liu, President and CEO, The Jackson Laboratory

DAYTON

For Women, By Women: Entrepreneurs on the Rise

PANELISTS

Emily Current, Co-Founder and Creative Director, Emily + Meritt and The GREAT
Anjali Kumar, Co-Founder, The Justice Dept; Board Member, Happy Money, Women's World Banking, Amplifier
Hannah Skvarla, Co-Founder and CEO, The Little Market
Trina Spear, Co-Founder and Co-CEO, FIGS
Debbie Wosskow, Co-Founder, AllBright

MODERATOR

Kevin O'Leary, Chairman, O'Shares ETFs; Television Personality, "Shark Tank"

3:45 PM - 4:45 PM

PALM

Ag Tech: Food Security as National Security

PANELISTS

Her Excellency Mariam bint Mohammed Hareb Al Mheiri, Minister of State for Future Food Security, United Arab Emirates
Devry Boughner Vorwerk, Chief Communications Officer and Head of Global Corporate Affairs, Cargill
Stephen Censky, Deputy Secretary of Agriculture, U.S. Department of Agriculture
Charlie McNairy, CEO and Chief Investment Officer, International Farming Corporation
Antonio Tataranni, Senior Vice President, Physiology, Life Sciences and R&D, PepsiCo

MODERATOR

Michael Pellman Rowland, Partner and Co-Head, Impact Investments, Alpenrose Wealth Management

CANON

Maximizing the Power of Impact Storytelling

PANELISTS

Scott Budnick, Founder and President, Anti-Recidivism Coalition; Film Producer; CEO, One Community
Paul Dalio, Filmmaker, Moonstruck Productions
Abigail Disney, President and CEO, Fork Films; Co-Founder, Level Forward
Simone Friedman, Head of Philanthropy and Impact Investment, EJF Philanthropies
Manny Oteyza, Producer and Director, Manny O Productions, Inc.

MODERATOR

Beth Karlin, Founder and CEO, See Change Institute

STARDUST

From Products to Partnerships: The Future of the LP/GP Model

PANELISTS

Stefan Dunatov, Senior Vice President, Investment Strategy and Risk, British Columbia Investment Management Corporation
Jon Fox, Partner, Member of Investment and Senior Leadership Committees, Värde Partners
Bill Lee, Chief Investment Officer, NewYork-Presbyterian Hospital Investment Office
Brian O'Neil, Chief Investment Officer, Robert Wood Johnson Foundation

MODERATOR

Andrea Auerbach, Head of Global Private Investments, Cambridge Associates

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INTERNATIONAL GALLERY

Behind the Scenes: Insiders' Views on ASEAN

PANELISTS

Anindya Novyan Bakrie, CEO, Bakrie Global Ventura; Deputy Chairperson, Indonesian Chamber of Commerce and Industry (KADIN)
Swan Gin Beh, Chairman, Economic Development Board of Singapore
Dave Fernandez, Director, Sim Kee Boon Institute for Financial Economics, Singapore Management University; Professor of Finance (Practice)
Cesar Purisima, Asia Fellow, Milken Institute; Founding Partner, IKHLAS Capital; Former Secretary of Finance, Republic of the Philippines
Shahril Ridza Ridzuan, Managing Director, Khazanah Nasional Berhad

MODERATOR

Robin Hu, Head of Sustainability and Stewardship Group, Temasek

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BOARD ROOM

Can Crypto Ever Be Money?

PANELISTS

Saifedean Ammous, Economist and Author
Elad Gil, Chairman, Electric Capital
Robby Gutmann, CEO, NYDIG
Elizabeth Stark, Co-Founder and CEO, Lightning Labs

MODERATOR

Staci Warden, Executive Director, Global Market Development, Milken Institute

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4:45 PM - 5:00 PM

PAVILION

Meet the Author: Valerie Jarrett

BOOK SIGNING

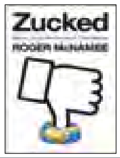
Valerie Jarrett, Senior Advisor, Obama Foundation; Author, "Finding My Voice: My Journey to the West Wing and the Path Forward"

PAVILION

Meet the Author: Roger McNamee

BOOK SIGNING

Roger McNamee, Founding Partner, Elevation Partners; Author, "Zucked: Waking Up to the Facebook Catastrophe"

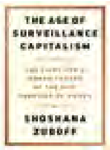


PAVILION

Meet the Author: Shoshana Zuboff

BOOK SIGNING

Shoshana Zuboff, Professor of Business Administration, Harvard Business School; Author, "The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontiers of Power"



5:00 PM - 6:00 PM

INTERNATIONAL BALLROOM

Part 1: A Conversation With John Hickenlooper
Part 2: A Conversation With Seth Moulton

INTRODUCTION BY
Conrad Kiechel, Executive Director, Global Programming and Events, Milken Institute

GUEST
John Hickenlooper, Former Governor, Colorado

MODERATOR
Gerard Baker, Editor-at-Large, The Wall Street Journal

GUEST
Seth Moulton, U.S. Representative, Massachusetts

MODERATOR
Christina Bellantoni, Professor of Professional Practice, Director of the Annenberg Media Center, University of Southern California

WILSHIRE BALLROOM

5G: A Tech Revolution With National Security Implications

PANELISTS
Vijay Doradla, Chief Business Officer, SparkCognition
Jason Hoffman, Chairman and CEO, MobiledgeX
Zvi Marom, CEO, BATM Advanced Communications Ltd.

MODERATOR
David Sanger, National Security Correspondent, The New York Times

INTERNATIONAL TERRACE

How Drug Trafficking Is Fueling the Opioid Crisis

PANELISTS
Michael A. Davis, Assistant Special Agent in Charge, Drug Enforcement Administration, Los Angeles Field Division
Lynn Goldman, Michael and Lori Milken Dean, Milken Institute School of Public Health, George Washington University
Adriaan Louw, CEO and Program Director, International Spine and Pain Institute

MODERATOR
Anita Gupta, Senior Vice President, Medical Strategy and Government Affairs, Heron Therapeutics

WHITTIER

Finding Opportunities in India's Next Chapter

PANELISTS
Nisha Biswal, President, U.S.-India Business Council, U.S. Chamber of Commerce
S Jaishankar, President, Global Corporate Affairs, Tata Sons Private Limited; Former Foreign Secretary, Republic of India
Ravi Kumar, President, Infosys Limited
Jayne Plunkett, CEO, Reinsurance, Asia, Swiss Re

MODERATOR
Reuben Abraham, Asia Fellow, Milken Institute; CEO and Senior Fellow, IDFC Institute

BRIGHTON

New Models Shaking Up the Health-Care Value Chain

PANELISTS
Patrick Edelmann, Managing Director, KBBO Americas
Dan Liljenquist, Senior Vice President and Chief Strategy Officer, Intermountain Healthcare
Josh Ofman, Senior Vice President, Global Health Policy, Amgen
Vivek Ramaswamy, Founder and CEO, Roivant Sciences
David Tapolczay, CEO, St. George Street Capital

MODERATOR
Freda Lewis-Hall, Chief Patient Officer and Executive Vice President, Pfizer Inc.

5:00 PM - 6:00 PM

CANON

Transforming Economies: Investment in MENA

PANELISTS
His Excellency Yousef Al Otaiba, Ambassador of the United Arab Emirates to the United States of America, Embassy of the United Arab Emirates
His Excellency Khalid Al Rumaihi, Chief Executive, Bahrain Economic Development Board
Ibrahim Saad Almojel, Director General, Saudi Arabia Industrial Development Fund
Hazem Ben-Gacem, Co-CEO, Investcorp

MODERATOR
Hadley Gamble, Reporter and Anchor, CNBC

INTERNATIONAL GALLERY

Achieving Social Impact Through Opportunity Zones

WELCOME REMARKS
Wilbur L. Ross, Jr., Secretary, U.S. Department of Commerce

PANELISTS
Lorenzo Bernasconi, Senior Associate Director, Innovative Finance, The Rockefeller Foundation
Diana Bucco, President, The Buhl Foundation
John Buley, Professor of the Practice of Finance, Fuqua School of Business, Duke University
Shirley Franklin, Executive Board Chair, Purpose Built Communities; Former Mayor, City of Atlanta
Simone Friedman, Head of Philanthropy and Impact Investment, EJF Philanthropies

MODERATOR
Christopher Lee, Director, Center for Financial Markets, Milken Institute

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MAPLE

How Asia Leads on FinTech: A Discussion with Industry Leaders

PANELISTS
Dennis Cong, Managing Partner, CreditEase Fintech Investment Fund
Daisuke Iwase, Group Chief Digital Officer, AIA Group
Mohit Joshi, President, Infosys Limited
Aireen Omar, Deputy Group CEO, Digital, Transformation & Corporate Services, AirAsia
Simon Paris, CEO, Finastra

MODERATOR
Donald Lacey, Chief Operating Officer and Managing Director, Ping An Global Voyager Fund

PRIVATE, BY INVITATION ONLY

6:00 PM - 7:30 PM

PAVILION

Evening Reception | Media Influencers as Agents for Social Change

PANELISTS
Scott Budnick, Founder and President, Anti-Recidivism Coalition; Film Producer; CEO, One Community
Sophia Bush, Actress; Activist
Caron Butler, Author, Analyst, Entrepreneur, and former NBA Champion/NBA AllStar

MODERATOR
Zack O'Malley Greenburg, Senior Editor, Media and Entertainment, Forbes

6:00 PM - 8:00 PM

ALLBRIGHT WEST HOLLYWOOD

Milken Institute Young Leaders Circle Private Reception

SPEAKER
Debbie Wosskow, Co-Founder, AllBright

hosted by AllBright

OPENING REMARKS
Lowell Milken, Founder, National Institute for Excellence in Teaching (NIET); Chairman and Co-Founder, Milken Family Foundation

PRIVATE, BY INVITATION ONLY

6:00 PM - 7:00 PM

STARDUST

Reception for Speakers and Sponsors

PRIVATE, BY INVITATION ONLY

852/904

WEDNESDAY

MAY 1, 2019

6:00 AM - 8:30 AM

Continental Breakfast

Available in the Wilshire Garden and the Executive Center Foyer starting at 6:00 am.

7:30 AM - 9:00 AM

STARDUST

Innovations for Infrastructure Financing & Regional Integration

PANELISTS

IFC-Milken Institute Capital Markets Alumni

MODERATOR

Carole Biau, Director, Global Market Development, Milken Institute

PRIVATE, BY INVITATION ONLY

8:45 AM - 9:45 AM

BEVERLY HILLS BALLROOM

Things That Will Blow Your Mind

PANELISTS

Moty Avisar, CEO, Surgical Theater
Jessica Green, CEO and Co-Founder, Phylagen, Inc.
Jason Kelly, Co-Founder and CEO, Ginkgo Bioworks

MODERATOR

Richard Sandler, Executive Vice President, Milken Family Foundation; Partner, Law Offices of Maron & Sandler

WILSHIRE BALLROOM

Blockchain Technology: What Is It Good for, Really?

PANELISTS

Elad Gil, Chairman, Electric Capital
Sandra Ro, CEO, Global Blockchain Business Council
Stefan Schulz, Co-Founder and CEO, Bitfury Surround
Bill Tai, Venture Capitalist; Founder, ACTAI Global
Tomicah Tillemann, Co-Founder and Director, Blockchain Trust Accelerator, New America

MODERATOR

Staci Warden, Executive Director, Global Market Development, Milken Institute

PAVILION

Words That Work: A Workshop With Frank Luntz

SPEAKER

Frank Luntz, Founder and President, Luntz Global

8:45 AM - 9:45 AM

INTERNATIONAL TERRACE

Diabetes and Obesity: An Urgent Global Health Crisis

PANELISTS

Hawaa Almansoori, Deputy Medical Director, Imperial College London Diabetes Centre Abu Dhabi; Chairman, Sonostik LLC
Kathy Higgins, CEO, Alliance for a Healthier Generation
Deborah B. Horn, Medical Director, Center for Obesity Medicine and Metabolic Performance, University of Texas McGovern Medical School
Randy Jackson, Musician, Record Producer, and Entrepreneur

MODERATOR

Edward Greissing, Executive Director, Center for Public Health, Milken Institute

INTERNATIONAL GALLERY

Unlocking the GCC Puzzle

PRIVATE, BY INVITATION ONLY

MAPLE

Shaping the Workforce of the Future in California

PANELISTS

Jay Banfield, Chief Innovation Officer and Managing Director of California, Year Up
Noemi Donoso, Executive Vice President, Wonderful Education, The Wonderful Company
Eloy Ortiz Oakley, Chancellor, California Community Colleges
Maria Salinas, President and CEO, Los Angeles Chamber of Commerce

MODERATOR

Matt Horton, Associate Director, California Center, Milken Institute

PRIVATE, BY INVITATION ONLY

10:00 AM - 11:00 AM

INTERNATIONAL BALLROOM

AI's Next Chapters: What to Expect from A Transformative Technology

PANELISTS

Erkin Adylov, Founder and CEO, Behavox
Vijay Doradla, Chief Business Officer, SparkCognition
James Golden, CEO, WorldQuant Predictive
Mark Johnson, Co-Founder and CEO, Descartes Labs
Robert Kirkpatrick, Director, UN Global Pulse

MODERATOR

Becky Peterson, Senior Reporter, Technology, Business Insider

BEVERLY HILLS BALLROOM

The Future of Europe: Security, Economy, and the Transatlantic Relationship

PANELISTS

Peter Beyer, Member, German Bundestag; Coordinator of Transatlantic Cooperation, German Foreign Office
Niall Ferguson, Senior Fellow, Hoover Institution, Stanford University
Richard Haass, President, Council on Foreign Relations
Lord Mandelson, Chairman, Global Counsel; former UK First Secretary of State and EU Trade Commissioner
Yascha Mounk, Associate Professor, Johns Hopkins University
Laura Rudas, Executive Vice President, Strategy, Palantir Technologies

MODERATOR

Stephanie Flanders, Senior Executive Editor, Bloomberg News; Head, Bloomberg Economics

10:00 AM - 11:00 AM

WILSHIRE BALLROOM

Right or Left: Who's Best for Freedom?

PANELISTS

Kenneth Hersh, President and CEO, George W. Bush Presidential Center
Rich Lowry, Editor-in-Chief, National Review
Gene Sperling, President, Sperling Economic Strategies; Former National Economic Advisor to Presidents Obama and Clinton
Felicia Wong, President and CEO, Roosevelt Institute

MODERATOR

Josh Barro, Business Columnist, New York Magazine; Host of Left, Right & Center, KCRW

PAVILION

Stand in Your Power: The Mindful Way

PANELISTS

Neville Crawley, CEO, Kiva
Laura Dern, Actress; Activist
Donna Karan, Founder, Urban Zen and Donna Karan International
George Mumford, The Performance Whisperer
Dan Siegel, Clinical Professor of Psychiatry, UCLA School of Medicine; Founding Co-director, Mindful Awareness Research Center, UCLA

MODERATOR

James Doty, Professor of Neurosurgery, Founder and Director, The Center for Compassion and Altruism Research and Education (CCARE), Stanford University School of Medicine

INTERNATIONAL TERRACE

The Globalization of Sports

PANELISTS

Dan Beckerman, President and CEO, AEG
Kevin Demoff, Chief Operating Officer and Executive Vice President of Football Operations, Los Angeles Rams
Carl Mergele, CEO, STATS
Steve Tew, CEO, New Zealand Rugby
Casey Wasserman, Chairman and CEO, Wasserman; Chairman, LA 2028

MODERATOR

Jim Gray, Sportscaster, Showtime, Fox and WestwoodOne Radio

WHITTIER

The New Farmacy: Harnessing the Microbiome to Treat Disease

PANELISTS

Robynne Chutkan, Founder, Digestive Center for Wellness; Gastroenterologist
Rob Knight, Professor, Departments of Pediatrics, Bioengineering, and Computer Science & Engineering, University of California, San Diego
Karen Sandell Sfanos, Associate Professor, Department of Pathology, Oncology, and Urology, Johns Hopkins University School of Medicine
Josh Stevens, President and Chief Commercial Officer, DayTwo

MODERATOR

Julie DiBiase, Chief Content Officer, Prostate Cancer Foundation

BRIGHTON

Enhancing Financial Health for All Generations through Technology

PANELISTS

Michael Calhoun, President, Center for Responsible Lending
Aaron Klein, Fellow, Economic Studies, and Policy Director, Center on Regulation and Markets, Brookings Institution
Theodora Lau, Founder, Unconventional Ventures
Elizabeth Loewy, Co-Founder and Chief Operating Officer, EverSafe

MODERATOR

Rick Newman, Senior Columnist, Yahoo Finance

DAYTON

Hail to the Chief: A Conversation With Presidential Insiders

PANELISTS

Stuart Eizenstat, Author, "President Carter: The White House Years"; Former Domestic Policy Advisor, Carter Administration
Stewart McLaurin, President, White House Historical Association

MODERATOR

Richard Sandler, Executive Vice President, Milken Family Foundation; Partner, Law Offices of Maron & Sandler

10:00 AM - 11:00 AM

CANON

From Aid to Investment: New Models in Development Finance

PANELISTS

Richard Blum, Chairman, Blum Capital Partners L.P.; Founder, Blum Centers for Developing Economics, University of California, Berkeley
Michael Kashani, Global Head of ESG Portfolio Management, Fixed Income, Goldman Sachs Asset Management
Jonathan Medved, Founder and CEO, OurCrowd
Stephanie von Friedeburg, Chief Operating Officer, International Finance Corporation

MODERATOR

Glenn Yago, Senior Director, Milken Innovation Center, Jerusalem Institute; Senior Fellow and Founder, Financial Innovations Labs, Milken Institute

STARDUST

A Population Behind Bars: Incarceration's Opportunity Cost

PANELISTS

Kerry Kennedy, President, Robert F. Kennedy Human Rights
Ken Sagynbekov, Economist, Health Economics Research, Milken Institute
Robin Steinberg, Founder and CEO, The Bail Project
John Studzinski, Vice Chairman, PIMCO

MODERATOR

Nicholas Turner, President and Director, Vera Institute of Justice

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INTERNATIONAL GALLERY

Pandemics vs. the Pipeline: Confronting New Global Health Threats

MODERATOR

Peter Piot, Director and Handa Professor of Global Health, London School of Hygiene & Tropical Medicine

PRIVATE, BY INVITATION ONLY

MAPLE

Innovation Beyond the Valley: The Global Future of Venture and Growth Equity

PANELISTS

Michael Brown, Investor and Advisor to Emerging Technology Companies
Gerry Cardinale, Managing Partner and CEO, RedBird Capital Partners
Jonathan Hausman, Managing Director, Ontario Teachers' Pension Plan
Mark Suster, Founder, UpFront Ventures

PRIVATE, BY INVITATION ONLY

11:00 AM - 11:15 AM

PAVILION

Meet the Author: Stuart Eizenstat

BOOK SIGNING

Stuart Eizenstat, Author, "President Carter: The White House Years"; Former Domestic Policy Advisor, Carter Administration

854/904

11:15 AM - 12:15 PM

BEVERLY HILLS BALLROOM

Institutional Investors: Managing for the Long Term

PANELISTS

Jerry Albright, Chief Investment Officer, Teacher Retirement System of Texas
Jingdong Hua, Vice President and Treasurer, Treasury, The World Bank
Kim Lew, Vice President and Chief Investment Officer, Carnegie Corporation of New York
Amy McGarrity, Chief Investment Officer, Colorado Public Employees' Retirement System
Hiromichi Mizuno, Executive Managing Director and Chief Investment Officer, Government Pension Investment Fund, Japan; Co-Chair, Global Capital Markets Advisory Council, Milken Institute

MODERATOR

Christopher Ailman, Chief Investment Officer, California State Teachers' Retirement System; Co-Chair, Global Capital Markets Advisory Council, Milken Institute

WILSHIRE BALLROOM

The Chinese Economy in the Next 30 Years: Political Reform vs. Status Quo?

PANELISTS

Nicholas Lardy, Anthony M. Solomon Senior Fellow, Peterson Institute for International Economics; Author, "The State Strikes Back: The End of Economic Reform in China?"
Michael Pillsbury, Director, Center on Chinese Strategy, Hudson Institute; Author, "The Hundred-Year Marathon"
Sophie Richardson, China Director, Asia Division, Human Rights Watch
Stephen Roach, Senior Fellow, Jackson Institute for Global Affairs, Yale University
Perry Wong, Managing Director, Research, Milken Institute

MODERATOR

Sheryl WuDunn, Co-Founder, FullSky Partners; Co-Author, "China Wakes" and "A Path Appears"

PAVILLION

Fighting the Cycle of Poverty Through Industry Intervention: A Conversation With Lynda Resnick

PANELISTS

Noemi Donoso, Executive Vice President, Wonderful Education, The Wonderful Company
Victor Gomez, Student, Cal Poly San Luis Obispo
Lynda Resnick, Vice Chair and Co-Owner, The Wonderful Company
Logan Stout, Student, Wonderful College Prep Academy

MODERATOR

Michael Milken, Chairman, Milken Institute

INTERNATIONAL TERRCAE

Live Entertainment Embraces Immersive Technologies

PANELISTS

Erik Anderson, Executive Chairman, Topgolf Entertainment Group
James Carwana, Vice President, Intel Capital; General Manager, Intel Sports
Cary Granat, CEO, Immersive Artistry
Assia Grazioli, CEO and Co-Founder, Muse Capital; Board of Directors, Juventus Football Club
Markus Leitsch, Co-Founder, Hitbox Entertainment
Lauren Selig, Founder, Shake and Bake Productions

MODERATOR

Arjun Metre, Co-Founder, Pragya Ventures; Senior Managing Director, Sapinda

WHITTIER

Is Retirement Extinct?

PANELISTS

Arthur Bilger, Founder and CEO, WorkingNation
Teresa Ghilarducci, Bernard L. and Irene Schwartz Professor of Economics, The New School for Social Research; Director, Schwartz Center for Economic Policy Analysis and The New School Retirement Equity Lab
Kathleen Kennedy Townsend, Director, Retirement Security, Economic Policy Institute; Senior Advisor, Rock Creek Group; former Lieutenant Governor, State of Maryland
Penny Pennington, Managing Partner, Edward Jones

MODERATOR

Paul Irving, Chairman, Center for the Future of Aging, Milken Institute; Chairman, Encore.org; Distinguished Scholar-in-Residence, University of Southern California Davis School of Gerontology

11:15 AM - 12:15 PM

BRIGHTON

Housing Finance Reform: Will We Finally Get the Stone Up the Hill?

PANELISTS

Robert Broeksmit, President and CEO, Mortgage Bankers Association
Jeb Mason, Partner, The Cypress Group
Lisa Rice, President and CEO, National Fair Housing Alliance

MODERATOR

Eric Kaplan, Director, Center for Financial Markets, Milken Institute

DAYTON

Resilient Response: How Can We Better Help Communities Recover from Disasters?

PANELISTS

Joe Gebbia, Co-Founder and Chief Product Officer, Airbnb
Petra Nemcova, Supermodel, Philanthropist, and Co-Founder of All Hands and Hearts

MODERATOR

Patrick Steel, CEO, POLITICO

OAKHURST

Open Data, Open Banking: Creating a More Competitive Financial Services Ecosystem

PANELISTS

Gilles Gade, Founder, President and CEO, Cross River
Sima Gandhi, Head of Business Development and Strategy, Plaid
Sahil Kini, Co-Founder and CEO, Setu
Craig Schachter, Global Head of Fintech Ecosystem, Finastra

MODERATOR

Melissa Koide, Founder and CEO, FinRegLab; Senior Advisor, Milken Institute

PALM

eSports: The Bumpy Ride to ROI

PANELISTS

Sam Englebardt, Co-Founder and Partner, Galaxy Digital
Peter Levin, Managing Director, Griffin Gaming Partners
Kristen Salvatore, Vice President Commercial Director, Esports, Twitch
Ari Segal, CEO, Immortals Gaming Club

MODERATOR

Ben White, Chief Economic Correspondent, POLITICO

CANON

Beyond Crypto's Wild Ride

PANELISTS

Meltem Demirors, Chief Strategy Officer, CoinShares
Kathryn Haun, General Partner, Andreessen Horowitz
Elizabeth Rossiello, Founder and CEO, BitPesa
Elizabeth Stark, Co-Founder and CEO, Lightning Labs

MODERATOR

Staci Warden, Executive Director, Global Market Development, Milken Institute

INTERNATIONAL GALLERY

Gut Microbiome and Cancer Immunotherapy

MODERATOR

Jonathan W. Simons, President and CEO, Prostate Cancer Foundation; Senior Advisor, Milken Institute

PRIVATE, BY INVITATION ONLY

12:30 PM - 2:30 PM

INTERNATIONAL BALLROOM

Lunch Program
The Future of the Free-Enterprise System

PANELISTS
Niall Ferguson, Senior Fellow, Hoover Institution, Stanford University
Soraya Hakuziyaremye, Cabinet Minister of Trade and Industry, Rwanda
Paul Hawken, Founder, Project Drawdown; Author, "Drawdown"
Kerry Healey, President, Babson College; Former Lieutenant Governor, Massachusetts
Terry McAuliffe, Former Governor of Virginia

MODERATOR
Michael Milken, Chairman, Milken Institute

SIMULCAST

Lunch Program Simulcast:
Beverly Hills Ballroom, Pavilion, & Wilshire Garden

INTERNATIONAL GALLERY

Global California

SPEAKER
Steven Ciobo, Former Minister for Trade, Tourism and Investment, Australia
Deborah Flint, CEO, Los Angeles World Airports
Nina Hachigian, Deputy Mayor, International Affairs, City of Los Angeles
Lenny Mendonca, Chief Economic and Business Advisor to Governor Gavin Newsom, Governor's Office of Business and Economic Development, State of California
Jim Wunderman, President and CEO, Bay Area Council

INTRODUCTION BY
Kevin Klowden, Executive Director, Center for Regional Economics and California Center, Milken Institute

MODERATOR
Matthew Spence, Managing Director, Guggenheim Partners

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2:45 PM - 3:45 PM

BEVERLY HILLS BALLROOM

Pushing the Boundaries of the Final Frontier

PANELISTS
Peter Diamandis, Founder and Executive Chairman, XPRIZE Foundation
Bernard Harris, Jr., CEO, National Math and Science Initiative; Former NASA Astronaut
Steve Isakowitz, President and CEO, The Aerospace Corporation
Leland Melvin, Former NFL Football Player, NASA Astronaut and Author of "Chasing Space: An Astronaut's Story of Grit, Grace, and Second Chances"
George Whitesides, CEO, Virgin Galactic

MODERATOR
Anousheh Ansari, CEO, XPRIZE

WILSHIRE BALLROOM

Envisioning the Future of Media and Entertainment

PANELISTS
Jeffrey Hirsch, Chief Operating Officer, STARZ
Gale Anne Hurd, CEO and Producer, Valhalla Entertainment
Charles D. King, Founder and CEO, MACRO
Asif Satchu Co-CEO, Valence Media and Media Rights Capital
Jeremy Zimmer, CEO and Co-Founder, United Talent Agency

MODERATOR
Julia Boorstin, Senior Media and Entertainment Correspondent, CNBC

PAVILION

Part 1: A Conversation With Calvin Klein
Part 2: A Conversation With Mark Bradford and Michael Govan

GUEST
Calvin Klein, Designer and Founder, Calvin Klein Inc.

MODERATOR
Michael Milken, Chairman, Milken Institute

GUEST
Mark Bradford, Artist

GUEST
Michael Govan, CEO and Wallis Annenberg Director, Los Angeles County Museum of Art

INTERNATIONAL TERRACE

Hollywood + Silicon Valley: The Next Form of Storytelling

PANELISTS
Jeffrey Katzenberg, Co-Founder and Managing Partner, WndrCo; Founder and Chairman of the Board, Quibi
Meg Whitman, CEO, Quibi

MODERATOR
Andrew Wallenstein, Co-Editor-in-Chief, Variety.com and Variety Magazine

PRIVATE, BY INVITATION ONLY

2:45 PM - 3:45 PM

WHITTIER

The Sustainable Investing Challenge

PANELISTS
Thomas Elliot Fields, Co-Founder, Carbon Yield Fund
David Mallett, Co-Founder, Carbon Yield Fund
Claire Elizabeth Pluard, Co-Founder, Carbon Yield Fund
Samuel Max Schiller, Co-Founder, Carbon Yield Fund

MODERATOR
Dave Chen, Chairman and Head of Product Development and Research, Equilibrium

2:45 PM - 4:30 PM

INTERNATIONAL GALLERY

Disaster Preparedness and the Role of Philanthropy

SPEAKER
Justine Lucas, Executive Director, Clara Lionel Foundation
Petra Nemcova, Supermodel, Philanthropist, and Co-Founder of All Hands and Hearts
Shamsheer Vayalil, Chairman and Managing Director, VPS Healthcare

MODERATOR
Maura Donlan, Director, Center for Strategic Philanthropy, Milken Institute

MODERATOR
Lynn Goldman, Michael and Lori Milken Dean, Milken Institute School of Public Health, George Washington University

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2:45 PM - 5:00 PM

MAPLE

DevTech: Meeting SDGs through Disruptive Technologies

PANELISTS
Danielle Abraham, Executive Director, Volcani International Partnerships
Sean Hinton, CEO, Soros Economic Development Fund; Director, Economic Justice Program
Daniel Martinez-Valle, CEO, Mexichem; Chairman, Netafim
Tamar Pashtan, Head of ESG, Vital Capital
S. Shankar Sastry, Director, Richard C. Blum Center for Developing Economies; Professor of Electrical Engineering and Computer Science, Professor of Bioengineering, UC Berkeley
Chetna Sinha, Founder and Chair, Mann Deshi Bank and Mann Deshi Foundation
Tally Zingher, Co-Founder and CEO, Dawsat
Alix Zwane, CEO, Global Innovation Fund

MODERATOR
Glenn Yago, Senior Director, Milken Innovation Center, Jerusalem Institute; Senior Fellow and Founder, Financial Innovations Labs, Milken Institute

PRIVATE, BY INVITATION ONLY

4:00 PM - 5:00 PM

INTERNATIONAL BALLROOM

Keeping the American Dream Alive

PANELISTS
Raymond Dalio, Founder, Chairman and Co-Chief Investment Officer, Bridgewater Associates
Robert Smith, Chairman and CEO, Vista Equity Partners

MODERATOR
Michael Milken, Chairman, Milken Institute

4:30 PM - 6:00 PM

INTERNATIONAL TERRACE

George Washington University Private Session

PRIVATE, BY INVITATION ONLY

5:00 PM - 6:00 PM

POOLSIDE - WEST

Closing Reception

I-8

Memorandum

DATE: June 17, 2019

TO: Members of the Board of Retirement

FROM: Steve Delaney, Chief Executive Officer

SUBJECT: **2019 STRATEGIC PLANNING WORKSHOP – PROPOSED AGENDA TOPICS**

Written Report

Background/Discussion

It's time to begin planning for OCERS' annual Strategic Planning Workshop scheduled for Wednesday, September 18 and Thursday, September 19, 2019, to be held once again at the Embassy Suites Santa Ana Orange County Airport North.

The workshop has multiple goals:

- Combine both education and discussion on topics pertinent to operations and investments over the next several years. Seek consensus on Board and agency priorities for the coming calendar year.
- Focus is generally on operational issues as they relate to the agency's strategic objectives, and their funding. Investment operations and strategic goals are covered as well.
- Presentations and discussions provide the opportunity for sharing of ideas among OCERS' trustees, staff and consultants.

Though held off-site, this is a public meeting, and has consistently had an audience of a size similar to regular OCERS Board meetings.

Possible Agenda Items:

The annual Strategic Planning workshop is the first occasion for the Board to consider staff's early proposals for the coming year's business plan goals, as well as any updates to the multi-year strategic plan.

For general administration issues:

1. STATE OF OCERS
   Due to time constraints in collecting and updating system data, it was agreed at last year's spring presentation of "STATE OF OCERS" that we would move the presentation to the annual Strategic Planning Workshop.

2. STAKEHOLDER COMMENTS

3. PUBLIC PENSION PLAN GOVERNANCE BEST PRACTICES
As part of OCERS' culture of continuous improvement, we are always looking for examples of governance best practice.

For the past ten years we have started the day's sessions with presentations from both plan sponsors and labor representatives. This allows the Board of Trustees to hear directly from our stakeholders regarding the economic and life challenges being faced by employers and members in relation to the retirement benefits this Board administers.

For Investment Issues:

Ms. Murphy is arranging for each OCERS Board investment consultant to present an educational overview of that portion of the OCERS portfolio falling under their expertise.

Prior Agenda Items:

Trustees may wish to recommend other topics. As a reminder of the kinds of issues that have been considered at prior Strategic Planning meetings, I've included a sampling of topics that have been discussed over the past decade or more:

Please let me know if there is a topic that you would like explored at this year's workshop and I will work with the Board Chair and Investment Committee Chair to give each request full consideration. I will return in July with a final proposed agenda for the 2019 Strategic Planning Workshop for the Board's final review and approval.

Submitted by:

Steve Delaney
Chief Executive Officer

OCERS BOARD OF RETIREMENT

2019 STRATEGIC PLANNING WORKSHOP

Embassy Suites by Hilton Santa Ana Orange County Airport
1325 E Dyer Road,
Santa Ana, CA 92705

AGENDA
Wednesday, September 18, 2019

BREAKFAST ***7:15 – 8:00***

WELCOME & INTRODUCTORY COMMENTS ***8:00 – 8:15***
Steve Delaney, CEO

A. **STAKEHOLDER DISCUSSIONS** ***8:15 – 9:00***
Presentations by Michelle Aguirre, CFO, County of Orange; Tom Dominguez, President, Association of Orange County Deputy Sheriffs (AOCDS); and Tim Deutsch, General Manager, Orange County Cemetery District.

Goal: Understand how plan sponsors and member organizations will address their pension needs and obligations given current economic climate.

B. **CANADIAN MODEL SPEAKER** ***9:00 – 10:00***
Presentation by

Goal:

REFRESHMENT BREAK ***10:00 – 10:15***

C. **YOU DON'T KNOW WHAT Y D K** ***10:15 – 11:00***
Presentation by

Goal:

D. **TO BE DETERMINED** ***11:00 – 12:00***

Goal:

LUNCH ***12:00 – 12:45***

E. **MOLLY'S SPEAKERS** ***12:45 – 5:00***

Goal:

NETWORK RECEPTION ***5:00 – 5:30***

DINNER ***5:30***

OCERS BOARD OF RETIREMENT

2019 STRATEGIC PLANNING WORKSHOP

Embassy Suites by Hilton Santa Ana Orange County Airport
1325 E Dyer Road,
Santa Ana, CA 92705

AGENDA
Thursday, September 19, 2019

BREAKFAST ***7:15 - 8:00***

WELCOME & INTRODUCTORY COMMENTS ***8:00 – 8:15***
Steve Delaney, CEO and Molly A. Murphy, CFA, CIO, OCERS

A. **MOLLY'S SPEAKERS** ***8:15 – 12:00***
Discussions led by Molly A. Murphy, CFA, CIO OCERS

Goal:

LUNCH ***12:00 - 12:45***

B. **STATE OF OCERS** ***12:45 - 1:45***
Presentation by Steve Delaney, CEO, OCRS

Goal:

C. **OCERS EMPLOYER OVERVIEW** **1:45 –** ***2:30***
Presentation by David Kim, Internal Auditor, OCERS

REFRESHMENT BREAK ***2:30 - 2:45***

D. **PRELIMINARY 2020-2022 OCERS STRATEGIC PLAN** **2:45 –** ***3:30***
Presentation by Steve Delaney, CEO, OCERS

Goal: Review tentative strategic plan and benchmarks and provide direction for developing final strategic plan for 2020-2022.

E. **PRELIMINARY 2020 OCERS BUSINESS PLAN** **3:30 – *4:30***
Presentation by Steve Delaney, CEO, and OCERS Management Team

Goal: Review tentative business goals and provide direction for developing the final business plan and budget for 2020.

CONCLUSION **4:30**

It is OCERS' intention to comply with the Americans with Disabilities Act ("ADA") in all respects. If, as an attendee or participant at this meeting, you will need any special assistance beyond that normally provided, OCERS will attempt to accommodate your needs in a reasonable manner. Please contact OCERS via email at adminsupport@ocers.org or call 714-558-6200 as soon as possible prior to the meeting to tell us about your needs and to determine if accommodation is feasible. We would appreciate at least 48 hours' notice, if possible. Please also advise us if you plan to attend meetings on a regular basis.

I-9

Memorandum

DATE: June 17, 2019

TO: Members of the Board of Retirement

FROM: Steve Delaney, Chief Executive Officer

SUBJECT: **2019 ANNUAL BUSINESS PLAN PROGRESS – MID-YEAR REVIEW**

Written Report

Background/Discussion

The OCERS Board's Planning Policy requires the following:

> **Review of Business Plan Initiatives**
>
> On a semi-annual basis, the Chief Executive Officer will review for the Board the status of each initiative in the Business Plan, regardless of whether any progress was made.

Attached you will find a copy of the 2019 Business Plan.

Each assigned manager has provided a brief update as to current status of 2019 initiatives. We will be prepared to respond to any questions these may raise at the June 17, 2019 meeting of the Board.

Submitted by:

Steve Delaney
Chief Executive Officer

Orange County Employees Retirement System

2223 East Wellington Avenue | Santa Ana | 92701

2019

BUSINESS PLAN

MISSION, VISION AND VALUES

MISSION STATEMENT:

We provide secure retirement and disability benefits with the highest standards of excellence.

VISION STATEMENT:

To be a trusted partner providing premier pension administration, distinguished by consistent, quality member experiences and prudent financial stewardship.

VALUES:

- **O**pen and Transparent
- **C**ommitment to Superior Service
- **E**ngaged and Dedicated Workforce
- **R**eliable and Accurate
- **S**ecure and Sustainable

2019-2021 STRATEGIC GOALS

- Fund Sustainability
- Excellent Service and Support
- Risk Management
- Talent Management

FUND SUSTAINABILITY

GOAL: STRENGTHEN THE LONG-TERM STABILITY OF THE PENSION FUND

Business Plan Initiatives

Objective: Mitigate the Risk of Significant Investment Loss
Executive Lead – Molly Murphy

1. Fund the Risk Mitigating asset class: - In Process
    - We are methodically funding the risk mitigating strategies: 2 so far, 1 in legal review and 2-3 more by year end.
2. Explore and evaluate investment/risk management systems: - In Process
    - We are still sourcing and meeting with investment risk vendors. The likely scenario is that I will include some budget for 2020. Now that we have realized $100,000 savings with the Meketa/PCA merger, I would like to spend that on risk tools.

Objective: Develop procedures for new employers entering the system
Executive Leads – Gina Ratto

1. Create an Administrative Procedure
    - OAP has been drafted and is ready for review by key executives before implementation
2. Create a worksheet for staff's use in evaluating new plan

sponsors

- Worksheet has been drafted and is ready for review by key executives before implementation

3. Create a new template for Participation Agreement with plan sponsors

- Draft is in process and will be completed by end of June

Objective: Employ a Governance Structure that Supports a Dynamic Investment Program
Executive Lead – Molly Murphy

1. Evaluate governance best practices (year two):

- We plan to do more governance best practices education at the September workshop. Meketa is doing that presentation.

Objective: Prudent Use of Resources
Executive Leads – Molly Murphy

2. Investigate actionable items to reduce fees in the future:

- We have been looking at using evergreen structures for direct lending to reduce fees. So far, we have rejected what has been offered but we are still working on one that may get to the finish line.
- We are able to reduce fees and enhance scope of services due to the Meketa/PCA merger.

EXCELLENT SERVICE AND SUPPORT

GOAL: ACHIEVE EXCELLENCE IN THE SERVICE AND SUPPORT WE PROVIDE TO OUR MEMBERS AND PLAN SPONSORS

Business Plan Initiatives

Objective: Provide Accurate and Timely Benefits
Executive Leads – Suzanne Jenike; Gina Ratto

1. Develop and communicate OCERS Administrative Procedures on Final Average Salary (year two)
   - Overall Status: Complete
   - Specifics: OCERS Administrative Procedures (OAP) related to Final Average Salary have been approved by the Governance Committee and Board of Retirement and have been posted on the OCERS website for public consumption and use. All employers and stakeholder groups have been provided with a copy as well as links to the documents online.

2. Streamline the initial disability determination process by implementing; (year two)
   - Overall Status: Partially Complete, In Process
   - Specifics: Disability implemented most of what we learned from LEAN and continuously look for additional "LEAN" opportunities. Some examples of 2019 LEAN changes: shorten our lead time on employer request:, request estimates at application, work with

vendor to improve V3 workflows; reduce process time by reassigning tasks; removed steps identified as NVA (non-value add). The application packet is near completion with some minor formatting adjustments still needing to be made. Will work with Communications to ensure that formatting is similar to Member Services before printing.

3. Update and create desk manuals and procedures for staff (year two)
   - Overall Status: Partially Complete, In Process
   - Specifics: Member Services is continually updating procedure documents and provides updates and training to department staff at team meetings and department staff meetings. Copies of procedure documents and meeting handouts are stored on the Member Services Department's intranet page (in SharePoint), and are accessible by topic. A large quantity of the documents and resources previously stored in other locations have been moved to the intranet over the past 18 months for better visibility and easier accessibility by staff. Member Services plans to continue using the intranet as a central location for storing the latest department procedures, to ensure that staff are using the most current documents and information available.

4. Improve customer service standards by enhancing V3 workflows, monitoring and reporting
   - Overall Status: Partially Complete, In Process
   - Specifics: Member Services has made a number of new improvements in the area of workflows. The first is a new workflow report that was developed in-house pulling workflow data from V3. This allows management staff to see the status each V3 workflow, to view pending workload by staff member, and to see aging information for existing workflows. The second change in this area is the development of five (5) new V3 workflows for Service Credit Purchases. OCERS has worked with Vitech to design the new workflows, which are set to be delivered to OCERS for testing on June 14th and installed to the V3 production environment on July 12th. There is a separate

workflow for each SCP type, and each will track the life of an SCP from the member's submission of the request form, to the point of the calculation being complete and a cost notification letter sent to the member. A separate SCP Contract Workflow will track the status and work performed once OCERS receives a signed SCP contract from a member. All the steps associated to the new workflows will be tracked via the previously developed workflow reports.

Objective: Provide Education to our Members and Plan Sponsors
Executive Lead – Suzanne Jenike

1. Web site redesign (year three)
   - Overall Status: Complete
   - Specifics: The new website was successfully launched on May 22, 2019.

2. Enhance participation in Plan Sponsors' Employee Orientation
   - Overall Status: Under review
   - Specifics: Member Services is currently looking at developing ways to provide timely retirement education to our newest members.

3. Create white board videos that will provide education to members and stakeholders about OCERS benefits
   - Overall Status: In process
   - Specifics: Communications is currently considering our options for developing white board videos either internally or with assistance of a vendor.

RISK MANAGEMENT

GOAL: CULTIVATE A RISK-INTELLIGENT ORGANIZATION

Business Plan Initiatives

Objective: Provide System and Data Security and a Robust Business Continuity Solution
Executive Leads – Brenda Shott, Matt Eakin & Jenny Sadoski

1. Select Cyber Security Framework and develop implementation plan for best practice controls - Complete

2. Continuously assess current Information Security environment and address identified risks: - In process

   a. Perform third party penetration test of OCERS network – in Process – once complete, executive summary and discussion of results will be brought to the Audit Committee
   b. Perform third party penetration test of new OCERS web site – in Process – once complete, executive summary and discussion of results will be brought to the Audit Committee
   c. Review and enhance information security training for new hires and all staff – In Process – training deck complete, pending roll-out to all staff
   d. Develop incident response and management program – in process

e. Develop OCERS data map, data classification structure and data exchange flows and identify associated risks – Scheduled for Q3
f. Evaluate risks associated with external third party IT business partners – in process along with operational risk team

3. Implement tools to mitigate the risk of data or financial loss or information disclosure:

   a. Implement enhanced Email Security protections and features - Complete
   b. Implement Managed Security / Managed Detection & Response services – In process
   c. Implement continuous vulnerability assessment and remediation program - Complete
   d. Implement automated hardware and software inventory tool – In process
   e. Implement security patch management solution - Complete

4. Continue development of the Business Continuity Plan:
   a. Establish alternate work space / work site plan – In process
   b. Develop manual workaround and alternate procedure plans – in process

Objective: Implement Operational Risk Management Program
Executive Lead – Brenda Shott

1. Continue to implement the Operational Risk Management Program- In Process

Objective: Ensure a Safe and Secure Workplace and Public Service Facility
Executive Lead – Brenda Shott

1. Plan and implement building security upgrades and space management projects (year two) – In Process
   - OCERS Board Building Committee formed to provide direction

TALENT MANAGEMENT

GOAL: RECRUIT, RETAIN AND INSPIRE A HIGH-PERFORMING WORKFORCE

Business Plan Initiatives

Objective: Recruit and Retain a High-Performing Workforce to Meet Organizational Priorities
Executive Lead – Cynthia Hockless

1. Enhance onboarding and transitioning of new hires into the organization
   a. Evaluation of newly implemented onboarding process

2. Implement recommendations from workforce analysis (year two)

Objective: Develop and empower every member of the team
Executive Lead – Steve Delaney

1. Implement a comprehensive training program covering OCERS policies, processes and procedures (year two) - In process – new Learning and Development Manager has been hired

2. Recognize individual needs and career goals within OCERS (year two) - In Process
   - CEO is meeting individually with every OCERS team member in 2019

3. Create succession plans across the agency (year two) – In Process
   - Will be partly based on individual responses and in cooperation with new Learning and Development Manager

Objective: Cultivate a Collaborative, Inclusive and Creative Culture
Executive Lead – Steve Delaney

1. Foster OCERS culture of engagement and continuous improvement (year two)

A. Completed initial steps, now ongoing cultural integration
   i. Completed work process improvement procedure
   ii. Completed quarterly values staff award process
   iii. Completed continuous improvement communications process:
      - Monthly staff meeting review
      - Quarterly Senior Executive discourse to all staff
      - Booster posters/banners are in place

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM
www.ocers.org

I-10

Memorandum

DATE: June 17, 2019

TO: Members of the Board of Retirement

FROM: Steve Delaney, Chief Executive Officer

SUBJECT: **OCERS 2019-2021 STRATEGIC PLAN PROGRESS – MID YEAR REVIEW**

Written Report

Background/Discussion

This is our second year of the simplified strategic plan format. Details relating to each goal and objective are found in the related 2019 Business Plan.

While I am not recommending any substantive changes or modifications to the 2019-21 Strategic Plan (attached) at this time, among many tasks presently underway as noted in the 2019 Business Plan progress report, we are getting close to completing some objectives which will lead to a need to make some future updates.

Under the goal of "Fund Sustainability", we are moving closer to accomplishing Objective 3 "Employ a governance structure that supports a dynamic investment program." The use of delegated authority is the key governance initiative the OCERS Board has undertaken in this arena, and the improved reporting documents and narrowing areas of concern indicate we are making progress towards completion of this objective.

Under the goal of "Excellent Service and Support", Objective 1 to "Provide accurate and timely benefits" is nearing completion of one of the Board's key tasks in this regard, the approval of a Master Final Average Salary determination framework and accompanying documentation.

Under "Risk Management", Objective 2 "Implement operational risk management program" is well underway, heavily documented, and nearly complete.

The upcoming Strategic Planning Workshop in the month of September will provide us with an opportunity to review the status and outcomes of these objectives and perhaps others, allowing for a revisioning of future goals and objectives with the 2020-22 edition of the Board's multi-year strategic plan.

One actual change you will note in this updated edition of the 2019-21 Strategic Plan is that I have added footers, as well as numbered the various objectives to facilitate discussion of the plan.

If Trustees see any additional changes to be suggested to this current edition of the 2019-21 Strategic Plan, the June 17 Board meeting agenda allows for those comments to be shared with the Board.

Submitted by:

Steve Delaney
Chief Executive Officer

Orange County Employees Retirement System
2223 East Wellington Avenue | Santa Ana | 92701

2019-2021 STRATEGIC PLAN

MISSION, VISION AND VALUES

MISSION STATEMENT:

We provide secure retirement and disability benefits with the highest standards of excellence.

VISION STATEMENT:

To be a trusted partner providing premier pension administration, distinguished by consistent, quality member experiences and prudent financial stewardship.

VALUES:

- **O**pen and Transparent
- **C**ommitment to Superior Service
- **E**ngaged and Dedicated Workforce
- **R**eliable and Accurate
- **S**ecure and Sustainable

2019 BUSINESS PLAN

2019-2021 STRATEGIC GOALS

- Fund Sustainability
- Excellent Service and Support
- Risk Management
- Talent Management

FUND SUSTAINABILITY

STRENGTHEN THE LONG-TERM STABILITY OF THE PENSION FUND

Objective 1: Mitigate the risk of significant investment loss

Objective 2: Develop procedures for new employers entering the system

Objective 3: Employ a governance structure that supports a dynamic investment program

Objective 4: Prudent use of resources

EXCELLENT SERVICE AND SUPPORT

ACHIEVE EXCELLENCE IN THE SERVICE AND SUPPORT WE PROVIDE TO OUR MEMBERS AND PLAN SPONSORS

Objective 1: Provide accurate and timely benefits

Objective 2: Provide education to our members and plan sponsors

RISK MANAGEMENT

CULTIVATE A RISK-INTELLIGENT ORGANIZATION

Objective 1: Provide system and data security and a robust business continuity solution

Objective 2: Implement operational risk management program

Objective 3: Ensure a safe and secure workplace and public service facility

TALENT MANAGEMENT

RECRUIT, RETAIN AND INSPIRE A HIGH-PERFORMING WORKFORCE

Objective 1: Recruit and retain a high-performing workforce to meet organizational priorities

Objective 2: Develop and empower every member of the team

Objective 3: Cultivate a collaborative, inclusive and creative culture

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM

www.ocers.org

I-11

Memorandum

DATE: June 6, 2019

TO: Members, Board of Retirement

FROM: Steve Delaney, Chief Executive Officer

SUBJECT: **DISCUSSION OF SENSITIVITY ANALYSES OF ALTERNATIVE ECONOMIC ASSUMPTIONS**

Written Report

Background/Discussion

OCERS entered into a new contract with Segal Consulting (Segal) in August 2016. Under the new contract, Segal agreed to provide up to four sensitivity analyses of alternative economic actuarial assumptions as part of the annual actuarial valuation process. The sensitivity analyses are provided on an aggregate basis for OCERS as a whole rather than on an individual rate group basis. Each year Segal first discusses with the Board options of sensitivity analysis that could be performed to meet this contractual requirement. Based on the Board's discussion and the Board Chair's direction, Segal then returns to present to the Board the results of their analysis of the alternative economic assumptions.

Segal has again proposed a set of sensitivity analyses for 2019 (attached) consistent with the current economic assumptions adopted by the Board in 2017. Andy Yeung from Segal will present the recommendations at the June 17, 2019 meeting and again seek direction from the Board Chair on which analyses to perform in 2019. Those sensitivity analyses will be presented to the Board at the Board's July 11, 2019 meeting as an information item. As we are not presently in an actuarial assumption review period, the sensitivity analyses are simply to provide further context for the economic assumptions currently in use.

Submitted by:

Steve Delaney
Chief Executive Officer

Segal Consulting

Orange County Employees Retirement System (OCERS)

Alternative Economic Assumptions for Use in 2019 Sensitivity Analyses

June 17, 2019

Andy Yeung, ASA, EA, MAAA, FCA

Segal Consulting

5575070v1

892/904

Review of Scope and Terminology (from new Actuarial Standard on Risk Assessments)

- Scenario testing – impact of occurrence of possible event(s)
  - For example, illustrations prepared each year to show impact of one year of favorable or unfavorable market return
  - Metrics studied, both by rate group and for entire plan
    - Employer contribution rate
    - Funded ratio
    - Unfunded Actuarial Accrued Liability
  - Scenario test will be repeated using results from 12/31/18 valuation
- Sensitivity testing – impact of change in actuarial assumption(s)
  - Same metrics but using alternative long term economic assumptions (i.e., different from those used in 12/31/18 valuation)
  - Performed every year, even if no experience study
  - Results only for entire plan

OCERS Scenario Testing – Impact due to One Year of Favorable or Unfavorable Market Return

- Under three hypothetical market returns for year following valuation
  - 0.00%
  - 7.00% (current baseline)
  - 14.00%
- Metrics studied (by Rate Group)
  - Employer contribution rate
  - Funded ratio
  - Unfunded Actuarial Accrued Liability
- Can be useful as a budgeting tool for the employer
  - Next year’s employer contribution rate can be estimated as actual year-to-date market return becomes available from OCERS
- Scenario testing will be updated using results and assumptions from 12/31/18 valuation

OCERS Sensitivity Testing – Hypothetical Impact of Alternative Economic Assumptions

- Metrics studied (for the entire System) – first done in 2017
  - Employer contribution rate
  - Funded ratio
  - Unfunded Actuarial Accrued Liability
- Illustrates "what if" impact of changes to economic assumptions

1. Inflation (2.75% used in 12/31/18 valuation)
   - COLA increases for retirees
   - Component of salary increases for actives and wage increases for amortizing UAAL
   - Component of investment return assumption
2. Real return (4.25% used in 12/31/18 valuation)
3. Investment return (7.00% used in 12/31/18 valuation)

- In practice, only two alternative assumptions are identified
  - Since Inflation + Real Return = Investment Return

OCERS Economic Assumptions

	12/31/17-18 Valuation		12/31/14-16 Valuation		12/31/12-13 Valuation		12/31/11 Valuation	
	Return	Pay*	Return	Pay*	Return	Pay*	Return	Pay*
Price Inflation	2.75%	2.75%	3.00%	3.00%	3.25%	3.25%	3.50%	3.50%
Real Wages	n/a	0.50%	n/a	0.50%	n/a	0.50%	n/a	0.25%
Net Real Return	4.25%	n/a	4.25%	n/a	4.00%	n/a	4.25%	n/a
Total	7.00%	3.25%	7.25%	3.50%	7.25%	3.75%	7.75%	3.75%

* Excludes Merit and Promotion component of assumed individual salary increases

Sensitivity Testing – Proposed 2019 Alternative Economic Assumptions

- Includes all the same assumptions recommended by Segal and approved by OCERS in 2018

	Inflation	Real Return	Investment Return
Baseline (assumptions used in 12/31/18 val'n)	2.75%	4.25%	7.00%
Alt #1: Lower inflation only	2.50%	4.25%	6.75%
Alt #2: Lower real return only	2.75%	4.00%	6.75%
Alt #3: Lower inflation and lower real return	2.50%	4.00%	6.50%
Alt #4: Higher inflation and lower real return	3.00%	4.00%	7.00%

- The above alternatives are not necessarily assumptions Segal would recommend in any future triennial experience study

I-12

Memorandum

DATE: June 17, 2019

TO: Members of the Board of Retirement

FROM: Gina Ratto, General Counsel

SUBJECT: **OCERS BOARD AND COMMITTEE MEETING MINUTES STANDARDS**

Presentation

Background/Discussion

Staff recently suggested to the Board Chair and Vice Chair that the minutes of Board and committee meetings have become increasingly detailed and lengthy – oftentimes approaching a transcript of what was stated by the Board or committee members and staff at the meeting. Staff suggested that this amount of detail in the meeting minutes is contrary to the **Board's By Laws**, **OCERS Rules of Parliamentary Procedure** and **Robert's Rules of Order**. Moreover, such detailed minutes are unnecessary in light of the fact that all meetings are videotaped, and the tapes are permanently retained and available to the public if requested and to the Board and staff if questions about what was said or considered during a meeting were to arise in the future.

Staff recommended and the Chair and Vice Chair agreed and directed staff to prepare future meeting minutes in conformity with the **Board's By Laws**, **OCERS Rules of Parliamentary Procedure** and **Robert's Rules of Order**. The Chair and Vice Chair asked staff to present this information item in order to update the Board with respect to the future content of meeting minutes.

OCERS' By Laws state the following with respect to meeting minutes:

8. The Secretary shall cause to be recorded in the Minutes the time and place of each meeting of the Board of Retirement, the names of members present, all official acts of the Board and the votes of individual members, except when the action is unanimous. When requested, a member's dissent, approval or abstention with his/her reason, if given, shall be recorded. The Secretary shall cause the Minutes to be written and presented for approval at the next regularly scheduled meeting. The Minutes submitted by the Secretary and signed by the Secretary and the Chairperson shall be a part of the permanent records of the Board.

OCERS Rules of Parliamentary Procedure state:

4. The OCERS CEO or his or her designee shall be the secretary of the Board or committee meeting. The duties of the secretary of the meeting are:
   a. To prepare or cause to be prepared concise minutes of all meetings of the Board and its committees for approval by the Board at a subsequent meeting.
   b. At a minimum, the secretary shall record the following in the minutes:

i. All members of the Board or committee present at the meeting.

ii. All adopted and defeated motions.

iii. The name of the maker and seconder of each motion and amendment.

iv. Names of all persons reporting or presenting to the Board or committee.

v. The identity and vote of each Board or committee member voting or abstaining from a vote.

c. The secretary need not record the following in the minutes:

i. Detailed discussion or personal opinions of members of the Board or committee or members of the public.

ii. Motions that have been withdrawn.

iii. Full reports of committees.

OCERS' Rules of Parliamentary Procedure conform in large part to **Robert's Rule of Order**. The latter also states the following regarding the content of meeting minutes:

> [T]he minutes should contain mainly a record of what was *done* at the meeting, not what was *said* by the members. . . . (emphasis original.)
>
> CONTENT OF THE MINUTES. The first paragraph of the minutes should contain the following information . . .:
>
> 1) the kind of meeting: regular, special, adjourned regular, or adjourned special;
> 2) the name of the society or assembly;
> 3) the date and time of the meeting, and the place, if it is not always the same;
> 4) the fact that the regular chairman and secretary were present or, in their absence, the names of the persons who substituted for them; and
> 5) whether the minutes of the previous meeting were read and approved – as read, or as corrected – and the date of that meeting if it was other than a regular business meeting. Any correction approved by the assembly is made in the text of the minutes being approved; the minutes of the meeting making the correction merely state that the minutes were approved "as corrected," without specifying what the correction was.
>
> The body of the minutes should contain a *separate paragraph for each subject matter*, and should show:
>
> 6) all main motions or motions to bring a main question again before the assembly that were made or taken up – except, normally, any that were withdrawn – stating:
>   a) the wording in which each motion was adopted or otherwise disposed of (with the facts as to whether the motion may have been debated or amended before disposition being mentioned only parenthetically); and

b) the disposition of the motion, including … any primary and secondary amendments and all adhering secondary motions that were then pending;

7) secondary motions that were not lost or withdrawn . . .

The last paragraph should state… the hour of adjournment.

Additional rules and practices relating to the content of the minutes are the following:

- The name of the maker of a main motion should be entered in the minutes, but the name of the seconder should not be entered unless ordered by the assembly.[1]

. . . .

Minutes should be signed by the secretary and can also be signed, if the assembly wishes, by the president.

Commencing with the minutes of the June 17, 2019 Board meeting, staff will prepare the all meeting minutes in accordance with the aforementioned provisions.

Submitted by:

Gina M. Ratto

Gina M. Ratto
General Counsel

[1] The OCERS Board has directed in the Rules of Parliamentary Procedure that the seconder of the motion be noted in the meeting minutes.

I-13

Memorandum

DATE: June 7, 2019

TO: Members of the Board of Retirement

FROM: Brenda Shott, Assistant CEO Finance and Internal Operations

SUBJECT: **PUBLIC IDENTIFICATION OF REAL PROPERTY SUBJECT TO NEGOTIATIONS AND PERSONS WITH WHOM OCERS NEGOTIATOR MAY NEGOTIATE**

Written Report

Background/Discussion

Staff has become aware that the parcel of property immediately adjacent to the OCERS headquarter building located at 1200 N. Tustin Avenue, Santa Ana, CA is being marketed for sale.

The Brown Act (California Government Code §54956.8) allows the Board to hold a closed session to "grant authority to its negotiator regarding the price and terms of payment for the … purchase…" of real property by the Board. The Brown Act also requires that the Board hold an open and public session that identifies its negotiators, the real property or real properties which the negotiations concern and the person or persons with whom its negotiators may negotiate. The required information is as follows:

Agency Negotiator: Brenda Shott, OCERS Assistant Chief Executive Officer, Finance and Internal Operations

Negotiating Party: Brian Booth, Cushman & Wakefield

Property: 1200 N. Tustin Avenue, Santa Ana, CA

Submitted by:

Brenda M Shott

Brenda Shott

Assistant CEO, Finance and Internal Operations