

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

**REGULAR MEETING
Monday, November 16, 2020
9:30 A.M.**

Pursuant to Executive Order N-29-20, certain provisions of the Brown Act are suspended due to a State of Emergency in response to the COVID-19 pandemic. Consistent with the Executive Order, this meeting will be conducted by video/teleconference only. None of the locations from which the Board members will participate will be open to the public.

Members of the public who wish to observe and/or participate in the meeting may do so via the Zoom app or via telephone. Members of the public who wish to provide comment during the meeting may do so by “raising your hand” in the Zoom app, or if joining by telephone, by pressing * 9 on your telephone keypad.

OCERS Zoom Video/Teleconference information	
<p>Join Using Zoom App (Video & Audio)</p> <p>https://ocers.zoom.us/j/95760809775</p> <p>Meeting ID: 953 3484 7132 Password: 261753</p> <p>Go to https://www.zoom.us/download to download Zoom app before meeting Go to https://zoom.us to connect online using any browser.</p>	<p>Join by Telephone (Audio Only)</p> <p>Dial by your location</p> <p>+1 669 900 6833 US (San Jose) +1 346 248 7799 US (Houston) +1 253 215 8782 US +1 301 715 8592 US +1 312 626 6799 US (Chicago) +1 929 436 2866 US (New York)</p> <p>Meeting ID: 953 3484 7132 Password: 261753</p>
<p>A Zoom Meeting Participant Guide is available on OCERS website Board & Committee meetings page</p>	

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.

CALL MEETING TO ORDER AND ROLL CALL

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. Members of the public who wish to provide comment at this time may do so by “raising your hand” in the Zoom app, or if joining by telephone, by pressing * 9 on your telephone keypad. 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.

- Donald Voght

ADMINISTRATION

C-2 BOARD MEETING MINUTES

Regular Board Meeting Minutes

October 19, 2020

Recommendation: Approve minutes.

C-3 OUTCOMES OF THE OCTOBER 6, 2020 GOVERNANCE COMMITTEE MEETING

Recommendation: The Governance Committee recommends that the Board:

- (1) Adopt revisions to the Reserves and Interest-Crediting Policy as approved by the Governance Committee; and
- (2) Adopt revisions to the Elections Procedures as approved by the Governance Committee.

C-4 RETIREE REQUEST TO BE REINSTATED – SAMUEL CHAIREZ

Recommendation: Reinstate Mr. Chairez as an active member under the provisions of Government Code Section 31680.4 and 31680.5.

DISABILITY/MEMBER BENEFITS AGENDA

9:30 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 ITEMS

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 in closed session during agenda item DA-1.

DC-1: MARGARITA CASTILLO

Coach Operator, Orange County Transportation Authority

Recommendation: The Disability Committee recommends that the Board grant service connected disability retirement with an effective date of October 29, 2017. (General Member)

DC-2: STEVEN CHAFE

Firefighter/Paramedic, Orange County Fire Authority

Recommendation: The Disability Committee recommends that the Board grant service connected disability retirement with an effective date of August 30, 2019. (Safety Member)

DC-3: JAIME CLEPHAS

Deputy Juvenile Correctional Officer II, Orange County Probation Department

Recommendation: The Disability Committee recommends that the Board grant service connected disability retirement with and effective date of June 21, 2019. (Safety Member)

DC-4: DAVID CUNNINGHAM

Firefighter/Paramedic, Orange County Fire Authority

Recommendation: The Disability Committee recommends that the Board grant service connected disability retirement with an effective date of March 29, 2019. (Safety Member)

DC-5: GINA EDWARDS

Information Processing Technician, Orange County Probation Department

Recommendation: The Disability Committee recommends that the Board deny service and non-service connected disability retirement without prejudice due to the member's failure to cooperate. (General Member)

DC-6: COLLEEN FLYNN

Court Reporter, Orange County Superior Court

Recommendation: The Disability Committee recommends that the Board grant service connected disability retirement with an effective date of June 22, 2018. (General Member)

DC-7: LAURIE KEOGH

Senior Computer Graphics Specialist, Orange County Public Works

Recommendation: The Disability Committee recommends that the Board grant non-service connected disability retirement with an effective date of December 22, 2017 (General Member)

DC-8: CONNIE TRAN

Deputy Juvenile Correctional Officer II, Orange County Probation Department

Recommendation: The Disability Committee recommends that the Board grant service connected disability retirement with an effective date of March 27, 2020. (Safety Member)

CLOSED SESSION

Government Code section 54957

Adjourn to Closed Session under Government Code section 54957 to consider member disability applications and to discuss member medical records submitted in connection therewith. The applicant may waive confidentiality and request his or her disability application to be considered in Open Session.

**DA-1: INDIVIDUAL ACTION ON ANY ITEM TRAILED FROM THE DISABILILTY/MEMBER BENEFITS
CONSENT AGENDA**

OPEN SESSION

REPORT OF ACTIONS TAKEN IN CLOSED SESSION

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. **Members of the public who wish to provide comment in connection with any matter listed in this agenda may do so by “raising your hand” in the Zoom app, or if joining by telephone, by pressing * 9, at the time the item is called.**

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

A-2 OCERS’ ADMINISTRATIVE BUDGET FOR FISCAL YEAR 2021

Presentation by Brenda Shott, Assistant CEO, Internal Operations, and Steve Delaney, CEO

Recommendation:

- 1. Adopt the Administrative Budget for Fiscal Year 2021 in the amount of \$28,283,900 which includes:**
 - a. Personnel costs in the amount of \$16,034,052
 - b. Services and supplies in the amount of \$11,579,848
 - c. Capital expenditures in the amount of \$670,000
- 2. Approve the Personnel Committee’s recommendation for the 2021 Staffing Plan consisting of 96 budgeted positions within 102 approved classifications which includes the following changes:**
 - a. Adding one Investment Analyst in the Investment Division (+ 1 FTE)
 - b. Dropping one Extra-Help Attorney in the Legal Division (- 0.5 FTE)
- 3. Approve Salary Adjustments based on one of the two options below as recommended by the Personnel Committee:**
 - a. Performance based Salary Adjustments for OCERS’ direct employees consisting of a rating scale as follows:
 - i. Option 1
A base salary increase of 1.5% for employees whose performance meets expectations; a base of 1.5% plus a merit increase of 2.75% for employees whose performance exceeds expectations; and a base of 1.5% plus two merit increases totaling 5.50% (2.75% x 2) for employees whose performance was exceptional
 - OR
 - ii. Option 2
A base salary increase of 1.5% for employees whose performance meets expectations; a base of 1.5% plus a merit increase of 1.75% for employees whose performance exceeds expectations; and a base of 1.5% plus two merit increases totaling 3.50% (1.75% x 2) for employees whose performance was exceptional
- 4. Approve the Personnel Committee’s recommendation to adjust all existing OCERS’ direct salary ranges by 1.5%**

A-3 PROPOSED 2021 REGULAR BOARD MEETING AND INVESTMENT COMMITTEE MEETING SCHEDULE

Presentation by Steve Delaney, Chief Executive Officer, OCERS

Recommendation: Approve the proposed 2021 Regular Board Meeting and Investment Committee Meeting Schedule.

A-4 COMPENSATION OF THE CHIEF EXECUTIVE OFFICER

Recommendation: Take appropriate action.

INFORMATION ITEMS

Each of the following informational items will be presented to the Board for discussion.

Presentations

I-1 ACTUARIAL UPDATES

Presentation by Paul Angelo, Segal Consulting

I-2 UPDATE ON STAFFS PROGRESS IN RESPONSE TO THE ALAMEDA COUNTY DECISION IN *Alameda*

County Deputy Sheriff’s Assoc. et al., v. Alameda County Employees’ Retirement Assn., et al

Presentation by Suzanne Jenike and Steve Delaney

I-3 COVID-19 UPDATE

Presentation by Steve Delaney, Chief Executive Officer, OCERS

WRITTEN REPORTS

The following are written reports that will not be discussed unless a member of the Board requests discussion.

R-1 MEMBER MATERIALS DISTRIBUTED

Written Report

Application Notices

November 16, 2020

Death Notices

November 16, 2020

R-2 COMMITTEE MEETING MINUTES

- January 13, 2020 Audit Committee Minutes
- June 4, 2020 Audit Committee Minutes

R-3 CEO FUTURE AGENDAS AND 2020 OCERS BOARD WORK PLAN

Written Report

R-4 QUIET PERIOD – NON-INVESTMENT CONTRACTS

Written Report

- R-5 **BOARD COMMUNICATIONS**
Written Report
- R-6 **THIRD QUARTER 2020 BUDGET TO ACTUALS REPORT**
Written Report
- R-7 **THIRD QUARTER UNAUDITED FINANCIAL STATEMENTS FOR THE NINE MONTHS ENDED SEPTEMBER 30, 2020**
Written Report
- R-8 **2020 STRATEGIC PLANNING WORKSHOP SUMMARY**
Written Report
- R-9 **PUBLIC PENSION COORDINATING COUNCIL (PPCC) STANDARDS AWARD FOR FUNDING AND ADMINISTRATION**
Written Report
- R-10 **STATE STREET PERFORMANCE REVIEW**
Written Report

CLOSED SESSION ITEMS

- E-1 **CONFERENCE REGARDING SIGNIFICANT EXPOSURE TO LITIGATION (ONE MATTER) (GOVERNMENT CODE SECTION 54956.9)**
Adjourn pursuant to Government Code section 54956.9(d)(2)

Recommendation: Take appropriate action.
- E-2 **PUBLIC EMPLOYEE PERFORMANCE EVALUATION PURSUANT TO GOVERNMENT CODE SECTION 54957**
Adjourn to closed session pursuant to Government Code Section 54957

Position to be evaluated: Chief Executive Officer

Recommendation: Take appropriate action.

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

INVESTMENT COMMITTEE MEETING

November 18, 2020

9:30 A.M.

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM

2223 E. WELLINGTON AVENUE, SUITE 100

SANTA ANA, CA 92701

PERSONNEL COMMITTEE MEETING

November 18, 2020

**11:00 A.M. OR UPON ADJOURNMENT OF THE INVESTMENT COMMITTEE MEETING,
WHICHEVER IS LATER**

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM

2223 E. WELLINGTON AVENUE, SUITE 100

SANTA ANA, CA 92701

DISABILITY COMMITTEE MEETING

December 14, 2020

8:30 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.



Memorandum

DATE: November 16, 2020
TO: Members of the Board of Retirement
FROM: Adina Bercaru, Member Services Manager
SUBJECT: **OPTION 4 RETIREMENT ELECTION – DONALD VOGHT**

Recommendation

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

Background/Discussion

This member elected Option 4 as the benefit payment option for his service retirement allowance as required by his Domestic Relations Order (DRO), effective October 9, 2020. The Orange County Employees Retirement System (OCERS) was joined in the member’s dissolution of marriage and under the terms of the 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 and the member’s friend’s continuance (upon the member’s death).

Submitted by:



A. B. – APPROVED

Adina Bercaru
Member Services Manager



Molly Calcagno, ASA, MAAA, EA
 Actuary
 T 415.263.8254
 mcalcagno@segalco.com

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

Personal and Confidential

November 6, 2020

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 Donald Voght**

Dear Adina:

Pursuant to your request, we have determined the Option 4 benefits payable to Donald Voght, his ex-spouse and his friend¹ based on the unmodified benefit and other information provided in the System's request dated October 30, 2020.

The monthly benefits payable to the member, the ex-spouse and the member's friend 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	October 9, 2020
Plan of Membership	General Plan B and Safety Plan F
Monthly Unmodified Benefit	Plan B: \$69.73 Plan F: \$12,195.16 Total: \$12,264.89
Ex-Spouse's Share of Monthly Unmodified Benefit	31.82%
Retirement Type	Service Retirement
Member's Friend's Date of Birth	
Continuance Payable to Member's Friend	10%/20%/30%

¹ In preparing this calculation, we have made the assumption that the beneficiary has satisfied the definition of having an "insurable interest" in the life of the member as required by Section 31764 of the California Government Code.

Ms. Adina Bercaru
November 6, 2020
Page 2

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 31.82% continuance to the ex-spouse. As instructed by OCERS, the cost to provide the continuance benefit to the ex-spouse is paid for entirely by the ex-spouse.

Part One – Before Adjustment for Continuance to Member's friend

	Payable while the Member is Alive	Payable After the Member's Death
Monthly benefit payable to member		
Plan B Annuity:	\$11.04	
Plan B Pension:	36.50	
Plan F Annuity:	1,343.87	
Plan F Pension:	<u>6,970.79</u>	
Total:	\$8,362.20	\$0.00
Monthly benefit payable to ex-spouse ²	\$3,517.25	\$3,517.25

In Part Two, we further adjusted the member's benefit in Part One so that a continuance benefit of 10%, 20%, or 30% can be paid to the member's friend. In addition, the cost to provide this continuance benefit would be paid for entirely by the member.

Part Two – After Adjustment for Continuance Benefit Payable to Member's Friend

Alternative A: 10% Continuance

	Payable while the Member is Alive	Payable After the Member's Death
Monthly benefit payable to member		
Plan B Annuity:	\$10.86	
Plan B Pension:	35.89	
Plan F Annuity:	1,321.62	
Plan F Pension:	<u>6,855.38</u>	
Total:	\$8,223.75	\$0.00
Monthly benefit payable to member's friend	\$0.00	\$822.38
Monthly benefit payable to ex-spouse ²	\$3,517.25	\$3,517.25

² This is equal to 31.82% of the member's unmodified benefit (i.e., 31.82% * \$12,264.89 or \$3,902.69) 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.

Ms. Adina Bercaru
November 6, 2020
Page 3

Alternative B: 20% Continuance

	Payable while the Member is Alive	Payable After the Member's Death
Monthly benefit payable to member		
Plan B Annuity:	\$10.68	
Plan B Pension:	35.31	
Plan F Annuity:	1,300.09	
Plan F Pension:	<u>6,743.73</u>	
Total:	\$8,089.81	\$0.00
Monthly benefit payable to member's friend	\$0.00	\$1,617.96
Monthly benefit payable to ex-spouse ³	\$3,517.25	\$3,517.25

Alternative C: 30% Continuance

	Payable while the Member is Alive	Payable After the Member's Death
Monthly benefit payable to member		
Plan B Annuity:	\$10.51	
Plan B Pension:	34.74	
Plan F Annuity:	1,279.26	
Plan F Pension:	<u>6,635.65</u>	
Total:	\$7,960.16	\$0.00
Monthly benefit payable to member's friend	\$0.00	\$2,388.05
Monthly benefit payable to ex-spouse ³	\$3,517.25	\$3,517.25

ACTUARIAL ASSUMPTIONS

Effective interest rate of 4.136253% per year, which is calculated using an investment return assumption of 7.00% per year together with a cost-of-living adjustment assumption of 2.75% per year.

³ See footnote 1

Ms. Adina Bercaru
November 6, 2020
Page 4

Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected 20 years with the two-dimensional mortality improvement scale MP-2016 set back four years, weighted 80% male and 20% female for members.⁴

Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected 20 years with the two-dimensional mortality improvement scale MP-2016, weighted 20% male and 80% female for beneficiaries.⁴

The actuarial calculations contained in this letter were prepared under the supervision of Andy Yeung, ASA, MAAA, FCA, Enrolled Actuary, who is a member of the American Academy of Actuaries and who meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion 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,



Molly Calcagno, ASA, MAAA, EA
Actuary

JY/hy

⁴ Since the member last worked as a Safety member, we used Safety assumptions in determining optional benefits even for benefits paid from the General Plan.



November 10, 2020

Donald D. Voght

Re: Retirement Election Confirmation – Option 4

Dear Mr. VOGHT:

You have elected Option 4 as your retirement option. This option will provide the following:

- 31.82% of your monthly benefit, for the life of the benefit, to Michelle Scallon and
- 10% of your monthly benefit (upon your death) to Joy Herek

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 31.82% continuance to MICHELLE SCALLON and 10% continuance (upon my death) to Joy Herek.

Donald D. Voght 11-10-20
Member Signature/Date

Sincerely,

Ricardo Serrano
Retirement Program Specialist

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

**REGULAR MEETING
Monday, October 19, 2020
9:30 a.m.**

MINUTES

Chair Hilton called the meeting to order at 9:37 a.m.

Cammy Torres administered the Roll Call attendance.

Attendance was as follows:

Present via Zoom video teleconference pursuant to Executive Order N-29-20 issued by Governor Newsom on March 17, 2020:

Roger Hilton, Chair; Shawn Dewane, Vice-Chair; Shari Freidenrich, Adele Tagalao, Charles Packard, Chris Prevatt, Arthur Hidalgo, Frank Eley, Jeremy Vallone and Wayne Lindholm

Also Present via Zoom:

Steve Delaney, Chief Executive Officer; Brenda Shott, Assistant CEO, Internal Operations; Suzanne Jenike, Assistant CEO, External Operations; Gina Ratto, General Counsel; Jenny Sadoski, Director of Information Technology, Anthony Beltran, Visual Technician; Cammy Torres; Recording Secretary

Guests via Zoom:

Harvey Leiderman, ReedSmith

CONSENT AGENDA

MOTION by Packard, **seconded** by Lindholm, to approve staff's recommendation on all of the following items on the Consent Agenda:

BENEFITS

C-1 OPTION 4 RETIREMENT ELECTION

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

- GERLYN BOWMAN
- ROBERT HUNT
- MICHAEL WALLACE
- HARRIET MYERS FAIN

ADMINISTRATION

C-2 BOARD MEETING MINUTES

Regular Board Meeting Minutes

August 17, 2020

Recommendation: Approve minutes.

C-3 OUTCOMES OF THE DISABILITY COMMITTEE MEETING ON AUGUST 17, 2020

Recommendation: The Disability Committee recommends that the Board:
(1) Approve a new OCERS Administrative Procedure for Determining Disability Retirement Effective Dates

The motion passed **unanimously**.

CONSENT ITEMS: DISABILITY/MEMBER BENEFITS AGENDA

OPEN SESSION

CONSENT ITEMS

MOTION by Packard, **seconded** by Eley, to approve staff’s recommendation on all of the following items on the Disability/Member Benefits Consent Agenda:

DC-1: BRIAN HOPP
Firefighter, Orange County Fire Authority

Recommendation: The Disability Committee recommends that the Board deny service and non-service connected disability retirement without prejudice due to the member’s failure to cooperate. (Safety Member)

DC-2: JANE MARTORANA
Senior Social Worker, Orange County Social Services Agency

Recommendation: The Disability Committee recommends that the Board deny service connected disability retirement due to insufficient evidence of permanent incapacity and job causation. (General Member)

DC-3: BAO VINH
Senior Social Worker, Orange County Social Services Agency

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

This item was **pulled** from the agenda.

DC-4: JENNIFER COLE

Deputy Sheriff I, Orange County Sheriff's Department

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: RONALD ROSAS

Plumber, Orange County Sheriff's Department

Recommendation: The Disability Committee recommends that the Board grant service connected disability retirement with an effective date of October 11, 2019. (General Member)

DC-6: CALINH VU

Employment and Eligibility Specialist, Orange County Social Services Agency

Recommendation: The Disability Committee recommends that the Board grant service connected disability retirement with an effective date of September 27, 2019. (General Member)

DC-7: DANIEL MACKAY

Fire Captain, Orange County Fire Authority

Recommendation: The Disability Committee recommends that the Board grant service connected disability retirement with an effective date of November 30, 2019. (Safety Member)

DC-8: TERESA McCONKEY

Group Counselor II, Orange County Social Services Agency

Recommendation: The Disability Committee recommends that the Board grant service connected disability retirement with an effective date of August 30, 2019; find the applicant is capable of performing other duties in the service of the County of Orange pursuant to Government Code Section 31725.65 ; Grant a supplemental disability retirement payment allowance effective August 30, 2019. (General Member)

The motion passed **unanimously**.

ACTION ITEMS:

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

N/A

The Board adjourned into closed session at: 9:42 a.m.

CLOSED SESSION

DISABILITY/MEMBER BENEFITS AGENDA

DA-2: DISABILITY APPEAL – PAULA SNYDER
Office Services Specialist, Orange County Fire Authority

Recommendation: Approve and adopt the findings and recommendations of the Referee/Hearing Officer as set forth in the Summary of Evidence, Findings of Fact, Conclusions of Law, and Recommendations dated July 7, 2020 (Recommendations), wherein the Hearing Officer recommends that the Board deny service connected disability retirement based upon the fact that Applicant Paula Snyder was found not to be substantially incapacitated to perform her usual and customary job duties.

DA-3: DISABILITY APPEAL – LYNN HONG
Service Worker, Orange County Transportation Authority

Recommendation: Approve and adopt the findings and recommendations of the Referee/Hearing Officer as set forth in the Proposed Decision dated August 17, 2020 (Recommendations) wherein the Hearing Officer recommended (1) that the application of Lynn Hong (Applicant) for service connected disability retirement based on the orthopedic injury to Applicant's left shoulder be granted with an effective date of October 23, 2013; and (2) that the application for service-connected and non-service connected disability retirement based on the orthopedic injuries to Applicant's right shoulder and lumbar spine be denied.

OPEN SESSION

The Board reconvened into open session at: 10:11 a.m.

REPORT OF ACTIONS TAKEN IN CLOSED SESSION

Chair Hilton reported that the Board took the following actions in Closed Session:

DA-2: DISABILITY APPEAL – PAULA SNYDER

MOTION by Eley, **seconded** by Packard to approve and adopt the findings and recommendations of the Referee/Hearing Officer as set forth in the Summary of Evidence, Findings of Fact, Conclusions of Law, and Recommendations dated July 7, 2020 (Recommendations), wherein the Hearing Officer recommends that the Board deny service connected disability retirement based upon the fact that Applicant Paula Snyder was found not to be substantially incapacitated to perform her usual and customary job duties.

The motion passed **unanimously.**

DA-3: DISABILITY APPEAL – LYNN HONG

MOTION by Eley, **seconded** by Packard to approve and adopt the findings and recommendations of the Referee/Hearing Officer as set forth in the Proposed Decision dated August 17, 2020 (Recommendations) wherein the Hearing Officer recommended (1) that the application of Lynn Hong (Applicant) for service connected disability retirement based on the orthopedic injury to Applicant’s left shoulder be granted with an effective date of October 23, 2013; and (2) that the application for service-connected and non-service connected disability retirement based on the orthopedic injuries to Applicant’s right shoulder and lumbar spine be denied.

The motion passed **unanimously**.

ACTION ITEMS

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

N/A

A-2 OCERS 2021-2023 STRATEGIC PLAN

Presentation by Steve Delaney, Chief Executive Officer, OCERS

Recommendation: Approve OCERS 2021-2023 Strategic Plan.

Mr. Delaney presented the OCERS 2021-2023 Strategic Plan. There were no additional modifications made since the initial presentation at the September 2020 Strategic Planning Workshop.

MOTION by Packard, **seconded** by Lindholm to approve OCERS 2021-2023 Strategic Plan.

The motion passed **unanimously**.

A-3 OCERS 2021 BUSINESS PLAN

Presentation by Steve Delaney, Chief Executive Officer, and Brenda Shott, Assistant CEO Internal Operations, OCERS

Recommendation: Approve OCERS 2021 Business Plan.

Ms. Shott reviewed the OCERS 2021 Business Plan including the cost estimates for business initiatives that would be included in the budget upon approval of the Plan. There were no additional modifications made since the initial presentation at the September 2020 Strategic Planning Workshop.

MOTION by Packard, **seconded** by Dewane to approve OCERS 2021 Business Plan.

The motion passed **unanimously**.

The Board recessed for break at 10:23 a.m.

The Board reconvened from break at 10:35 a.m.

INFORMATION ITEMS

I-1 MEMBER MATERIALS DISTRIBUTED

Written Report

Application Notices

October 19, 2020

Death Notices

October 19, 2020

I-2 COMMITTEE MEETING MINUTES

- None

I-3 CEO FUTURE AGENDAS AND 2020 OCERS BOARD WORK PLAN

Written Report

I-4 QUIET PERIOD – NON-INVESTMENT CONTRACTS

Written Report

I-5 BOARD COMMUNICATIONS

Written Report

I-6 STATE AND FEDERAL LEGISLATIVE UPDATE

Written Report

I-6 was pulled by Mr. Lindholm. He stated that Bill AB2967 did not mention the city of Placentia and inquired as to why that was the case.

Ms. Ratto gave an overview of the Bill and explained that the initial bill was in response to the City of Placentia's withdrawal from OCFA. She further explained that the Bill has no effect on the CERL systems.

I-7 THIRD QUARTER 2020 TRAVEL AND TRAINING EXPENSE REPORT

Written Report

I-8 THE EVOLUTION OF THE OCERS UAAL (2020 EDITION)

Written Report

I-8 was pulled by Mr. Lindholm. He raised two questions. The first was regarding the actual verses expected COLA increases and the second was regarding experience losses. Mr. Delaney said he would work with Segal staff and come back at the November board meeting with figures regarding his questions.

I-9 MEMBER SERVICES PROGRESS ON PROCESSING COUNTY OF ORANGE VOLUNTARY INCENTIVE PROGRAM RETIREMENTS

Written Report

I-9 was pulled by Mr. Delaney. He stated that the County’s Executive Office found this program to be far more successful than they initially anticipated. Ms. Jenike gave a full update as to the impact the incentive program has had on OCERS staff as well as the positive services the member’s received.

I-10 OUTCOMES OF THE PERSONNEL COMMITTEE MEETING ON AUGUST 19, 2020

Presentation by Brenda Shott and Steve Delaney

Mr. Delaney discussed the Performance Management Plan for OCERS direct employees. Ms. Shott walked the Board through all the options that were recommended by the Personnel Committee.

I-11 UPDATE ON STAFFS PROGRESS IN RESPONSE TO THE ALAMEDA COUNTY DECISION IN *Alameda County Deputy Sheriff’s Assoc. et al., v. Alameda County Employees’ Retirement Assn., et al*

Presentation by Suzanne Jenike and Steve Delaney

Ms. Jenike gave an overview of the Alameda County Decision. She discussed that on August 17, 2020 staff informed the Board of two administrative actions that were implemented immediately:

1. Employee and Employer contributions would no longer be applied to these pay items effective the first full pay period after August 31, 2020. For most employers pay period 20 which started on September 11, 2020 was the pay period in which the change was made.
2. OCERS Team would exclude these pay items from all new benefit set ups beginning on October 1, 2020. She also stated that no action was taken to change benefit allowances that were in place prior to October 1, 2020.

Ms. Jenike also discussed the ongoing collaboration OCERS continues to have with all employers and major labor groups in order to keep everyone up to date.

I-12 COVID-19 UPDATE

Presentation by Steve Delaney, Chief Executive Officer, OCERS

Mr. Delaney presented the COVID-19 update for the month of October. He informed the Board that while OCERS staff continue to work remotely until the end of October, in line with current County Health Department advice emphasizing telework wherever possible, that decision is revisited by himself and the Crisis Management team every month. Mr. Delaney further stated that in light of increasing illnesses he would not be surprised if OCERS remains teleworking at least through to the end of the calendar year.

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

CLOSED SESSION ITEMS

**E-1 CONFERENCE REGARDING SIGNIFICANT EXPOSURE TO LITIGATION (ONE MATTER)
(GOVERNMENT CODE SECTION 54956.9)**

Adjourn pursuant to Government Code section 54956.9(d)(2)

Recommendation: Take appropriate action.

Orange County Employees Retirement System
October 19, 2020
Regular Board Meeting – Minutes

Page 8

Item E-1 was postponed. The Board did not adjourn to Closed Session.

BOARD MEMBER COMMENTS

N/A

CHIEF EXECUTIVE OFFICER/STAFF COMMENTS

N/A

COUNSEL COMMENTS

Ms. Ratto gave the Board an update on a proposed amendment staff is currently working on that would give the Board the authority to change the reporting structure in the Investments Department. This would affect OCERS direct staff only. The amendment would give the OCERS CIO greater flexibility to promote staff as mid-managers to the Investment team.

PUBLIC COMMENTS

Michael Simon, member of the public, stated he will wait to comment at a later time.

Sam Maner, member of the public, expressed his disappointment in the recent Alameda decision and wanted to know why this wasn't given more attention back in 2013. Mr. Delaney stated that it's difficult to address and/or take action on something that had no official ruling made by the court system. OCERS will continue to work diligently with the Board members on this issue.

Chair Hilton adjourned in memory of the active members, retired members, and surviving spouses who passed away during the past month. The meeting **ADJOURNED** at 11:54 a.m.

Submitted by:

Approved by:

Steve Delaney
Secretary to the Board

Roger Hilton
Chairman



Memorandum

DATE: November 16, 2020
TO: Members of the Board of Retirement
FROM: Gina M. Ratto, General Counsel
SUBJECT: **OUTCOMES OF THE OCTOBER 6, 2020 GOVERNANCE COMMITTEE MEETING**

Recommendation

The Governance Committee recommends that the Board:

- (1) Adopt revisions to the Reserves and Interest-Crediting Policy as approved by the Governance Committee; and
- (2) Adopt revisions to the Elections Procedures as approved by the Governance Committee.

Background/Discussion

(1) Reserves and Interest-Crediting Policy

The Reserves and Interest-Crediting Policy was reviewed by the Governance Committee on October 6, 2020, and non-substantive revisions were approved by the Committee. The revisions are aimed at making the document easier to understand and to reflect actual practice.

Staff intends to bring the policy back to the Governance Committee in 2021, out of the next regular triennial cycle, with recommendations for changing the rates used for crediting the various reserves. The current rates used in the policy are the default rates included in the CERL. However, the Board has the authority to adjust those rates. Staff will be doing research over the next several months and will develop a set of recommendations for the Governance Committee and the Board to consider. Concurrently, staff will review and propose changes to other policies and practices that reference the Reserves and Interest-Crediting Policy, specifically as it relates to the rates used in calculating interest (e.g. Over and Under Payment of Benefits Policy, Over and Under Payment of Contributions Policy and the calculation of Service Credit Purchases) to ensure consistency in the various applicable policies and procedures.

A copy of the policy, with the changes approved by the Governance Committee on October 6, 2020 indicated in underlined/strikeout text, is attached. The Governance Committee recommends the Board adopt the revised Reserves and Interest-Crediting Policy as presented and attached.

(2) Election Procedures

The OCERS Board Policy on Election Procedures ("Election Procedures") was adopted on October 15, 2001 and was last reviewed and revised on July 20, 2015. It is past due for its triennial review.

The Election Procedures presented for the Committee's review on October 6, 2020 were a complete re-write of the existing Election Procedures in order reorganize the material to enhance clarity and readability, better

define the roles and responsibilities of OCERS and the Registrar of Voters (“ROV”), and delete redundant provisions and several inconsistencies in the prior version.

The ROV, a principal participant in the OCERS Board election process, was consulted and offered an opportunity to suggest revisions to the Election Procedures. All of the revisions suggested by the ROV were incorporated. The only substantive revision to the Election Procedures was a revision requested by the ROV – to increase the amount of notice to the ROV of the need for a regular election; the notice period was increased to 140 days (from 120 days previously).

At the meeting on October 6, 2020, the Governance Committee approved the Election Procedures with staff’s recommended revisions, and requested additional revisions. The additional revisions requested by the Committee are reflected in underlined/strikeout text in the attached Election Procedures. Although almost completely non-substantive, the other revisions to the Elections Procedures are too widespread (since numerous of them represent a reorganization of the document) for a redlined document reflecting all of the changes to be useful. Accordingly, both the prior version of the Election Procedures (and the version with the Committee revisions) are attached.

Submitted by:

Gina M. Ratto
General Counsel



OCERS Board Policy

Reserves and Interest-Crediting Policy

Purpose and Background

1. The purpose of this policy is to document the existing reserve structure created and maintained by OCERS and the distribution of available earnings and interest-crediting to the reserve accounts consistent with Government Code §§31592 and 31592.2.

Policy Objectives

2. The objectives of this policy are to:
 - a. Identify all the reserves maintained by OCERS, and how funds are distributed to and from the relevant reserve.
 - b. In the event of excess earnings in any fiscal year, provide guidance to OCERS' staff to ensure appropriate application of excess earnings (Undistributed Earnings) to reserve accounts.

Definitions

The System's reserves are book-keeping accounts and do not represent an actual separation of funds; the sum of all reserves equals the net position restricted for pension ~~and~~ other ~~post-employment~~postemployment benefits and OPEB 115 and fall into these categories: Valuation, Non-Valuation ~~and~~ Health Care ~~and~~ OPEB 115.

3. **Valuation Reserves** consist of the reserves used by the actuary in calculating the valuation value of assets, ~~including the Employer Contribution Reserve, Employee Contribution Reserve, Pension Reserve, Annuity Reserve, UAAL Contribution Reserve, STAR COLA Reserve, ERI Contribution Reserve, Contra Account and the Contingency Reserve.~~ The total of the Valuation Reserves equals the market value of the system's assets used by the actuary in determining current funding levels. The following are OCERS' Valuation Reserve accounts:
 - a. **Employer Contribution Reserve**—represents ~~the cumulative~~ employer contributions for active and deferred members plus interest for future retirement benefits. Additions include employer contributions for active members and interest credited semi-annually. Deductions include transfers to the Pension Reserve to fund retirement benefits, disability benefits and death benefits.
 - b. **Employee Contribution Reserve**—represents ~~the cumulative~~ employee contributions for active and deferred members plus interest for future retirement benefits. Additions include member contributions and interest credited semi-annually. Deductions include member refunds and transfer of funds to the Annuity Reserve for retirement benefits of newly retired members.
 - c. **Pension Reserve**—represents funding ~~set aside~~originally from employer contributions for retirement and disability benefit payments for retired members. Additions include transfers from the Employer Contribution Reserve as current active members retire, transfers from other reserves as described below and interest credited semi-annually. Deductions include benefit payments to retired and disabled members, and their beneficiaries.



OCERS Board Policy

Reserves and Interest-Crediting Policy

- d. **Annuity Reserve**—represents funding ~~set aside originally~~ from employee contributions for retirement and disability benefit payments ~~for retired members~~. Additions include transfers from the Employee Contribution Reserve as current active members retire and interest credited ~~semi-annually~~. Deductions include benefit payments to retired and disabled members, and their beneficiaries.
 - e. **UAAL Contribution Reserve**—represents the cumulative additional employer contributions made for their unfunded actuarial accrued liability in excess of the required contribution. This reserve is included as part of the Employer Contribution Reserve in the financial statements of the System. Additions include employer contributions to their UAAL, and interest credited semi-annually. Deductions will include transfers to the Pension Reserve to fund retirement benefits, disability benefits and death benefits if Employer Contribution Reserves are insufficient.
 - f. **STAR COLA ~~Reserve~~ (Supplemental Targeted Adjustment for Retirees Cost-of-living Adjustment) Reserve**—represents employer contributions for retirees whose retirement benefit has lost more than 20 percent of its purchasing power since retirement. Additions to this reserve include ~~bi-weekly~~ contributions received from ~~the employer employers~~. Deductions include monthly benefit payments made to eligible retired members and transfers to the Pension Reserve for any differences between amounts contributed and benefits paid.
 - g. **ERI (Early Retirement Incentive) Contribution Reserve**—represents ~~the cumulative~~ employer contributions for future retirement payments to active employees who were offered an incentive for early retirement by their employer. This reserve is included as part of the Employer Contribution Reserve in the financial statements of the System. Additions include annual employer contributions ~~to be paid over a 15 year period from 2002~~ through 2017 and interest credited semi-annually. Deductions include transfers to the Pension Reserve to fund the early retirement benefits for eligible members. There are currently no active early incentive retirement programs that require contributions to this reserve.
 - h. **Contra Account**—is an accounting informational mechanism, not a reserve. The balance in the account represents the accumulation of the interest crediting to the valuation reserves accounts which cannot be funded from available earnings.
 - i. **Contingency Reserve**—provides a buffer against deficiencies for payment of retirement benefits due to interest and earnings fluctuations, changes in assumptions or some other unforeseen contingency. The County Employees Retirement Law provides that when the Contingency Reserve exceeds one percent of total assets, the retirement board may transfer all or any part of the surplus as specified in Government Code § 31592.2. Additions to this reserve are transfers from the Undistributed Earnings. Deductions are transfers to other reserve funds as required by this policy. If no Undistributed Earnings are available, this reserve may be unfunded.
4. ~~Non-Valuation Reserves include the County Investment Reserve, Medicare/Medical Insurance Reserve, EPA Reserve, the OCSD UAAL Deferred Reserve, as well as the Actuarial Deferred Returns. These reserves~~Non-Valuation Reserves are special purpose reserves for specific employers and



OCERS Board Policy

Reserves and Interest-Crediting Policy

retirees and are not used by the actuary in determining current funding levels. The following are OCERS' Non-Valuation Reserves:

- a. **County Investment Reserve**—represents the remaining proceeds from the County of Orange's 1994 Pension Obligation Bond issuance. The remaining proceeds are utilized, in accordance with a long standing agreement between OCERS and the County of Orange, to offset a portion of the annual actuarially-determined ~~contribution rates~~ contributions for the County of Orange. Additions to this reserve include interest credited as stated in the agreement. Deductions represent transfers to the Employer Contribution Reserve as provided in the aforementioned agreement.
- b. **Medicare/Medical Insurance Reserve**—represents funds received from the County to subsidize Medicare benefits for a small group of retirees in settlement of a retiree healthcare lawsuit back in the 1970's. There are no additions to this reserve. Deductions to this reserve represent payments to the few remaining retirees who are entitled to this benefit. Once there are no longer any retirees entitled to this benefit, any remaining funds will be transferred to the Pension Reserve. For financial statement reporting purposes only, this reserve is currently included with the Pension Reserve.
- c. **EPA (Employee Purchased Annuity) Reserve**—represents additional after-tax contributions made by employees pursuant to Government Code §31627 for the purpose of providing additional benefits. Under this plan, active employees were given the choice of receiving a lump sum benefit upon retirement, or a monthly distribution for 60 to 120 months, then a lifetime additional retirement benefit. The plan was closed as of December 31, 2002 and only a few retirees are receiving this additional benefit. Interest had been credited at the assumed rate of return minus 0.5%, but the balance in this reserve has been exhausted. Activity in this reserve is limited to deductions for the monthly additional benefit for the remaining retirees. For financial reporting purposes, the negative balance in this reserve is offset against the Pension Reserve.
- d. **OCSD UAAL Deferred Reserve**—represents ~~the payment~~ payments by the Orange County Sanitation District (OCSD) ~~offor~~ its deferred unfunded actuarial accrued liability (UAAL). This non-valuation reserve was established by a memorandum of understanding (MOU) adopted on January 17, 2017 to track the funding of the actuarial deferred losses ~~of OCSD's UAAL. Commencing December 31, 2016 and annually thereafter until there is no remaining balance of funds in this reserve, OCERS will transfer the amount necessary to satisfy the actual UAAL attributed to OCSD into OCERS' Employer Reserve Account, that is to be applied against their UAAL in future years.~~ Additions to this reserve include payments made by OCSD and interest credited annually at the actual rate of return ~~per~~. Deductions to this reserve are transfers made to the Employer Reserve Account to offset OCSD UAAL as calculated by the terms of actuary. As of December 18, 2018, the full balance of this reserve had been used to offset OCSD's UAAL and a new MOU was adopted on October 21, 2019 to track the funding of an additional payment by OCSD for its deferred UAAL.
- e. **Actuarial Deferred Returns**—represents the amount of deferred earnings created by a five-year smoothing of actual gains and losses compared to the assumed investment rate of return. A positive balance represents accumulated earnings above the assumed investment rate of return. A negative balance represents accumulated earnings below the assumed investment rate of



OCERS Board Policy

Reserves and Interest-Crediting Policy

return. Changes to this amount are determined based on the actuarial valuation completed at the end of the year. This amount may also be referred to as “Net Unrecognized Gains/ (Losses)” or “Reserve for Market Stabilization.”

5. **Health Care Reserves** include funds held for the special purpose to pay medical benefits for eligible recipients. The following are the Health Care Reserve accounts:
 - a. **Health Care Reserve—County**—represents assets held to pay retiree medical benefits for eligible retirees/participants of the County 401(h) health care plans. Additions include employer contributions and investment earnings. Deductions include medical premium payments and administrative expenses.
 - b. **Health Care Reserve—OCFA (Orange County Fire Authority)**—represents assets held to pay retiree medical benefits for eligible retirees/participants of the OCFA 401(h) health care plans. Additions include employer contributions and investment earnings. Deductions include medical premium payments and administrative expenses.
6. **OPEB 115 Plan Reserve** – represents custodial assets held by OCERS in an investment capacity for the Orange County Transportation Authority (OCTA) health care plan. Additions include other postemployment benefit contributions and investment earnings. Deductions include other postemployment benefits and administrative expenses.

6.7. Other Related Terms

- a. **Undistributed Earnings** are the most recent annual earnings of the fund.
- b. ~~Available Earnings are Undistributed Earnings, as defined above, plus any balance in the Unallocated Fund Balance and Contingency Reserves.~~
- c. **Unallocated Fund Balance** is the amount remaining after all the required reserves have been funded and interest has been credited to those reserves. An Unallocated Fund Balance will only occur when earnings have more than exceeded expectations and the required Contingency Reserve has been funded.
- d. Available Earnings are Undistributed Earnings, as defined above, plus any balance in the Unallocated Fund Balance and Contingency Reserves.

Policy Guidelines

7.8. Available Earnings of OCERS will be allocated in the following order:

- a. Payment of administrative and investment expenses
- b. Credit of regular interest compounded semi-annually on June 30 and December 31 to all contributions in the retirement fund which have been on deposit for six months prior to that date as specified in Government Code § 31591:
 1. Employee (EE) Contribution Reserve at an annual rate of 5%
 2. Employer (ER) Contribution Reserve at the annual assumed rate of return plus the excess between the annual assumed rate of return and 5% credited for employee interest
 3. Annuity Reserve at the annual assumed rate of return



OCERS Board Policy

Reserves and Interest-Crediting Policy

4. Pension Reserve at the annual assumed rate of return
5. Early Retirement Incentive (ERI) Reserve at the annual assumed rate of return
6. UAAL Contribution Reserve at the annual assumed rate of return
- c. Credit of interest per terms of applicable agreement to the following non-valuation reserves:
 - a. County Investment Reserve
 - b. OCSD UAAL Deferred Reserve
- ~~h. Credit the balance to Undistributed Earnings~~
9. The Board adopts the allocation of the remaining balance of Undistributed Earnings after making the allocations described in Section 8 in the following order:
 - a. Replenish the Contra Account until it is zero
 - b. ~~Replenishing~~ Replenish the Contingency Reserves to 1% of assets
 - c. Credit to Employer (ER) Contribution and Pension Reserves so as to reduce the unfunded accrued actuarial liability (UAAL) of the System
 - d. Credit the balance to the Unallocated Fund Balance

Policy Review

10. This Policy is subject to change in the exercise of the Board's judgment. The Board will review this policy at least every three years to ensure that it remains relevant and appropriate. In the event of legislative changes to the pertinent sections addressed in this policy, the Board will review the policy as appropriate.

Policy History

11. The Board adopted the Undistributed Earnings policy on November 23, 2009.
12. The Undistributed Earnings Policy was last reviewed on January 21, 2014.
- ~~13. This~~ The Reserves and Interest-Crediting Policy ~~supersedessuperseded~~ the prior Undistributed Earnings Policy and was approved by the Board on December 18, 2017.
- ~~13-14.~~ The Reserves and Interest Crediting Policy was last reviewed on December 18, 2017.

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 Secretary of the Board	<u>12/18/170</u> _____ Date
---	-----------------------------------



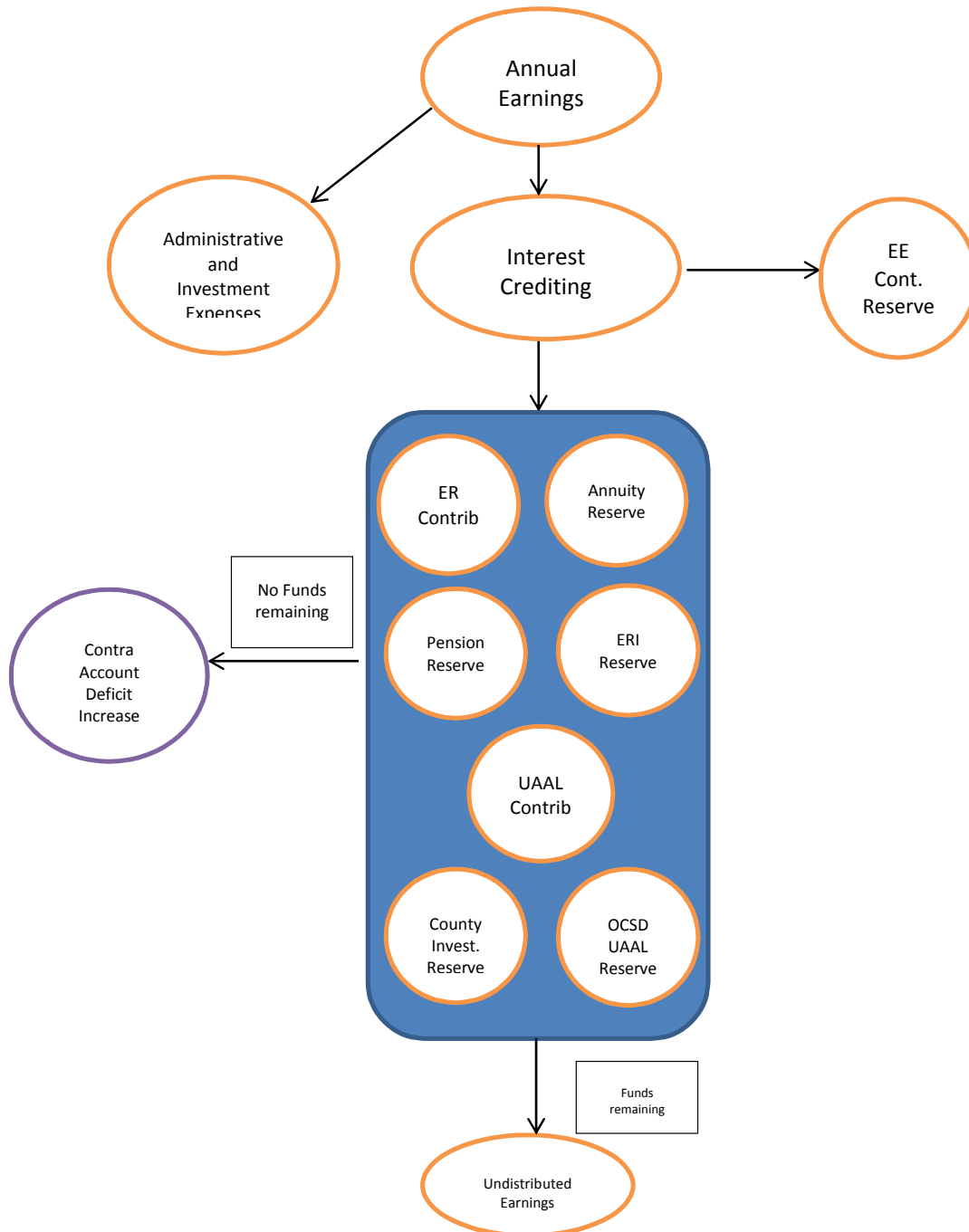
OCERS Board Policy
Reserves and Interest-Crediting Policy

	12/18/170



OCERS Board Policy Reserves and Interest-Crediting Policy

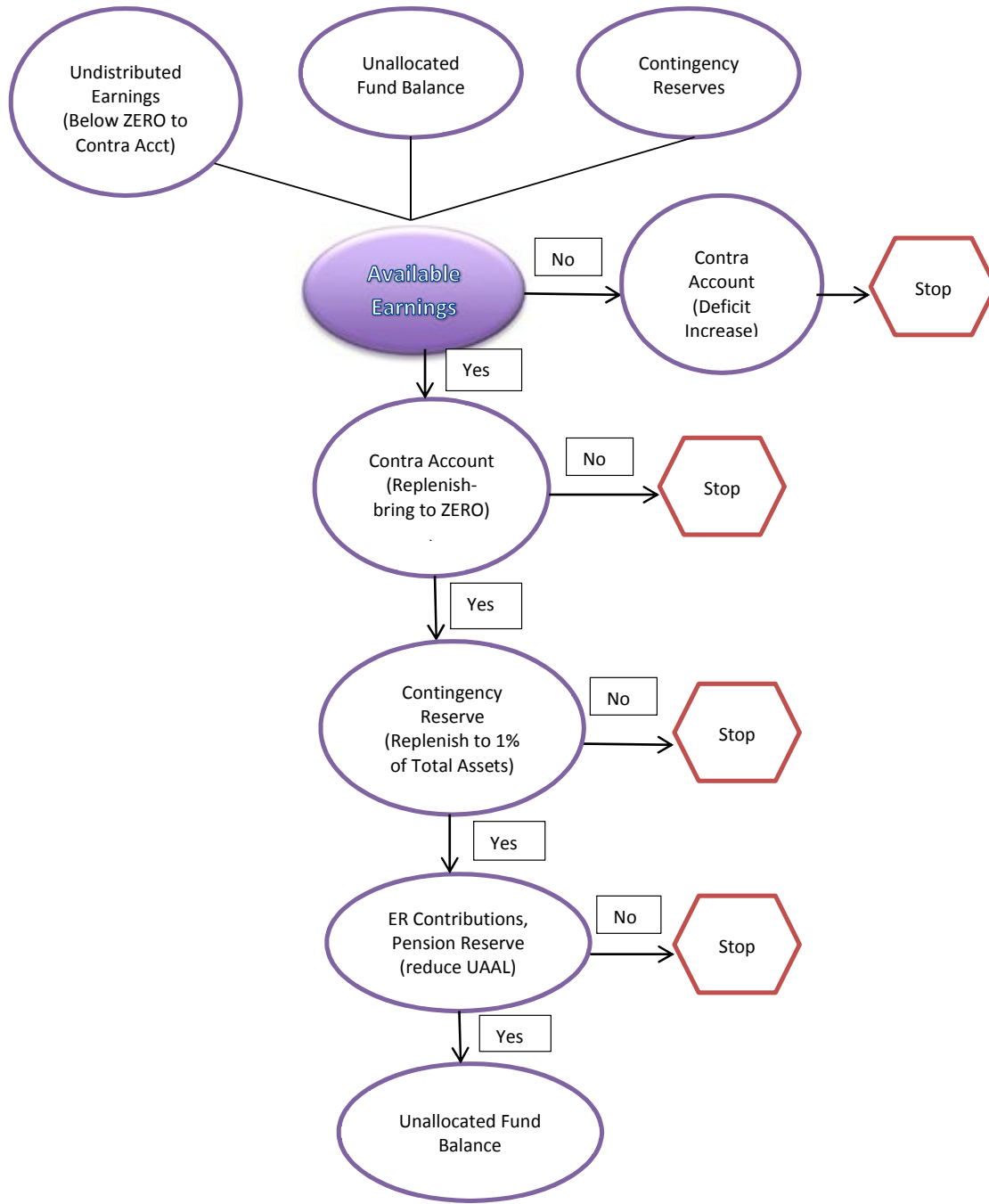
Distribution of Annual Earnings to Expenses and Interest-Crediting





OCERS Board Policy Reserves and Interest-Crediting Policy

Allocation of Undistributed Earnings and Available Earnings





OCERS Board Policy

Reserves and Interest-Crediting Policy

Purpose and Background

1. The purpose of this policy is to document the existing reserve structure created and maintained by OCERS and the distribution of available earnings and interest-crediting to the reserve accounts consistent with Government Code §§31592 and 31592.2.

Policy Objectives

2. The objectives of this policy are to:
 - a. Identify all the reserves maintained by OCERS, and how funds are distributed to and from the relevant reserve.
 - b. In the event of excess earnings in any fiscal year, provide guidance to OCERS' staff to ensure appropriate application of excess earnings (Undistributed Earnings) to reserve accounts.

Definitions

The System's reserves are book-keeping accounts and do not represent an actual separation of funds; the sum of all reserves equals the net position restricted for pension, other postemployment benefits and OPEB 115 and fall into these categories: Valuation, Non-Valuation, Health Care and OPEB 115.

3. **Valuation Reserves** consist of the reserves used by the actuary in calculating the valuation value of assets. The total of the Valuation Reserves equals the market value of the system's assets used by the actuary in determining current funding levels. The following are OCERS' Valuation Reserve accounts:
 - a. **Employer Contribution Reserve**—represents employer contributions for active and deferred members plus interest for future retirement benefits. Additions include employer contributions for active members and interest credited semi-annually. Deductions include transfers to the Pension Reserve to fund retirement benefits, disability benefits and death benefits.
 - b. **Employee Contribution Reserve**—represents employee contributions for active and deferred members plus interest for future retirement benefits. Additions include member contributions and interest credited semi-annually. Deductions include member refunds and transfer of funds to the Annuity Reserve for retirement benefits of newly retired members.
 - c. **Pension Reserve**—represents funding originally from employer contributions for retirement and disability benefit payments for retired members. Additions include transfers from the Employer Contribution Reserve as current active members retire, transfers from other reserves as described below and interest credited semi-annually. Deductions include benefit payments to retired and disabled members, and their beneficiaries.
 - d. **Annuity Reserve**—represents funding originally from employee contributions for retirement and disability benefit payments for retired members. Additions include transfers from the Employee Contribution Reserve as current active members retire and interest credited semi-annually. Deductions include benefit payments to retired and disabled members, and their beneficiaries.



OCERS Board Policy

Reserves and Interest-Crediting Policy

- e. **UAAL Contribution Reserve**—represents the cumulative additional employer contributions made for their unfunded actuarial accrued liability in excess of the required contribution. This reserve is included as part of the Employer Contribution Reserve in the financial statements of the System. Additions include employer contributions to their UAAL, and interest credited semi-annually. Deductions will include transfers to the Pension Reserve to fund retirement benefits, disability benefits and death benefits if Employer Contribution Reserves are insufficient.
 - f. **STAR COLA (Supplemental Targeted Adjustment for Retirees Cost-of-living Adjustment) Reserve**—represents employer contributions for retirees whose retirement benefit has lost more than 20 percent of its purchasing power since retirement. Additions to this reserve include contributions received from employers. Deductions include monthly benefit payments made to eligible retired members and transfers to the Pension Reserve for any differences between amounts contributed and benefits paid.
 - g. **ERI (Early Retirement Incentive) Contribution Reserve**—represents employer contributions for future retirement payments to active employees who were offered an incentive for early retirement by their employer. This reserve is included as part of the Employer Contribution Reserve in the financial statements of the System. Additions include annual employer contributions paid from 2002 through 2017 and interest credited semi-annually. Deductions include transfers to the Pension Reserve to fund the early retirement benefits for eligible members. There are currently no active early incentive retirement programs that require contributions to this reserve.
 - h. **Contra Account**—is an accounting informational mechanism, not a reserve. The balance in the account represents the accumulation of the interest crediting to the valuation reserves accounts which cannot be funded from available earnings.
 - i. **Contingency Reserve**—provides a buffer against deficiencies for payment of retirement benefits due to interest and earnings fluctuations, changes in assumptions or some other unforeseen contingency. The County Employees Retirement Law provides that when the Contingency Reserve exceeds one percent of total assets, the retirement board may transfer all or any part of the surplus as specified in Government Code § 31592.2. Additions to this reserve are transfers from the Undistributed Earnings. Deductions are transfers to other reserve funds as required by this policy. If no Undistributed Earnings are available, this reserve may be unfunded.
4. **Non-Valuation Reserves** are special purpose reserves for specific employers and retirees and are not used by the actuary in determining current funding levels. The following are OCERS' Non-Valuation Reserves:
- a. **County Investment Reserve**—represents the remaining proceeds from the County of Orange's 1994 Pension Obligation Bond issuance. The remaining proceeds are utilized, in accordance with a long standing agreement between OCERS and the County of Orange, to offset a portion of the annual actuarially-determined contributions for the County of Orange. Additions to this reserve include interest credited as stated in the agreement. Deductions represent transfers to the Employer Contribution Reserve as provided in the aforementioned agreement.



OCERS Board Policy

Reserves and Interest-Crediting Policy

- b. **Medicare/Medical Insurance Reserve**—represents funds received from the County to subsidize Medicare benefits for a small group of retirees in settlement of a retiree healthcare lawsuit back in the 1970's. There are no additions to this reserve. Deductions to this reserve represent payments to the few remaining retirees who are entitled to this benefit. Once there are no longer any retirees entitled to this benefit, any remaining funds will be transferred to the Pension Reserve. For financial statement reporting purposes only, this reserve is currently included with the Pension Reserve.
 - c. **EPA (Employee Purchased Annuity) Reserve**—represents additional after-tax contributions made by employees pursuant to Government Code §31627 for the purpose of providing additional benefits. Under this plan, active employees were given the choice of receiving a lump sum benefit upon retirement, or a monthly distribution for 60 to 120 months, then a lifetime additional retirement benefit. The plan was closed as of December 31, 2002 and only a few retirees are receiving this additional benefit. Interest had been credited at the assumed rate of return minus 0.5%, but the balance in this reserve has been exhausted. Activity in this reserve is limited to deductions for the monthly additional benefit for the remaining retirees. For financial reporting purposes, the negative balance in this reserve is offset against the Pension Reserve.
 - d. **OCSD UAAL Deferred Reserve**—represents payments by the Orange County Sanitation District (OCSD) for its deferred unfunded actuarial accrued liability (UAAL). This non-valuation reserve was established by a memorandum of understanding (MOU) adopted on January 17, 2017 to track the funding of the actuarial deferred losses attributed to OCSD that is to be applied against their UAAL in future years. Additions to this reserve include payments made by OCSD and interest credited annually at the actual rate of return. Deductions to this reserve are transfers made to the Employer Reserve Account to offset OCSD UAAL as calculated by the actuary. As of December 18, 2018, the full balance of this reserve had been used to offset OCSD's UAAL and a new MOU was adopted on October 21, 2019 to track the funding of an additional payment by OCSD for its deferred UAAL.
 - e. **Actuarial Deferred Returns**—represents the amount of deferred earnings created by a five-year smoothing of actual gains and losses compared to the assumed investment rate of return. A positive balance represents accumulated earnings above the assumed investment rate of return. A negative balance represents accumulated earnings below the assumed investment rate of return. Changes to this amount are determined based on the actuarial valuation completed at the end of the year. This amount may also be referred to as "Net Unrecognized Gains/ (Losses)" or "Reserve for Market Stabilization."
5. **Health Care Reserves** include funds held for the special purpose to pay medical benefits for eligible recipients. The following are the Health Care Reserve accounts:
- a. **Health Care Reserve—County**—represents assets held to pay retiree medical benefits for eligible participants of the County 401(h) health care plans. Additions include employer contributions and investment earnings. Deductions include medical premium payments and administrative expenses.
 - b. **Health Care Reserve—OCFA (Orange County Fire Authority)** —represents assets held to pay retiree medical benefits for eligible participants of the OCFA 401(h) health care plans. Additions



OCERS Board Policy

Reserves and Interest-Crediting Policy

include employer contributions and investment earnings. Deductions include medical premium payments and administrative expenses.

6. **OPEB 115 Plan Reserve** – represents custodial assets held by OCERS in an investment capacity for the Orange County Transportation Authority (OCTA) health care plan. Additions include other postemployment benefit contributions and investment earnings. Deductions include other postemployment benefits and administrative expenses.
7. **Other Related Terms**
 - a. **Undistributed Earnings** are the most recent annual earnings of the fund.
 - b. **Unallocated Fund Balance** is the amount remaining after all the required reserves have been funded and interest has been credited to those reserves. An Unallocated Fund Balance will only occur when earnings have more than exceeded expectations and the required Contingency Reserve has been funded.
 - c. **Available Earnings** are Undistributed Earnings, as defined above, plus any balance in the Unallocated Fund Balance and Contingency Reserves.

Policy Guidelines

8. Available Earnings of OCERS will be allocated in the following order:
 - a. Payment of administrative and investment expenses
 - b. Credit of regular interest compounded semi-annually on June 30 and December 31 to all contributions in the retirement fund which have been on deposit for six months prior to that date as specified in Government Code § 31591:
 1. Employee (EE) Contribution Reserve at an annual rate of 5%
 2. Employer (ER) Contribution Reserve at the annual assumed rate of return plus the excess between the annual assumed rate of return and 5% credited for employee interest
 3. Annuity Reserve at the annual assumed rate of return
 4. Pension Reserve at the annual assumed rate of return
 5. Early Retirement Incentive (ERI) Reserve at the annual assumed rate of return
 6. UAAL Contribution Reserve at the annual assumed rate of return
 - c. Credit of interest per terms of applicable agreement to the following non-valuation reserves:
 - a. County Investment Reserve
 - b. OCSD UAAL Deferred Reserve
9. The Board adopts the allocation of the remaining balance of Undistributed Earnings after making the allocations described in Section 8 in the following order:
 - a. Replenish the Contra Account until it is zero
 - b. Replenish the Contingency Reserves to 1% of assets



OCERS Board Policy Reserves and Interest-Crediting Policy

- c. Credit to Employer (ER) Contribution and Pension Reserves so as to reduce the unfunded accrued actuarial liability (UAAL) of the System
- d. Credit the balance to the Unallocated Fund Balance

Policy Review

10. This Policy is subject to change in the exercise of the Board's judgment. The Board will review this policy at least every three years to ensure that it remains relevant and appropriate. In the event of legislative changes to the pertinent sections addressed in this policy, the Board will review the policy as appropriate.

Policy History

- 11. The Board adopted the Undistributed Earnings policy on November 23, 2009.
- 12. The Undistributed Earnings Policy was last reviewed on January 21, 2014.
- 13. The Reserves and Interest-Crediting Policy superseded the prior Undistributed Earnings Policy and was approved by the Board on December 18, 2017.
- 14. The Reserves and Interest Crediting Policy was last reviewed on December 18, 2017.

Secretary's Certificate

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

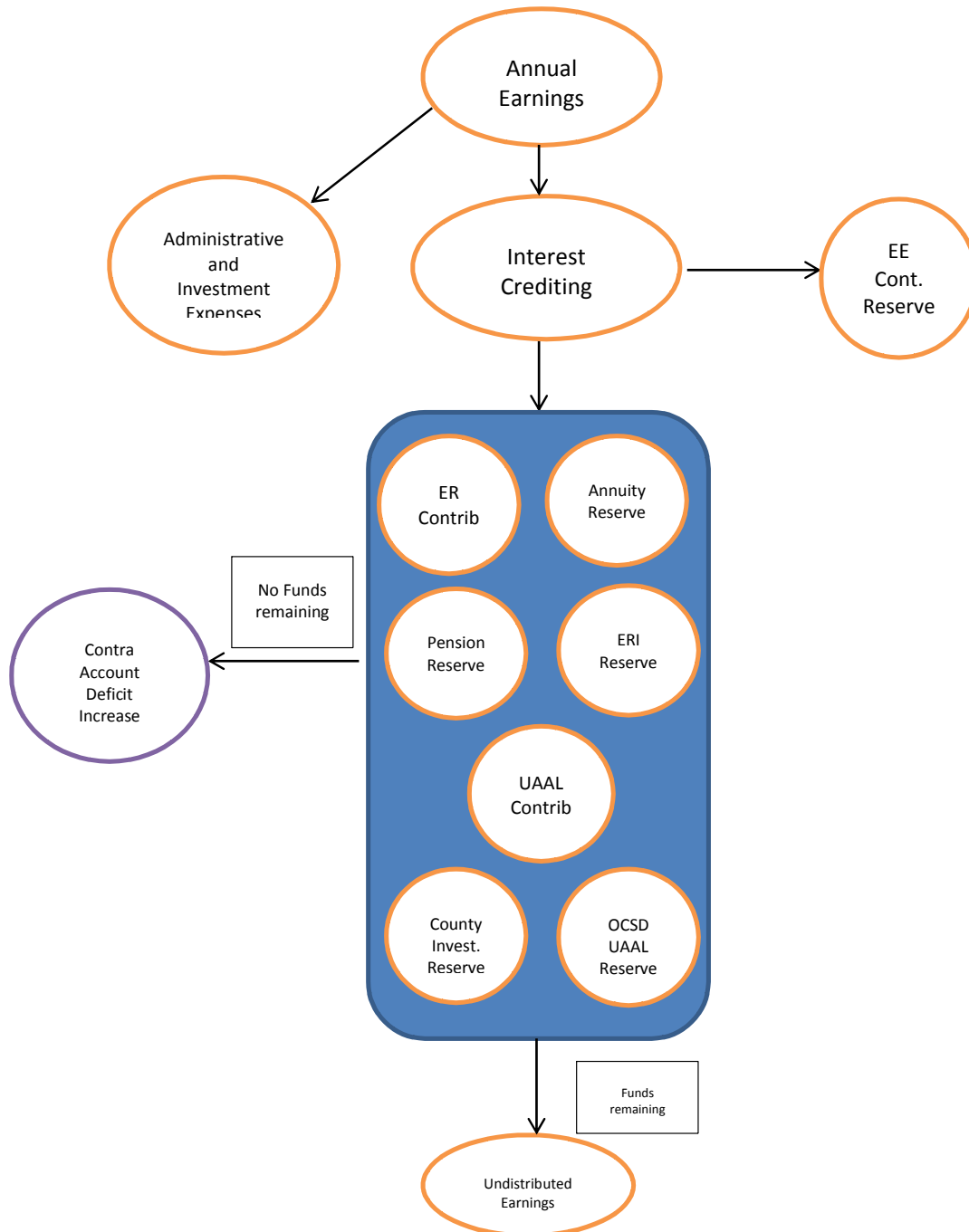
Steve Delaney
Secretary of the Board

_____ Date



OCERS Board Policy Reserves and Interest-Crediting Policy

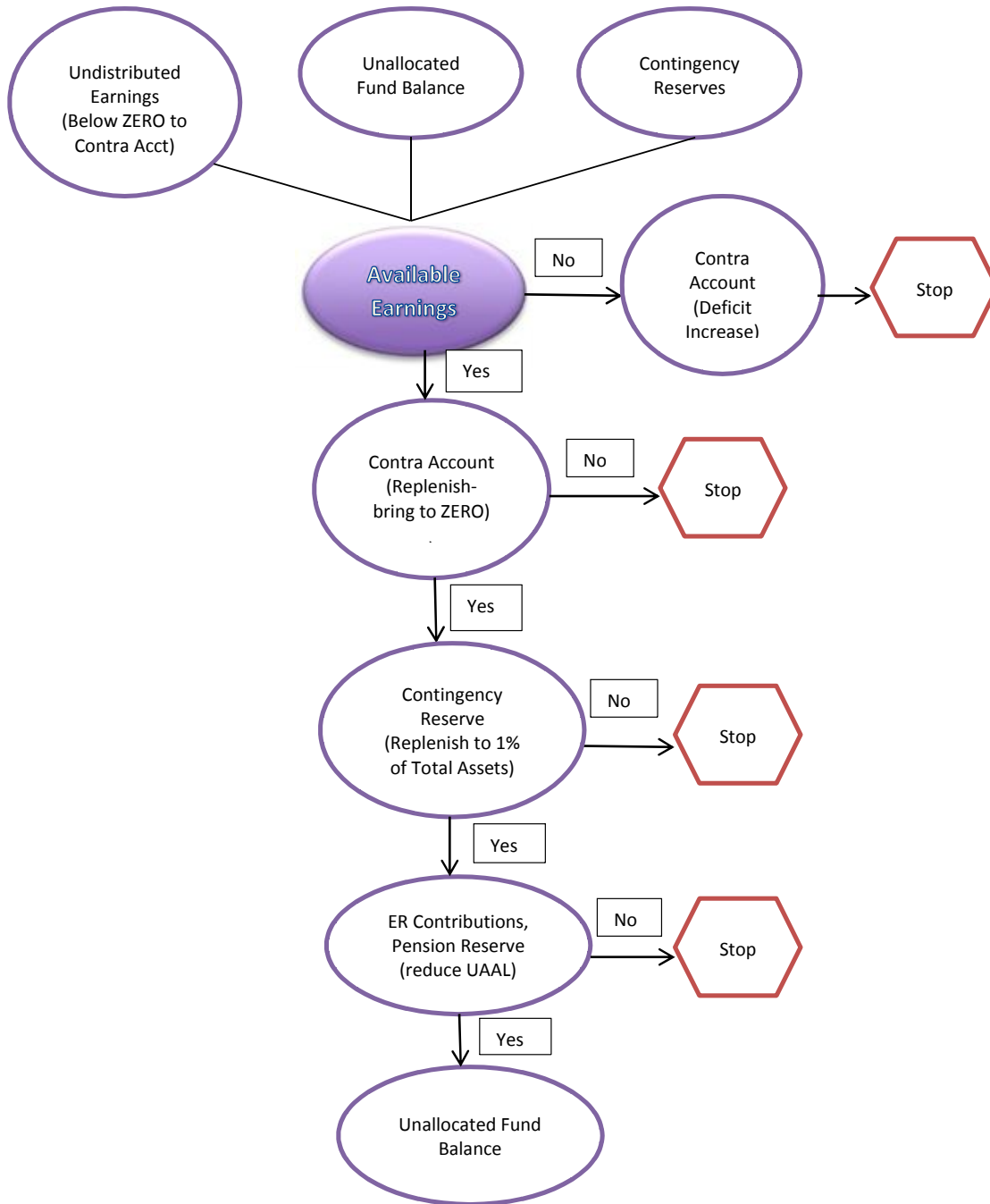
Distribution of Annual Earnings to Expenses and Interest-Crediting





OCERS Board Policy Reserves and Interest-Crediting Policy

Allocation of Undistributed Earnings and Available Earnings





OCERS Board Policy Election Procedures

Purpose

To provide for the lawful and orderly election of the Second, Third, Seventh, Eighth, and Alternate Members of the OCERS Board of Retirement (“Board”), consistent with the County Employees Retirement Law of 1937 (Govt. Code, § 31450, et seq.). Government Code § 31520.1 designates these Board Member positions to be filled as follows:

Second (General Member)	Elected by OCERS General Membership
Third (General Member)	Elected by OCERS General Membership
Seventh (Safety Member)	Elected by OCERS Safety Membership
Eighth (Retired Member)	Elected by OCERS Retired Membership
Alternate Member	The candidate in the election for the Seventh Member from the safety group under Section 31470.2 or 31470.4 other than the safety group of the successful candidate who received the most votes.

Elections Process

The Orange County Registrar of Voters (“Registrar”) will serve as the elections official for Board Member elections. The Registrar’s office and OCERS will agree on the process and procedures for the conduct of elections. Such process may be modified from time to time, and all candidates must comply with the Registrar’s then-existing elections process. OCERS staff will cooperate with the Registrar’s office to ensure that elections are held in a timely and efficient manner. OCERS will reimburse the Registrar for its actual costs in conducting Board Member elections.

The failure of a candidate or potential candidate to comply with the Registrar’s requirements or deadlines will result in their disqualification from that election.

Election Schedule

An election upon the expiration of a Board Member term of office is a “regular election.” An election necessary to fill a vacancy that occurs for a reason other than term expiration is referred to as a “special election.”

At least 140 days before the expiration of the term of office of a Safety Member, General Member, or Retired Member, the OCERS Chief Executive Officer (“CEO”) or their designee will notify the Registrar of the date of expiration and the need for a regular election. In addition, the CEO or their designee will notify the Registrar of the need for a special election promptly following a vacancy on the Board. The special election will be held as soon as practicable after the vacancy unless the Board determines that ~~it is exigent circumstances make it~~ impractical to ~~effectively~~ conduct an election during the remaining term of the vacant position.



OCERS Board Policy Election Procedures

The Registrar will coordinate with OCERS to develop an election schedule for each regular or special election. The election schedule which will include all relevant deadlines and timeframes– that are mutually satisfactory to OCERS and the Registrar. Among other things, the election schedule will provide the date on which the nomination period opens (“Nomination Period Open Date”) and the date on which the nomination period closes (“Nomination Period Close Date”). The election schedule will provide for a minimum of 30 days between the Nomination Period Open Date and the Nomination Period Close Date. The schedule will be posted on the OCERS’ web site.

Candidate Requirements

Any current member of the respective election group (General, Safety, or Retired) who wishes to be considered for certification as a Board Member candidate must file all the required nomination documents with the Registrar’s Office no later than 5:00 p.m. on the ~~deadline~~ date the Nomination Period Close Date as stated on the Registrar’s schedule for that election. The required nominations documents are as follows:

1. Nomination Petition for Election
2. Statement of Willingness to Serve

A potential candidate may also file a Biographical Statement (see below).

Nomination Petition for Election

The Registrar will prepare the Nomination Petition for Election and make it available to potential candidates at least 30 days before the Nomination Period Close Date (i.e., the deadline by which candidates must return completed forms to the Registrar). Candidates must complete the Nomination Petition for Election with the following information and signatures~~contain~~:

1. The name, address (work or home), and signature of the candidate.
2. The designation of the seat on the Board to which the candidate seeks election.
3. A ballot designation selected by the candidate that contains no more than than 40 characters.
4. All individuals signing the Nomination Petition for Election must be members of the election group at the time of signature. The printed name and last four digits of the signer’s social security number must accompany the signature. The Registrar will not accept electronic signatures.
5. The Nomination Petition for Election filed by a candidate for a General Member or Safety Member position must include at least seventy-five (75) signatures of current active employee members of OCERS from the same election group as the candidate for election.
6. The Nomination Petition for Election filed by a candidate for the Retired Member position must include at least twenty-five (25) signatures of retired members of OCERS.

Statement of Willingness to Serve

Each candidate is required to file a Statement of Willingness to Serve, which consists of the following signed statement:

I do hereby state that if I am elected, I am willing to faithfully serve the position of Board of Retirement Member and will execute the position of this office by attending meetings, and



OCERS Board Policy Election Procedures

fulfilling my fiduciary duties. I understand that additional time will be required for Committee assignments, which will be made by the Chairman of the Board.

Executed this _____ day of, [year] in [county], [state].

Signature of Candidate

Biographical Statement

Candidates may *at their option* submit to the Registrar a Biographical Statement consisting of no more than four hundred (400) words, and provided on a single sheet of 8 ½ by 11 inch paper of camera ready quality. The deadline for the Biographical Statement is the same as that for the required nomination documents above; [i.e, on the Nomination Period Close Date.](#)

Preparation of Ballots

The Registrar will determine the order in which candidates’ names will appear on the ballot by random drawing. The Registrar will notify all candidates of the time and place of the drawing at least one (1) day in advance.

The Registrar will print the ballots and envelopes that voters must use to return their completed ballots. OCERS will provide the Registrar with voter addresses based on OCERS’ current member information. An active employee’s work address will be provided if the personal address is unknown. The Registrar will mail a ballot, voter’s pamphlet, and a postage paid return envelope to each eligible member no less than thirty-five (35) calendar days before the date the Registrar will tally the votes as indicated on the election schedule.

If there is only one qualified candidate for an office, no ballot will be printed, and no election will be held. The Registrar will notify the CEO and then prepare an Agenda Item Transmittal for the Orange County Board of Supervisors, and the Board of Supervisors will declare that candidate to be appointed to the Board for the term specified. If no eligible candidate is certified by the Registrar, the Registrar will notify the CEO and reschedule the election.

Campaign Materials

If a qualified candidate or other interested third-party wishes to request that OCERS send campaign material in support of or in opposition to a candidate, they must:

- Notify OCERS, and submit the materials in the format required by OCERS before the scheduled deadline.
- Include in the campaign materials the following disclaimer:

These election materials are provided by [insert name of candidate or third party] and are not endorsed by the Orange County Employees Retirement System (OCERS). Neither OCERS, its Board, nor their agents are responsible for the content, format, or timeliness of these materials.



OCERS Board Policy Election Procedures

- Deposit with the mailing service designated by OCERS an amount of money sufficient to cover the processing and postage costs of the campaign material.

OCERS will employ a mailing service that has entered into a confidentiality agreement with OCERS to send the campaign materials to members voting in an election. The mailing service will use the information provided to it only for the purpose of distributing campaign material.

Voting Procedures

1. After making their ballot selection(s), the voter must sign the outside of the provided envelope and return it to the Registrar with the completed ballot inside.
2. Ballots must be returned by the individual member either in person, via County of Orange “pony” mail, or by mail in the envelope provided by the Registrar.
3. Ballots must be received by~~returned to~~ the Registrar on or before 9:00 a.m. on the date of the election.

Election Certification

The Registrar will notify the CEO and each candidate at least five (5) days in advance of the time and place of the tallying of ballots. The Registrar will prepare an election certification, certifying the candidate with the highest number of votes, and submit the certification to the Orange County Board of Supervisors on an Agenda Item Transmittal before the beginning of the term of the newly elected Board Member. A copy of the certification will be sent to the CEO and the OCERS’ Administrator.

The candidate certified by the Registrar as winning the election will take office the day after the expiration of the term of their predecessor. In the event of a tie vote and the need for a runoff election, or a delay due to a request for a recount, the incumbent will continue to serve in office until their successor is certified.

Recount

A candidate may request a recount of ballots to be performed by the Registrar. A recount request must be in writing and filed with the Registrar within five (5) days of the Registrar’s certification of the election.

The candidate making the request or a third party on behalf of the candidate will pay the cost of the recount. The Registrar will provide the requestor an estimate of the cost, and a deposit of the estimated amount must be provided before the recount will be commenced. The recount will commence no more than seven (7) days following the receipt of the request for recount and continued on each following business day until concluded. The Registrar will notify the CEO and all candidates for the office being recounted and post a Notice of Recount at least one (1) day before the recount at the office of the Registrar.

A recount is only valid if every vote received per the Registrar’s election procedures is recounted. The results will be posted in the office of the Registrar and at the OCERS’ office.

Safety Member Elections

When there is an election for the Safety Member, OCERS will advise the Registrar which of the eligible candidate(s) are engaged in active law enforcement (Law Enforcement Group); which are engaged in active fire suppression (Fire Suppression Group); and which are in any other safety group, e.g., probation (Other



OCERS Board Policy Election Procedures

Safety Group). The candidate with the highest number of votes will be certified by the Registrar as the Safety Member regardless of their group.

The Safety Member candidate with the highest number of votes in a group other than that of the winner of the election will be certified as the Alternate Member of the Board, except that if there is a candidate from the Fire Suppression or Law Enforcement Group, a candidate from the Other Safety Group cannot be the Alternate Member, regardless of vote count.

The terms of office for the Safety Member and Alternate Member will be the same. In the event of an Alternate Member vacancy before the end of that member’s term, a special election will be held to elect a successor to complete the unexpired term unless the Board determines that it is impractical to conduct an election during the remaining term period. Only safety members who are not members of the current Safety Member’s group will be eligible candidates. If there is an eligible candidate from either the Law Enforcement Group or Fire Suppression Group to succeed as the Alternate Member, no member from the Other Safety Group may be candidates. If there are no eligible candidates, there will be no successor Alternate Member. The candidate receiving the most votes will become the successor and serve out the unexpired term of the Alternate Member.

Policy Review

The Board will review these procedures at least every three years to ensure that they remain relevant and appropriate.

Policy History

These procedures were adopted by the Board on October 15, 2001. These procedures were revised on May 17, 2011, February 17, 2015, July 20, 2015, and _____.

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
Secretary of the Board

_____ Date



OCERS Board Policy Elections Procedures

A. Notice and Date of Election

At least one hundred twenty (120) days prior to the expiration of the term of office of any Safety Member, General Member, or Retired Member of the Board of Retirement, the Retirement Administrator will notify the Registrar of Voters in writing that said member's term of office will expire, the date of such expiration, and the fact that an election must be scheduled. The date of the election shall be set prior to the expiration of the term of the member. However, no election of any Safety Member, General Member, or Retired Member of the Board of Retirement shall be set for or take place on the date set for any statewide primary or general election.

In the event of the need for a special election to fill the unexpired term caused by a vacancy in the office of one of the elected members, the Board of Retirement shall determine that the office is vacant and shall establish the date of the election, unless the Board determines that exigent circumstances make it impractical to effectively conduct an election. A special election shall be held as soon as practicable, following consultation with the Registrar of Voters. No such special election shall be set for or take place on the date set for any statewide primary or general election.

B. Candidate Requirements

Current members of the respective election groups: (1) General, (2) Safety, (3) Retired who wish to be placed on the ballot shall file a Petition of Election and a Statement of Willingness to Serve with the Registrar of Voters at least sixty (60) days prior to the date set for the election. Biographical statements shall be filed in OCERS' office at least sixty (60) days prior to the date set for the election. OCERS' office shall furnish a camera ready copy of each biographical statement to the Registrar of Voters, or provide the printed biographical statements in a manner acceptable to the Registrar of Voters.

The Petition for Election filed by any candidate for a General Member or Safety Member position on the Board of Retirement shall include at least seventy-five (75) signatures of current active employee members of OCERS from the same group (General or Safety) as the candidate for election. The printed name of each signer must also appear on the petition, next to the signature.

The Petition for Election filed by any candidate for the Retired Member position on the Board of Retirement shall include at least twenty-five (25) signatures of retired members of the OCERS. The printed name of each signer must also appear on the petition, next to the signature.

The individuals signing the nominating petitions must be members of the eligible electing group at the time they sign the petition. The Registrar of Voters shall review the nominating petitions to determine that the required number of eligible names is on each petition. Candidates who fail to furnish the required number of eligible signatures will be disqualified. OCERS shall furnish to the Registrar of Voters a list of eligible retirement members for the particular position as of the date the petitions are available for distribution.

Each candidate is required to file a Statement of Willingness to Serve and if not filed prior to the drawing of names for ballot position, the candidate shall be disqualified. Biographical Statements must be received in OCERS' office by the deadline, which shall be set no later than one (1) day prior to the drawing of names for positions. If the biographical statement is not received by that deadline, the candidate's biographical statement shall not be printed or included within the distribution of ballots. The biographical statement



OCERS Board Policy

Elections Procedures

shall be no more than four hundred (400) words in length, and must be contained on single sheet of 8 ½ by 11 inch paper, and shall be of camera ready quality.

Each candidate may also furnish the Registrar of Voters with a short ballot designation, which shall be limited to the candidate's title, office, employment classification, or similar position held by the candidate. The designation shall not be more than forty (40) characters in length, including spaces. The ballot designation will be printed on the ballot, along with the candidate's name. If the ballot designation submitted by the candidate exceeds the foregoing space limitation, no ballot designation shall be printed for that candidate.

Neither the OCERS nor the Registrar of Voters shall be liable for printing or typographical errors.

C. Preparation and Mailing of Ballots

The Registrar of Voters will draw names in accordance with the California Secretary of State's current Randomized Alphabet process, from the list of qualified candidates, to determine the order in which candidates' names will appear on the ballot. The Registrar of Voters will notify all qualified candidates at least one (1) day in advance of the drawing of the time and place where such drawing will take place, and said candidates may attend the drawing. If there are at least two (2) qualified candidates for an office, the Registrar of Voters will prepare a ballot with the names of each qualified candidate, and the Registrar of Voters shall notify the Retirement Administrator of the names of the candidates and their respective positions on the ballot.

If there is only one (1) qualified candidate for an office, no ballots shall be printed and no election shall be held. In this event, the Registrar of Voters shall notify the Retirement Administrator that there was only one qualified candidate, and shall determine that there are no other qualified candidates for the position. The Registrar of Voters will then prepare an Agenda Item Transmittal for the Board of Supervisors, and the Board of Supervisors shall declare that candidate to be duly elected to the Board of Retirement for the term specified.

The Registrar of Voters shall be responsible for the printing of the ballots and identification envelopes in which voters shall return their voted ballots. The return identification envelopes that the Registrar of Voters provides to voters will include pre-paid U.S. first-class postage. OCERS shall be responsible for printing the biographical statements of the candidates; however, OCERS shall not print a biographical statement for any candidate who does not supply a camera ready copy of said biographical statement to OCERS in accordance with these procedures. OCERS will furnish the Registrar of Voters, on computer media, as specified by the Registrar of Voters, the names and mailing addresses of all OCERS members eligible to vote in the upcoming election, and the Registrar of Voters will mail the ballots and other election materials to such members. If the personal mailing address of any active employee member is unknown, the ballot will be mailed to the employee at his or her work address if available. OCERS will use its current records when supplying addresses to the Registrar of Voters, but OCERS in no way guarantees the accuracy of the addresses supplied.

D. Additional Campaign Material

This section D applies to you *only if* you are a candidate or interested third party who wants to use OCERS' mailing list and OCERS' qualified mailing service to mail additional campaign material to member voters. If



OCERS Board Policy

Elections Procedures

you do not intend to send out additional campaign material, or if choose to use a different (i.e., non-OCERS) mailing list and mailing service to send out additional campaign material, this section D does not apply to you.

The purpose of this section D is to set forth a policy designed to allow a qualified candidate for a Board of Retirement position or other interested third parties to request that *OCERS send additional campaign material* in support of, or opposition to, a candidate, while protecting the privacy of the names and addresses of member-voters as required by the 1937 Act, laws protecting disclosure of law enforcement officers' names and addresses, and laws concerning privacy generally. This policy takes effect only after the candidate is qualified.

A qualified candidate (hereafter "candidate") or interested third party (hereafter "third party") shall notify OCERS in writing when he/she wants to send campaign materials in addition to or instead of those sent by the Registrar of Voters.

Campaign materials must be submitted to OCERS in advance so that OCERS can determine compliance with the requirements of this policy. OCERS will notify the candidate and third parties of the deadline to provide such campaign materials to OCERS and the designated Mailing Service in the format determined by that Mailing Service (e.g., electronic format, hard copy in sufficient numbers, etc.).

The designated Mailing Service is one which has entered into a confidentiality agreement with OCERS.

OCERS shall provide the Mailing Service with the names and addresses of the member-voters who will receive the additional campaign materials. OCERS shall meet the required deadlines in order for the materials to be distributed in a timely manner. OCERS shall use its current records, but in no way guarantees the accuracy of the information provided to the mailing service.

The Mailing Service shall use the information provided to it only for the purpose of distributing such additional campaign mailing and for no other purpose. Except as required by law or document retention policies, at no time shall the Mailing Service copy and retain any part of the information provided to it or access such information after performing its service.

The materials distributed pursuant to this policy shall be used only for election purposes and for no other purpose.

It is the responsibility of the candidate or third party to provide, in a timely manner, all materials to be mailed out in a format acceptable to the Mailing Service. In addition, before any mailing will occur, the candidate or third party must deposit with the Mailing Service an amount of money sufficient to cover all costs of processing, copying, postage, and so forth. The identity of the candidate or third party making the request must be disclosed on the materials to be mailed out. Failure to provide all materials, failure to provide them in the acceptable format, failure to make the necessary deposit, or failure to meet deadlines will stop the distribution process.

The candidate or third party must disclose the identity of the sender of the materials by including the following *precise* disclaimer language with the materials to be mailed out:

"These election materials are provided by [*insert name of candidate or third party*]. They have not been sent, paid for, or in any manner endorsed by the Orange County Employees Retirement System (OCERS). Neither OCERS, the Board of Retirement, nor their agents are responsible for the



OCERS Board Policy

Elections Procedures

content, format, or timeliness of these materials; nor is OCERS, the Board of Retirement, or their agents responsible for correcting any errors of any kind.”

E. Voting Procedures

The information distributed to members of the group(s) electing a Board Member must state the time and date when ballots must be returned to the Registrar of Voters’ office in order to be counted. Ballots distributed to members shall be returned by the individual member either in person or via County of Orange “pony” mail or U.S. mail in the envelope provided by the Registrar of Voters.

The Registrar of Voters shall also distribute to each eligible voter, in the manner prescribed above, an information notice explaining how to vote and the deadline for submission of ballots. In order to be counted, ballots must be received in the office of the Registrar of Voters on or before 9:00 a.m. on election day.

The information notice distributed with the ballots shall advise members of the method in which ballots must be returned, and advise members that ballots not returned in this fashion will be disqualified by the Registrar of Voters. Ballots must be returned in the identification envelope provided by the Registrar of Voters; provided, however, that voters shall be allowed to place the identification envelopes inside another envelope (e.g., to protect the security of the voter’s signature when mailing). Ballots returned in any other envelopes shall be disqualified. The outside of the envelope must be signed by the voter and returned, with the ballot inside, to the Registrar of Voters. Ballot envelopes without a signature and / or sent to any location other than the Registrar of Voters shall be disqualified.

The information distributed to members of the group(s) electing a Board Member shall also state that ballots containing any identifying or extraneous marks will be disqualified and will not be counted in the election. For purposes of this election policy, identifying or extraneous marks shall include, but not be limited to, names, signatures, telephone numbers, other handwritten words, typed or printed words or marks, stray marks, drawings, or any other marks made outside the boxes designated for selection of a candidate.

The Registrar of Voters shall notify the Retirement Administrator and each candidate, at least five (5) days in advance, of the date, time, and place of the opening and tallying of ballots.

In the event of a tie, the Registrar of Voters shall conduct a runoff election between the tied candidates as soon as practicable in a manner consistent with these procedures.

The Registrar of Voters shall prepare an election certification, certifying the candidate with the highest number of votes, and submit the certification to the Board of Supervisors on an Agenda Item Transmittal prior to the beginning of the term of the newly elected member(s). A copy of the certification shall be sent to the OCERS Administrator.

F. Contested Elections

Any voter or candidate may request a recount of ballots to be performed by the Registrar of Voters in order to confirm the number of votes cast for a Retirement Board Member. A request for recount must be received by the Registrar of Voters within five (5) days of the signing of the election certification by the Registrar of Voters. A request for recount must be made in writing and specify the contest to be recounted. The request for recount shall also specify on behalf of which candidate it is being filed and may specify



OCERS Board Policy

Elections Procedures

other relevant material to be examined. All requests for recounts in elections for Retirement Board Members shall be filed with the Registrar of Voters for the County of Orange.

The Registrar of Voters shall post a Notice of Recount at least one (1) day prior to the recount. The Notice of Recount shall be posted at the Registrar of Voters and at OCERS' office. In addition, all candidates for the office being recounted and the Retirement Administrator shall be notified by the Registrar of Voters prior to the recount.

The recount shall commence no more than seven (7) days following the receipt of the request for recount and shall be continued daily, Saturdays, Sundays, and holidays excepted, based upon availability of Registrar of Voters staff until concluded.

Results of a recount are declared null and void unless every vote received in accordance with these election procedures is recounted. Upon completion of the recount, the results of the election will be changed only if a different candidate receives a higher number of votes than the candidate originally identified by the Registrar of Voters as the winner of the election. A copy of the results of any recount shall be posted conspicuously in the office of the Registrar of Voters and at OCERS' office.

The cost of a recount is based upon the amount of time required to prepare and perform the requested recount. If the request includes reviewing relevant material, the Registrar of Voters shall prepare an estimate of the cost. The Registrar of Voters shall then provide the requestor an estimate of the cost prior to commencing the recount.

The voter or candidate requesting the recount shall deposit, before the recount commences, the sum required by the Registrar of Voters to cover the cost of the recount. In no event shall the Board of Retirement, Office of Retirement, or Registrar of Voters be responsible for paying the cost of a recount.

G. Special Rules for Safety Member Elections

When there is an election for Safety Member of the Board of Retirement, OCERS will advise the Registrar of Voters which of the candidate(s) are in the "law enforcement" group (i.e., engaged in active law enforcement), which of the candidate(s) are in the "fire suppression" group (i.e., engaged in active fire suppression), and which of the candidates are in "any other safety group" (e.g. probation). The candidate for Safety Member with the highest number of votes will be certified by the Registrar of Voters as the elected Safety Member of the Board of Retirement.

The candidate from the other group (i.e., the group other than the one in which the person elected as Safety Member is employed), which has the highest number of votes of any candidate within said group, shall be certified as the Alternate Member of the Board of Retirement, except that if there is a candidate from the "fire suppression group" or a candidate from the "law enforcement group" a candidate from "any other safety group" cannot be the Alternate Member of the Board of Retirement, whether or not that candidate received the highest number of votes. The terms of office of the Safety Member and Alternate Member shall begin and end at the same time.

In the event of a vacancy in the position of the Alternate Member of the Board of Retirement prior to the end of that member's term, the Board of Retirement shall cause a special election to be held in accordance with these Election Procedures for the purpose of choosing a successor to fill out the unexpired term of the Alternate Member, unless the Board determines that exigent circumstances make it impractical to effectively conduct an election. Only safety members who are not members of the safety group then



OCERS Board Policy Elections Procedures

represented by the seventh member of the Board of Retirement shall be eligible to run as a candidates to succeed to the Alternate Member position.

If an eligible candidate from either the law enforcement or fire suppression groups is on the ballot to succeed as the Alternate Member, no member from any other safety group may be a candidate. If there are no eligible candidates, there shall be no successor Alternate Member of the Board of Retirement. The Board of Retirement may, but shall not be required to, establish more than one special election to fill the Alternate Member vacancy.

All safety members of the Retirement System are eligible to vote in the special election to fill the vacancy of the Alternate Member. If more than one eligible candidate appears on the ballot, the candidate receiving the most votes shall become the successor Alternate Member, to serve out the unexpired term of the Alternate Member.

H. Inauguration, Runoffs, Costs

The candidate certified by the Registrar of Voters as elected to the Board of Retirement shall take office effective on the day after the expiration of the term of office of his or her predecessor. In the event of a tie vote and the need for a runoff election or other delay due to a request for recount, the incumbent will continue to serve in office until his or her successor is duly elected and certified.

The Board of Retirement shall reimburse the Registrar of Voters for its actual costs associated with conducting elections for the Board of Retirement.

Policy Review

The Board shall review these procedures at least every three years to ensure that they remain relevant and appropriate.

Policy History

These procedures were adopted by the Board of Retirement on October 15, 2001.

These procedures were revised on May 17, 2011, February 17, 2015, and July 20, 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.

7/20/15

Steve Delaney
Secretary of the Board

Date



Memorandum

DATE: November 16, 2020
TO: Members of the Board of Retirement
FROM: Megan Cortez, Disability Manager
SUBJECT: RETIREE REQUEST TO BE REINSTATED – SAMUEL CHAIREZ

Recommendation:

Reinstate Mr. Chairez as an active member under the provisions of Government Code Section 31680.4 and 31680.5.

Background:

Application for re-employment of retired member

Orange County Superior Court, Superior Court Clerk I

Date of request: 09/15/2020; Date of entry to OCERS: 07/21/1989

Total years of service: 35.4581

Separation Date: 03/03/2019; Date of Service Retirement: 03/04/2019

Former position: Orange County Child Support Services, Family Support Officer

Discussion:

Mr. Chairez service retired from Orange County Child Support Services on March 27, 2020. He has requested to be reinstated as an active employee under the provisions of Government Code Sections 31680.4 and 31680.5.

Mr. Chairez was a Family Support Officer prior to his separation from Orange County Child Support Services on March 27, 2020. Orange County Superior Court has offered Mr. Chairez regular full time employment as a Superior Court Clerk I.

Pursuant to OCERS policy Mr. Chairez underwent a physical examination on October 6, 2020 with an independent OCERS panel physician to determine whether he was physically capable of returning to full time employment. It is the panel physician’s opinion that Mr. Chairez can return to work without restriction.

Submitted by:

MC-Approved _____

Megan Cortez
Disability Manager



Memorandum

DATE: November 16, 2020
TO: Members of the Board of Retirement
FROM: Brenda Shott, Assistant CEO, Finance and Internal Operations
SUBJECT: **OCERS' ADMINISTRATIVE BUDGET FOR FISCAL YEAR 2021**

Recommendation

1. **Adopt the Administrative Budget for Fiscal Year 2021 in the amount of \$28,283,900 which includes:**
 - a. Personnel costs in the amount of \$16,034,052
 - b. Services and supplies in the amount of \$11,579,848
 - c. Capital expenditures in the amount of \$670,000
2. **Approve the Personnel Committee's recommendation for the 2021 Staffing Plan consisting of 96 budgeted positions within 102 approved classifications which includes the following changes:**
 - a. Adding one Investment Analyst in the Investment Division (+ 1 FTE)
 - b. Dropping one Extra-Help Attorney in the Legal Division (- 0.5 FTE)
3. **Approve Salary Adjustments based on one of the two options below as recommended by the Personnel Committee:**
 - a. Performance based Salary Adjustments for OCERS' direct employees consisting of a rating scale as follows:
 - i. Option 1
A base salary increase of 1.5% for employees whose performance meets expectations; a base of 1.5% plus a merit increase of 2.75% for employees whose performance exceeds expectations; and a base of 1.5% plus two merit increases totaling 5.50% (2.75% x 2) for employees whose performance was exceptional

OR
 - ii. Option 2
A base salary increase of 1.5% for employees whose performance meets expectations; a base of 1.5% plus a merit increase of 1.75% for employees whose performance exceeds expectations; and a base of 1.5% plus two merit increases totaling 3.50% (1.75% x 2) for employees whose performance was exceptional
4. **Approve the Personnel Committee's recommendation to adjust all existing OCERS' direct salary ranges by 1.5%**

Background/Discussion

The proposed budget was developed based on the 2021 Business Plan (Plan) approved by the Board of Retirement on October 19, 2020. The Plan is directly linked to the 2021-2023 Strategic Plan developed using OCERS' Mission Statement and Vision Statement and Values as its foundation. The goals and initiatives included in the approved Plan provided guidance for the proposed FY21 Administrative Budget. The proposed budget also includes guidance from the Personnel Committee who met on August 19, 2020 and approved,



Memorandum

and recommended that the Board of Retirement approve, performance/salary adjustments for OCERS' direct employees and an adjustment to OCERS direct salary ranges of 1.5%.

Attached is the presentation that summarizes the FY21 Administrative Budget, as well as a detailed budget narrative and several detailed appendixes that provide further information about the proposed budget that staff is recommending for approval.

Submitted by:

Handwritten signature of Tracy Bowman in blue ink, positioned above a horizontal line.

Tracy Bowman
Director of Finance

Approved by:

Handwritten signature of Brenda Shott in blue ink, positioned above a horizontal line.

Brenda Shott
Assistant CEO, Finance & Internal Operations

Approved by:

Handwritten signature of Steve Delaney in blue ink, positioned above a horizontal line.

Steve Delaney
CEO



OCERS

2021 Proposed Administrative Budget

**Regular Board Meeting
November 16, 2020**

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





Today's Agenda

1. Purpose of Presentation
2. Overview of Budget Process
3. Proposed 2021 Administration Budget



Purpose of Presentation

➤ General review of 2021 Administrative Budget

Recommended actions:

1. Adopt the Administrative Budget for Fiscal Year 2021 in the amount of \$28,283,900, which includes:
 - a. Personnel costs in the amount of \$16,034,052
 - b. Service and supplies in the amount of \$11,579,848
 - c. Capital expenditures in the amount of \$670,000
2. Approve the Personnel Committee's recommendation for the 2021 Staffing Plan consisting of 96 budgeted positions within 102 approved classifications which includes the following changes:
 - a. Adding one Investment Analyst in the Investment Division (+1 FTE)
 - b. Dropping one Extra-Help Attorney in the Legal Division (-0.5 FTE)





Purpose of Presentation (continued)

3. Approve Salary Adjustments based on one of the two options below as recommended by the Personnel Committee:
 - a. Performance based Salary Adjustments for OCERS' direct employees consisting of a rating scale that includes:
 - i. Option 1—A base salary increase of 1.5% for employees whose performance meet expectations; a base of 1.5% plus a merit increase of 2.75% for employees whose performance exceeds expectations; and a base of 1.5% plus two merit increases totaling 5.50% (2.75% x 2) for employees whose performance was exceptional
OR
 - ii. Option 2—A base salary increase of 1.5% for employees whose performance meet expectations; a base of 1.5% plus a merit increase of 1.75% for employees whose performance exceeds expectations; and a base of 1.5% plus two merit increases totaling 3.50% (1.75% x 2) for employees whose performance was exceptional
4. Approve the Personnel Committee's recommendation to adjust all existing OCERS' direct salary ranges by 1.5%



Overview of Budget Process

- Budget Approval Policy
- OCERS' Mission Statement, Vision and Values, and 3-Year Strategic Plan
- Set Business Plan goals for 2021 and related cost estimates
 - Executives/Directors' virtual meeting prior to Strategic Planning
 - Strategic Planning with Board on September 9-10, 2020
 - 2021 Business Plan approval on October 19, 2020
- Initial budget requests are made by each department head
- CEO, Assistant CEO of Internal Operations and Director of Finance met individually with department heads to discuss and determine necessity of each line item in their budget request





Overview of Budget Process (cont'd)

- Prepare budget with comparisons to prior years' budgets and actuals
- Meeting with the Personnel Committee on August 19, 2020 and incorporated their salary related recommendations in the budget
- Approval of the budget by the Board at the November 16, 2020 meeting



Budget Supports Strategic Goals

Fund
Sustainability

Excellent
Service and
Support

Risk
Management

Talent
Management

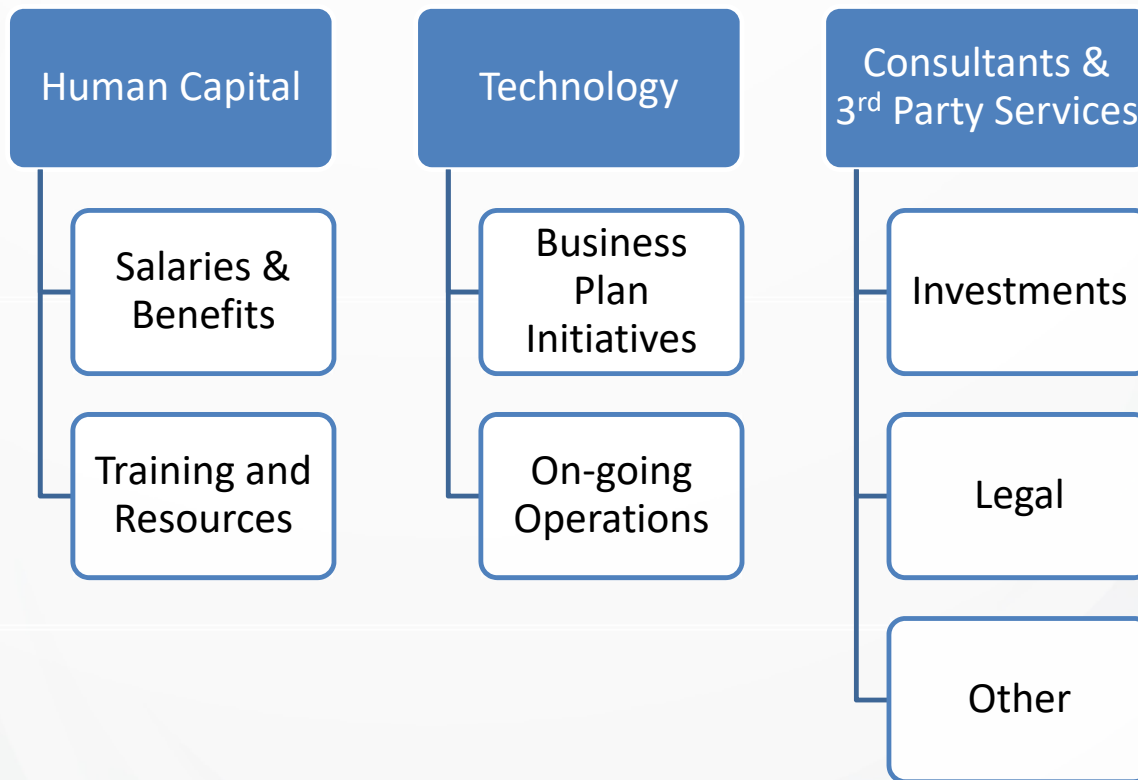
Effective
Governance

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





Cost Drivers



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



Budget Limitations

Budget Authority

Administration expenses, as defined in Government Code Section 31580.2, incurred in any year will not exceed 21 basis points of the actuarial accrued liability (AAL) of the system.

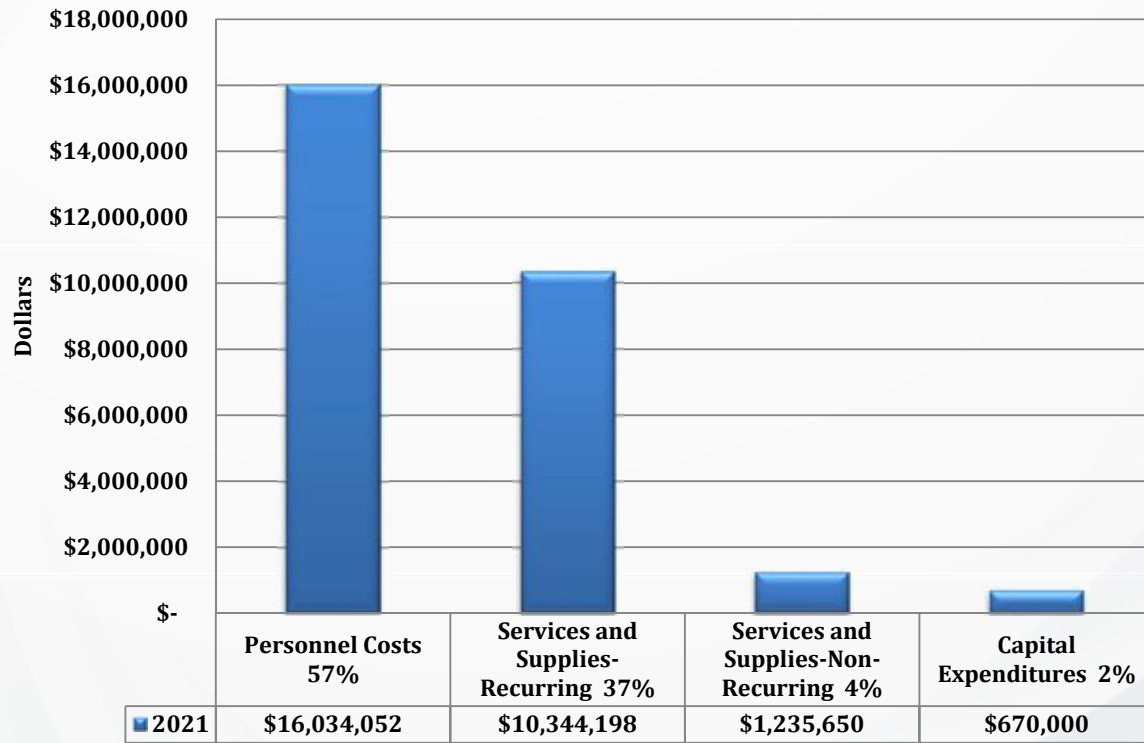
2021 Statutory Budget Limitation is \$48,260,094

2021 Proposed Budget is 8.72 basis point of AAL



FY21 Proposed Administrative Budget Summary

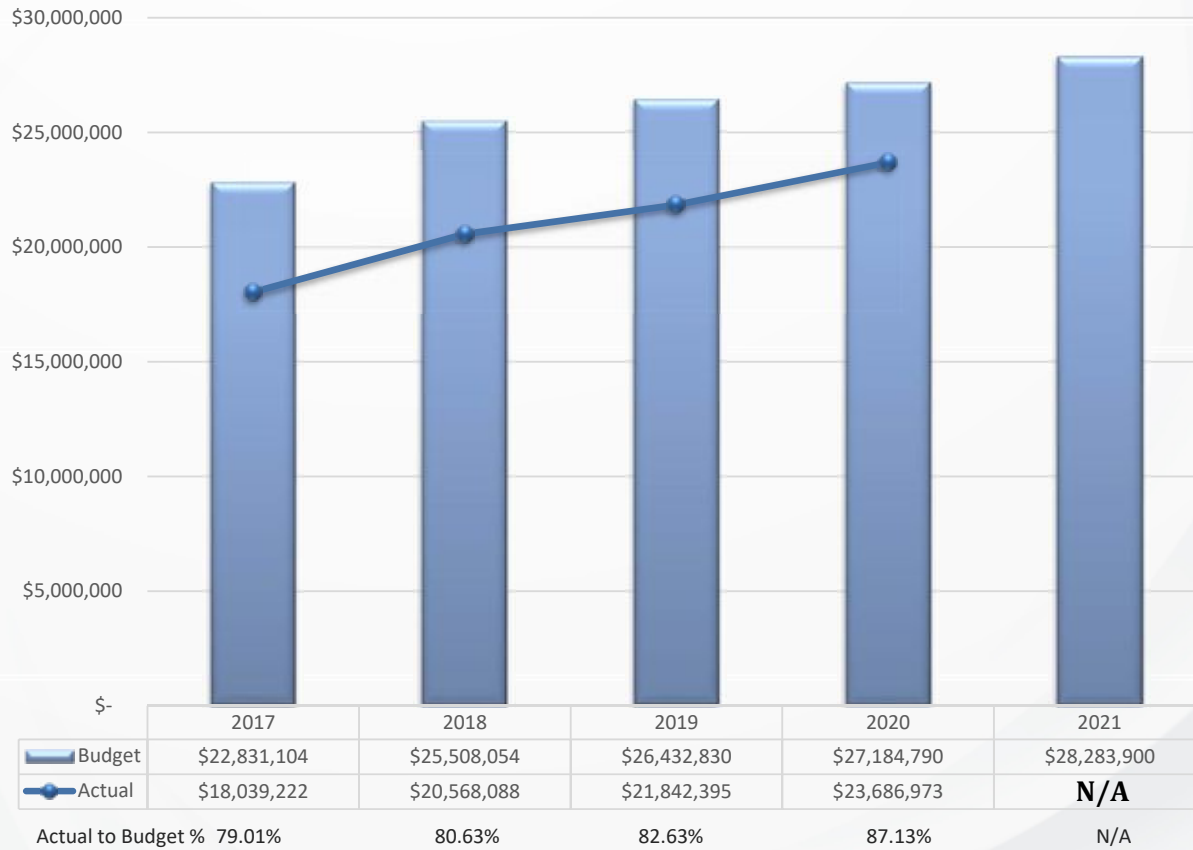
Total - \$28,283,900



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



Budget versus Actuals Trend Total Budget

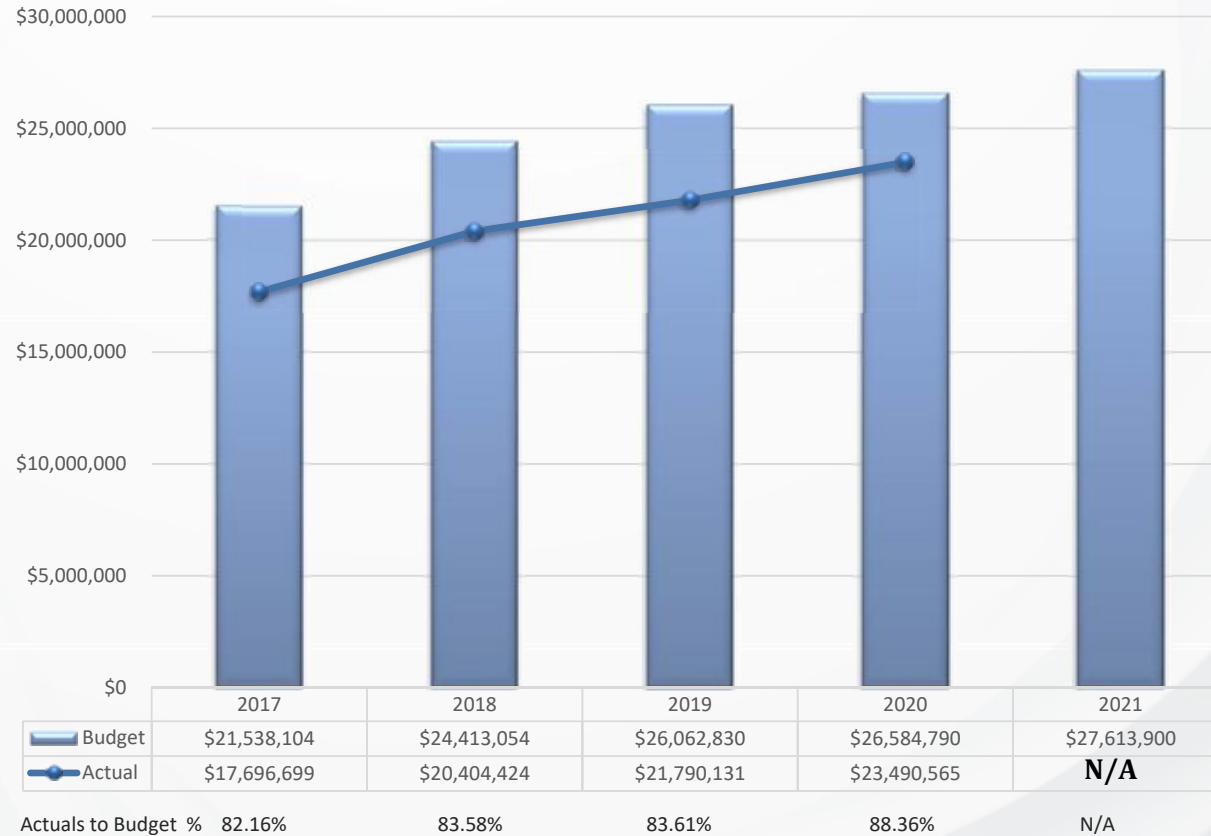


*"We provide secure retirement and disability benefits
with the highest standards of excellence."*





Budget versus Actuals Trend Personnel Costs, Services and Supplies (No Capital Expenditures)



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



Trends

(Dollars in Thousands)

	2017	2018	2019	2020	2021	5 Year Average
Total Budget	\$ 22,831	\$ 25,508	\$ 26,433	\$ 27,185	\$ 28,284	
% Increase/(Decrease)	2.6%	11.7%	3.6%	2.8%	4.0%	5.0%
Total Budget (No Capital Expenditures)	\$ 21,538	\$ 24,413	\$ 26,063	\$ 26,585	\$ 27,614	
% Increase/(Decrease)	6.9%	13.3%	6.8%	2.0%	3.9%	6.6%
Actuals	\$ 18,039	\$ 20,568	\$ 21,842	\$ 23,687	N/A	
% Increase/(Decrease)	-2.0%	14.0%	6.2%	8.4%	N/A	6.7%
Actuals (No Capital Expenditures)	\$ 17,697	\$ 20,404	\$ 21,790	\$ 23,491	N/A	
% Increase/(Decrease)	-3.6%	15.3%	6.8%	7.8%	N/A	6.6%
Budgeted Personnel Costs	\$ 12,417	\$ 13,925	\$ 14,765	\$ 15,507	\$ 16,034	
% Increase	8.0%	12.1%	6.0%	5.0%	3.4%	6.9%
Budgeted FTE¹	79	91.5	92.5	94	94.5	
% Increase	6.0%	15.8%	1.1%	1.6%	0.5%	5.0%

¹ Budgeted FTE was amended for FY2020 to include three additional extra help positions in Member Services.





FY 2021 Staffing Plan

\$16,034,052

(Staff Recommendations 2, 3 & 4)

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





Compensation Philosophy OCERS' Direct

- Purpose and Background
 - Provide pay levels that are externally competitive among peers and published market data
 - Recognize and reward individual performance
 - Provide management the flexibility to make compensation decisions within budgetary guidelines
- Compensation Strategy
 - Written performance evaluations and annual merit increases with a performance rating of meets performance standards or better
 - Salary increases within a range shall not be automatic
 - CEO makes final determination of salary awards within limits approved by Board
 - Salary ranges reviewed annually with an intended purpose of keeping total compensation competitive



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



2021 Staffing and Personnel Recommendations

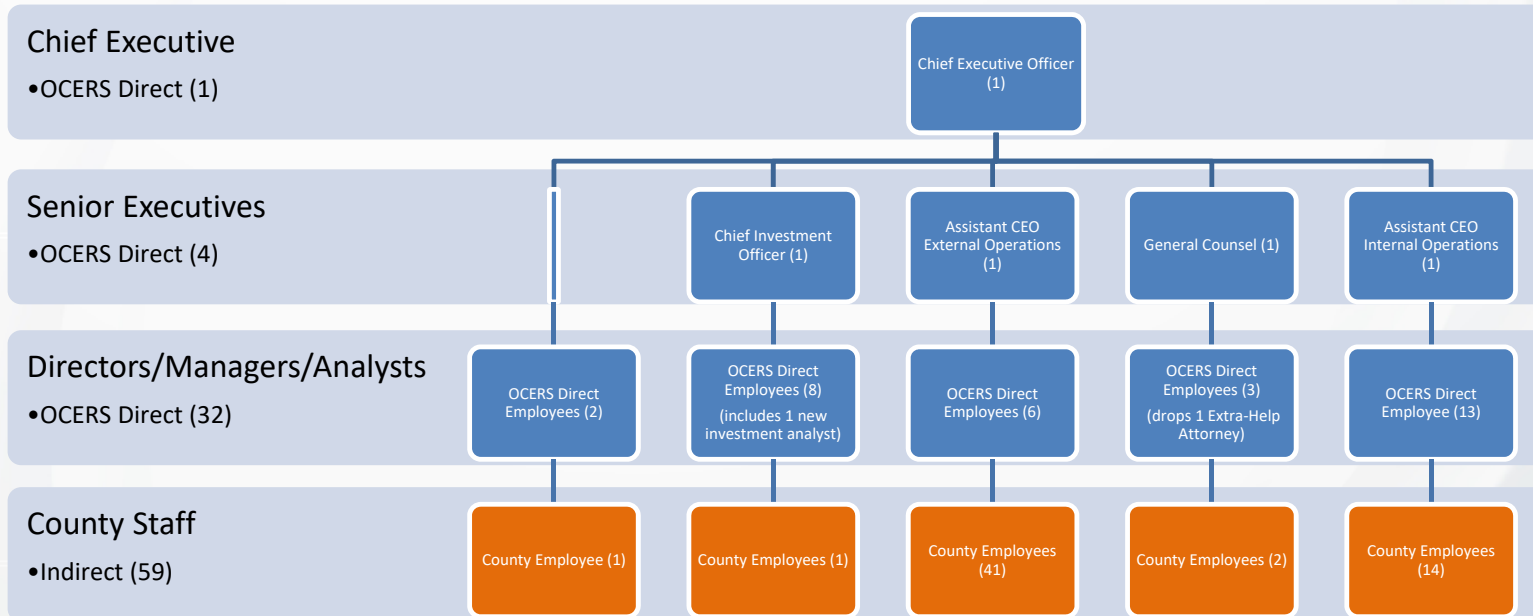
- Add one investment analyst in the Investment Division (+1.0 FTE), drop one Extra-Help attorney in the Legal Division (-0.5 FTE) (Recommendation 2)
- Approve the terms of the OCERS Direct Performance Management Program (Recommendation 3)
- Approve adjustment to OCERS Direct salary ranges (Recommendation 4)





OCERS Organization Chart

(96 team members, 94.5 FTE)

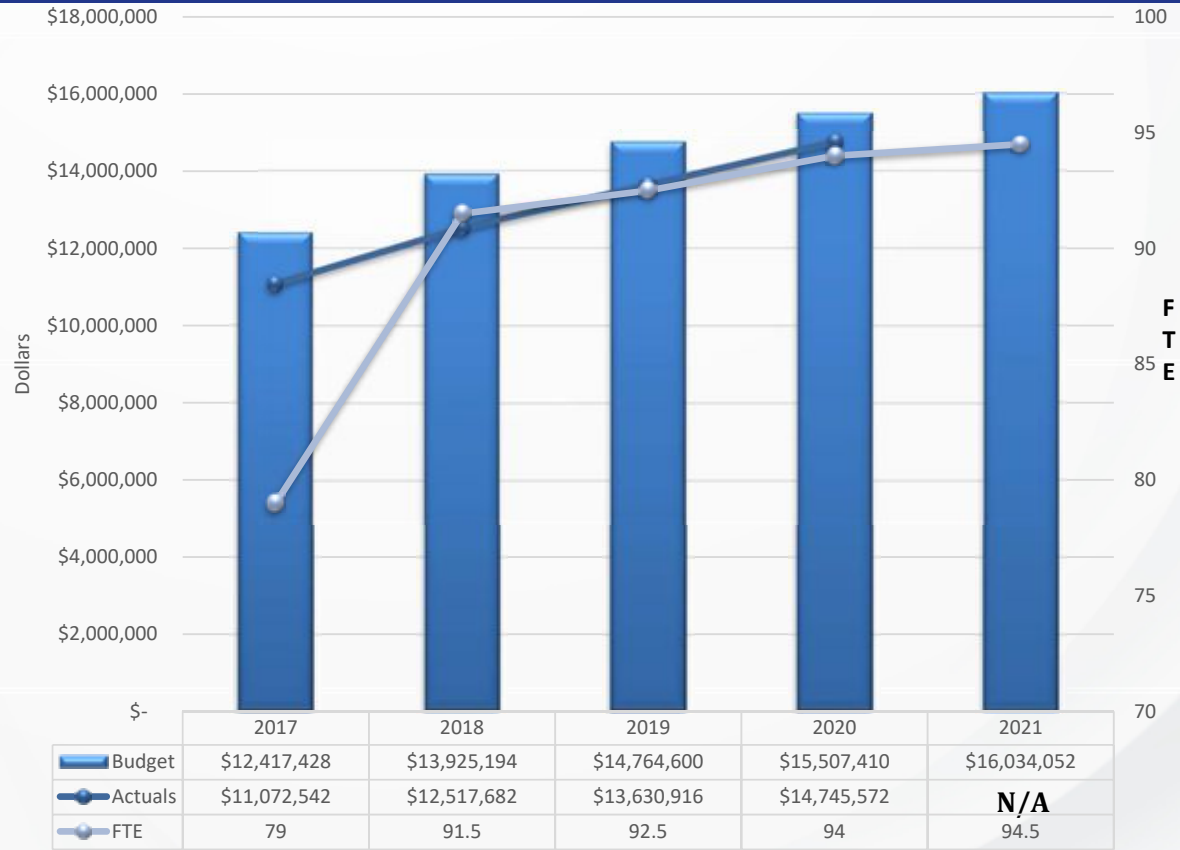


Staffing Plan
96 Budgeted Positions
102 Approved Classifications

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



Budget versus Actuals Trend Personnel Costs and FTE's



Actuals to Budget % 89.17% 89.89% 92.32% 95.09% N/A
 Budgeted FTE was amended for FY2020 to include three additional extra help positions in Member Services.

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



Salary Adjustment Recommended Option 1

➤ 2021 Salary Adjustment Recommendations¹

➤ Performance Adjustments

- Increases for OCERS' direct staff are based on performance evaluations
- Base = 1.5% (base increases salary ranges)
- 1 merit increase = 2.75%

Meets	Base
Exceeds	Base + 1 merit increase
Exceptional	Base + 2 merit increases



- 12-month CPI for Los Angeles-Long Beach-Anaheim as of September 2020 is 1.2%
- FY21 direct staff budget for merit-based increases = \$337K
- County employee salary adjustments are dictated by County MOU
 - FY21 County staff budget increase as governed by MOU = \$50K (effective 7/2021)
 - FY21 County staff budget for increase in steps = \$38K

¹See Appendix for Salary Survey results as requested by Board at October 19, 2020 Board Meeting



Salary Adjustment Alternative Option 2

➤ 2021 Salary Adjustment Alternative¹

➤ Performance Adjustments

- Increases for OCERS' direct staff are based on performance evaluations
- Base = 1.5% (base increases salary ranges)
- 1 merit increase = 1.75%

Meets	Base
Exceeds	Base + 1 merit increase
Exceptional	Base + 2 merit increases



- 12-month CPI for Los Angeles-Long Beach-Anaheim as of September 2020 is 1.2%
- FY21 direct staff budget for merit-based increases = \$252K
- County employee salary adjustments are dictated by County MOU
 - FY21 County staff budget increase as governed by MOU = \$50K (effective 7/2021)
 - FY21 County staff budget for increase in steps = \$38K

¹See Appendix for Salary Survey results as requested by Board at October 19, 2020 Board Meeting



OCERS Direct Employees Salary Range Adjustment Recommendation

1.5% Salary Range Increase (Effective date January 1, 2021)

OCERS Employee Position	Current Annual Minimum	Revised Annual Minimum	Current Annual Midpoint	Revised Annual Midpoint	Current Annual Maximum	Revised Annual Maximum
Chief Investment Officer	\$220,631	\$223,940	\$275,789	\$279,926	\$330,947	\$335,911
General Counsel	\$139,991	\$142,091	\$208,111	\$211,232	\$276,230	\$280,373
Assistant Chief Executive Officer	\$139,991	\$142,091	\$191,895	\$194,773	\$243,798	\$247,455
Managing Director of Investments	\$139,991	\$142,091	\$191,895	\$194,773	\$243,798	\$247,455
Director of Investments	\$139,991	\$142,091	\$172,700	\$175,290	\$205,408	\$208,489
Deputy Legal Counsel	\$139,991	\$142,091	\$172,700	\$175,290	\$205,408	\$208,489
Director of Member Services	\$124,877	\$126,750	\$146,279	\$148,473	\$167,680	\$170,195
Director of Human Resources	\$121,016	\$122,831	\$139,770	\$141,867	\$158,524	\$160,902
Director of Finance	\$118,369	\$120,145	\$142,142	\$144,274	\$165,915	\$168,404
Staff Attorney	\$118,038	\$119,809	\$146,941	\$149,145	\$175,843	\$178,481
Senior Manager Operations Support Services	\$66,962	\$67,966	\$103,642	\$105,196	\$140,321	\$142,426
Senior Investment Officer	\$112,081	\$113,762	\$142,473	\$144,610	\$172,865	\$175,458
Director of Internal Audit	\$110,978	\$112,643	\$138,722	\$140,803	\$166,466	\$168,963
Director of Information Technology	\$108,661	\$110,291	\$135,854	\$137,891	\$163,046	\$165,492
Director of Information Security	\$108,661	\$110,291	\$133,593	\$135,596	\$158,524	\$160,902
Investment Officer	\$84,171	\$85,434	\$112,246	\$113,930	\$140,321	\$142,426
Internal Auditor	\$74,353	\$75,468	\$92,886	\$94,279	\$111,419	\$113,090
Senior Investment Analyst	\$73,691	\$74,796	\$98,292	\$99,766	\$122,892	\$124,735
Information Security Manager	\$66,962	\$67,966	\$103,642	\$105,196	\$140,321	\$142,426
Retirement Analyst	\$66,962	\$67,966	\$103,642	\$105,196	\$140,321	\$142,426
Finance Manager	\$63,211	\$64,159	\$93,327	\$94,727	\$123,443	\$125,295
Member Services Manager	\$63,211	\$64,159	\$93,327	\$94,727	\$123,443	\$125,295
Disability Manager	\$63,211	\$64,159	\$93,327	\$94,727	\$123,443	\$125,295
Learning and Organization Development Manager	\$63,211	\$64,159	\$93,327	\$94,727	\$123,443	\$125,295
Contracts, Risk & Performance Administrator	\$63,211	\$64,159	\$93,327	\$94,727	\$123,443	\$125,295
Communications Manager	\$63,211	\$64,159	\$88,198	\$89,520	\$113,184	\$114,882
Staff Analyst	\$63,211	\$64,159	\$84,337	\$85,602	\$105,462	\$107,044
Investment Analyst	\$63,211	\$64,159	\$84,337	\$85,602	\$105,462	\$107,044

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



Historic Changes of CPI for Los Angeles area as of September¹

Budget Year	Direct Employees Salary Range Adjustment	CPI - 12 months ending prior September
2013	0.0%	2.2%
2014	0.0%	0.6%
2015	0.0%	1.7%
2016	0.0%	0.7%
2017	5.0%*	1.9%
2018	0.0%	3.1%
2019	2.5%	3.9%
2020	2.5%	3.0%
2021	1.5%	1.2%
Total	11.5%	18.3%

*Salary range adjustment in 2017 intended to adjust for CPI from 2013-2016.

¹See Appendix for History of County Staff and Management Salary Range movement requested by Board at October 19, 2020 Board Meeting

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





Services and Supplies

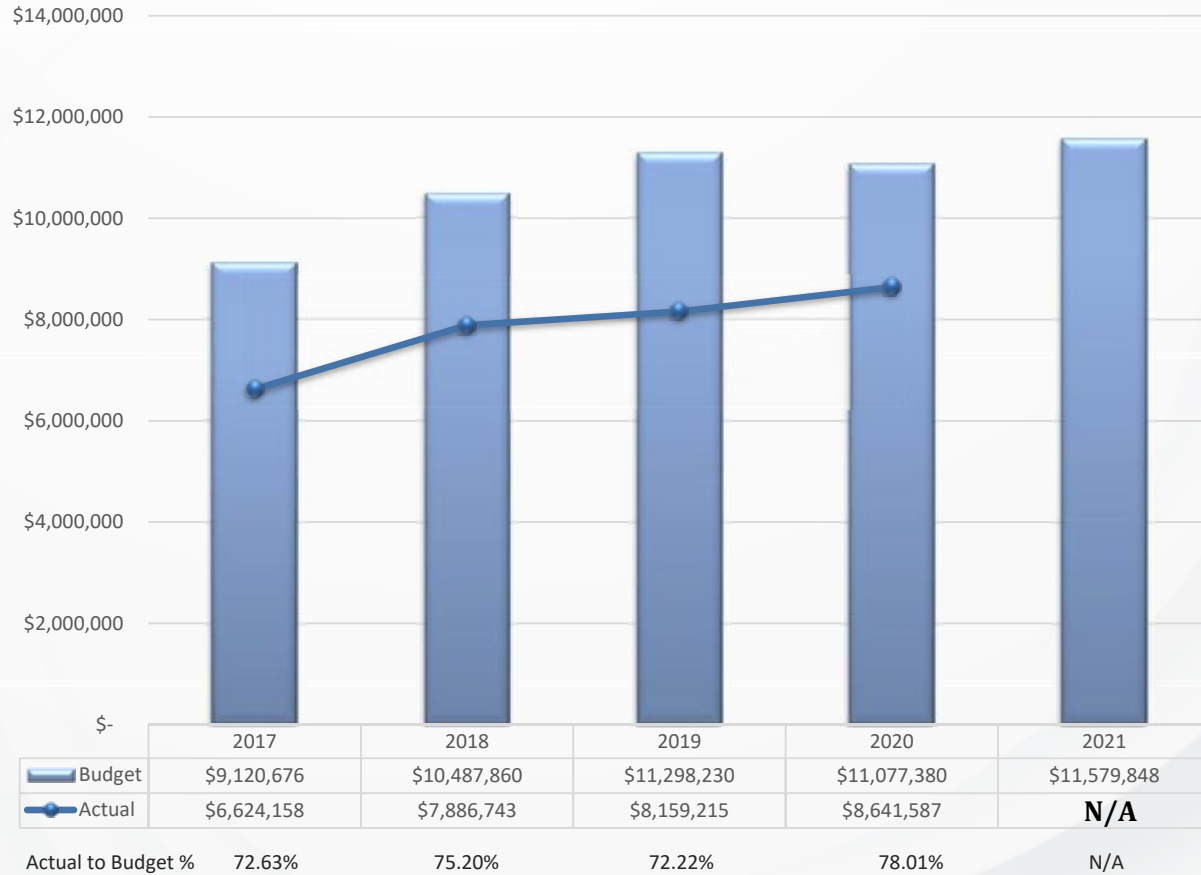
\$11,579,848

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





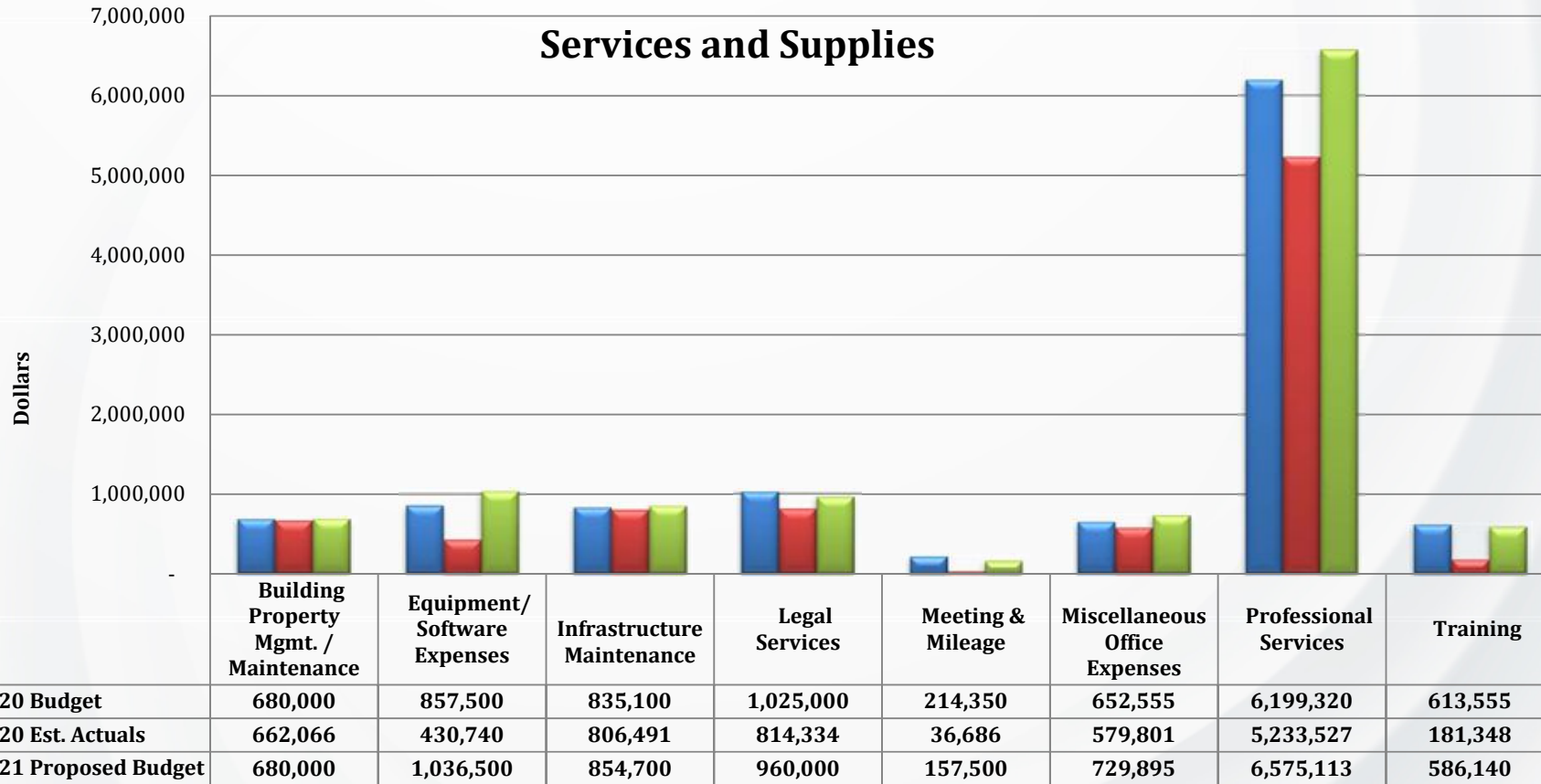
Budget versus Actuals - Trend Services and Supplies



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

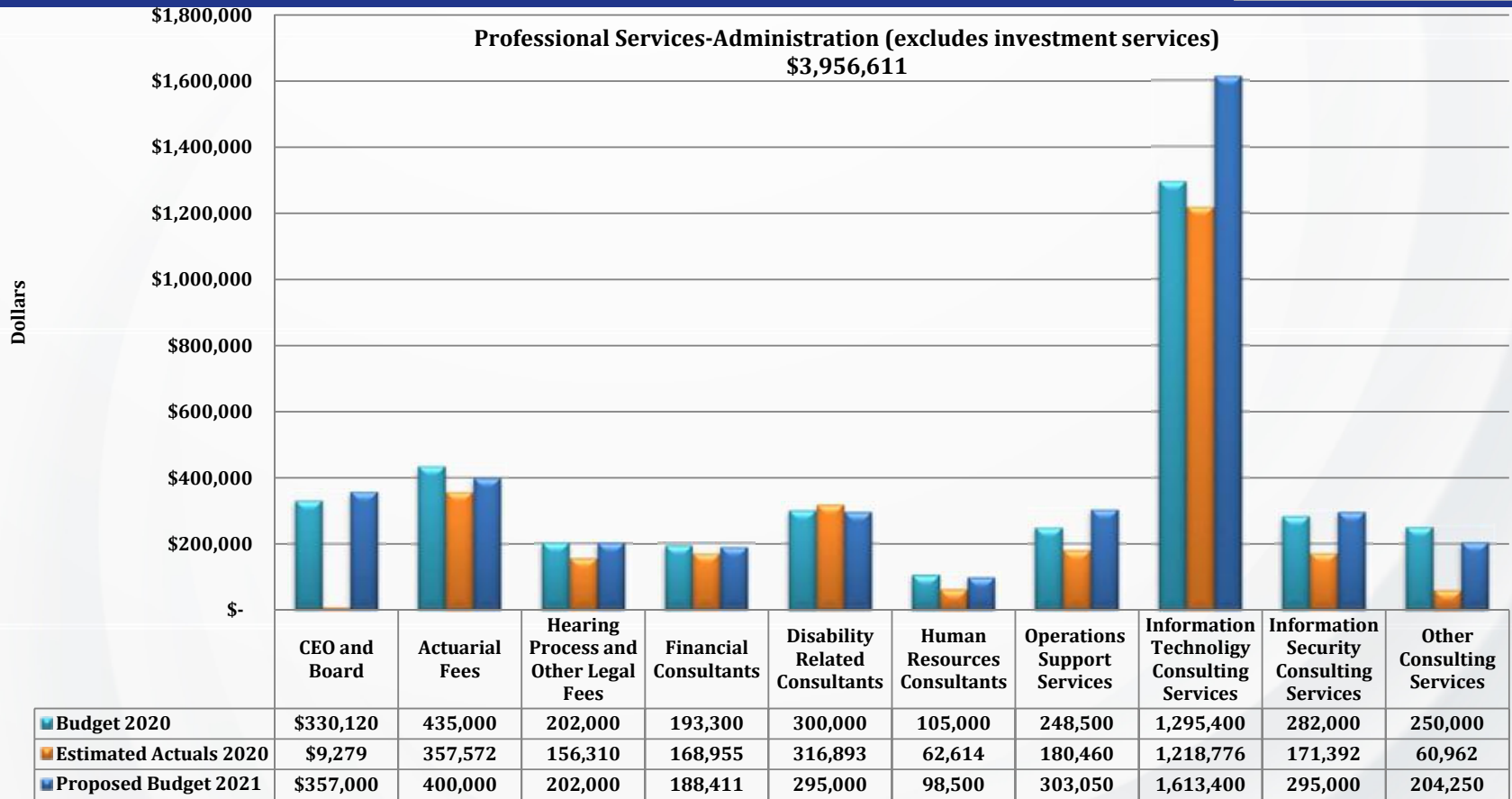


Services and Supplies Proposed versus Estimated Actuals





Professional Services Administration



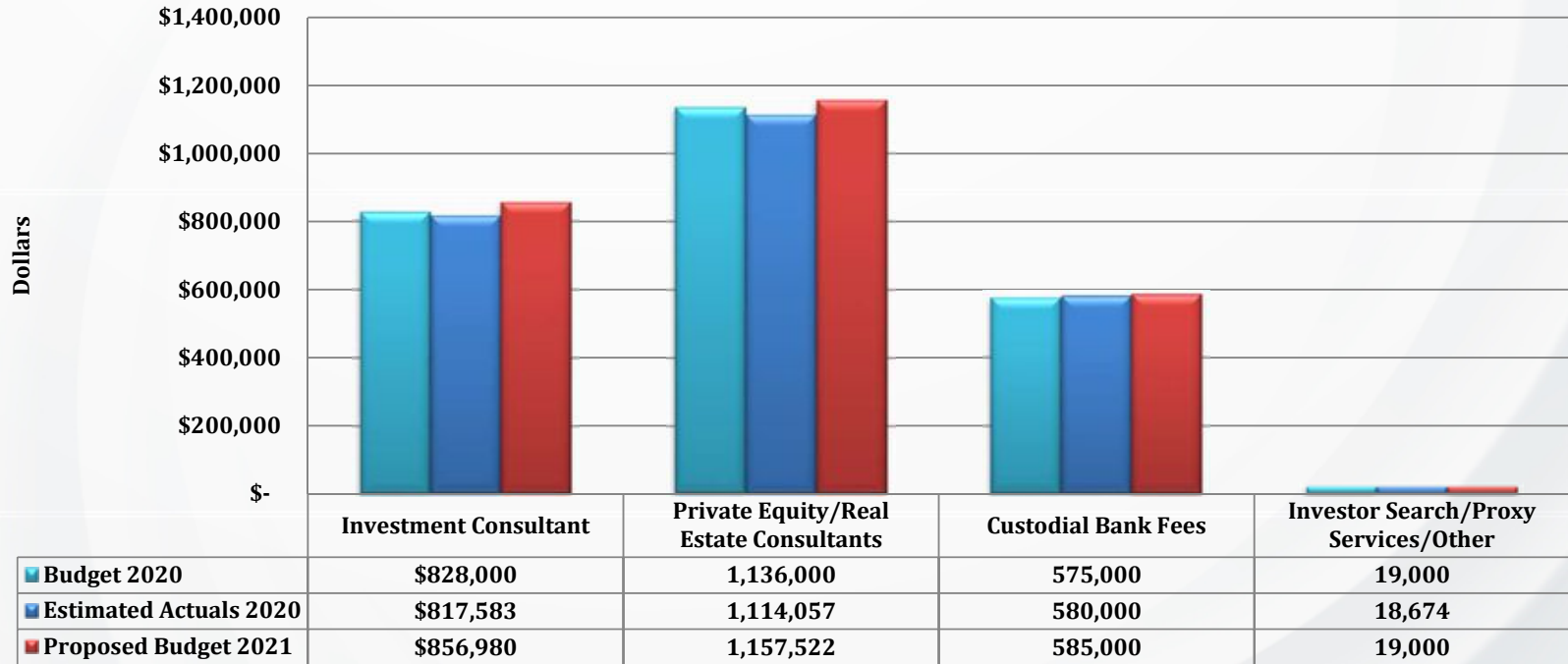
"We provide secure retirement and disability benefits with the highest standards of excellence."

26



Professional Services Investments

Professional Services-Investments \$2,618,502

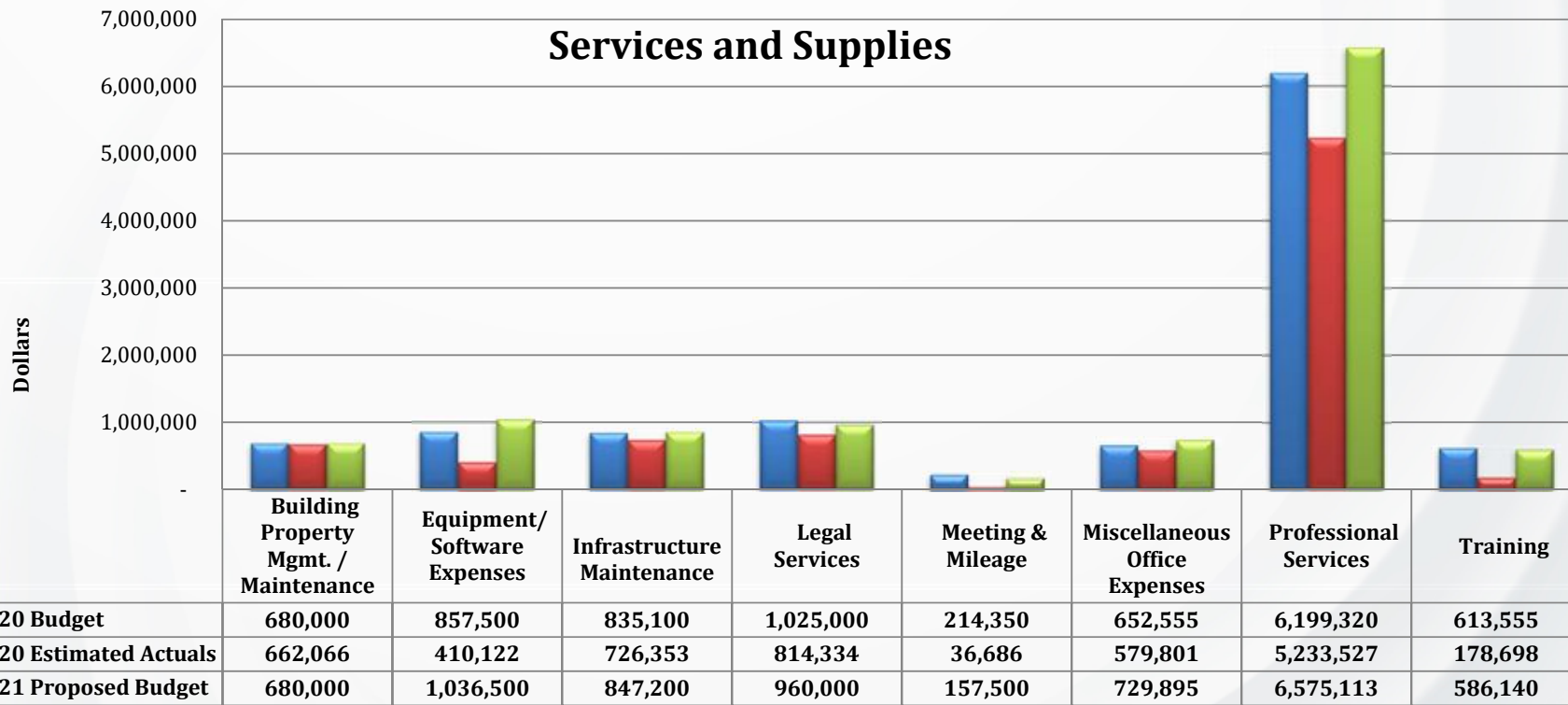


"We provide secure retirement and disability benefits with the highest standards of excellence."





Services and Supplies Proposed versus Estimated Actuals



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



Capital Expenditures

\$670,000

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





Budget vs. Actuals Trend Capital Expenditures

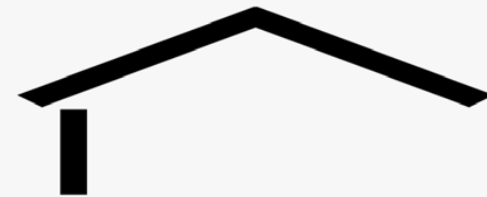
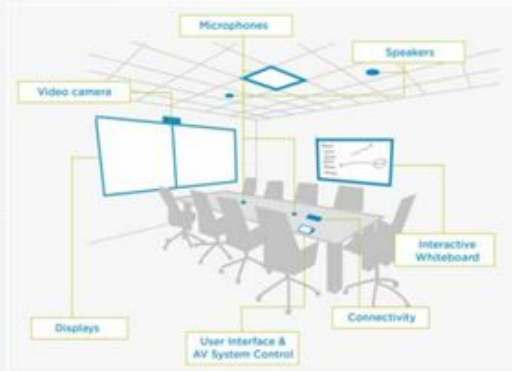


"We provide secure retirement and disability benefits with the highest standards of excellence."



Capital Expenditures

➤ Board Room Audio Visual Upgrades	\$350,000
➤ New Enterprise Backup Solutions	\$250,000
➤ Capitalized Roof Replacement	<u>\$ 70,000</u>
Total	\$670,000



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



21 Basis Points Test

**Orange County Employees Retirement System
21 Basis Points for Budget Year 2021**

Projected actuarial accrued liability as of December 31, 2020	\$22,980,997,000
21 basis points of projected actuarial accrued liability	48,260,094
FY21 proposed budget amount subject to 21 basis points limitation ¹	<u>20,029,272</u>
Amount under 21 basis points	<u>\$28,230,822</u>
Budgeted amount expressed as basis points of projected actuarial accrued liability-FY21	8.72
Budgeted amount expressed as basis points of projected actuarial accrued liability-FY20	9.04

¹ Reconciliation of amount subject to 21 basis points limitation:

Total FY21 proposed budget	\$ 28,283,900
Less: Investment-related costs	<u>(6,208,728)</u>
Total FY21 proposed administrative budget	22,075,172
Less: IT Capital expenses	-
Computer hardware/software	(698,500)
Information Security-Professional services consulting	(180,000)
InformationTechnology-Professional services consulting	<u>(1,167,400)</u>
FY21 proposed budget amount subject to 21 basis points limitation	<u>\$ 20,029,272</u>

21 Basis Point History

	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2020</u>
-					
21 Basis Points	8.55	9.31	8.93	9.04	8.72

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



Appendix

- Salary Survey and County Staff and Management Salary Range information requested by Board at October 19, 2020 Board Meeting:
 - Salary Survey Summary
 - Survey Participants
 - Survey Results
 - County Staff and Management Salary Ranges



Appendix

Salary Survey Information

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



2021 Salary Survey Summary

- OCERS Human Resources' Department conducted a survey via Survey Monkey.
- The survey consisted of 8 questions that gathered data on the annual merit increase process for management-level employees.
- The department invited a total of 71 agencies (OCERS' Plan Sponsors, California Retirement System and some National Retirement Systems) to participate in the survey.
- The survey has garnered 47% participation (34 agencies responded).
- Five Participating Employers responded (including the County).
- The range of Merit increases are between 2% - 5.5%.
- The range of COLA increases are between 2% - 3.25%.

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



34 Agencies Participated in the Survey

Alameda County Employees' Retirement Association	Sacramento County Employees' Retirement System
Arizona State Retirement System (ASRS)	San Bernardino County Employees Retirement Association
County of Fresno	San Diego City Employees' Retirement System
County of Marin	San Joaquin County
County of Orange - Plan Sponsor	School Employee Retirement System of Ohio
Fire and Police Pension Association of Colorado	San Diego County Employees Retirement Association
Iowa Public Employees Retirement System	Sonoma County Employees' Retirement Association
Kern County Employees' Retirement Association	State Board of Administration of Florida
Mendocino County Employees Retirement Association	STRS Ohio
Merced County Employees' Retirement Association	Transportation Corridor Agencies - Plan Sponsor
Municipal Employees' Retirement System of Michigan	Teacher Retirement System of Texas
Ohio Police & Fire	Washington State Investment Board
Ohio Public Employees Retirement System	Wyoming Retirement System
Orange County Fire Authority - Plan Sponsor	CALPERS
Orange County Superior Court – Plan Sponsor	OC Sanitation District - Plan Sponsor
PA State Employees' Retirement System	LACERA
Pueblo Water	Missouri State Employees' Retirement System

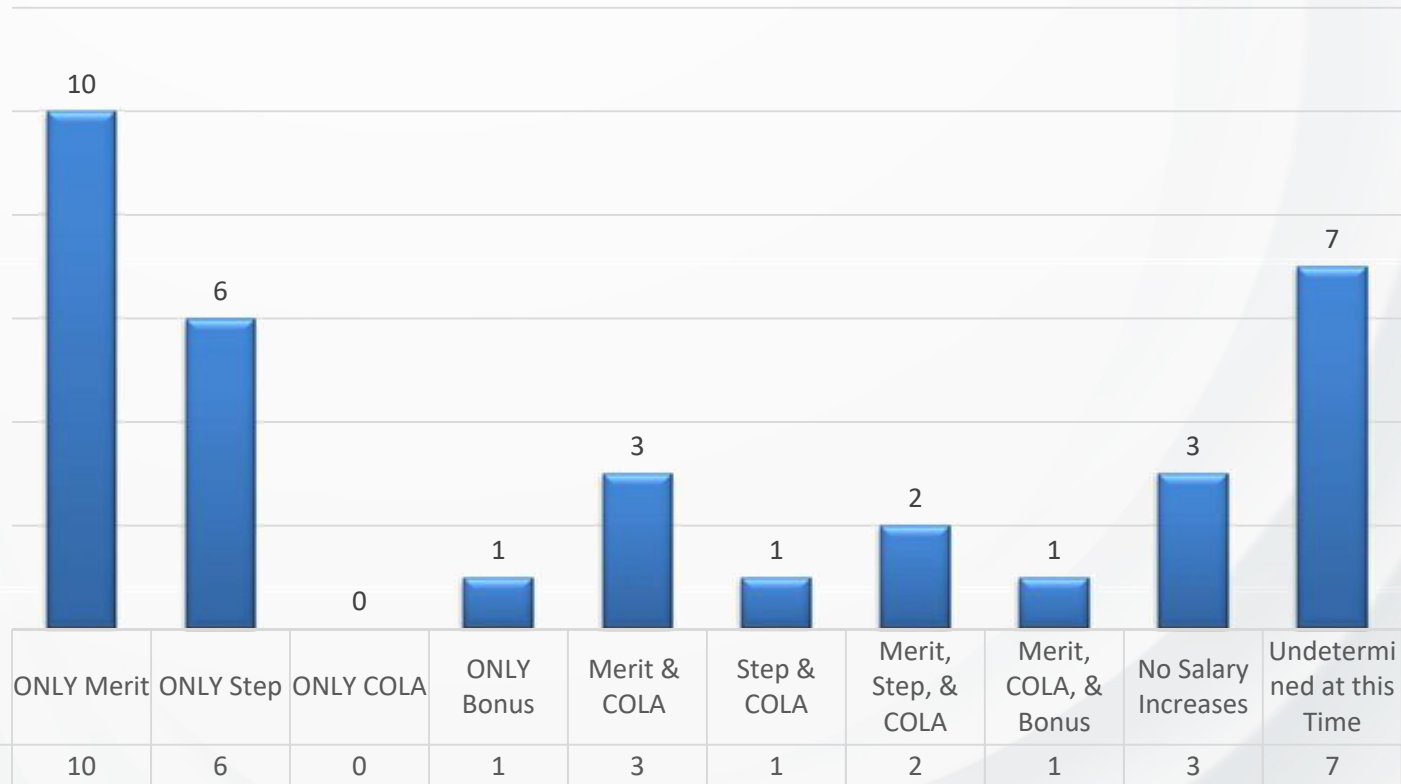
"We provide secure retirement and disability benefits with the highest standards of excellence."



Survey Results: Type of Management-Level Salary Increase



34 Participating Agencies



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





Appendix

County Staff and Manager Salary Range Information

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



County Staff Salary Adjustments from 2019 – 2023 MOU

Budget Year	County Employees Salary Range Adjustment	Reduction in Retirement Contributions Reverse Pickup
2019	2.5%	1.2%
2020	2.5%	1.2%
2021	2.5%	1.2%
2022	3.5%	
Total	11.0%	3.6%

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





County Staff Salary Adjustments from 2014 – 2018 MOUs

Budget Year	County Employees Salary Range Adjustment	Lump Sum Payment
2014	1.25%	One time lump sum payment equivalent to 1.25% of salary
2015	4.5%	\$500 lump sum payment
2016	2.5%	\$500 lump sum payment
2017	2.5%	\$500 lump sum payment
2018	1.5%	N/A
Total	12.25%	

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





County Management Salary Adjustments from 2014 – 2018 MOUs

Budget Year	County Management Salary Range Adjustment	Additional Comments
2014	1.75%	
January, 2016	1.0%	
July, 2016	1.5%*	
January, 2017	1.0%	
July, 2017		2.75% placed into funding pool for new compensation system
Total	5.25%	

*** Information confirmed by County Class & Comp**

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



County Management Salary Adjustments from 2019 – 2023 MOU

Budget Year	Management Employees Salary Range Adjustment	Reduction in Retirement Contributions Reverse Pickup
2019	2.5%	1.2%
2020	2.5%	1.2%
2021	2.5%	1.2%
2022	3.0%	0.5%
Total	10.5%	4.1%

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





End of Presentation

Questions?

Brenda Shott, Assistant CEO
Tracy Bowman, Director of Finance

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





2021
ADMINISTRATIVE BUDGET

TABLE OF CONTENTS

Section I – Introduction	3
Section II – Budget Policies and Process.....	5
Section III – Executive Summary - 2021 Administrative Budget	7
Section IV –2021 Administrative Budget	10
Appendix	17
A - 2021 Administrative Budget Detail by Department	
B - 2021 Administrative Budget Detail by Expense Category	
C - Current Organization Chart	
2021 Personnel Cost Budget	
D - 21 Basis Points for Budget Year 2021	
E - 5 Year Budget Comparison	
5 Year Actuals Comparison	
F - Historical Statistics	
G - OCERS' Direct Employees Salary Ranges (effective January 1, 2021)	

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM

SECTION I – INTRODUCTION

The 2021 Administrative Budget was developed based on the 2021 Business Plan which is directly linked to the 2021-2023 Strategic Plan. OCERS' Mission Statement and Vision Statement and Values are the foundation for all three documents:

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:

*Open and Transparent
Commitment to Superior Service
Engaged and Dedicated Workforce
Reliable and Accurate
Secure and Sustainable*

The 2021 Administrative Budget reflects OCERS' continued commitment to:

- *Strengthen the long-term stability of the pension fund*
- *Achieve excellence in the service and support we provide to our members and plan sponsors*
- *Cultivate a risk-intelligent organization*
- *Recruit, retain and inspire a high-performing workforce*
- *Improve the effectiveness and efficiency of the Board and staff by clarifying roles and responsibilities, improving oversight, clarifying accountability and improving decision making*

These strategic goals were outlined in the 2021 Business Plan presented to the Board at the Strategic Planning Meeting held on September 9-10, 2020 and formally adopted by the Board at the Regular Board Meeting held on October 19, 2020.

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM

The 2021 Administrative Budget was prepared during an ongoing global pandemic due to the outbreak of Coronavirus COVID-19. This pandemic led to a Stay at Home Order issued by Governor Gavin Newsom on March 19, 2020 which resulted in the closure of OCERS' offices to the public and the transition of team members and operations to a telework environment. Despite these challenges, OCERS 2021 Administrative Budget includes the funding of business plan initiatives to help OCERS continue achieving its strategic goals without disruption. Many of the business plan initiatives focus on risk management, including providing a robust business continuity solution with the implementation of a new enterprise backup solution to enhance recovery of on premise and cloud systems; conducting a data classification study and implementing automated inventories for tracking technology assets to ensure compliance with industry frameworks and best practices; ensuring a safe and secure workplace and public service facility once OCERS reopens, including upgrading the Boardroom audio and visual equipment; and other initiatives that cultivate a risk-intelligent organization, such as implementation of network access controls, monitoring and traffic analysis. Other business plan initiatives with a budget impact include the implementation of a new Enterprise Resource Planning (ERP) system and migration to a Microsoft 365 cloud based platform that meet the objective of continuously improving business processes and procedures to be efficient and effective. The budget also includes an initiative to investigate options on implementing a mobile app/enhanced self-service portal in support of providing accurate and timely benefits.

The 2021 Administrative Budget also includes costs carried over from 2020 associated with the strategic goal to recruit, retain and inspire a high-performing workforce, with a continued emphasis on developing and empowering every member of the team with comprehensive training programs and developing a comprehensive standardized library of process and procedure manuals across the organization to be accessible using OCERS' intranet.

2021 Administrative Budget Summary

Staff recommends a 2021 Administrative Budget of \$28,283,900 which is:

- \$1.1 million or 4.0% greater than the 2020 Budget
- \$4.6 million or 19.4% greater than 2020 estimated actuals

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM

SECTION II – BUDGET POLICIES AND PROCESS***Budget Policies***

OCERS budgeting policies are based on legal statutes required for 1937 Act Systems as well as policies set by OCERS Board of Retirement. Budgeted items are on an accrual basis in accordance with Generally Accepted Accounting Principles (GAAP).

OCERS budgeting authority is regulated by California Government Code Sections 31580.2 and 31596.1. A notable provision within the regulations is that OCERS' budget for administrative expenses (which excludes investment-related costs and expenditures for computer software, hardware and related technology consulting services) is limited to twenty-one hundredths of one percent of the accrued actuarial liability of the retirement system (commonly referred to as the 21 basis point test). The FY20 Administrative Budget represents 8.72 basis points of the projected actuarial accrued liability. See Appendix D for the 21 basis point test calculation.

In addition to the State Code, the budget is also guided by OCERS' Budget Approval Policy adopted by the Board of Retirement on February 19, 2002 and last revised April 20, 2020. Until 2010, the previous State Code budget limitation was the 18 basis points test which limited OCERS' budget to 18 basis points of the projected actuarial value of assets. Although no longer bound by this provision, this calculation continued to be included as part of the annual budget based on Board direction received in 2010. However, as there is no legal requirement or basis to continue with this test, at the April 20, 2020 Board meeting, the Board approved discontinuing the practice of calculating and reporting the 18 basis point test and it has been excluded from the 2021 Administrative Budget.

The OCERS' Budget Approval Policy provides the purpose, roles and guidelines related to approving the annual budget for covering the expenses of administering the retirement system including the authority of the Chief Executive Officer, or the Assistant CEO, to transfer funds within the three broad categories of the budget: 1) Personnel Costs, 2) Services and Supplies, and 3) Capital Projects. Funds may not be moved from one category to another without approval from the Board of Retirement. In addition, any increases to the total approved budget resulting in a budget amendment must be approved by the Board of Retirement.

Budget Process

In August, each department head begins the process of completing their budget requests for the following fiscal year. The Director of Finance and Finance Manager-Budgeting compile the budget requests and draft the budgets for each department. The department heads then meet individually with the CEO, Assistant CEO of Internal Operations, and the Director of Finance to review, discuss and determine the necessity of each line item of their draft budget, which may go through several review cycles.

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM

Once the CEO agrees upon the budget requests, any proposed business plan goals/initiatives with a budget impact are incorporated into the Business Plan for the upcoming fiscal year and presented to the Board at its annual Strategic Planning Meeting in September for discussion and feedback and the final version of the Business Plan is approved in October. The Personnel Committee meets to consider changes to the OCERS staffing plan, as well as to make recommendations to the Board regarding OCERS' direct employee salary and range adjustments. The Board is provided the opportunity to discuss the Personnel Committee's meeting outcomes at a regularly scheduled meeting. The Board's feedback is incorporated into the proposed final version of the administrative budget and submitted for final adoption at the regularly scheduled Board Meeting held in November.

SECTION III – EXECUTIVE SUMMARY - 2021 ADMINISTRATIVE BUDGET

The overall administrative budget for 2021 is summarized by the following categories of expenses:

- Personnel Costs
- Services and Supplies
- Capital Expenditures

The 2021 Administrative Budget is based on estimates of anticipated expenses for personnel costs, services and supplies, and capital expenditures. It includes the costs of carrying out the current level of services, activities, initiatives and projects approved by OCERS' Board, as well as a proposed Performance Management Program for OCERS' direct employees approved by the Personnel Committee on August 19, 2020 and recommended to the Board of Retirement for approval as part of the 2021 Administrative Budget.

Notable components in the 2021 Administrative Budget include:

Personnel Costs:

- Salaries to support the Staffing Plan for 2021 consisting of 93 budgeted positions and a total of 102 approved classifications (unfilled classifications are used as career ladders when appropriate). Staffing changes include adding one investment analyst in the Investment Division and dropping one extra-help staff attorney in the Legal Division (no change in total headcount and a net increase of 0.5 in full-time equivalents or FTE)
- An average fringe benefit rate of 55.8% of total salaries
- Performance based salary adjustments for OCERS' direct employees eligible to participate in the annual Performance Management Program based on one of two options as follows:

- Option 1:

A base salary increase of 1.5% for employees whose performance meet expectations; a base increase of 1.5% plus a merit increase of 2.75% for employees whose performance exceeds expectations; and a base increase of 1.5% plus two merit increases totaling 5.50% (2.75% x2) for employees whose performance was exceptional. This option would have an estimated total annual cost of \$337,000

OR

- Option 2:

A base salary increase of 1.5% for employees whose performance meet expectations; a base increase of 1.5% plus a merit increase of 1.75% for employees whose performance exceeds expectations; and a base increase of 1.5% plus two merit increases totaling 3.50% (1.75% x2) for employees whose performance was exceptional. This option would have an estimated total annual cost of \$252,000

- Step increases for approximately 19 County staff not at the top of the established salary range and across the board salary increases for all County staff as dictated by County MOU at a cost of \$88,000
- Pay item of 5.5% of salary for employees obtaining the designations of Chartered Financial Analyst, and Certified Professional Accountant totaling \$76,000
- The Personnel Committee approved Staff's recommendation and is recommending the Board approve adjusting all existing OCERS' direct salary ranges by the proposed base increase of 1.5%. Adjustments to ranges do not automatically change an individual's actual paid salary. Salary adjustments are made through the Performance Management Program as discussed above. For details of all OCERS' direct salary ranges please refer to *Appendix G – OCERS' Direct Employees Salary Ranges (effective January 1, 2021)*

Services and Supplies:

- New recurring professional services expenses, including:
 - Network Security Testing for \$68,000
- Non-recurring expenses, including
 - 2021 Business Plan Initiatives that have costs associated with implementation include:
 - Mobile App/Enhanced Self-Service Portal consultant at an estimated cost of \$300,000 to assist with the development of a mobile application that will provide members access to the MyOCERS self-service portal on mobile devices
 - Office 365 migration consultant services at a cost of \$180,000
 - Technical writer to develop a comprehensive standardized library of process and procedure manuals across the organization at a cost of \$150,000
 - Data Classification Study in support of the risk management objective to ensure compliance with industry frameworks and best practices at an estimated cost of \$100,000
 - Information security implementation and consulting services for Privileged Access Management, DNS Security, Microsoft 365 Security, information security policy development services and other risk management-related implementations at a total estimated costs of \$100,000
 - Implement automated inventories for tracking technology assets at an estimated cost of \$100,000
 - Architect and Design consultant to assist with planning and design of the future OCERS Headquarters at a cost of \$40,000
 - Compensation study to be completed at an estimated cost of \$30,000
 - Lean Process consultant for process and performance improvement at an estimated cost of \$25,000 along with an additional \$10,000 for having a select number of OCERS' team members obtain a LEAN certification

- Creation of video and other online educational resources to enhance education to members and stakeholders about OCERS benefits, administrative operations and investments at an estimated cost of \$50,000
- Governance consultant at an estimated cost of \$15,000 to explore methods of focusing Board and staff time and effort on activities that support or advance OCERS' strategic goals
- Procurement and implementation of a new Enterprise Resource Planning (ERP) System at an estimated cost of \$150,000
- Design and development of a comprehensive training program, as well as customize training programs based on individual needs and career goals within OCERS, at a total cost of \$53,000
- Implement infrastructure to allow employees to work a hybrid work schedule of in-office and telework at an estimated cost of \$25,000
- Other non- recurring professional services expenses including:
 - Additional support hours and/or potential change orders for V3, the pension administration system, in the amount of \$215,000
 - Executive Coach to provide high level coaching to the Senior Executives to achieve development objectives at an estimated cost of \$100,000
 - Additional IT programming, report development and support consultant at a cost of \$86,400
 - Internal Audit consultants to support IT related audit projects at an estimated cost of \$134,250

Capital Expenditures:

Business Plan initiatives that have costs associated with them and meet the criteria for being a capitalized expense include:

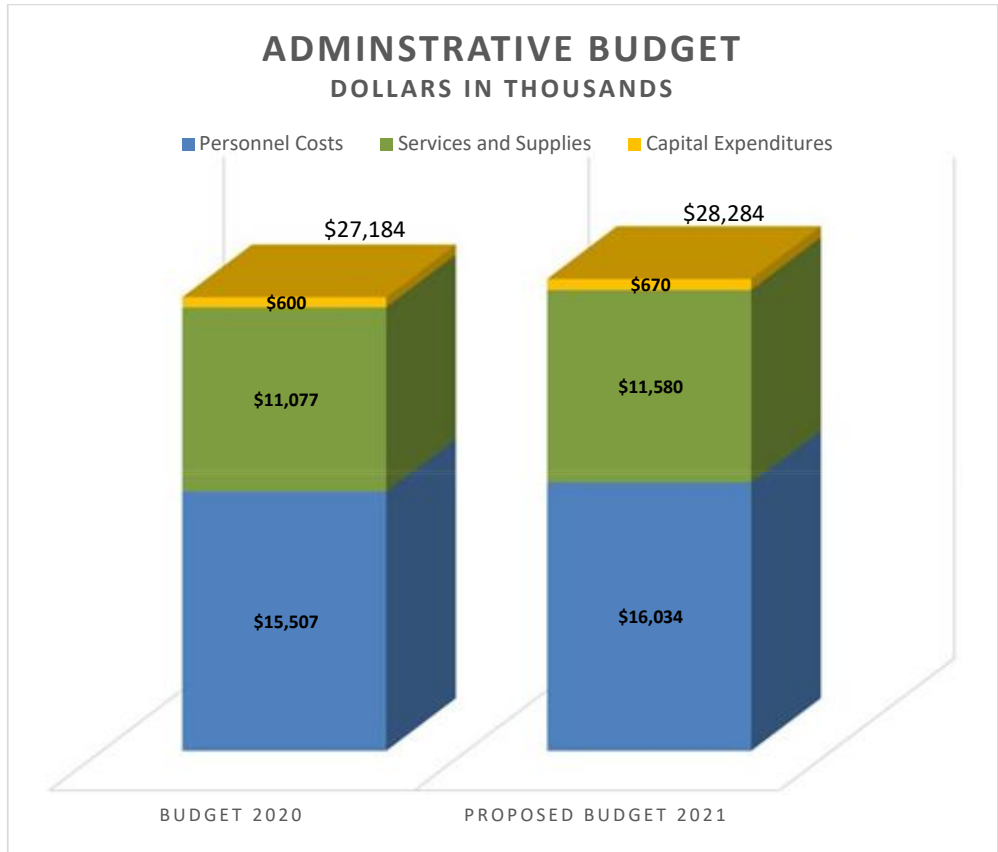
- Upgrades to the OCERS Board Room audio and visual equipment at an estimated cost of \$350,000
- New enterprise backup solution to enhance recovery of on premise and cloud systems at an estimated cost of \$250,000

Regularly scheduled building upgrades meeting the criteria for being a capitalized expense include:

- Roof replacement totaling \$70,000

SECTION IV –2021 ADMINISTRATIVE BUDGET

Comparison to 2020 Administrative Budget



The total administrative budget for 2021 is \$28.3 million, representing a total increase of \$1.1 million or 4.0% from the 2020 Budget of \$27.2 million. The increase can be attributed to an increase in personnel costs of \$.5 million primarily due to performance adjustments that were granted in FY20 being included in annual salary in fiscal year 2021 (FY21), as well as funding for FY21 salary/performance adjustments. Additionally, services and supplies increased \$.5 million primarily related to professional services and equipment/software expenses. Capital expenditures increased by \$70,000 for a scheduled roof replacement at OCERS' Headquarters. A detailed comparison between the FY21 Proposed Administrative Budget and FY20 Administrative Budget, as well as FY20 estimated actuals, are discussed further in the following *Administrative Budget Summary*.

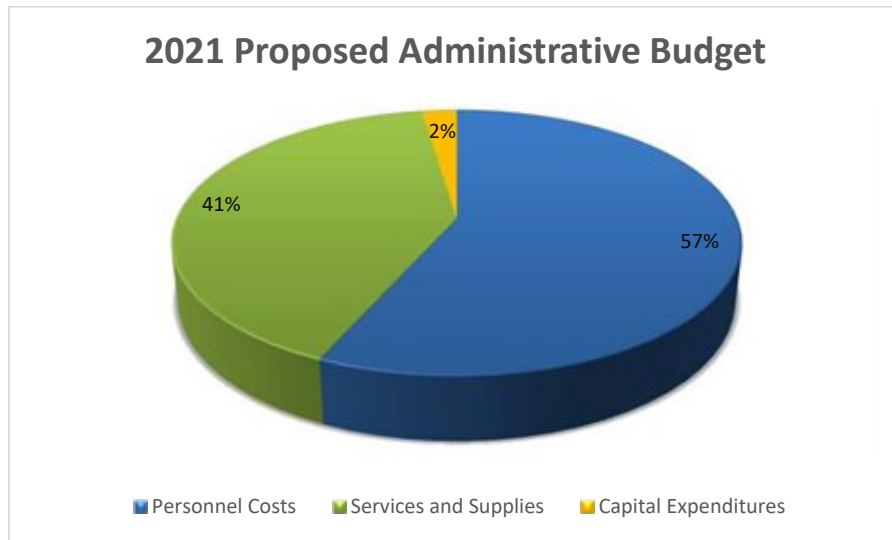
Administrative Budget Summary

The Administrative Budget is prepared in accordance with the limits of Section 31580.2 of the County Employees Act of 1937 which limits the budget to twenty-one hundredths of one percent of the accrued actuarial liability of the retirement system (commonly referred to as the 21 basis point test), excluding investment-related costs of \$6.2 million and expenditures for computer software, hardware and related technology consulting services totaling \$2.0 million in the FY21 Administrative Budget. The 2021 Administrative Budget, at 8.72 basis points, is \$28 million under the cap limit of \$48.3 million (see Appendix D – 21 Basis Points for Budget Year 2021).

A summary of the FY20 Administrative Budget compared to FY20 estimated actuals and the FY21 Proposed Administrative Budget compared to FY20 estimated actuals is provided below:

	Budget 2020	Estimated Actuals 2020	2020 Over/(Under) Budget	Proposed Budget 2021	2021 Proposed Budget vs. 2020 Actuals Over/(Under)	
Personnel Costs	\$15,507,410	\$14,745,572	(\$761,838)	\$16,034,052	\$1,288,480	8.7%
Services and Supplies						
Professional Services	6,199,320	5,233,527	(965,793)	6,575,113	1,341,586	25.6%
Legal Services	1,025,000	814,334	(210,666)	960,000	145,666	17.9%
Infrastructure Maintenance	835,100	806,491	(28,609)	854,700	48,209	6.0%
Equipment/Software Expenses	857,500	430,740	(426,760)	1,036,500	605,760	140.6%
Building Prop Mgmt/Maint	680,000	662,066	(17,934)	680,000	17,934	2.7%
Miscellaneous Office Expense	652,555	579,801	(72,754)	729,895	150,094	25.9%
Training	613,555	181,348	(432,207)	586,140	404,792	223.2%
Meetings & Mileage	214,350	36,686	(177,664)	157,500	120,814	329.3%
Services and Supplies	11,077,380	8,744,993	(2,332,387)	11,579,848	2,834,855	32.4%
Capital Expenditures*	600,000	196,408	(403,592)	670,000	473,592	241.1%
Administrative Expense Total	\$27,184,790	\$23,686,973	(\$3,497,817)	\$28,283,900	\$4,596,927	19.4%

*Capital expenditures represent purchases of assets to be amortized in future periods.



Personnel Costs

A summary of the FY20 budgeted personnel costs compared to FY20 estimated actuals and the FY21 proposed budgeted personnel costs compared to FY20 estimated actuals is provided below:

	Budget 2020	Estimated Actuals 2020	2020 Over/(Under) Budget	Proposed Budget 2021	2021 Proposed Budget vs. 2020 Actuals Over/(Under)	
Personnel Costs:						
Annual Salary	\$9,144,566	\$8,755,270	(\$389,296)	\$9,373,245	\$617,975	7.1%
Fringe Benefits	5,272,103	4,848,492	(423,611)	5,509,070	660,578	13.6%
Performance/Salary Adjustments*	484,825	474,095	(10,730)	425,129	(48,966)	-10.3%
Annual Leave	300,000	328,751	28,751	410,001	81,250	24.7%
Temp Help	135,240	149,390	14,150	134,482	(14,908)	-10.0%
Overtime	87,000	103,097	16,097	87,000	(16,097)	-15.6%
Certification Pay	64,776	72,377	7,601	76,225	3,848	5.3%
Board Allowance	18,900	14,100	(4,800)	18,900	4,800	34.0%
Total Personnel Costs	\$15,507,410	\$14,745,572	(\$761,838)	\$16,034,052	\$1,288,480	8.7%

*All performance/salary adjustments are budgeted in Human Resources Department until awarded.

Personnel Costs for 2021 are \$16.0 million and represent 57% of the total Administrative Budget. Personnel costs are detailed by department in Appendix C and include salaries, fringe benefits (e.g., health insurance, retirement and deferred compensation), performance/salary

adjustments, accrued annual leave, temporary/extra help costs, estimated overtime, certification pay for Board approved certifications, and Board allowance for meeting attendance. The total budget for personnel costs is \$1.3 million or 8.7% higher than the FY20 estimated actuals for personnel costs. The increase can be attributed to performance and salary adjustments of \$506,000 that were granted in FY20 being included in annual salary in FY21. In addition, there were vacant positions that remained unfilled for most of FY20, including a Senior Manager-Operations Support Services, an Accountant Auditor, and a Staff Assistant. The increase can also be attributed to fringe benefits which increased by \$660,000 due to higher employer contribution rates and health care costs, as well as the impact of higher salaries.

The FY21 Administrative Budget for personnel costs includes the following components:

- Salaries to support the Staffing Plan for 2021 consisting of 93 budgeted positions and a total of 102 approved classifications (unfilled classifications are used as career ladders when appropriate). Changes in the Staffing Plan from the prior year consists of adding one Investment Analyst in the Investment Division and dropping one Extra-Help Attorney from the Legal Division. The net change in head count from the prior year is zero while there is a net increase in FTEs of 0.5. Current vacant positions have been budgeted on a prorated basis based on the planned timing of when the vacancy will be filled. The full list of budgeted positions and the related budgeted costs can be found in Appendix C
- An average fringe benefit rate of 55.8% of total salaries
- Performance based salary adjustments for OCERS' direct employees. OCERS' Compensation Philosophy calls for a Performance Management program to be managed by the CEO within the individual award limits approved by the Board in connection with the Budget. Two options for setting the individual award limits were recommended by the Personnel Committee to be considered by the Board.
 - Option 1:
A base salary increase of 1.5% for employees whose performance meet expectations; a base increase of 1.5% plus a merit increase of 2.75% for employees whose performance exceeds expectations; and a base increase of 1.5% plus two merit increases totaling 5.50% (2.75% x2) for employees whose performance was exceptional. This option would have an estimated total annual cost of \$337,000

OR

 - Option 2:
A base salary increase of 1.5% for employees whose performance meet expectations; a base increase of 1.5% plus a merit increase of 1.75% for employees whose performance exceeds expectations; and a base increase of 1.5% plus two merit increases totaling 3.50% (1.75% x2) for employees whose performance was exceptional. This option would have an estimated total annual cost of \$252,000

- Step increases for approximately 19 County staff not at the top of the established salary range and across the board salary increases for all County staff as dictated by County MOU at a cost of \$88,000
- Pay item of 5.5% of salary for employees obtaining the designations of Chartered Financial Analyst, and Certified Professional Accountant totaling \$76,000.

Salary Ranges

In accordance with OCERS' Compensation Philosophy, salary ranges are reviewed annually with an intended purpose of keeping total compensation competitive. The Personnel Committee approved Staff's recommendation and is recommending the Board approve adjusting all existing OCERS' direct salary ranges by the proposed base increase of 1.5%. Adjustments to ranges do not automatically change an individual's actual paid salary. Salary adjustments are made through the Performance Management Program as discussed above. For details of all OCERS' direct salary ranges please refer to *Appendix G – OCERS' Direct Employees Salary Ranges (effective January 1, 2021)*

Services and Supplies

Services and Supplies costs for 2021 are \$11.6 million, which is 40.9% of the total Administrative Budget. Included in services and supplies are administrative and investment professional services, legal services, equipment expenses (other than those that are capitalized on OCERS' books as assets that will be depreciated over time and budgeted as a capital expenditure), maintenance costs, office expenses, training, and meetings & mileage costs. The expenses that are included in these line items are detailed in Appendix B – Administrative Budget Detail by Expense Category and summarized below:

- **Professional Services** budgeted at \$6.6 million represents the largest percentage of Services and Supplies and comprises 23.2% of the total Administrative Budget. This category includes investment-related consulting fees, actuarial and audit fees, medical panel reviews, pension administration system consultants, and other IT related consulting and professional services fees. The overall increase of approximately \$1.3 million or 26% from FY20 estimated actuals is due to the FY21 budget including new non-recurring costs that support OCERS' strategic goals, some of which were budgeted in FY20, but not spent and carried over to FY21. This includes the following costs to enhance excellent service and support: \$300,000 for a consultant to assist with developing a mobile app/enhanced self-service portal to provide members access to the MyOCERS self-service portal on mobile devices; the continuation of a FY20 initiative to create videos that will provide education to members and stakeholders about OCERS' benefits on the website at an estimated cost of \$50,000; and \$25,000 for a Lean process consultant. Other non-recurring expenses included in the budget consist of business initiatives related to both risk management and effective governance, including \$180,000 carried over from the prior year for an Office 365 migration consultant; \$134,000 for Internal Audit consultants

to support IT-related audit projects; \$86,000 for additional IT programming, report development and support services; and \$15,000 for a governance consultant to assist in exploring methods of focusing Board and staff time and effort on activities that support or advance OCERS' strategic goals.

- **Legal Services** budgeted at \$960,000 are 3.4% of the total Administrative Budget and consist of fees paid to OCERS' external fiduciary counsel, labor attorney, litigation counsel, tax attorney, and investment related legal services. These fees are budgeted for use on an as-needed basis and in FY20 legal fees came in less than anticipated for general counsel and investment-related legal services. The FY21 budget has been reduced from the FY20 budget by \$65,000 and is approximately \$146,000 higher than FY20 estimated actuals.
- **Infrastructure Maintenance** budgeted at \$854,700 represents 3.0% of the total Administrative Budget and has increased from FY20 estimated actuals by approximately \$48,000 or 6.0%, primarily due to costs being amortized over contract period versus previously expensing entire cost at time of payment, as well as anticipated increases in maintenance renewals. This budget category includes V3 licensing and support of \$396,000 and other ongoing V3 related costs including Oracle maintenance of \$70,000, \$115,000 for Microsoft related software licensing, \$107,500 for data center maintenance, and several other smaller line items for various software, hardware and mobile device licensing, maintenance, support and security.
- **Equipment/Software Expenses** budgeted at \$1,036,500 represent 3.7% of the total Administrative Budget and consists of computers, laptops, monitors, Board meeting online portal expenses, IT Helpdesk, data and Cloud backup solutions, information security related software/tools and other miscellaneous hardware and software expenses. The increase from FY20 estimated actuals of \$606,000 or 140.6% is primarily due to costs to support business plan initiatives related to excellent service and support, fund sustainability and risk management, including \$150,000 for the procurement of a new Enterprise Resource Planning (ERP) System that has been carried over from the FY20 budget, \$178,000 of costs associated with a newly implemented investment risk management system, \$100,000 for the procurement of an IT Service Management (ITSM) Solution that will automate inventories for tracking technology assets, and \$100,000 for various information security implementation services.
- **Building Management and Maintenance** budgeted at \$680,000 represents 2.4% of the overall Administrative Budget and is related to funds provided to the property manager of OCERS' Headquarters building to manage and maintain the building. Expenses include property management fees, security, utilities, property taxes, insurance, and maintenance contracts. FY20 estimated costs were less than the budget by \$18,000. The FY21 budget for building management and maintenance is unchanged from FY20.
- **Miscellaneous Office Expense** budgeted at \$729,895 represents 2.6% of the total Administrative Budget and consists of routine office expenses such as postage, printing

costs, telephone, equipment leases, office supplies and periodicals. The budget for this line item increased from FY20 actuals by approximately \$73,000 or 25.9% primarily due to an increase in postage for quarterly newsletters and contingency for unplanned mailings.

- **Training** budgeted at \$586,140 represents 2.1% of the total Administrative Budget and encompasses training and conferences attended by the Board and staff, as well as tuition reimbursement. The budget for this line is above the FY20 estimated actuals by approximately \$405,000 or 223.2%. During 2020, travel for work-related training was prohibited when the COVID-19 Stay at Home order went into effect and conferences went virtual, resulting in a significant reduction in costs. For FY21 training and conferences are assumed to resume after the first quarter. The FY21 budget includes costs to support talent management business initiatives, including \$53,000 for continuing the design and development of a comprehensive training program and customized training programs based on individual needs and career goals within OCERS. In addition, \$100,000 has been budgeted for executive coaching for OCERS' senior executives as part of continued succession planning efforts. The FY21 budget also includes tuition reimbursement of \$100,000 in anticipation that more employees will seek educational and professional reimbursement due to the MOU for County employees and the newly adopted OCERS Employee Handbook for OCERS Direct employees which increased annual tuition reimbursement from \$3,000 to \$10,000.
- **Meetings and Mileage** budgeted at \$157,000 represents 0.6% of the total Administrative Budget. The majority of the expenses relates to Board meeting and due diligence costs. The budget has increased by \$121,000 or 329.3% compared to FY20 estimated actuals primarily due to the impact of the COVID-19 pandemic on all board-related meetings and investment due diligence meetings and the transition to virtual meetings from in person meetings. The FY21 budget assumes that in-person meetings will resume in the first half of 2021. The amount budgeted is less than the amount budgeted for FY20 by approximately \$57,000.

Capital Expenditures

Capital Expenditures for 2021 are \$670,000 and are 2.4% of the total Administrative Budget. The 2021 Administrative Budget is approximately \$485,000 higher than FY20 estimated actuals primarily due the board room audio visual upgrades budgeted in FY20 intentionally delayed because of the impacts of COVID-19 and being carried over into FY21. The FY21 budget includes funding for boardroom audio visual upgrades of \$350,000, new enterprise backup solutions of \$250,000, and \$70,000 for roof improvements to the OCERS Headquarters which have been identified as necessary.

APPENDIX

**Appendix A
2021 Budget Detail by Department**

Department	Account Group	Description	Total
0001 - BOARD	Personnel Cost	Annual Salary	18,900
	Personnel Cost Total		\$ 18,900
	Professional Svcs	Board Election Security	78,000
	Professional Svcs Total		\$ 92,000
	Training	Board Approved Conferences	25,000
		CALAPRS	3,800
		NASRA	13,000
		SACRS	6,600
		Strategic Planning	26,000
		UC Berkeley	4,000
	Training Total		\$ 78,400
	Mtg/Mileage	Membership Committee Meetings	2,500
		Miscellaneous Meetings	15,000
	Mtg/Mileage Total		\$ 17,500
	Membership	CALAPRS	2,500
		Coalition to Preserve Retirement Security	3,000
		NASRA	3,000
		NCPERS	2,050
		NIRS	3,500
		SACRS	6,000
Membership Total		\$ 20,050	
0001 - BOARD Total			\$ 226,850
0010 - EXECUTIVE	Personnel Cost	Annual Salary	850,444
		Certification Pay	13,409
		Fringe Benefits	519,598
		Leave P/O	37,200
		Overtime	1,000
		Temp Help	15,000
	Personnel Cost Total		\$ 1,436,651
	Professional Svcs	CEO Contingency	75,000
		Governance Consultant	15,000
		Lean Process Consultant/Study	25,000
		Technical Writer-Procedures	150,000
	Professional Svcs Total		\$ 265,000
	Training	CALAPRS	3,650
		CEM Conference	5,000
		GFOA Conference	2,500
		IFEBP	4,800
		LCW Employment Law Conference	250
		Miscellaneous Conferences/Training	16,000
		NASRA/NIRS	3,800
		NCPERS - General & Safety	4,000
		Public Pension Financial Forum	2,500
		SACRS	2,950
	Training Total		\$ 45,450
	Mtg/Mileage	CEO Visit to Federal Legislature	2,500
		CEO Visit to State Legislature	1,000
		CEO/Manager visits to Cal Retirement Systems	1,500
		Membership Committee Meetings	1,500
		Miscellaneous Meetings	4,000
	Mtg/Mileage Total		\$ 10,500
	Membership	AICPA	600
		American Express	255
		CalCPA	525
		GFOA	570
		International Foundation (IFEBP)	1,000
		Miscellaneous Memberships	1,500
		National Pension Education Assoc. (NPEA)	750
		Notary	1,000
		P2F2 - Public Pension Financial Forum	150
	Membership Total		\$ 6,350
	Periodicals	Miscellaneous periodicals	800
	Public Retirement Journal	950	
Periodicals Total		\$ 1,750	
7670 - Actuarial Fees	Actuarial Fees2	400,000	
7670 - Actuarial Fees Total		\$ 400,000	
0010 - EXECUTIVE Total			\$ 2,165,701
0011 - INVESTMENTS	Personnel Cost	Annual Salary	1,469,495
		Certification Pay	35,388
		Fringe Benefits	834,200
		Leave P/O	64,278
		Overtime	1,000
	Personnel Cost Total		\$ 2,404,361
	Professional Svcs	7650 Proxy Services	19,000
		7660 Consulting Fees-Investment Consultant	856,980
		7661 Consulting Fees-Private Equity and Real Assets	869,068
		7662 Consulting Fees-Real Estate	288,454
		Custodial Bank Fees	585,000

**Appendix A
2021 Budget Detail by Department**

Department	Account Group	Description	Total
	Professional Svcs Total		\$ 2,618,502
	Due Diligence	Due Diligence	100,000
	Due Diligence Total		\$ 100,000
	Training	Conferences	8,000
	Training Total		\$ 8,000
	Mtg/Mileage	Investment Committee Meetings	16,000
	Mtg/Mileage Total		\$ 16,000
	Membership	Other Memberships	16,500
	Membership Total		\$ 16,500
	Periodicals	Miscellaneous periodicals	35,000
	Periodicals Total		\$ 35,000
	Equipment / Software	Benchmark Subscriptions	10,000
	Equipment / Software Total		\$ 10,000
0011 - INVESTMENTS Total			\$ 5,208,363
0015 - COMMUNICATIONS	Personnel Cost	Annual Salary	182,268
		Fringe Benefits	109,477
		Leave P/O	7,973
		Overtime	500
	Personnel Cost Total		\$ 300,218
	Professional Svcs	White Board / Animated Videos	50,000
	Professional Svcs Total		\$ 50,000
	Training	CALAPRS	1,500
		Miscellaneous Conferences/Training	3,000
		SACRS	500
	Training Total		\$ 5,000
	Mtg/Mileage	Miscellaneous Meetings	150
	Mtg/Mileage Total		\$ 150
	Printing Svcs	Brochures	10,000
		CAFR (Comprehensive Annual Financial Report)	12,000
		Quarterly newsletters	40,000
	Printing Svcs Total		\$ 62,000
	Postage	Miscellaneous Mailing/Mass Mailing	40,000
		Quarterly Newsletters - All Members	65,000
	Postage Total		\$ 105,000
	Office Supplies	Public Relation Materials	10,000
	Office Supplies Total		\$ 10,000
	Equipment / Software	Video Camera / Video Equipment	2,500
	Equipment / Software Total		\$ 2,500
0015 - COMMUNICATIONS Total			\$ 534,868
0020 - LEGAL	Personnel Cost	Annual Salary	905,915
		Fringe Benefits	507,764
		Leave P/O	39,626
		Overtime	1,000
	Personnel Cost Total		\$ 1,454,305
	Professional Svcs	Admin. Hearing Process Fees	175,000
		Court Filing Fees	1,000
		Court Reporter Fees	25,000
		Subpoena Fees	1,000
	Professional Svcs Total		\$ 202,000
	Legal Svcs	Board/Fiduciary	125,000
		Dept of Ed vs OCERS	50,000
		Other Litigation	150,000
		Tax Attorney/Outside Counsel	35,000
	Legal Svcs Total		\$ 360,000
	Training	CALAPRS	3,000
		MCLE and other training	5,000
		NAPPA Meetings	7,500
		SACRS	4,500
	Training Total		\$ 20,000
	Mtg/Mileage	Membership Committee Meetings	1,500
		Miscellaneous Meetings	500
	Mtg/Mileage Total		\$ 2,000
	Membership	Miscellaneous Memberships (incl. State Bar dues, NAPPA, etc.)	5,000
	Membership Total		\$ 5,000
	Periodicals	Legal Publications, Daily Journal, Law Book Updates, Reference Books	12,500
	Periodicals Total		\$ 12,500
	7690 - Legal Svcs	Investment Legal Services	600,000
	7690 - Legal Svcs Total		\$ 600,000
0020 - LEGAL Total			\$ 2,655,805
0030 - MEMBER SERVICES	Personnel Cost	Annual Salary	2,575,325
		Fringe Benefits	1,549,932
		Leave P/O	112,649
		Overtime	30,000
		Temp Help	104,482

**Appendix A
2021 Budget Detail by Department**

Department	Account Group	Description	Total
	Personnel Cost Total		\$ 4,372,388
	Professional Svcs	Death Records Match	20,000
	Professional Svcs Total		\$ 20,000
	Training	CALAPRS	3,000
		SACRS	1,800
		Staff Development Training	14,000
	Training Total		\$ 18,800
	Mtg/Mileage	Miscellaneous Meetings	250
	Mtg/Mileage Total		\$ 250
0030 - MEMBER SERVICES Total			\$ 4,411,438
0040 - FINANCE	Personnel Cost	Annual Salary	855,775
		Certification Pay	21,040
		Fringe Benefits	500,514
		Leave P/O	37,433
		Overtime	1,000
	Personnel Cost Total		\$ 1,415,762
	Professional Svcs	Bank Charges	35,000
		CAFR	20,000
		Certificate Application Fees	1,400
		Dynamics Consulting	4,000
		Financial Audit Cost	128,011
	Professional Svcs Total		\$ 188,411
	Training	Conferences	5,000
		Staff Training/Continuing Education	4,000
	Training Total		\$ 9,000
	Mtg/Mileage	Miscellaneous Meetings	250
	Mtg/Mileage Total		\$ 250
	Membership	Miscellaneous Memberships	4,300
	Membership Total		\$ 4,300
	Periodicals	Miscellaneous periodicals	1,000
	Periodicals Total		\$ 1,000
0040 - FINANCE Total			\$ 1,618,723
0050 - DISABILITY	Personnel Cost	Annual Salary	342,466
		Fringe Benefits	243,803
		Leave P/O	14,980
		Overtime	1,000
	Personnel Cost Total		\$ 602,249
	Professional Svcs	Copy Service	20,000
		Medical Panel Reviews	275,000
	Professional Svcs Total		\$ 295,000
	Training	CALAPRS	1,100
		Miscellaneous Conferences/Training	1,300
		SACRS	1,200
	Training Total		\$ 3,600
	Mtg/Mileage	Miscellaneous Meetings	250
	Mtg/Mileage Total		\$ 250
0050 - DISABILITY Total			\$ 901,099
0060 - HUMAN RESOURCES	Personnel Cost	Annual Salary	467,475
		Fringe Benefits	257,992
		Leave P/O	20,448
		Overtime	1,500
		Salary Adjustments	425,129
		Temp Help	15,000
	Personnel Cost Total		1,187,544
	Professional Svcs	Compensation Study	30,000
		CWCAP(County Wide Cost Allocation Plan)	40,000
		Recruitment Costs	28,000
		Volunteer Program Costs	500
	Professional Svcs Total		98,500
	Training	CALAPRS	250
		Executive Coaching	100,000
		HR Conferences	12,300
		Learning and Development Program	53,300
		OCERS Management Succession/Staff Training	25,000
		SACRS	600
		Tuition Reimbursement	100,000
	Training Total		291,450
	Mtg/Mileage	Civic Center Parking Cards	250
		EE Recognition/Educational Seminar/Qtrly Meetings	9,500
		Miscellaneous Meetings	250
	Mtg/Mileage Total		10,000
	Membership	Miscellaneous Memberships	11,400
	Membership Total		11,400
0060 - HUMAN RESOURCES Total			1,598,894
0065 - OPERATIONS SUPPORT SE	Personnel Cost	Annual Salary	202,568
		Fringe Benefits	109,828
		Leave P/O	8,861
	Personnel Cost Total		321,257
	Professional Svcs	Architect/Design Consultant	40,000
		BC/DR Avaluation Exercise Facilitation	25,500
		Credit Safe	500
		Cyber Security Vendor Monitoring Service	31,000
		Insurance Premiums	180,000
		Iron Mountain	18,500
		Plant Maintenance	3,550
		Universal Protection Security (UPS)	4,000

**Appendix A
2021 Budget Detail by Department**

Department	Account Group	Description	Total
	Professional Svcs Total		303,050
	Training	Miscellaneous Conferences/Training	4,000
	Training Total		4,000
	Membership	Miscellaneous Memberships	200
	Membership Total		200
	Printing Svcs	Printing	15,000
	Printing Svcs Total		15,000
	Postage	Pony Mail Services	4,000
		Postage Expense	75,000
	Postage Total		79,000
	Office Supplies	General Office Expense- Includes: Ergos, Safety items	55,000
		Office Furniture	30,000
	Office Supplies Total		85,000
	Capital Expenditures	Capitalized Roof Replacement	70,000
	Capital Expenditures Total		70,000
	Equipment Lease	Postage Machine	14,500
	Equipment Lease Total		14,500
	Bldg. Prop. Mgmt./Maintenance	Property Management	680,000
	Bldg. Prop. Mgmt./Maintenance Total		680,000
0065 - OPERATIONS SUPPORT SERVICES	0070 - INFORMATION TECHNOLOG		1,572,007
	Personnel Cost	Annual Salary	945,396
		Fringe Benefits	550,702
		Leave P/O	41,353
		Overtime	50,000
	Personnel Cost Total		\$ 1,587,451
	Professional Svcs	Additional Consulting	86,400
		Colocation Facilities (monthly service)	78,000
		County VPN Access	150,000
		Data Classification Study	100,000
		Gartner Consulting	196,000
		Internet Access	110,000
		Mobile App/Enhanced Self-Service Portal	300,000
		Network Security Testing	68,000
		Office 365 Migration Consulting	180,000
		Online Data Storage	40,000
		Oracle Consulting	90,000
		Vitech Addl. Support - Cos	215,000
	Professional Svcs Total		\$ 1,613,400
	Training	CALAPRS	500
		Conferences	10,000
		Miscellaneous Training Materials	2,500
		Online Training	30,000
	Training Total		\$ 43,000
	Membership	Miscellaneous Memberships	1,500
	Membership Total		\$ 1,500
	Equipment / Software	Accounting Software Project	150,000
		AD Management and Auditing Tools	30,000
		Board Portal	52,000
		Computers/Laptops/Monitors	50,000
		Information Security Remediation Contingency	50,000
		ITSM Solution	100,000
		Miscellaneous Hardware & Software Supplies (including printer)	30,000
		OpenDNS Subscription	5,000
		Project Management Tools	15,000
		Software Development Tools	18,000
	Equipment / Software Total		\$ 500,000
	Equipment / Software	Backstop	100,000
		Bloomberg	50,000
		Risk Management System	178,000
	Equipment / Software Total		\$ 328,000
	Capital Expenditures	Board Room A/V Improvements	350,000
		New Enterprise Backup Solutions	250,000
	Capital Expenditures Total		\$ 600,000
	Equipment Lease	Copier/Printer Lease	35,000
	Equipment Lease Total		\$ 35,000
	Telephone	AT & T Telecom Services	25,000
		Cellular/Mobile Services	55,000
		Phone/VOIP	125,000
	Telephone Total		\$ 205,000
	Infrastructure Maintenance	Anti-Virus Solution	7,500
		Arbutus Internal Audit Software Licensing	5,000
		Catalyst-Bullhorn Licensing	5,500
		Computer Room AC/Humidifier Maintenance	5,000
		Computer Room UPS Battery Replacement2	7,500
		Computer Room UPS Maintenance	5,000
		Data Center Hardware/Software Maintenance and Support	90,000
		Database Access	5,000
		Digital Content Subscription	500
		Dynamics Software Maintenance (incl: Sandler Kahne, AP Laser Chk, Key Chg)	14,500
		Electronic Signatures and forms	10,000
		Enterprise Remote Access	6,500
		Ethics and Fraud Reporting	2,500
		IBM DejaView One Maintenance and Support - V3	7,000
		McAfee Secure	3,500
		Microsoft Software Assurance	115,000
		NTIS Certification Fees	3,000
		Oracle - V3	70,000
		Patch Management Support	7,200

**Appendix A
2021 Budget Detail by Department**

Department	Account Group	Description	Total
		Pressure Sealer Maintenance and Support	1,500
		Printer & Microfiche Maintenance	2,500
		Satellite Phone support	5,500
		Server Hardware Support	10,000
		SmartBear Licensing	1,000
		SSL Certificates	2,500
		V3 Licensing and Support	412,000
		Vendor Management System License	11,000
		Web Conferencing Tools	3,500
		Website Hosting	25,000
		Work Station Hardware Support	10,000
	Infrastructure Maintenance Total		\$ 854,700
0070 - INFORMATION TECHNOLOGY Total			\$ 5,768,051
0080 - INTERNAL AUDIT	Personnel Cost	Annual Salary	277,273
		Certification Pay	6,388
		Fringe Benefits	162,203
		Leave P/O	12,128
	Personnel Cost Total		\$ 457,992
	Professional Svcs	Audit consultant / specialist / expert/IT Audit	134,250
	Professional Svcs Total		\$ 134,250
	Training	Assoc. Pension Fund Audit	3,000
		Miscellaneous Conferences/Training	6,240
		SACRS	1,200
	Training Total		\$ 10,440
	Mtg/Mileage	Miscellaneous Meetings	100
	Mtg/Mileage Total		\$ 100
	Membership	Miscellaneous Memberships	1,295
	Membership Total		\$ 1,295
	Periodicals	Reference books / research materials	200
	Periodicals Total		\$ 200
0080 - INTERNAL AUDIT Total			\$ 604,277
0090 - INFORMATION SECURITY	Personnel Cost	Annual Salary	298,845
		Fringe Benefits	163,057
		Leave P/O	13,072
	Personnel Cost Total		\$ 474,974
	Professional Svcs	Cloud Access Security Broker (CASB) Implementation	15,000
		DNS Security Implementation Services	15,000
		Info Sec Implementation Services Contingency	25,000
		Information Security Policy Development Services	20,000
		Managed Security / Detection & Response Services	80,000
		Microsoft 365 Security Consulting Services	20,000
		Network/Server Monitoring Software Implementation	5,000
		Penetration Testing Services	75,000
		Privileged Access Management (PAM) System Implementation	25,000
		Security Awareness Training	5,000
		Single Sign-On (SSO) Implementation Services	10,000
	Professional Svcs Total		\$ 295,000
	Training	Gartner Enterprise IT Leader Peer Forums	5,000
		Gartner Security & Risk Management Summit	5,000
		Information Security Conferences	4,000
		Information Security Training	30,000
		PRISM Conference	5,000
	Training Total		\$ 49,000
	Mtg/Mileage	Miscellaneous Meetings	500
	Mtg/Mileage Total		\$ 500
	Membership	Financial Services Information Sharing and Analysis Center Membership (FS-ISAC)	1,500
		Information Systems Security Association Membership (ISSA)	350
	Membership Total		\$ 1,850
	Periodicals	Miscellaneous periodicals	500
	Periodicals Total		\$ 500
	Equipment / Software	Cloud Access Security Broker (CASB)	35,000
		DNS Security Software	20,000
		Governance, Risk and Compliance Platform	30,000
		Network/Server Monitoring Software	10,000
		Privileged Access Management (PAM)	25,000
		Security Equipment / Software Contingency	25,000
		Single Sign-On (SSO) & Multi-Factor Authentication (MFA)	25,000
		Software Application Whitelisting	15,000
		Vulnerability Management System	11,000
	Equipment / Software Total		\$ 196,000
0090 - INFORMATION SECURITY Total			\$ 1,017,824
			\$ 28,283,900

Appendix B
2020 Administrative Budget Detail by Expense Category

Account Group	Description	Total
Personnel Cost	Annual Salary	\$ 9,392,145
	Certification Pay	76,225
	Fringe Benefits	5,509,070
	Overtime	87,000
	Leave P/O	410,001
	Temp Help	134,482
	Salary Adjustments	425,129
Personnel Cost Total		\$ 16,034,052
Professional Svcs	Actuarial Fees	400,000
	Additional Consulting	86,400
	Admin. Hearing Process Fees	175,000
	Architect/Design Consultant	40,000
	Audit consultant / specialist / expert/IT Audit	134,250
	Bank Charges	35,000
	BC/DR Avaluation Exercise Facilitation	25,500
	Board Election	78,000
	CAFR	20,000
	CEO Contingency	75,000
	Certificate Application Fees	1,400
	Cloud Access Security Broker (CASB) Implementation	15,000
	Colocation Facilities (monthly service)	78,000
	Compensation Study	30,000
	Consulting Fees-Investments	2,014,502
	Copy Service	20,000
	County VPN Access	150,000
	Court Filing Fees	1,000
	Court Reporter Fees	25,000
	Credit Safe	500
	Custodial Bank Fees	585,000
	CWCAP(County Wide Cost Allocation Plan)	40,000
	Cyber Security Vendor Monitoring Service	31,000
	Data Classification Study	100,000
	Death Records Match	20,000
	DNS Security Implementation Services	15,000
	Dynamics Consulting	4,000
	Financial Audit Cost	128,011
	Gartner Consulting	196,000
	Governance Consultant	15,000
	Info Sec Implementation Services Contingency	25,000
	Information Security Policy Development Services	20,000
	Insurance Premiums	180,000
	Internet Access	110,000
	Iron Mountain	18,500
	Lean Process Consultant/Study	25,000
	Managed Security / Detection & Response Services	80,000
	Medical Panel Reviews	275,000
	Microsoft 365 Security Consulting Services	20,000
	Mobile App/Enhanced Self-Service Portal	300,000
	Network/Server Monitoring Software Implementation	5,000
	Network Security Testing	68,000
	Office 365 Migration Consulting	180,000
	Online Data Storage	40,000
	Oracle Consulting	90,000
	Penetration Testing Services	75,000
	Plant Maintenance	3,550
Privileged Access Management (PAM) System Implementation	25,000	
Proxy Services	19,000	
Recruitment Costs	28,000	
Security	14,000	
Security Awareness Training	5,000	
Single sign-on (SSO) Implementation Services	10,000	
Subpoena Fees	1,000	
Technical Writer-Procedures	150,000	
Universal Protection Security (UPS)	4,000	

Appendix B
2020 Administrative Budget Detail by Expense Category

Account Group	Description	Total
	Vitech Addl. Support - Cos	215,000
	Volunteer Program Costs	500
	White Board / Animated Videos	50,000
Professional Svcs Total		\$ 6,575,113
Legal Svcs	Board/Fiduciary	125,000
	Dept of Ed vs OCERS	50,000
	Investment Legal Services	600,000
	Other Litigation	150,000
	Tax Attorney/Outside Counsel	35,000
Legal Svcs Total		\$ 960,000
Infrastructure Maintenance	Anti-Virus Solution	7,500
	Arbutus Internal Audit Software Licensing	5,000
	Catalyst-Bullhorn Licensing	5,500
	Computer Room AC/Humidifier Maintenance	5,000
	Computer Room UPS Battery Replacement	7,500
	Computer Room UPS Maintenance	5,000
	Data Center Hardware/Software Maintenance and Support	90,000
	Database Access	5,000
	Digital Content Subscription	500
	Dynamics Software Maintenance (incl: Sandler Kahne, AP Laser Chk, Key Chg)	14,500
	Electronic Signatures and forms	10,000
	Enterprise Remote Access	6,500
	Ethics and Fraud Reporting	2,500
	IBM DejaView One Maintenance and Support - V3	7,000
	McAfee Secure	3,500
	Microsoft Software Assurance	115,000
	NTIS Certification Fees	3,000
	Oracle - V3	70,000
	Patch Management Support	7,200
	Pressure Sealer Maintenance and Support	1,500
	Printer & Microfiche Maintenance	2,500
	Satellite Phone support	5,500
	Server Hardware Support	10,000
	SmartBear Licensing	1,000
	SSL Certificates	2,500
	V3 Licensing and Support	412,000
	Vendor Management System License	11,000
	Web Conferencing Tools	3,500
	Website Hosting	25,000
	Work Station Hardware Support	10,000
Infrastructure Maintenance Total		\$ 854,700
Bldg. Prop. Mgmt./Maintenance	Property Management	680,000
Bldg. Prop. Mgmt./Maintenance Total		\$ 680,000
Equipment / Software	Accounting Software Project	150,000
	AD Management and Auditing Tools	30,000
	Benchmark Subscriptions	10,000
	Bloomberg	50,000
	Backstop	100,000
	Board Portal	52,000
	Cloud Access Security Broker (CASB)	35,000
	Computers/Laptops/Monitors	50,000
	DNS Security Software	20,000
	Governance, Risk and Compliance Platform	30,000
	Information Security Remediation Contingency	50,000
	ITSM Solution	100,000
	Miscellaneous Hardware & Software Supplies (including printer)	30,000
	Network/Server Monitoring Software	10,000
	OpenDNS Subscription	5,000

Appendix B
2020 Administrative Budget Detail by Expense Category

Account Group	Description	Total
	Privileged Access Management (PAM)	25,000
	Project Management Tools	15,000
	Risk Management System	178,000
	Security Equipment / Software Contingency	25,000
	Single Sign-on (SSO) & Multi-Factor Authentication (MFA)	25,000
	Software Application Whitelisting	15,000
	Software Development Tools	18,000
	Video Camera / Video Equipment	2,500
	Vulnerability Management System	11,000
Equipment / Software Total		\$ 1,036,500
Training	Tuition Reimbursement	100,000
	Assoc. Pension Fund Audit	3,000
	Board Approved Conferences	25,000
	CALAPRS	16,800
	CEM Conference	5,000
	Conferences	23,000
	Executive Coaching	100,000
	Gartner Security & Risk Management Summit	5,000
	Gartner Enterprise IT Leader Peer Forums	5,000
	GFOA Conference	2,500
	HR Conferences	12,300
	IFEBP	4,800
	Information Security Conferences	4,000
	Information Security Training	30,000
	Learning and Development Program	53,300
	LCW Employment Law Conference	250
	MCLE and other training	5,000
	Miscellaneous Conferences/Training	30,540
	Miscellaneous Training Materials	2,500
	NAPPA Meetings	7,500
	NASRA	13,000
	NASRA/NIRS	3,800
	NCPERS - General & Safety	4,000
	OCERS Management Succession/Staff Training	25,000
	Online Training	30,000
	PRISM Conference	5,000
	Public Pension Financial Forum	2,500
	SACRS	19,350
	Staff Development Training	14,000
	Staff Training/Continuing Education	4,000
	Strategic Planning	26,000
	UC Berkeley	4,000
Training Total		\$ 586,140
Telephone	AT & T Telecom Services	25,000
	Cellular/Mobile Services	55,000
	Phone/VOIP	125,000
Telephone Total		\$ 205,000
Postage	Miscellaneous Mailing/Mass Mailing	40,000
	Pony Mail Services	4,000
	Postage Expense	75,000
	Quarterly Newsletters - All Members	65,000
Postage Total		\$ 184,000
Printing Svcs	Brochures	10,000
	CAFR (Comprehensive Annual Financial Report)	12,000
	Printing	15,000
	Quarterly newsletters	40,000
Printing Svcs Total		\$ 77,000
Due Diligence	Due Diligence	100,000
Due Diligence Total		\$ 100,000
Office Supplies	General Office Expense- Includes: Ergos, Safety items	55,000
	Office Furniture	30,000

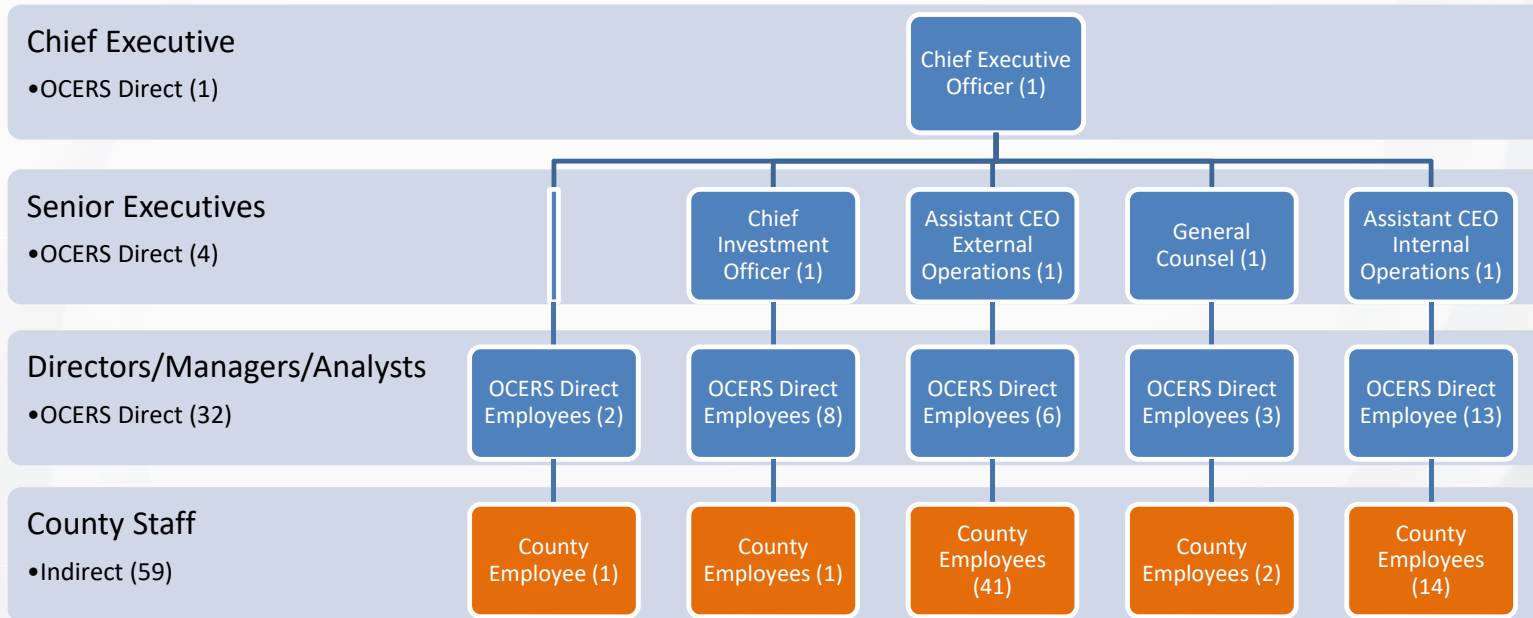
Appendix B
2020 Administrative Budget Detail by Expense Category

Account Group	Description	Total
	Public Relation Materials	10,000
Office Supplies Total		\$ 95,000
Equipment Lease	Copier/Printer Lease	35,000
	Postage Machine	14,500
Equipment Lease Total		\$ 49,500
Mtg/Mileage	CEO Visit to State Legislature	1,000
	CEO Visit to Federal Legislature	2,500
	CEO/Manager visits to Cal Retirement Systems	1,500
	Civic Center Parking Cards	250
	EE Recognition/Educational Seminar/Qtrly Meetings	9,500
	Investment Committee Meetings	16,000
	Membership Committee Meetings	5,500
	Miscellaneous Meetings	21,250
Mtg/Mileage Total		\$ 57,500
Membership	AICPA	600
	American Express	255
	CALAPRS	2,500
	CalCPA	525
	Coalition to Preserve Retirement Security	3,000
	Financial Services Information Sharing and Analysis Center Membership (FS-ISAC)	1,500
	GFOA	570
	Information Systems Security Association Membership (ISSA)	350
	International Foundation (IFEBP)	1,000
	Miscellaneous Memberships	41,695
	NASRA	3,000
	National Pension Education Assoc. (NPEA)	750
	NCPERS	2,050
	NIRS	3,500
	Notary	1,000
	P2F2 - Public Pension Financial Forum	150
	SACRS	6,000
Membership Total		\$ 68,445
Periodicals	Legal Publications, Daily Journal, Law Book Updates, Reference Books	12,500
	Miscellaneous periodicals	37,300
	Public Retirement Journal	950
	Reference books / research materials	200
Periodicals Total		\$ 50,950
Capital Expenditures	Board Room A/V Improvements	350,000
	Capitalized Roof Replacement	70,000
	New Enterprise Backup Solutions	250,000
Capital Expenditures Total		\$ 670,000
Grand Total		\$ 28,283,900



Appendix C OCERS Organization Chart

(96 team members, 94.5 FTE)



Staffing Plan
96 Budgeted Positions
102 Approved Classifications

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

Appendix C

OCERS
Personnel Cost Budget
2021

Department	Position	Employee Count	Regular Salary	Certification Pay	Fringe Benefits	Salary Adjustments	Overtime	Leave Payout	Temporary Help	Grand Total
Board										
	Board Member	-	18,900.00	-	-	-	-	-	-	-
Board Total			\$ 18,900.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 18,900.00
Executive										
	Chief Executive Officer	1	288,675.50	-	171,578.11	-	-	-	-	-
	Asst. CEO-Internal Operations	1	243,798.05	13,408.89	160,189.93	-	-	-	-	-
	Asst. CEO-External Operations	1	243,798.05	-	146,688.05	-	-	-	-	-
	Executive Secretary II	1	74,172.80	-	41,142.00	-	-	-	-	-
Executive Total		4	\$ 850,444.40	\$ 13,408.89	\$ 519,598.09	\$ -	\$ 1,000.00	\$ 37,199.72	\$ 15,000.00	\$ 1,436,651.11
Investments										
	Chief Investment Officer	1	330,947.14	18,202.09	180,679.00	-	-	-	-	-
	Managing Director-Investments	1	210,500.16	-	108,777.92	-	-	-	-	-
	Director-Investments	1	209,232.19	-	137,913.99	-	-	-	-	-
	Senior Investment Analyst	1	110,562.61	-	59,320.28	-	-	-	-	-
	Senior Investment Officer	1	158,165.49	-	85,894.79	-	-	-	-	-
	Investment Officer	1	138,478.70	7,616.33	79,309.76	-	-	-	-	-
	Investment Analyst	3	249,000.32	9,570.02	149,525.52	-	-	-	-	-
	Staff Specialist	1	62,608.00	-	32,779.37	-	-	-	-	-
Investments Total		10	\$ 1,469,494.61	\$ 35,388.44	\$ 834,200.63	\$ -	\$ 1,000.00	\$ 64,277.91	\$ -	\$ 2,404,361.59
Communications										
	Communications Manager	1	108,760.70	-	68,619.30	-	-	-	-	-
	Staff Specialist	1	73,507.20	-	40,857.57	-	-	-	-	-
Communications Total		2	\$ 182,267.90	\$ -	\$ 109,476.88	\$ -	\$ 500.00	\$ 7,972.67	\$ -	\$ 300,217.45
Legal										
	General Counsel	1	276,230.24	-	166,782.12	-	-	-	-	-
	Staff Attorney	3	489,555.46	-	253,955.43	-	-	-	-	-
	Paralegal	1	73,507.20	-	51,417.93	-	-	-	-	-
	Executive Secretary I	1	66,622.40	-	35,611.88	-	-	-	-	-
Legal Total		6	\$ 905,915.30	\$ -	\$ 507,767.36	\$ -	\$ 1,000.00	\$ 39,626.10	\$ -	\$ 1,454,308.76

Appendix C

OCERS
Personnel Cost Budget
2021

Department	Position	Employee Count	Regular Salary	Certification Pay	Fringe Benefits	Salary Adjustments	Overtime	Leave Payout	Temporary Help	Grand Total
Member Services										
	Director-Member Services	1	150,000.03	-	81,087.40					
	Member Services Manager	2	217,296.56	-	138,732.87					
	Retirement Analyst	1	140,321.17	-	70,163.62					
	Retirement Benefits Supervisor	3	246,355.20	-	150,868.26					
	Sr. Retirement Program Specialist	4	294,028.80	-	179,151.22					
	Sr. Staff Development Specialist	1	86,756.80	-	58,174.16					
	Retirement Program Specialist	12	770,265.60	-	461,122.29					
	Retirement Benefits Technician	4	203,424.00	-	109,973.79					
	Accounting Technician	5	281,756.80	-	177,135.39					
	Office Specialist	1	52,457.60	-	32,649.97					
	Office Technician	3	132,662.40	-	89,575.19					
	Extra Help-Retirement Program Specialist	3	-	-	1,297.48				89,481.60	
	Temporary Help	-	-	-	-				15,000.00	
Member Services Total		40	\$ 2,575,324.96	\$ -	\$ 1,549,931.65	\$ -	\$ 30,000.00	\$ 112,648.61	\$ 104,481.60	\$ 4,372,386.81
Finance										
	Director-Finance	1	165,915.15	9,125.33	103,897.75					
	Finance Manager	2	246,886.85	6,789.39	133,142.22					
	Sr. Accountant / Auditor I	1	94,161.60	-	56,175.10					
	Staff Analyst	1	93,190.24	5,125.46	61,549.03					
	Accountant Auditor II	2	160,784.00	-	84,077.68					
	Accountant Auditor I	1	38,032.80	-	18,132.50					
	Accounting Technician	1	56,804.80	-	43,539.86					
Finance Total		9	\$ 855,775.44	\$ 21,040.18	\$ 500,514.15	\$ -	\$ 1,000.00	\$ 37,432.91	\$ -	\$ 1,415,762.68
Disability										
	Disability Manager	1	90,536.37	-	64,945.60					
	Disability Investigator	2	147,014.40	-	94,275.70					
	Office Specialist	2	104,915.20	-	84,582.13					
Disability Total		5	\$ 342,465.97	\$ -	\$ 243,803.43	\$ -	\$ 1,000.00	\$ 14,979.98	\$ -	\$ 602,249.37
Human Resources										
	Director-Human Resources	1	158,524.08	-	86,060.77					
	Manager-Learning/Organization	1	95,000.05	-	43,371.86					
	Staff Analyst	2	182,647.30	-	110,137.92					
	Staff Assistant	1	31,304.00	-	18,422.16					
	Salary Adjustments	-	-	-	-	425,127.82				
	Temporary Help	-	-	-	-				15,000.00	
Human Resources Total		5	\$ 467,475.42	\$ -	\$ 257,992.71	\$ 425,127.82	\$ 1,500.00	\$ 20,448.08	\$ 15,000.00	\$ 1,187,544.03

Appendix C

OCERS
Personnel Cost Budget
2021

Department	Position	Employee Count	Regular Salary	Certification Pay	Fringe Benefits	Salary Adjustments	Overtime	Leave Payout	Temporary Help	Grand Total
Operations Support Services										
	Senior Manager-Operations Support Services	1	35,080.25	-	21,122.72					
	Contracts Administrator	1	119,044.85	-	60,885.52					
	Store Clerk	1	48,443.20	-	27,818.68					
Operations Support Total		3	\$ 202,568.30	\$ -	\$ 109,826.92	\$ -	\$ -	\$ 8,860.64	\$ -	\$ 321,255.86
IT										
	Director-Information Technology	1	163,046.00	-	86,638.27					
	Sr. Retirement Programmer/Business Analyst	1	133,556.80	-	77,625.11					
	I.T. Operations Supervisor	1	120,265.60	-	81,381.36					
	Sr. Applications Developer	2	221,956.80	-	121,725.78					
	Network Engineer II	1	102,190.40	-	66,316.24					
	System Technologist II	1	102,190.40	-	66,316.24					
	Systems Engineer II	1	102,190.40	-	50,698.75					
IT Total		8	\$ 945,396.40	\$ -	\$ 550,701.76	\$ -	\$ 50,000.00	\$ 41,353.07	\$ -	\$ 1,587,451.22
Internal Audit										
	Director-Internal Audit	1	161,120.13	-	85,616.65					
	Internal Auditor	1	116,153.23	6,388.43	76,586.12					
Internal Audit Total		2	\$ 277,273.36	\$ 6,388.43	\$ 162,202.76	\$ -	\$ -	\$ 12,128.36	\$ -	\$ 457,992.90
Information Security										
	Director-Information Security	1	158,524.08	-	87,625.10					
	Information Security Manager	1	140,321.17	-	75,432.32					
Information Security Total		2	\$ 298,845.25	\$ -	\$ 163,057.41	\$ -	\$ -	\$ 13,071.94	\$ -	\$ 474,974.60
Grand Total		96	\$ 9,392,147.31	\$ 76,225.94	\$ 5,509,073.74	\$ 425,127.82	\$ 87,000.00	\$ 410,000.00	\$ 134,481.60	\$ 16,034,056.40

Appendix D

**Orange County Employees Retirement System
21 Basis Points for Budget Year 2021**

Projected actuarial accrued liability as of December 31, 2020	\$ 22,980,997,000
21 basis points of projected actuarial accrued liability	48,260,094
FY21 proposed budget amount subject to 21 basis points limitation ¹	20,029,637
Amount under 21 basis points	\$ 28,230,457
Budgeted amount expressed as basis points of projected actuarial accrued liability-FY20	8.72
Budgeted amount expressed as basis points of projected actuarial accrued liability-FY19	9.04

¹ Reconciliation of amount subject to 21 basis points limitation:

Total FY21 proposed budget	\$ 28,283,900
Less: Investment-related costs (includes actuarial fees)	(6,208,363)
Total FY21 proposed administrative budget	22,075,537
Less: IT Capital expenses	-
Computer hardware/software	(698,500)
Information Security-Professional services consulting	(180,000)
InformationTechnology-Professional services consulting	(1,167,400)
FY21 proposed budget amount subject to 21 basis points limitation	\$ 20,029,637

<u>21 Basis Point History</u>					
	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>
21 Basis Points	8.55	9.31	8.93	9.04	8.72



Appendix E 5 Year Budget Comparison

	Budget 2017	Budget 2018	Budget 2019	Budget 2020	Proposed Budget 2021	\$ Variance FY20-21	% Variance FY20-21
Personnel Costs	\$ 12,417,428	\$ 13,925,194	\$ 14,764,600	\$ 15,507,410	\$ 16,034,052	\$ 526,642	3.4%
Services and Supplies	\$ 9,120,676	\$ 10,487,860	\$ 11,298,230	\$ 11,077,380	\$ 11,579,848	\$ 502,468	4.5%
Capital Expenditures	\$ 1,293,000	\$ 1,095,000	\$ 370,000	\$ 600,000	\$ 670,000	\$ 70,000	11.7%
Total	\$ 22,831,104	\$ 25,508,054	\$ 26,432,830	\$ 27,184,790	\$ 28,283,900	\$ 1,099,110	4.0%

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





Appendix E Actuals Compared to Proposed Budget

	Actuals 2017	Actuals 2018	Actuals 2019	Estimated Actuals 2020	Proposed Budget 2021	\$ Variance FY20-21	% Variance FY20-21
Personnel Costs	\$ 11,072,542	\$ 12,517,682	\$ 13,630,916	\$ 14,745,572	\$ 16,034,052	\$ 1,288,480	8.7%
Total Services and Supplies	\$ 6,624,158	\$ 7,886,743	\$ 8,159,215	\$ 8,744,993	\$ 11,579,848	\$ 2,834,855	32.4%
Total Capital Expenditures	\$ 342,523	\$ 163,663	\$ 52,264	\$ 196,408	\$ 670,000	\$ 473,592	241.1%
Total	\$ 18,039,222	\$ 20,568,087	\$ 21,842,395	\$ 23,686,973	\$ 28,283,900	\$ 4,596,927	19.4%

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



2021 Proposed Budget Compared to Actuals by Category

	Actuals 2017	Actuals 2018	Actuals 2019	Estimated Actuals 2020	Proposed Budget 2021	\$ Variance FY20-21	% Variance FY20-21
Personnel Costs	\$ 11,072,542	\$ 12,517,682	\$ 13,630,916	\$ 14,745,572	\$ 16,041,012	\$ 1,295,440	8.8%
Professional Services	3,988,579	4,480,145	4,782,275	5,233,527	6,575,113	1,341,586	25.6%
Legal Services	624,049	783,481	900,015	814,334	960,000	145,666	17.9%
Infrastructure Maintenance	553,149	722,048	691,482	806,491	854,700	48,209	6.0%
Miscellaneous Office Expenses	574,363	639,641	517,550	579,801	729,895	100,199	17.3%
Building Property Mgmt. / Maintenance	507,482	443,000	558,346	662,066	680,000	67,829	10.2%
Equipment/ Software Expenses	120,998	440,142	296,900	430,740	1,036,500	605,760	140.6%
Training	210,350	302,856	326,230	181,348	586,140	404,792	223.2%
Meeting & Mileage	45,187	75,430	86,417	36,686	157,500	120,814	329.3%
Total Services and Supplies	\$ 6,624,158	\$ 7,886,743	\$ 8,159,215	\$ 8,744,993	\$ 11,579,848	\$ 2,834,855	32.4%
Total Capital Expenditures	\$ 342,523	\$ 163,663	\$ 52,264	\$ 196,408	\$ 670,000	\$ 473,592	241.1%
Total	\$ 18,039,222	\$ 20,568,087	\$ 21,842,395	\$ 23,686,973	\$ 28,290,860	\$ 4,603,887	19.4%

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



Professional Services Administration

Description	Actuals 2017	Actuals 2018	Actuals 2019	Estimated Actuals 2020	Proposed Budget 2021	\$ Variance FY20-21	% Variance FY20-21
CEO and Board	\$ 7,027	\$ 104,468	\$ 52,962	\$ 9,279	\$ 357,000	\$ 347,721	3747.6%
Actuarial Fees	384,587	395,963	235,617	357,572	400,000	42,429	11.9%
Hearing Process and Other Legal Fees	80,168	134,453	198,355	156,310	202,000	45,690	29.2%
Financial Consultants	261,106	180,513	172,421	168,955	188,411	19,456	11.5%
Disability Related Consultants	298,919	276,671	305,018	316,893	295,000	(21,893)	-6.9%
Human Resources Consultants	138,440	90,917	73,040	62,614	98,500	35,886	57.3%
Operations Support Services	51,695	150,644	188,489	180,460	303,050	122,590	67.9%
Information Technology Consulting Services	1,295,391	708,650	857,186	1,218,776	1,613,400	394,624	32.4%
Information Security Consulting Services	-	-	106,785	171,392	295,000	123,608	72.1%
Other Consulting Services	1,399	141,637	116,997	60,962	204,250	143,288	235.0%
Total Administrative Professional Services	\$ 2,518,730	\$ 2,183,916	\$ 2,306,870	\$ 2,703,213	\$ 3,956,611	\$ 1,253,398	46.4%

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



Professional Services Investments



Description	Actuals 2017	Actuals 2018	Actuals 2019	Estimated Actuals 2020	Proposed Budget 2021	\$ Variance FY20-21	% Variance FY20-21
Investment Consultant	\$ 657,698	\$ 595,365	\$ 704,479	\$ 817,583	\$ 856,980	\$ 39,397	4.8%
Private Equity/Real Estate Consultants	309,000	1,103,695	1,172,252	1,114,057	1,157,522	43,465	3.9%
Custodial Bank Fees	437,500	578,750	580,000	580,000	585,000	5,000	0.9%
Investor Search/Proxy Services/Other	65,651	18,419	18,674	18,674	19,000	326	1.7%
Total Investments Professional Services	\$ 1,469,849	\$ 2,296,228	\$ 2,475,405	\$ 2,530,314	\$ 2,618,502	\$ 88,188	3.5%

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





Legal Services

Description	Actuals 2017	Actuals 2018	Actuals 2019	Estimated Actuals 2020	Proposed Budget 2021	\$ Variance FY20-21	% Variance FY20-21
Tax Attorney/Outside Counsel	\$ 37,854	\$ 19,139	\$ 20,069	\$ 16,375	\$ 35,000	\$ 18,625	113.7%
Board/Fiduciary	105,380	107,478	116,855	69,797	125,000	55,203	79.1%
Dept of Ed vs OCERS	29,515	47,400	43,678	92,574	50,000	(42,574)	-46.0%
Other Litigation	96,944	153,494	199,634	83,282	150,000	66,718	80.1%
Other Legal Matters	7,965	-	-	-	-	-	NA
Investment Legal Services	346,391	338,602	519,780	552,307	600,000	47,693	8.6%
Settlement Payment	-	117,368	-	-	-	-	NA
Total Legal Services	\$ 624,049	\$ 783,481	\$ 900,015	\$ 814,334	\$ 960,000	\$ 145,666	17.9%

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



Infrastructure Maintenance

Description	Actuals 2017	Actuals 2018	Actuals 2019	Estimated Actuals 2020	Proposed Budget 2021	\$ Variance FY20-21	% Variance FY20-21
V3 Licensing and Support	\$ 396,000	\$ 396,000	\$ 396,000	\$ 396,000	\$ 412,000	\$ 16,000	4.0%
Oracle V3	55,056	56,707	58,409	60,602	70,000	9,398	15.5%
Microsoft Software Assurance	-	83,109	41,555	90,046	115,000	24,954	27.7%
Data Center Maintenance	7,213	80,922	95,916	118,544	107,500	(11,044)	-9.3%
Anti-Virus Solution	13,723	7,200	7,200	11,574	7,500	(4,074)	-35.2%
Dynamics Software Mte	7,609	8,379	7,843	7,953	14,500	6,547	82.3%
Other Software Maintenance <\$10K	63,393	46,003	65,912	97,147	104,200	7,053	7.3%
Other Hardware Maintenance <\$10K	10,155	43,728	18,647	24,625	24,000	(625)	-2.5%
Total Equipment Maintenance	\$ 553,149	\$ 722,048	\$ 691,482	\$ 806,491	\$ 854,700	\$ 48,209	6.0%

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



Building Management and Maintenance



Description	Actuals 2017	Actuals 2018	Actuals 2019	Estimated Actuals 2020	Proposed Budget 2021	\$ Variance FY20-21	% Variance FY20-21
Property Management and Maintenance	\$ 507,482	\$ 443,000	\$ 558,346	\$ 662,066	\$ 680,000	\$ 17,934	2.7%
Total Building Management and Maintenance	\$ 507,482	\$ 443,000	\$ 558,346	\$ 662,066	\$ 680,000	\$ 17,934	2.7%

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





Miscellaneous Office Expense

Description	Actuals 2017	Actuals 2018	Actuals 2019	Estimated Actuals 2020	Proposed Budget 2021	\$ Variance FY20-21	% Variance FY20-21
Equipment Lease	\$ 61,001	\$ 46,478	\$ 51,958	\$ 38,718	\$ 49,500	\$ 10,782	27.8%
Memberships*	111,694	147,666	58,278	49,486	68,445	18,959	38.3%
Office Supplies	56,242	83,635	69,956	66,363	95,000	28,637	43.2%
Periodicals	4,588	14,855	16,624	19,364	50,950	31,586	163.1%
Postage	124,742	108,394	109,445	119,332	184,000	64,668	54.2%
Printing	102,827	105,755	70,455	65,710	77,000	11,290	17.2%
Telephone	113,270	132,858	140,835	220,828	205,000	(15,828)	-7.2%
Total Miscellaneous Office Expense	\$ 574,363	\$ 639,641	\$ 517,550	\$ 579,801	\$ 729,895	\$ 150,094	25.9%

*Gartner Consulting moved from Memberships to Professional Services in 2019.

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



Equipment and Software

Description	Actuals 2017	Actuals 2018	Actuals 2019	Estimated Actuals 2020	Proposed Budget 2021	\$ Variance FY20-21	% Variance FY20-21
Information Technology Department							
Board Portal	\$ 30,199	\$ 30,199	\$ 31,104	\$ 55,738	\$ 52,000	\$ (3,738)	-6.7%
Computers-Laptops-Monitors	21,987	222,312	24,499	101,998	50,000	(51,998)	-51.0%
Miscellaneous Hardware and Software	36,452	69,482	75,474	31,065	30,000	(1,065)	-3.4%
Wireless & Telecom Equip	4,956	2,247	-	5,152	-	(5,152)	-100.0%
SmartBear Licensing	3,594	3,414	2,276	3,414	-	(3,414)	-100.0%
AD Management and Auditing Tools	-	-	-	-	30,000	30,000	NA
OpenDNS Subscription	-	9,859	4,356	5,000	5,000	-	0.0%
Anti Spam Email Solution	-	15,505	12,707	-	-	-	NA
ITSM Solution	-	-	-	-	100,000	100,000	NA
Software Deployment Tools & Project Mgmt Tools	-	-	-	5,000	33,000	28,000	560.0%
Digital Signature Solution	-	-	-	9,425	-	(9,425)	-100.0%
Information Security Remediation	-	-	16,174	-	50,000	50,000	NA
Accounting Software Project	-	-	-	-	150,000	150,000	NA
Penetration Testing Software	-	-	-	-	-	-	NA
Bloomberg and Other Investment Databases	23,810	87,123	121,184	133,466	338,000	204,534	153.2%
Information Security Department							
Vulnerability Management System	-	-	9,125	9,482	11,000	1,518	16.0%
Single Sign-On (SSO)	-	-	-	7,100	25,000	17,900	252.1%
Multi-Factor Authentication (MFA)	-	-	-	17,700	-	(17,700)	-100.0%
Cloud Security Access Broker (CASB)	-	-	-	15,000	35,000	20,000	133.3%
Software Application Whitelisting	-	-	-	15,000	15,000	-	0.0%
Privileged Account Management (PAM)	-	-	-	15,000	25,000	10,000	66.7%
DNS Security Software	-	-	-	-	20,000	20,000	NA
Network/Server Monitoring Software	-	-	-	-	10,000	10,000	NA
Governance, Risk and Compliance Platform	-	-	-	-	30,000	30,000	NA
Security Equipment/ Software Contingency	-	-	-	-	25,000	25,000	NA
Other Departments							
Other	-	-	-	1,200	2,500	1,300	108.3%
Total Equipment and Software	\$ 120,998	\$ 440,142	\$ 296,900	\$ 430,740	\$ 1,036,500	\$ 605,760	140.6%

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



Training



Description	Actuals 2017	Actuals 2018	Actuals 2019	Estimated Actuals 2020	Proposed Budget 2021	\$ Variance FY20-21	% Variance FY20-21
Online Training	\$ 2,698	\$ 65,355	\$ 17,375	\$ 21,236	\$ 30,000	\$ 8,764	41.3%
Miscellaneous Conferences/Training	41,126	75,021	96,525	25,040	128,190	103,150	411.9%
Information Security Training (SANS)	21,559	16,204	32,859	23,527	34,000	10,473	44.5%
Board Approved Conferences	39,066	53,959	22,314	3,073	29,000	25,927	843.7%
SACRS	24,445	15,821	15,277	1,836	19,350	17,514	954.1%
Tuition Reimbursement	3,025	11,718	28,394	29,259	200,000	171,606	604.4%
Management Succession, Learning & Development, In-Class Training	17,127	6,983	38,560	62,735	78,300	15,565	24.8%
CALAPRS	25,243	14,302	34,999	7,312	16,800	9,488	129.8%
Strategic Planning	12,855	17,256	16,300	-	26,000	-	NA
NAPPA Meetings	6,772	6,451	3,848	3,482	7,500	4,018	115.4%
NASRA	16,333	17,936	16,147	3,849	13,000	9,151	237.8%
NCPERS-General and Safety	100	1,851	3,630	-	4,000	4,000	NA
Total Training	\$ 210,349	\$ 302,857	\$ 326,230	\$ 181,348	\$ 586,140	\$ 404,792	223.2%

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





Meetings and Mileage



Description	Actuals 2017	Actuals 2018	Actuals 2019	Estimated Actuals 2020	Proposed Budget 2021	\$ Variance FY20-21	% Variance FY20-21
Miscellaneous Meetings	\$ 36,669	\$ 41,993	\$ 60,125	\$ 22,530	\$ 57,500	\$ 34,970	155.2%
Due Diligence-Investments	8,519	33,436	26,292	14,156	100,000	85,844	606.4%
Total Meetings and Mileage	\$ 45,188	\$ 75,429	\$ 86,417	\$ 36,686	\$ 157,500	\$ 120,814	329.3%

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





Capital Expenditures

Description	Actuals 2017	Actuals 2018	Actuals 2019	Estimated Actuals 2020	Proposed Budget 2021	\$ Variance FY20-21	% Variance FY20-21
OCERS BC/DR	\$ 281,385	\$ 116,763	\$ -	\$ -	\$ -	\$ -	NA
Lobby Reception Security Project	61,138	-	-	-	-	-	NA
Space Management	-	46,900	21,841	-	-	-	NA
Building HVAC Repair	-	-	30,423	-	-	-	NA
Building Security, Safety and Health Upgrades	-	-	-	46,637	200,000	153,363	328.8%
Board Room Audio Visual Upgrades	-	-	-	-	250,000	250,000	NA
New Firewalls	-	-	-	149,772	150,000	228	0.2%
Capitalized Roof Replacemat	-	-	-	-	70,000	70,000	NA
Total Capital Expenditures	\$ 342,523	\$ 163,663	\$ 52,264	\$ 196,408	\$ 670,000	\$ 473,592	241.1%

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



Appendix F Historical Statistics

	2016	2017	2018	2019	2020
Number of Full-Time Positions Budgeted	75	79	92	93	93
Number of Retirees - Beginning of Year	15,810	16,369	16,947	17,674	18,420
Number of Additional Retirements ¹	1,006	1,061	1,080	1,203	1,154
Number Removed from Payroll ¹	(447)	(483)	(353)	(457)	(410)
Payroll \$ (in thousands) * ²	\$ 717,976	\$ 764,344	\$ 828,278	\$ 900,902	\$ 959,711
Number of Members ** ¹	43,485	44,471	45,629	47,197	47,964
Number of New Members ** ¹	1,058	986	1,135	1,450	767
Seminars	52	46	56	65	29

¹ 2020 amounts are as of October 2020

² 2020 amounts are annualized estimates based on actuals through August 2020.

* Payroll represents retirement payroll, withdrawals and death benefits

** Number of members includes active, deferred and retired (including beneficiaries).

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

Appendix G

OCERS Direct Employees

1.5% Salary Range Increase (Effective date January 1, 2021)

OCERS Employee Position	Current Annual Minimum	Revised Annual Minimum	Current Annual Midpoint	Revised Annual Midpoint	Current Annual Maximum	Revised Annual Maximum
Chief Investment Officer	\$220,631	\$223,940	\$275,789	\$279,926	\$330,947	\$335,911
General Counsel	\$139,991	\$142,091	\$208,111	\$211,232	\$276,230	\$280,373
Assistant Chief Executive Officer	\$139,991	\$142,091	\$191,895	\$194,773	\$243,798	\$247,455
Managing Director of Investments	\$139,991	\$142,091	\$191,895	\$194,773	\$243,798	\$247,455
Director of Investments	\$139,991	\$142,091	\$172,700	\$175,290	\$205,408	\$208,489
Deputy Legal Counsel	\$139,991	\$142,091	\$172,700	\$175,290	\$205,408	\$208,489
Director of Member Services	\$124,877	\$126,750	\$146,279	\$148,473	\$167,680	\$170,195
Director of Human Resources	\$121,016	\$122,831	\$139,770	\$141,867	\$158,524	\$160,902
Director of Finance	\$118,369	\$120,145	\$142,142	\$144,274	\$165,915	\$168,404
Staff Attorney	\$118,038	\$119,809	\$146,941	\$149,145	\$175,843	\$178,481
Senior Manager Operations Support Services	\$66,962	\$67,966	\$103,642	\$105,196	\$140,321	\$142,426
Senior Investment Officer	\$112,081	\$113,762	\$142,473	\$144,610	\$172,865	\$175,458
Director of Internal Audit	\$110,978	\$112,643	\$138,722	\$140,803	\$166,466	\$168,963
Director of Information Technology	\$108,661	\$110,291	\$135,854	\$137,891	\$163,046	\$165,492
Director of Information Security	\$108,661	\$110,291	\$133,593	\$135,596	\$158,524	\$160,902
Investment Officer	\$84,171	\$85,434	\$112,246	\$113,930	\$140,321	\$142,426
Internal Auditor	\$74,353	\$75,468	\$92,886	\$94,279	\$111,419	\$113,090
Senior Investment Analyst	\$73,691	\$74,796	\$98,292	\$99,766	\$122,892	\$124,735
Information Security Manager	\$66,962	\$67,966	\$103,642	\$105,196	\$140,321	\$142,426
Retirement Analyst	\$66,962	\$67,966	\$103,642	\$105,196	\$140,321	\$142,426
Finance Manager	\$63,211	\$64,159	\$93,327	\$94,727	\$123,443	\$125,295
Member Services Manager	\$63,211	\$64,159	\$93,327	\$94,727	\$123,443	\$125,295
Disability Manager	\$63,211	\$64,159	\$93,327	\$94,727	\$123,443	\$125,295
Learning and Organization Development Manager	\$63,211	\$64,159	\$93,327	\$94,727	\$123,443	\$125,295
Contracts, Risk & Performance Administrator	\$63,211	\$64,159	\$93,327	\$94,727	\$123,443	\$125,295
Communications Manager	\$63,211	\$64,159	\$88,198	\$89,520	\$113,184	\$114,882
Staff Analyst	\$63,211	\$64,159	\$84,337	\$85,602	\$105,462	\$107,044
Investment Analyst	\$63,211	\$64,159	\$84,337	\$85,602	\$105,462	\$107,044



Memorandum

DATE: November 16, 2020
TO: Members of the Board of Retirement
FROM: Steve Delaney, Chief Executive Officer
SUBJECT: **PROPOSED 2021 REGULAR BOARD MEETING AND INVESTMENT COMMITTEE MEETING SCHEDULE**

Recommendation

Approve the proposed 2021 Regular Board Meeting and Investment Committee Meeting Schedule.

Background/Discussion

On November 16, I will use the attached documents to review each month of 2021 and determine the best dates for the Board meeting as well as the Investment Committee meeting to be held.

Submitted by:



SD - Approved

Steve Delaney
Chief Executive Officer

2021 Meeting Calendar

(Including Conference Dates)

January						
Su	Mo	Tu	We	Th	Fr	Sa
					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						

February						
Su	Mo	Tu	We	Th	Fr	Sa
	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						

March						
Su	Mo	Tu	We	Th	Fr	Sa
	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			

April						
Su	Mo	Tu	We	Th	Fr	Sa
				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	

May						
Su	Mo	Tu	We	Th	Fr	Sa
						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					

June						
Su	Mo	Tu	We	Th	Fr	Sa
		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			

July						
Su	Mo	Tu	We	Th	Fr	Sa
				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

August						
Su	Mo	Tu	We	Th	Fr	Sa
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				

September						
Su	Mo	Tu	We	Th	Fr	Sa
			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		

October						
Su	Mo	Tu	We	Th	Fr	Sa
					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						

November						
Su	Mo	Tu	We	Th	Fr	Sa
	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				

December						
Su	Mo	Tu	We	Th	Fr	Sa
			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	

Federal Holidays 2021

Jan 1	New Year's Day	May 31	Memorial Day	Sep 6	Labor Day	Nov 25	Thanksgiving Day
Jan 18	Martin Luther King Day	Jul 4	Independence Day	Oct 11	Columbus Day	Dec 24	Christmas Day (obs.)
Feb 15	Presidents' Day	Jul 5	Independence Day (obs.)	Nov 11	Veterans Day	Dec 25	Christmas Day
						Dec 31	New Year's Day (obs.)

SACRS 2021 CONFERENCES		
Spring Conference	May 11-14, 2021	Long Beach, CA
Fall Conference	November 9-12, 2021	Hollywood, CA
SACRS/UC Berkeley Program	July 18-21, 2021	Berkeley, CA

CALAPRS 2021 CONFERENCES		
General Assembly	March 8-9, 2021	Virtual
Advanced Principals of Pension Governance for Trustees at UCLA	March 31-April 2, 2021	Los Angeles, CA
Principles of Pension Governance for Trustees at Pepperdine University	Not yet listed	Not yet listed

NASRA 2021 CONFERENCES		
Winter Meeting	February 20-24, 2021	Washington, DC
Annual Conference	August 7-11, 2021	Pittsburgh, PA

NCPERS 2021 CONFERENCES		
Legislative Conference	Not yet listed	
Trustee Educational Seminar (TEDS)	Not yet listed	
Program for Advanced Trustee Studies (PATS)	Not yet listed	

NCPERS Accredited Fiduciary Program (NAF) Modules 1&2	February 23-26, 2021	Virtually
NCPERS Accredited Fiduciary Program (NAF) Modules 3&4	March 2-5, 2021	Virtually
Annual Conference & Exhibition (ACE)	Not yet listed	
Public Safety Conference	Not yet listed	

IFEBP 2021 CONFERENCES		
Institute for Apprenticeshop, Training and Education Programs	January 26, 2021	Virtually
Evidence, Insight and Strategy for Optimizing Health Benefits	May 11-13, 2021	Boston, MA
Health Benefits Conference & Expo	May 26, 2021	Clearwater, FL
Trustees and Administrators Institute	June 28-July 2, 2021	San Diego, CA
Certificate Series: - Health Benefit Plan - Basics Organizational Strategies for Health and Financial Wellness - Basics of Employee Benefits Administration -Retirement Plan Basics -Total Rewards and Workforce Strategies - Funding and Finance of Health Benefits - Basic Compensation Concepts - Health Care Cost Management - Communicating Employee Benefits	July 12-17, 2021	Chicago, IL
Certificate in Global Benefits Management	July 12-16, 2021	Chicago, IL

Certificate of Achievement in Public Plan Policy (CAPPP®)—Pensions – Part 1 & 2	July 13-16, 2021	Chicago, IL
Fraud Prevention Institute for Employee Benefit Plans	July 19-20, 2021	Nashville, TN
40th Annual ISCEBS Employee Benefits Symposium	September 19-22, 2021	Minneapolis, MN
<p>Certificate Series:</p> <ul style="list-style-type: none"> - Health Care Cost Management - Retirement Plan Basics - Basics of Employee Benefits Administration - Health Benefit Plan Basics - Investment Basics - Total Rewards and Workforce Strategies - Ancillary Benefit Plans - 401(k) Plans - Organizational Strategies for Health and Financial Wellness - Communicating Employee Benefits 	September 27-October 2, 2021	Orlando, FL
67th Annual Employee Benefits Conference	October 17, 2021	Denver, CO



Memorandum

DATE: November 16, 2020
TO: Members of the Board of Retirement
FROM: Roger Hilton, Board Chair
SUBJECT: **COMPENSATION OF THE CHIEF EXECUTIVE OFFICER**

Written Report

Background:

OCERS's Chief Executive Officer Performance Evaluation Policy states that a formal evaluation will be conducted annually and the Board will consider compensation at the time the performance evaluation is conducted. The Brown Act code 54957 requires the Board to discuss the Chief Executive Officer's Compensation during an open session. In prior years, the Board has requested comparable CEO compensation data from other pension systems and organizations which are both close in proximity and size to OCERS, as well as base compensation history for Mr. Delaney. Attached are the CEO Compensation Performance Evaluation documents used to evaluate the CEO.

Attachments:

1. CEO Performance Evaluation Policy
2. Chief Executive Officer Charter
3. 2020 OCERS Business Plan
4. Blank CEO Evaluation Form (PDF)
5. 2020 CEO Total Compensation History
6. 2020 CEO Compensation Comparison Spreadsheet



OCERS Board Policy

Chief Executive Officer Performance Evaluation Policy

Background and Objectives

1. The Board of Retirement supervises the Chief Executive Officer. Formal evaluation procedures and practices are required. This process shall be performed on an annual basis.
2. The objectives of this policy are to:
 - a. Assist the Board in arriving at and communicating clear and meaningful goals and performance targets for the Chief Executive Officer;
 - b. Ensure that the Chief Executive Officer receives meaningful, objective, and timely feedback that will allow the Chief Executive Officer to perform, over time, at the highest levels possible; and
 - c. Enable the Board to hold the Chief Executive Officer accountable for performance.

Roles

3. The Board will be responsible for evaluating the performance of the Chief Executive Officer.
4. The Chair and Vice Chair will be responsible for coordinating the evaluation process. The Board may use a third party to facilitate the process.

Policy Guidelines

Process and Timelines

5. The Chief Executive Officer will discuss the following items with the Chair during November each year:
 - a. Proposed CEO evaluation criteria for the coming calendar year;
 - b. Proposed weights for each of the above criteria; and
 - c. Proposed CEO Evaluation Form for the coming calendar year.
6. In addition, the CEO's performance for the prior twelve months may be based on the six categories below:
 - a. Achievement of performance targets established for the System as a whole;
 - b. Implementation of the annual Business Plan;
 - c. Implementation of Board policies and associated reporting to the Board;
 - d. Leadership and related qualities;
 - e. Ability to address special developments or situations that may arise; and
 - f. Other criteria that the Board may determine to be appropriate.



OCERS Board Policy

Chief Executive Officer Performance Evaluation Policy

7. The Board will attempt to ensure that the criteria:
 - a. Are objective and measurable; and
 - b. Pertain only to outcomes over which the Chief Executive Officer has a reasonable degree of control.
8. The Chair shall distribute the CEO Evaluation Package to each member of the Board in October of each year. The Evaluation Package will include copies of the Evaluation Form to be completed by each Board member, Business Plan, and the CEO's self-evaluation. The Chief Executive Officer's self-evaluation report is designed to assist the Board in the evaluation process. It should describe the extent to which the CEO believes the evaluation criteria were met over the past year, as well as all relevant supporting data. Supporting data may be confirmed by internal audit material where appropriate. The report may also describe any additional accomplishments during the year.
9. The Board shall treat this material as confidential. Completed individual Evaluation Forms will be returned to the Chair or the designated third party with a copy to the Vice Chair within the time frame specified. The Chair will ensure that all data is tabulated and summarized in a Master CEO Evaluation Form and treated as confidential until released to the Board.
10. Evaluation of the Chief Executive Officer will be completed by November each year. The evaluation process itself will be conducted in executive session. The Chair will distribute a copy of the Master CEO Evaluation Form and invite discussion by the Board. At the conclusion of discussion, the Chief Executive Officer will join the Board for review and discussion of his/her performance along with any suggestions for improvement. The Board may have preliminary discussions in October, but will complete the process by November.
11. Upon completion of the Master CEO Evaluation Form, the Chair and the Chief Executive Officer will sign the Master CEO Evaluation Form and cause it to be placed in the Chief Executive Officer's personnel file.

Documentation

12. The Individual and Master CEO Evaluation Form(s) may take any format the Board deems appropriate, but must allow Board members an opportunity to provide general comments.

Compensation

13. The Board of Retirement will consider the Chief Executive Officer's compensation at the time the performance evaluation is conducted.



OCERS Board Policy Chief Executive Officer Performance Evaluation Policy

Policy Review

14. The Board will review this policy at least every three years to ensure that it remains relevant and appropriate.

Policy History

15. This policy will be implemented in February 19, 2002. This policy was revised May 16, 2005, May 19, 2008, March 22, 2010, January 21, 2014 , November 14, 2016 and August 19, 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
Secretary of the Board

08/19/19

Date



OCERS Board Charter CEO Charter

Introduction

1. The Board of Retirement (Board) will appoint a Chief Executive Officer (CEO) who will serve at its pleasure. The CEO is the most senior executive of OCERS and is not subject to county civil service and merit system rules. This charter sets out the roles and responsibilities of the CEO.

Duties and Responsibilities

Leadership and Policy Analysis

2. The CEO will provide leadership for the OCERS staff in implementing the programs necessary to achieve the mission, goals and objectives established by the Board. The CEO will manage the day-to-day affairs of OCERS in accordance with policies established by the Board, and may delegate duties to senior management as necessary. In so doing, the CEO will solicit advice and counsel from the Board, the Board Chair, or individual Board members, as appropriate.
3. The CEO will provide support to the Board and its committees in establishing all policies of the Board including identifying and analyzing issues requiring Board policy, and providing well-supported policy recommendations for consideration by the Board or its committees.
4. The CEO will be responsible for ensuring that all policies of the Board and provisions of the County Employees Retirement Law, with the exception of governance policies pertaining to the conduct of the Board, are properly implemented.

Governance

5. The CEO will:
 - a. Recommend to the Governance Committee policies to help ensure appropriate governance practices;
 - b. Assist the Board in implementing its governance policies, charters, and By-Laws; and
 - c. Assist with Board member education and travel.
6. The CEO will serve as Secretary to the Board and, as such, will carry out the following duties:
 - a. Coordinate meetings, agendas, schedules and presentations for both Board and committee meetings in accordance with the Ralph M Brown Act (California Government Code §§54950, *et seq.*);
 - b. Maintain minutes of Board and committee meetings;
 - c. Sign minutes upon approval of the Board;
 - d. Sign subpoenas; and
 - e. Serve as OCERS' filing officer for purpose of compliance with the California Political Reform Act and regulations of the Fair Political Practices Commission.



OCERS Board Charter CEO Charter

Investments

7. The CEO will:
 - a. Employ a Chief Investment Officer (CIO) with appropriate education and experience in institutional investing;
 - b. Carry out the duties described in this section through the CIO and other professional investment staff;
 - c. Recommend to the Investment Committee an Investment Policy Statement which will include investment objectives;
 - d. Recommend to the Investment Committee strategies for achieving OCERS' investment objectives;
 - e. Ensure the implementation of the strategies approved by the Board by establishing manager structures for each asset class, which includes among other things determining:
 - i. The number of investment manager mandates to be established; and
 - ii. The size of each investment manager mandate.
 - f. Ensure execution of portfolio rebalancing and portfolio transitions;
 - g. Ensure that necessary research is performed into investment trends, issues and opportunities that may have implications for the OCERS investment program;
 - h. Ensure all necessary investment manager due diligence is performed in accordance with the Investment Policy Statement of the Board; and
 - i. Oversee the CIO's hiring and termination of investment managers.

Benefits Administration

8. The CEO will:
 - a. Recommend to the Board, as necessary, policies to ensure effective and efficient administration of member benefits;
 - b. Ensure accurate payment of benefits to members, and address problems or errors in accordance with established policies and procedures;
 - c. In consultation with medical evaluators and legal counsel, recommend disability applications to the Board and the Disability Committee for each of their consideration;
 - d. Maintain accurate records of member accounts;
 - e. Ensure delivery of high standards of service to members including calculations and counseling; and
 - f. Develop staff policies and procedures to ensure effective and efficient administration of member benefits.



OCERS Board Charter CEO Charter

Operations

9. The CEO will:
 - a. Recommend to the Board, as appropriate, Board policies designed to help ensure effective operations;
 - b. Develop and recommend to the Board a business plan and updates to the plan as necessary;
 - c. Recommend the annual Operating Budget to the Board;
 - d. Transfer funds within a category of expenditures (i.e., Salaries and Benefits; Services and Supplies; Capital Projects) within the approved Operating Budget;
 - e. Execute contractual agreements in accordance with the Procurement and Contracting Policy and authorize payments related to the administration of OCERS, consistent with the Operating Budget and OCERS' internal controls;
 - f. Account for and ensure appropriate collection, deposit and distribution of funds as required;
 - g. Implement internal operational control policies;
 - h. Ensure the appropriate design, acquisition, implementation, and maintenance of all technological systems required to administer OCERS;
 - i. Maintain the records of OCERS in a permanent and readily accessible format and in accordance with the Record Retention Policy and Guidelines;
 - j. Assist the Audit Committee in coordinating operational audits; and
 - k. Maintain an effective working relationship with the County and other plan sponsors of OCERS.

Finance, Actuarial and Accounting

10. The CEO will:
 - a. Recommend to the Audit Committee as appropriate, financial and accounting policies;
 - b. Implement appropriate internal financial controls to safeguard the assets of the OCERS;
 - c. Assist the Audit Committee in coordinating the annual financial audit;
 - d. Coordinate the actuarial valuation, actuarial experience studies, and actuarial audits;
 - e. Cause to be prepared a comprehensive annual financial report on the operations of OCERS for Board approval; and
 - f. File in the office of the County Auditor and with the Board of Supervisors a sworn statement which will exhibit the financial condition of the OCERS at the close of the preceding calendar year and its financial transactions for the year ending on that day as required by Government Code §31597.

Human Resources

11. The CEO will:
 - a. Recommend human resources and compensation policies to the Board;



OCERS Board Charter CEO Charter

- b. Assess the human resources needs of OCERS and establish and implement appropriate human resources programs and procedures, consistent with the human resources and compensation policies of the Board;
- c. Hire, manage and terminate senior management, and approve all personnel decisions concerning OCERS staff; and
- d. Implement and lead agency training, talent development and succession planning.

Legislation and Litigation

12. The CEO will:
- a. Recommend legislative proposals for approval by the Board;
 - b. Conduct and oversee the assigning, directing, and handling of litigation, claims, demands, disputes or legal proceedings involving OCERS and report material developments in these matters to the Board on a timely basis;
 - c. In consultation with legal counsel, provide recommendations to the Board concerning the initiation and settlement of litigation, including administrative appeals, involving OCERS; and
 - d. Oversee the development and implementation of plans to comply with newly enacted legislation and court rulings, as applicable.

Communications

13. The CEO will:
- a. Ensure effective and timely communications with stakeholders on matters relating to the administration of OCERS. Such communications may include press releases, newsletters, presentations, and internet communications; and
 - b. In situations that call for an official spokesperson to speak on behalf of OCERS, jointly determine with the Chair, on an issue-by-issue basis, who will act in such capacity.

Appointment of Service Providers

14. The CEO will cause the necessary due diligence to be performed for Named Service Providers, as listed in the Board Procurement and Contracting Policy, and will provide the Board with appropriate recommendations, in accordance with the Procurement and Contracting Policy and the Investment Policy Statement of the Board.
15. The CEO may hire other service providers, consistent with the Operating Budget and the Procurement and Contracting Policy and other policies of the Board, provided that the Board has not specifically retained the authority to hire such service providers.

Monitoring and Reporting

16. The CEO will provide the Board with relevant, appropriate and timely information to enable it to properly carry out its oversight and fiduciary responsibilities. Furthermore, the CEO will apprise the Board in a timely manner of all significant issues, problems, or



OCERS Board Charter CEO Charter

developments pertaining to OCERS and provide recommended courses of action as appropriate.

17. The CEO will:

- a. Oversee the regular review of all policies of OCERS to ensure they are being followed and continue to meet OCERS' needs;
- b. Oversee the activities of the Investment Division and report annually to the Board regarding the administrative oversight of the division, including identifying any issues that arose during the reporting period;
- c. Oversee the funded status of OCERS and all issues that may reasonably have a significant impact on such status;
- d. Oversee the investment performance of the Fund, the component asset classes, and the investment managers retained to manage the assets of the Fund;
- e. Oversee management's response to the findings of the annual financial audit, and of any internal audits that may be performed;
- f. Oversee employees and service providers of OCERS to ensure compliance with the OCERS policies;
- g. Oversee the activities and performance of key service providers including the actuary, financial auditor, investment consultant, legal counsel, and custodian on a regular basis;
- h. Oversee the activities and performance of senior management;
- i. Oversee the collection of all payments due to OCERS and the payment of all amounts due by OCERS to ensure accuracy and timeliness;
- j. Oversee OCERS' compliance with applicable laws and regulations; and
- k. In conjunction with legal counsel, oversee the status of all claims, demands, disputes and legal proceedings involving OCERS and report to the Board as appropriate.

Emergency Authority

18. In emergency situations, the CEO, after making reasonable attempts to contact the Board Chair and Vice Chair, will have the authority to act on matters not expressly stated within this charter provided that:
- a. The action is, in the CEO's judgment, necessary to protect the System, its employees, the Fund, or System assets from loss or harm that is reasonably likely to occur if action is delayed for the scheduling of a notices meeting of the Board or its committees; and



OCERS Board Charter CEO Charter

- b. The CEO promptly reports to the Board the emergency action taken, and the reasons why the CEO determined action was immediately necessary.

Charter Review

- 19. 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.
- 20. This charter was adopted by the Board on November 18, 2002, and amended on August 25, 2008, July 20, 2015, April 18, 2018, and March 18, 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.

A handwritten signature in blue ink that reads "Steve Delaney".

03/18/19

Steve Delaney
Secretary of the Board

Date

Orange County Employees Retirement System
2223 East Wellington Avenue | Santa Ana | 92701

2020 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

2020-2022 STRATEGIC GOALS

- Fund Sustainability
- Excellent Service and Support
- Risk Management
- Talent Management
- Effective Governance

FUND SUSTAINABILITY

GOAL: STRENGTHEN THE LONG-TERM STABILITY OF THE PENSION FUND

Business Plan Initiatives

Objective A: Mitigate the Risk of Significant Investment Loss

Executive Lead – Molly Murphy

1. Conduct and begin implementation of a triennial asset allocation study
2. Conduct a competitive procurement for an investment/risk management system

Objective B: Prudent Use and Security of Resources

Executive Leads – Molly Murphy;

1. Investigate Custodial Bank Services options

EXCELLENT SERVICE AND SUPPORT

GOAL: ACHIEVE EXCELLENCE IN THE SERVICE AND SUPPORT WE PROVIDE TO OUR MEMBERS AND PLAN SPONSORS

Business Plan Initiatives

Objective A: Provide Accurate and Timely Benefits

Executive Leads – Suzanne Jenike;

1. Streamline the service retirement process by implementing;
 - a. LEAN action items
 - b. Application packets
2. Improve customer service standards by enhancing V3 workflows, monitoring and reporting (year two)

Objective B: Provide Education to our Members and Employers

Executive Lead – Suzanne Jenike

1. Design and implement a bi-annual employer workshop
2. Create white board videos that will provide education to members and stakeholders about OCERS benefits (year two)

Objective C: Continuously Improve Business Processes and Procedures to be Efficient and Effective

Executive Lead – Brenda Shott and Suzanne Jenike

1. Explore the process of obtaining LEAN certifications
2. Identify additional business process to implement LEAN principles
3. Procure and begin conversion to new accounting software

RISK MANAGEMENT

GOAL: CULTIVATE A RISK-INTELLIGENT ORGANIZATION

Business Plan Initiatives

Objective A: Provide System and Data Security and a Robust Business Continuity Solution

Executive Leads – Brenda Shott, Matt Eakin & Jenny Sadoski

1. Continue implementation plan for security and operational best practice controls
2. Continuously assess current Information Security environment and address identified risks:
 - a. Implement software application whitelisting solution to prevent the installation and execution of unknown programs on OCERS systems
 - b. Implement a Privileged Account Management (PAM) solution to secure, control, manage and monitor privileged accounts
 - c. Perform review of firewall solutions and migrate to new firewall solution if warranted
 - d. Continue development of OCERS data map, data classification structure and data exchange flows and identify associated risks (year two)
 - e. Develop a process for mitigating risks associated with external third party IT business partners
3. Implement tools and processes to mitigate the risk of data or financial loss or information disclosure:

- a. Implement an Identity and Access Management (IAM) solution incorporating Single Sign-On (SSO) and Multi-Factor Authentication (MFA)
 - b. Implement tools to secure OCERS cloud based environments
 - c. Implement automated hardware and software inventory tool
 - d. Enhance processes between Managed Security / Managed Detection & Response vendor and Information Security staff
 - e. Determine alternative methods of exchanging member identification protocols
4. Enhance the Business Continuity and Disaster Recovery Program:
- a. Establish alternate work space / work site plan (year two)
 - b. Expand the Business Continuity and Disaster Recovery test plan

Objective B: Ensure a Safe and Secure Workplace and Public Service Facility
Executive Lead – Brenda Shott

- 1. Plan and implement building security, safety and health upgrades and space management projects (year three)

TALENT MANAGEMENT

GOAL: RECRUIT, RETAIN AND INSPIRE A HIGH-PERFORMING WORKFORCE

Business Plan Initiatives

Objective A: Recruit and Retain a Diverse High-Performing Workforce to Meet Organizational Priorities

Executive Lead – Steve Delaney and Cynthia Hockless

1. Enhance onboarding and transitioning of new hires into the organization
 - a. Continue to expand the newly implemented onboarding process
2. Expand advertising and outreach sources in order to continue to encourage diversity in recruitments
3. Implement recommendations from workforce analysis (year three)
4. Implement recommendations of the Personnel Committee regarding staff retention strategies

Objective B: Develop and empower every member of the team

Executive Lead – Steve Delaney

1. Design and develop a comprehensive training program that embeds a talent management mindset throughout the organization
2. Customize training programs based on individual needs and career goals within OCERS
3. Create succession plans across the agency (year three)
4. Develop a comprehensive standardized library of procedure manuals accessible on the OCERS Intranet following last year's initial review

Objective C: Cultivate a Collaborative, Inclusive and Creative Culture

Executive Lead – Steve Delaney

1. Explore methods to measure OCERS culture of engagement and continuous improvement
2. Provide inclusion training to staff
3. Celebrate OCERS 75th Anniversary

EFFECTIVE GOVERNANCE

GOAL: IMPROVE THE EFFECTIVENESS AND EFFICIENCY OF THE BOARD AND STAFF BY CLARIFYING ROLES AND RESPONSIBILITIES, IMPROVING OVERSIGHT, CLARIFYING ACCOUNTABILITY AND IMPROVING DECISION MAKING

Objective A: Employ a Governance Structure that Supports a Dynamic System

Executive Lead – Steve Delaney

1. Explore methods of focusing Board and staff time and effort on activities that support or advance OCERS' Strategic Goals

Objective B: Improve the Governance and Management of OCERS' Records

Executive Lead – Gina Ratto

1. Identify “best practices” in record retention
2. Develop and implement a records retention program that reflects best practices and identifies appropriate retention periods for each category of records
3. Establish storage protocols and automate destruction schedules for electronic mail
4. Establish an alternative “work space” and/or storage place for emails
5. Systematically bring each department within OCERS into compliance with the records retention program
6. Establish procedures to maintain and audit compliance with the record retention program



ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM
www.ocers.org



Orange County Employees Retirement System Chief Executive Officer 2020 Performance Review

CEO Name: Steve Delaney

Performance Review Period: January 1 - December 31, 2020

Board Member Name:

Date:

Rating Scale:

Superior		Above Average			Average		Below Average		Unsatisfactory	
10	9	8	7	6	5	4	3	2	1	0

1. Fund Security and Sustainability:

Performance Rating: 0

2. Risk Management:

Performance Rating: 0

3. Talent Management:

Performance Rating: 0

4. Direction and oversight of benefit administration:

Performance Rating: 0

5. Direction and oversight of the investment program:

Performance Rating: 0

6. Direction and oversight of internal operations:

Performance Rating: 0

7. Communications (membership, sponsors, Board, staff, public):

Performance Rating: 0

8. Addressing exigent situations that arose during year:

Performance Rating: 0

9. **Addressing the Opportunities to Grow identified in this evaluation:**

Performance Rating: 0

10. **Overall leadership and development of the organization (e.g., staff training and development, improvement of work processes, policy development, professionalism of the organization):**

Performance Rating: 0

11. **Overall Performance Rating Comments:**

12. **Total Performance Rating (please add your total score from questions 1 - 10) 100 points possible:**

Total Performance Rating: 0

Average Performance Rating: 0.00

OCERS CEO Total Compensation Cost History

Name: Steve Delaney
Date of Hire: 1/2/2008

CEO Compensation										Total Base Salary Lump Sum Auto Allowance AL Cash Out, OBP
Year	Increase Effective Date	% Increase over prior year	Base Salary Increase	Base Salary	Lump Sum	Notes	Auto Allowance	Annual Leave (AL) Cash Out	Optional Benefit Plan (OBP)	Annualized
2020	1/3/2020	3%	\$8,408	\$288,675	\$5,605	3.0% Annual Salary Adjustment & 2.0% lump sum - 2019 Performance Evaluation	\$0	\$23,290	\$4,500	\$322,070
2019	1/4/2019	2.5%	\$6,836	\$280,267	\$6,836	2.5% Annual Salary Adjustment & 2.5% lump sum - 2018 Performance Evaluation	\$0	\$22,906	\$4,500	\$314,509
2018	1/5/2018	5%	\$12,006	\$273,437	\$0	5% Annual Salary Adjustment - 2017 Performance Evaluation	\$0	\$22,348	\$4,500	\$300,285
2017	1/6/2017	3%	\$7,614	\$261,431	\$0	3% Annual Salary Adjustment - 2016 Performance Evaluation	\$0	\$20,739	\$4,500	\$286,670
2016	None for 2016	0%	\$0	\$253,817	\$0	Last increase effective date 1/9/2015	\$0	\$10,982	\$4,500	\$269,299
2015	1/9/2015	0%	\$0	\$253,817	\$5,076	One time 2% non-base building performance award	\$0	\$20,745	\$4,500	\$284,138
2014	12/27/2013	2%	\$4,977	\$253,817	\$0	Annual Merit	\$0	\$20,745	\$4,500	\$279,062
2013	6/2/2013	3%	\$7,248	\$248,840	\$0	Annual Merit	\$0	\$10,454	\$4,500	\$263,794
2012	1/13/2012	14%	\$29,640	\$241,592	\$0	Stop employee contribution pick up move to salary	\$0	\$0	\$4,500	\$246,092
2012	12/16/2011	4%	\$8,154	\$211,952	\$0	Annual Merit	\$0	\$0	\$0	\$211,952
2011	12/17/2010	5%	\$9,194	\$203,798	\$0	Stop auto allowance move to salary	\$0	\$0	\$4,500	\$208,298
2011	12/17/2010	4%	\$7,488	\$194,605	\$0	Annual Merit	\$9,180	\$0	\$0	\$203,785
2010	12/18/2009	8%	\$13,874	\$187,117	\$0	Annual Merit	\$9,180	\$0	\$4,500	\$200,797
2009	12/19/2008	5%	\$8,258	\$173,243	\$0	Annual Merit	\$9,180	\$0	\$4,500	\$186,923
2008	1/2/2008		\$164,986	\$0	\$0	Starting Salary	\$9,180	\$0	\$4,500	\$178,666

County 401(a)			OCERS 401(a)*		Total Employee's Deferred Comp County and OCERS 401(a)	Total Base Salary, Lump Sum, Auto Allowance, Annual Leave Cash Out, 401(a), OBP
Year	% of Salary	Annualized	% of Salary	Annualized	Annualized	Annualized
2020	5%	\$14,434	3%	\$8,660	\$23,094	\$345,164
2019	5%	\$14,013	3%	\$8,408	\$22,421	\$336,930
2018	5%	\$13,672	3%	\$8,203	\$21,875	\$322,160
2017	5%	\$13,072	3%	\$7,843	\$20,914	\$307,584
2016	5%	\$12,691	3%	\$7,614	\$20,305	\$289,604
2015	5%	\$12,691	3%	\$7,614	\$20,305	\$304,443
2014	5%	\$12,691	3%	\$7,614	\$20,305	\$299,367
2013	5%	\$12,442	3%	\$7,465	\$19,907	\$283,701
2012	5%	\$12,080	3%	\$7,248	\$19,327	\$265,419
2011	5%	\$10,190	3%**	\$6,114	\$16,304	\$224,602
2010	5%	\$9,356	3%	\$5,614	\$14,969	\$215,766
2009	5%	\$8,662	3%	\$5,197	\$13,859	\$200,783
2008	5%	\$8,249	3%	\$4,950	\$13,199	\$191,864

OCERS 2.7#55 Retirement Employer Contributions			Employer Pickup of Employee Contributions			
Fiscal Year	Employer Contribution % of Salary	Employer Contribution Amount Annualized	Calendar Year	Gov't Code Section 31581.2 Pick up	Gov't Code Section 31581.1 Pick up	Combined Total
7/1/20 - 1/1/20	38.27%	\$106,406	2020	\$0	\$0	\$0
1/1/20 - 6/30/20	35.45%		2019	\$0	\$0	\$0
7/1/19 - 1/1/19	35.45%	\$95,641	2018	\$0	\$0	\$0
1/1/19 - 6/30/19	32.80%		2017	\$0	\$0	\$0
7/1/18 - 1/1/18	32.80%	\$91,301	2016	\$0	\$0	\$0
1/1/18 - 6/30/18	33.98%		2015	\$0	\$0	\$0
7/1/17 - 1/1/17	33.15%	\$87,749	2014	\$0	\$0	\$0
1/1/17 - 6/30/17	33.15%		2013	\$0	\$0	\$0
7/1/16 - 1/1/16	35.79%	\$87,491	2012	\$0	\$0	\$0
1/1/16 - 6/30/16	35.79%		2011	\$14,219	\$11,011	\$25,230
7/1/15 - 1/1/15	35.79%	\$90,359	2010	\$13,662	\$10,644	\$24,306
1/1/15 - 6/30/15	35.41%		2009	\$12,636	\$9,628	\$22,264
7/1/14 - 1/1/14	31.13%	\$84,445	2008	\$10,771	\$8,802	\$19,573
1/1/14 - 6/30/14	31.13%					
7/1/13 - 1/1/13	26.61%	\$71,840				
1/1/13 - 6/30/13	26.61%					
7/1/12 - 1/1/12	25.27%	\$62,669				
1/1/12 - 6/30/12	25.27%					
7/1/11 - 1/1/11	22.90%	\$49,085				
1/1/11 - 6/30/11	22.90%					
7/1/10 - 12/31/10	19.26%	\$41,379				
1/1/10 - 6/30/10	19.26%					
7/1/09 - 12/31/09	18.76%	\$34,679				
1/1/09 - 6/30/09	18.76%					
7/1/08 - 12/31/08	18.76%	\$32,874				
1/1/08 - 6/30/08	18.99%					

Grand Total Annual Compensation Cost to OCERS									
Calendar Year	Base Salary	Lump Sum/401(a)/Cash Allowance	OCERS Annualized Cost of Retirement Benefit (Pension)	Retiree Medical Benefit (annualized cost)	Health Care, Life and Disability Insurance	Optional Benefit Plan	Annual Leave (AL) Cash Out	Employer Portion of Medicare Tax (1.45%)	Total Compensation
2020	\$288,675	\$28,699	\$106,406	\$11,258	\$10,777	\$4,500	\$23,290	\$4,589	\$478,193
2019	\$280,267	\$29,257	\$95,641	\$10,930	\$10,340	\$4,500	\$22,906	\$4,461	\$458,303
2018	\$273,437	\$21,875	\$91,301	\$10,793	\$10,320	\$4,500	\$22,348	\$4,354	\$438,928
2017	\$261,431	\$20,914	\$87,749	\$10,445	\$10,528	\$4,500	\$20,739	\$4,157	\$420,463
2016	\$253,817	\$20,305	\$87,748	\$9,684	\$10,449	\$4,500	\$10,982	\$3,905	\$401,391
2015	\$253,817	\$22,348	\$90,359	\$8,630	\$11,208	\$4,500	\$20,745	\$4,046	\$418,686
2014	\$253,817	\$20,305	\$84,445	\$9,340	\$11,262	\$4,500	\$20,745	\$4,046	\$408,461
2013	\$248,840	\$19,907	\$71,840	\$9,854	\$11,314	\$4,500	\$10,454	\$3,825	\$380,534
2012	\$241,592	\$19,327	\$62,669	\$4,784	\$10,735	\$4,500	\$0	\$3,568	\$347,175
2011	\$203,798	\$25,484	\$74,315	\$5,329	\$9,067	\$4,500	\$0	\$3,020	\$325,514
2010	\$187,117	\$24,149	\$65,685	\$4,800	\$6,173	\$4,500	\$0	\$2,776	\$295,202
2009	\$173,243	\$23,039	\$56,942	\$5,839	\$4,939	\$4,500	\$0	\$2,577	\$269,823
2008	\$164,986	\$22,379	\$52,446	\$5,807	\$4,207	\$4,500	\$0	\$2,458	\$258,782

*Separate & in addition to the County 401(a)
**No OCERS 401(a) contributions were made on the portion of salary that was added by eliminating auto allowance
F:\Human Resources\2008-2018 Salary CEO Audit Total Compensation 2018
Updated 11/4/2019 L. Baker

11-16-2020 REGULAR BOARD MEETING - A-4 COMPENSATION OF THE CHIEF EXECUTIVE OFFICER

2020 CEO Salary Comparison

Retirement System	Net Assets (\$Billion)	CEO Salary Range	CEO Current Salary	CEO Auto Allow/mo	Est. Annual Auto Allow Amount	ER Contributions for Deferred Comp	*Est. Annual Def Comp Total By ER	Defined Benefit EE Pickup By ER	Annual Optional Benefit Plan (OBP)/ Flexible Spending Dollars (FSA) or Additional Salary	**Est. Total = Base, Auto, Deferred Comp and OBP/Flex or Additional Salary	CEO Last Increase	Notes
OCERS	17.0	Salary set by the Board	\$288,675	None	\$0	OCERS 401(a) = 5% of salary County 401(a) = 3% of salary	\$23,094	None	\$10,105	\$321,874	1/3/2020	Additional salary = \$450 OBP + \$5,605 lump sum Not included in Total Salary - Optional 170 Hour Annual Leave Cashout (approx. \$23,290 annually)
Alameda CERA	8.4	\$252,595 - \$300,726	\$291,408	\$491	\$8,292	457(b): \$19,500	\$19,500	None	\$3,300	\$322,500	1/12/2020	
Kern CERA	4.3	\$181,067 - \$221,046	\$210,292	\$599	\$7,188	\$11,431	\$11,431	None	\$11,470	\$240,381	2/1/2020	
LACERS (City)	17.7	\$178,148 - \$315,768	\$279,478	\$500	\$6,000	None	\$0	None	\$1,476	\$286,954	7/1/2019	Contact Lin Lin noted "No additional salary; no flex dollars. City pays \$1,649.86 medical/Dental \$44.60 monthly"
San Diego County ERA	14.0	\$179,067 - \$329,784	\$325,000	\$600	\$7,200	None	\$0	None	\$22,750	\$354,950	9/27/2019 (reflects former incumbent's last increase)	Per HR contact, Phylisio Cicalo-Aiken, SDCCERS newly appointed CEO begins approximately 12/11/2020; negotiating a salary of approximately \$325,000. Annual Salary = 7% flex credits (applied to benefits)
San Joaquin CERA	3.2	\$178,744 - \$217,265	\$217,265	\$585	\$7,020	457(b) = SBCERA contribution 1 times employee contribution, up to 1%	\$10,863	None	\$4,345	\$239,494	10/26/2020	Additionally Salary = \$1,040 FSA + 2,400 annual cell allowance
San Bernardino CERA	10.3	\$225,819 - \$329,532	\$323,294	\$1,200	\$14,400	401(k) = SBCERA contribution 2 times employee contribution, up to 8%	\$29,096	ER picks up full 7% (268655)	\$3,440	\$370,230	1/1/2020	
LACERA (County)	60.00	Salary set by the Board	\$400,000	725.00	\$8,700	LACERA 401(k) = 4% of salary LACERA 457(b) = 4% of salary	\$32,000	ER Picks up 9.11%	\$76,000	\$516,700	11/18/19 (hire date; no increase since that time)	Annual Optional Benefit Plan (OBP)/Flexible Spending Dollars (FSA) or Additional Salary = 19% Cafeteria Allowance
Sonoma CERA	2.9	\$195,771 - \$237,948	\$237,948	\$467	\$5,604	3% foundation +1% matching 401(a) DC Plan	\$9,518	None	\$1,850	\$254,920	6/2/2020	
Sacramento CERS	9.8	\$203,058 - \$259,163	\$235,067	\$450	\$5,400	1% match	\$2,351	Max monthly contribution: \$1,569.04 (family)	\$650	\$243,468	6/21/2020	Amy Larson included Management Benefit Sheet with survey response
Contra Costa CERA	8.9	Salary set by the Board	\$270,310	None	\$0	457(b) = \$235 monthly	\$2,820	None	\$0	\$273,130	7/1/2019	
Additional Considerations:												
Organization	Name	Title	Current Salary	Auto Allow/mo	Est. Annual Auto Allow Amount	ER Contributions for Deferred Comp	*Est. Annual Def Comp Total By ER	Defined Benefit EE Pickup By ER	Annual Optional Benefit Plan (OBP)/ Flexible Spending Dollars (FSA) or Additional Salary	**Est. Total = Base, Auto, Deferred Comp and OBP/Flex or Additional Salary	CEO Last Increase	Notes
County of Orange	Frank Kim	CEO	\$314,579	\$765	\$9,180	401(a) = 5% of salary	\$15,729	\$12,583.00	\$4,500	\$343,988	7/3/2020	
OC Superior Court	David Yamasaki	CEO	\$250,000	None	\$0	None	\$0	None	\$4,500	\$254,500	12/2/2016 (hire date)	
OCFA	Brian Fennessy	Fire Chief	\$264,000	Uses OCFA vehicle	\$0	457(b) = \$11,880 annually	\$11,880	None	\$3,500	\$279,380	9/24/19 (hire date)	
OCSD	James Herberg	General Manager	\$323,045	\$700	\$8,400	457(b) = \$11,000 annually	\$11,000	\$3,651/month (OCERS Plan H); no (0%) employer pick-up of employee contribution	\$26,632	\$369,077	7/2020	Per contact, Laurie Klinger, additional salary = \$6,000 medical allowance + investment incentive salary (\$1,260 = 6% of base salary)
OCTA	Darrell Johnson	CEO	\$355,368	\$765	\$9,180	401(a) = 5% of base pay + \$25,000 annually	\$42,768	None	No cost for health, dental & vision	\$407,316	4/11/2019	Per HR contact: CEO currently waives the FSA. This is a voluntary benefit and OCTA does not contribute to it.
TCA	Samuel Johnson (former incumbent; Michael Kraman)	CEO	\$275,159	\$765	\$9,180	401(a) = \$24,500 annually	\$24,500	None	\$0	\$308,839	5/10/2018	Salary info shown reflects information for former incumbent. Per Amy Rolter on 10/27/20: "TCA doesn't have meaningful information to share this year as we transitioned to a new CEO and his salary/benefits haven't been negotiated yet...use the prior year info without any increase."



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

VIA E-MAIL & USPS

January 29, 2019

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

**Re: Orange County Employees Retirement System
Cost-of-Living Adjustments (COLA) as of April 1, 2019**

Dear Steve:

We have determined the cost-of-living adjustments for the System in accordance with Section 31870.1, as provided in the enclosed exhibit.

Pursuant to Section 31870.1, the cost-of-living factor to be used by the System on April 1, 2019 is determined by comparing the Bureau of Labor Statistics' annual average CPI for All Urban Consumers for the Los Angeles-Long Beach-Anaheim Area¹ (with 1982-84 as the base period) in each of the past two years. The ratio of the past two annual indices, 265.962 in 2018 and 256.210 in 2017, is 1.0381. The County Law section cited above indicates that the resulting percentage change of 3.81% should be rounded to the nearest one-half percent, which is 4.0%.

Please note the above cost-of-living adjustment calculated using established procedures for OCERS may result in adjustments different from those calculated using alternative procedures by other systems.

The actual cost-of-living adjustment is independent of the date of retirement. The CPI adjustment to be applied on April 1, 2019 is provided in Column (4) of the enclosed exhibit. The COLA bank on April 1, 2019 is provided in Column (5).

¹ Formerly the Los Angeles-Riverside-Orange County Area.

Mr. Steve Delaney
January 29, 2019
Page 2

Please give us a call if you have any questions.

Sincerely,


Andy Yeung

MAM/gxk
Enclosure

cc: Suzanne Jenike
Brenda M. Shott, CPA

Orange County Employees Retirement System
 Cost-Of-Living Adjustment
 As of April 1, 2019

Retirement Date	(1)	(2)	(3)	(4)	(5)
	April 1, 2018 Accumulated Carry-over Bank	2019 CPI Change*	2019 CPI Rounded**	2019 CPI Used***	April 1, 2019 Accumulated Carry-over Bank****
All Members					
Section 31870.1					
Maximum Annual COLA	3.0%				
On or Before 4/1/1972	47.0%	3.81%	4.0%	3.0%	48.0%
04/02/1972 to 04/01/1974	46.5%	3.81%	4.0%	3.0%	47.5%
04/02/1974 to 04/01/1975	46.0%	3.81%	4.0%	3.0%	47.0%
04/02/1975 to 04/01/1976	40.5%	3.81%	4.0%	3.0%	41.5%
04/02/1976 to 04/01/1977	35.0%	3.81%	4.0%	3.0%	36.0%
04/02/1977 to 04/01/1978	31.5%	3.81%	4.0%	3.0%	32.5%
04/02/1978 to 04/01/1979	27.5%	3.81%	4.0%	3.0%	28.5%
04/02/1979 to 04/01/1980	22.5%	3.81%	4.0%	3.0%	23.5%
04/02/1980 to 04/01/1981	15.0%	3.81%	4.0%	3.0%	16.0%
04/02/1981 to 04/01/1982	4.5%	3.81%	4.0%	3.0%	5.5%
04/02/1982 to 04/01/2018	0.0%	3.81%	4.0%	3.0%	1.0%
04/02/2018 to 04/01/2019		3.81%	4.0%	3.0%	1.0%

* Based on ratio of 2018 annual average CPI to 2017 annual average CPI for the Los Angeles - Long Beach - Anaheim Area.

** Based on CPI change rounded to nearest one-half percent.

*** These are the cost-of-living adjustment factors to be applied on April 1, 2019.

**** These are the carry-over of the cost-of-living adjustments that have not been used on April 1, 2019.

Orange County Employees Retirement System

Actuarial Valuation and Review

As of December 31, 2019



This report has been prepared at the request of the Board of Retirement to assist in administering the Fund. This valuation report may not otherwise be copied or reproduced in any form without the consent of the Board of Retirement and may only be provided to other parties in its entirety, unless expressly authorized by Segal. The measurements shown in this actuarial valuation may not be applicable for other purposes.

© 2020 by The Segal Group, Inc. All rights reserved.

Segal



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

June 4, 2020

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, 2019. It summarizes the actuarial data used in the valuation, analyzes the preceding year's experience, and establishes the funding requirements for fiscal year 2021-2022.

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

A handwritten signature in black ink, appearing to read "Paul Angelo".

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

A handwritten signature in black ink, appearing to read "Andy Yeung".

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

JY/jl

Table of Contents

- Section 1: Actuarial Valuation Summary 5
 - Purpose and Basis 5
 - Valuation Highlights 7
 - Summary of Key Valuation Results 11
 - Important Information About Actuarial Valuations 14
- Section 2: Actuarial Valuation Results 16
 - A. Member Data 16
 - B. Financial Information 20
 - C. Actuarial Experience 23
 - D. Other Changes in the Actuarial Accrued Liability 28
 - E. Development of Unfunded Actuarial Accrued Liability 29
 - F. Recommended Contribution 30
 - G. Funded Status 49
 - H. Actuarial Balance Sheet 51
 - I. Volatility Ratios 52
 - J. Risk Assessment 54
- Section 3: Supplemental Information 57
 - Exhibit A: Table of Plan Coverage 57
 - Exhibit B: Members in Active Service as of December 31, 2019 69
 - Exhibit C: Reconciliation of Member Data 81
 - Exhibit D: Summary Statement of Income and Expenses on a Market Value Basis 82
 - Exhibit E: Summary Statement of Plan Assets 83
 - Exhibit F: Summary of Reported Reserve Information as of December 31, 2019 84
 - Exhibit G: Development of the Fund through December 31, 2019 85
 - Exhibit H: Table of Amortization Bases 86

Table of Contents

Exhibit I: Projection of UAAL Balances and Payments.....	98
Exhibit J: Definition of Pension Terms	100
Section 4: Actuarial Valuation Basis.....	104
Exhibit I: Actuarial Assumptions and Methods	104
Exhibit II: Summary of Plan Provisions	118
Exhibit III: Member Contribution Rates	129
Exhibit IV: Funded Percentages by Rate Group	154
Exhibit V: Reconciliation of Employer Contribution Rates by Rate Group	155
Exhibit VI: Reconciliation of UAAL by Rate Group.....	158

Section 1: Actuarial Valuation Summary

Purpose and Basis

This report was prepared by Segal to present a valuation of the Orange County Employees Retirement System (“OCERS” or “the System”) as of December 31, 2019. 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 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, 2019, provided by OCERS;
- The assets of the Plan as of December 31, 2019, provided by OCERS;
- Economic assumptions regarding future salary increases and investment earnings adopted by the Board for the December 31, 2019 valuation;
- Other actuarial assumptions regarding employee terminations, retirement, death, etc. adopted by the Board for the December 31, 2019 valuation 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.

Section 1: Actuarial Valuation Summary

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* starting on page 104.

A schedule of current amortization balances and payments may be found in *Section 3, Exhibit H* starting on page 86. A graphical projection of the Unfunded Actuarial Accrued Liability (UAAL) amortization balances and payments has been included in *Section 3, Exhibit I* on pages 98 and 99.

The rates calculated in this report may be adopted by the Board for the fiscal year that extends from July 1, 2021 through June 30, 2022.

Section 1: Actuarial Valuation Summary

Valuation Highlights

Pg. 50 1. The ratio of the Valuation Value of Assets to Actuarial Accrued Liabilities increased from 72.4% to 73.2%. The funded ratio measured on a market value basis increased from 69.3% to 75.4%. The UAAL increased from \$5,708.9 million as of December 31, 2018 to \$5,879.9 million as of December 31, 2019. The increase in UAAL is primarily due to actual contributions less than expected and COLA increases greater 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*.

Pg. 29

Pgs. 86-97

Pgs. 98-99

Pg. 31 2. The aggregate employer contribution rate calculated in this valuation increased from 39.48% of payroll to 41.49% of payroll. This change was primarily due to the final year of the three-year phase-in of the UAAL cost impact due to assumption changes in the December 31, 2017 valuation, actual contributions less than expected and COLA increases greater than expected. 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 shown in this report reflect two-thirds of the UAAL cost impact from these changes while the employer contribution rates as of December 31, 2019 reflect the full UAAL cost impact.

3. As directed recently by OCERS, starting with this valuation Segal is only showing the "net" UAAL contribution rates for the active employers in Rate Group #1 (i.e., the County and O.C. IHSS Public Authority) after adjustments to exclude the UAAL paid by O.C. Vector Control, Cypress Recreation and Parks, U.C.I. and Department of Education. The UAAL contributions required to be paid by O.C. Vector Control and Cypress Recreation and Parks are subject to the Board's Withdrawing Employer Policy. The UAAL contributions required to be paid by U.C.I. and Department of Education are subject to the Board's Declining Employer Payroll Policy. The UAAL contributions for these employers will be provided in separate side letters following the administrative practice established by OCERS in the prior valuations.

Pg. 32 4. The aggregate member rate calculated in this valuation has increased from 12.29% of payroll to 12.31% of payroll. A complete reconciliation of the System's average member rate is provided in *Section 2, Subsection F*.

The individual member rates have been updated to reflect the valuation as of December 31, 2019. The detailed member rates are provided in *Section 4, Exhibit III* of this report.

Pg. 25 5. The rate of return on the Market Value of Assets was 14.79% for the 2019 plan year. The return on the Valuation Value of Assets was 6.66% for the same period after considering the recognition of prior years' investment gains and losses. This resulted in an actuarial loss when measured against the assumed rate of return of 7.00%. This actuarial investment loss increased the average employer contribution rate by 0.18% of pay.

Section 1: Actuarial Valuation Summary

- Pg. 21 6. As indicated in *Section 2, Subsection B* of this report, the total unrecognized investment gain as of December 31, 2019 was \$479.2 million (as compared to an unrecognized loss of \$644.7 million in the December 31, 2018 valuation). This investment gain 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 losses that may occur after December 31, 2019. 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 gains 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 decrease over the next few years. The potential impact associated with the net deferred investment gains may be illustrated as follows:
- a. If the net deferred gains in this year's valuation were recognized immediately and entirely in the Valuation Value of Assets, the funded ratio would increase from 73.2% to 75.4%.
For comparison purposes, if all the net deferred losses in the December 31, 2018 valuation had been recognized immediately in the December 31, 2018 valuation, the funded ratio in last year's valuation would have decreased from 72.4% to 69.3%.
 - b. If the net deferred gains in this year's valuation were recognized immediately and entirely in the Valuation Value of Assets, the aggregate employer contribution rate would decrease from 41.5% to 39.7%.
For comparison purposes, if all the net deferred losses in the December 31, 2018 valuation had been recognized immediately in the December 31, 2018 valuation, the aggregate employer contribution rate in last year's valuation would have increased from 40.0% to 42.5%.
7. The actuarial valuation report as of December 31, 2019 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.
 8. This report reflects the \$8.1 million in additional contributions made by O.C. Sanitation District to pay off their UAAL. The \$8.1 million¹ of additional contributions has been used to eliminate their UAAL rates for FY 20-21. In addition, O.C. Sanitation District made a \$29.9 million additional contribution to the O.C. Sanitation District UAAL deferred account to go towards paying their losses as they arise in future valuations to continue to eliminate their UAAL rate in those valuations. As of December 31, 2019, a transfer of \$18.6 million was required from this account to fully offset the actuarial losses (primarily from salary experience and COLA experience) during 2019. The balance in the O.C. Sanitation District UAAL deferred account after the transfer is \$12,057,000 as of December 31, 2019.

¹ \$8.1 million in additional contributions were made by O.C. Sanitation District on September 9, 2019. After adjusting with interest, those contributions have a value of \$8.3 million as of December 31, 2019.

Section 1: Actuarial Valuation Summary

This report also reflects the \$12.8 million additional contributions made by Transportation Corridor Agency to pay off their UAAL. The \$12.8 million¹ of additional contributions has been used to eliminate their UAAL rates for FY 20-21.

9. This report reflects the \$19.0 million in additional contributions made by OCFA towards their UAAL. The \$19.0 million² 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, 2019 and used to reduce their UAAL rates for fiscal year 2021-2022.
10. During 2019, a request was made by City of San Juan Capistrano to spinoff certain City utility employees to leave OCERS and join CalPERS. Such spinoff has not taken place as of December 31, 2019.
11. The Actuarial Standards Board approved Actuarial Standard of Practice No. 51 (ASOP 51) regarding risk assessment, which was first 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 provided in a separate stand-alone report.

12. Segal strongly recommends an actuarial funding method that targets 100% funding of the actuarial accrued liability. Generally, this implies payments that are ultimately at least enough to cover normal cost, interest on the unfunded actuarial accrued liability and the principal balance. The funding policy adopted by the Board meets this standard.

¹ \$12.8 million in additional contributions were made by Transportation Corridor Agency on July 1, 2019. After adjusting with interest, those contributions have a value of \$13.3 million as of December 31, 2019.

² \$19.0 million in additional contributions were made by OCFA continuously throughout the year. After adjusting with interest, those contributions have a value of \$19.2 million as of December 31, 2019.

Section 1: Actuarial Valuation Summary

13. This report constitutes an actuarial valuation for the purpose of determining the actuarially determined contribution under the Plan's funding policy and measuring the progress of that funding policy. The Net Pension Liability (NPL) and Pension Expense under Governmental Accounting Standards Board (GASB) Statements No. 67 and No. 68, for inclusion in the plan and employer's financial statements as of December 31, 2019, will be provided separately. The accounting disclosures will utilize different methodologies from those employed in the funding valuation, as required by the GASB. However, the actuarially determined contribution in this valuation is expected to be used as the actuarially determined contribution (ADC) for GASB financial.
14. It is important to note that this actuarial valuation is based on plan assets as of December 31, 2019. Due to the COVID-19 pandemic, market conditions have changed significantly since the valuation date. The Plan's actuarial status does not reflect short-term fluctuations of the market, but rather is based on the market values on the last day of the Plan Year. While it is impossible to determine how the market will perform over the next several months, and how that will affect the results of next year's valuation, Segal is available to prepare projections of potential outcomes upon request.

Section 1: Actuarial Valuation Summary

Summary of Key Valuation Results

	December 31, 2019		December 31, 2018	
	Total Rate	Estimated Annual Dollar Amount ¹ (\$ in '000s)	Total Rate ^{2,3,4}	Estimated Annual Dollar Amount ¹ (\$ in '000s)
Aggregate Employer Contribution Rates:				
• Rate Group #1 – Plans A, B and U (non-OCTA, non-OCSD)	15.49%	\$14,040	15.35%	\$13,909
• Rate Group #2 – Plans I, J, O, P, S, T, U and W (County et al.)	39.35%	456,528	37.03%	429,586
• Rate Group #3 – Plans B, G, H and U (OCSD)	11.93%	9,110	11.97%	9,147
• Rate Group #5 – Plans A, B and U (OCTA)	31.42%	35,501	30.47%	34,422
• Rate Group #9 – Plans M, N and U (TCA)	13.22%	970	12.98%	952
• Rate Group #10 – Plans I, J, M, N and U (OCFA)	26.70%	8,436	27.60%	8,721
• Rate Group #11 – Plans M and N, future service, and U (Cemetery)	14.84%	248	12.13%	203
• Rate Group #12 – Plans G, H, future service, and U (Law Library)	13.68%	153	15.35%	172
• Rate Group #6 – Plans E, F and V (Probation)	59.69%	37,659	55.23%	34,845
• Rate Group #7 – Plans E, F, Q, R and V (Law Enforcement)	67.55%	175,621	64.79%	168,423
• Rate Group #8 – Plans E, F, Q, R and V (OCFA)	48.71%	<u>71,845</u>	47.84%	<u>70,569</u>
All Categories Combined	41.49%	\$810,111	39.48%	\$770,949
Average Member Contribution Rates:				
• Rate Group #1 – Plans A, B and U (non-OCTA, non-OCSD)	9.72%	\$8,808	9.70%	\$8,790
• Rate Group #2 – Plans I, J, O, P, S, T, U and W (County et al.)	10.99%	127,511	10.97%	127,279
• Rate Group #3 – Plans B, G, H and U (OCSD)	11.62%	8,877	11.64%	8,892
• Rate Group #5 – Plans A, B and U (OCTA)	10.30%	11,637	10.28%	11,614
• Rate Group #9 – Plans M, N and U (TCA)	10.86%	797	10.85%	796
• Rate Group #10 – Plans I, J, M, N and U (OCFA)	11.42%	3,609	11.42%	3,609
• Rate Group #11 – Plans M and N, future service, and U (Cemetery)	10.13%	170	10.16%	170
• Rate Group #12 – Plans G, H, future service, and U (Law Library)	13.33%	149	13.23%	148
• Rate Group #6 – Plans E, F and V (Probation)	16.63%	10,492	16.56%	10,448
• Rate Group #7 – Plans E, F, Q, R and V (Law Enforcement)	17.22%	44,767	17.30%	44,975
• Rate Group #8 – Plans E, F, Q, R and V (OCFA)	15.90%	<u>23,453</u>	15.74%	<u>23,217</u>
All Categories Combined	12.31%	\$240,270	12.29%	\$239,938

¹ Based on December 31, 2019 projected annual compensation.

² These rates reflect 2/3 phase-in UAAL cost impact of the changes in actuarial assumptions from the December 31, 2017 valuation.

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, 2018 valuation to the corresponding projected payrolls reported as of December 31, 2019.

⁴ Average December 31, 2018 member contribution rates have been recalculated by applying the individual entry age based rates determined in the December 31, 2018 valuation to the System membership as of December 31, 2019.

Section 1: Actuarial Valuation Summary

Summary of Key Valuation Results (continued)

		December 31, 2019 (\$ in '000s)	December 31, 2018 (\$ in '000s)
Actuarial Accrued Liability as of December 31:	<ul style="list-style-type: none"> • Retired members and beneficiaries • Inactive vested members¹ • Active members • Total Actuarial Accrued Liability • Normal Cost for plan year beginning December 31 	\$12,631,182 500,271 <u>8,785,277</u> \$21,916,730 529,849	\$11,569,064 449,290 <u>8,684,995</u> \$20,703,349 516,408
Assets as of December 31:	<ul style="list-style-type: none"> • Market Value of Assets (MVA)^{2,3} • Valuation Value of Assets (VVA)² 	\$16,516,024 16,036,953	\$14,349,705 14,994,420
Funded status as of December 31:	<ul style="list-style-type: none"> • Unfunded Actuarial Accrued Liability on Market Value of Assets basis • Funded percentage on MVA basis • Unfunded Actuarial Accrued Liability on Valuation Value of Assets basis • Funded percentage on VVA basis 	\$5,400,706 75.36% \$5,879,861 73.17%	\$6,353,644 69.31% \$5,708,929 72.43%
Key assumptions:	<ul style="list-style-type: none"> • Net investment return • Price Inflation • Payroll growth increase 	7.00% 2.75% 3.25%	7.00% 2.75% 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.

Section 1: Actuarial Valuation Summary

Summary of Key Valuation Results (continued)

		December 31, 2019	December 31, 2018	Change From Prior Year
Demographic data as of December 31:	Active Members:			
	• Number of members	22,257	21,929	1.5%
	• Average age	44.9	45.1	-0.2
	• Average service	12.5	12.8	-0.3
	• Total projected compensation	\$1,952,534,335	\$1,875,371,661	4.1%
	• Average projected compensation	\$87,727	\$85,520	2.6%
	Retired Members and Beneficiaries:			
	• Number of members:			
	– Service retired	14,449	13,827	4.5%
	– Disability retired	1,505	1,482	1.6%
	– Beneficiaries	2,466	2,365	4.3%
	– Total	18,420	17,674	4.2%
	• Average age	70.1	70.0	0.1
	• Average monthly benefit ¹	\$4,077	\$3,913	4.2%
	Inactive Vested Members:			
• Number of members ²	6,520	6,026	8.2%	
• Average Age	44.7	44.9	-0.2	
Total Members:	47,197	45,629	3.4%	

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.

Section 1: Actuarial Valuation Summary

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 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, termination, 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.

Section 1: Actuarial Valuation Summary

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; and
- Changes in statutory provisions.

Some actuarial results in this report are not rounded, but that does not imply precision.

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 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: 2010 – 2019

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
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
2019	22,257	6,520	18,420	24,940	1.12	0.83

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

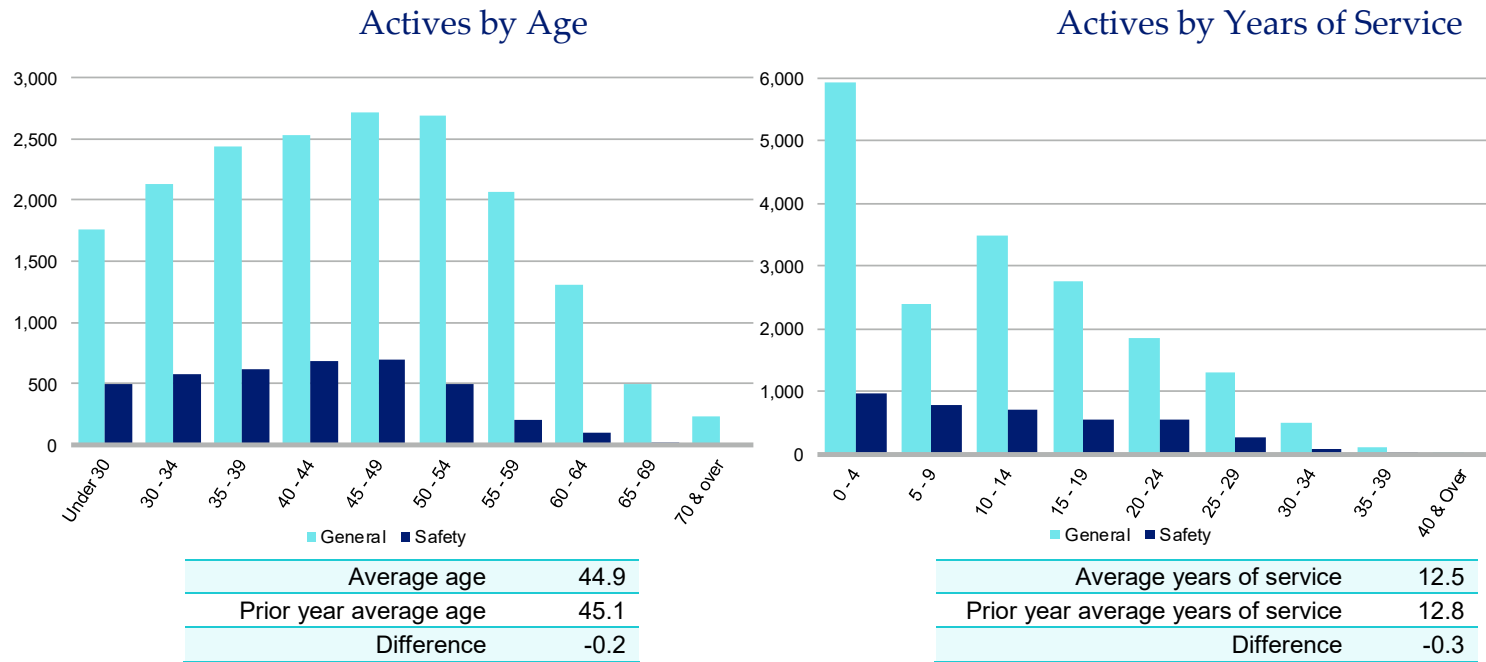
Section 2: Actuarial Valuation Results

Active Members

Plan costs are affected by the age, years of service and compensation of active members. In this year's valuation, there were 22,257 active members with an average age of 44.9, average years of service of 12.5 years and average compensation of \$87,727. The 21,929 active members in the prior valuation had an average age of 45.1, average service of 12.8 years and average compensation of \$85,520.

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

Distribution of Active Members as of December 31, 2019



Inactive Members

In this year's valuation, there were 6,520 members with a vested right to a deferred or immediate vested benefit or entitled to a return of their member contributions versus 6,026 in the prior valuation.

Section 2: Actuarial Valuation Results

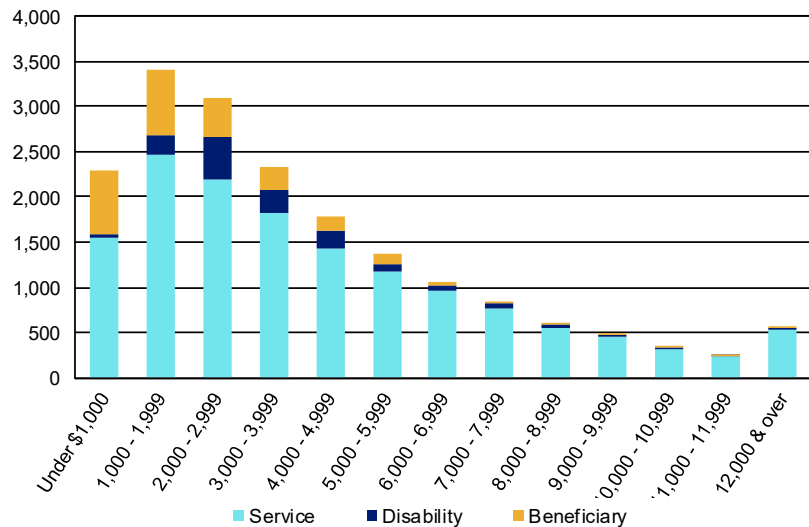
Retired Members and Beneficiaries

As of December 31, 2019, 15,954 retired members and 2,466 beneficiaries were receiving total monthly benefits of \$75,094,136. For comparison, in the previous valuation, there were 15,309 retired members and 2,365 beneficiaries receiving monthly benefits of \$69,152,036. These monthly benefits exclude benefits payable from the Supplemental Targeted Adjustment for Retirees Cost of Living Adjustment (STAR COLA).

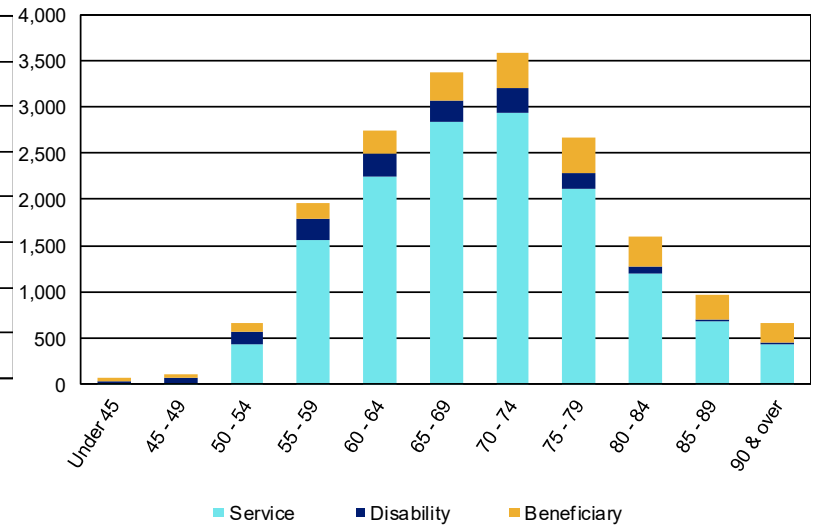
As of December 31, 2019, the average monthly benefit for retired members and beneficiaries is \$4,077, compared to \$3,913 in the previous valuation. The average age for retired members and beneficiaries is 70.1 in the current valuation, compared with 70.0 in the prior valuation.

Distribution of Retired Members and Beneficiaries as of December 31, 2019

Retired Members and Beneficiaries
by Type and Monthly Amount



Retired Members and Beneficiaries
by Type and Age



Section 2: Actuarial Valuation Results

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 Data Statistics: 2010 – 2019

Year Ended December 31	Active Members			Retired Members and Beneficiaries		
	Count	Average Age	Average Service	Count	Average Age	Average Monthly Amount
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
2019	22,257	44.9	12.5	18,420	70.1	4,077

Section 2: Actuarial Valuation Results

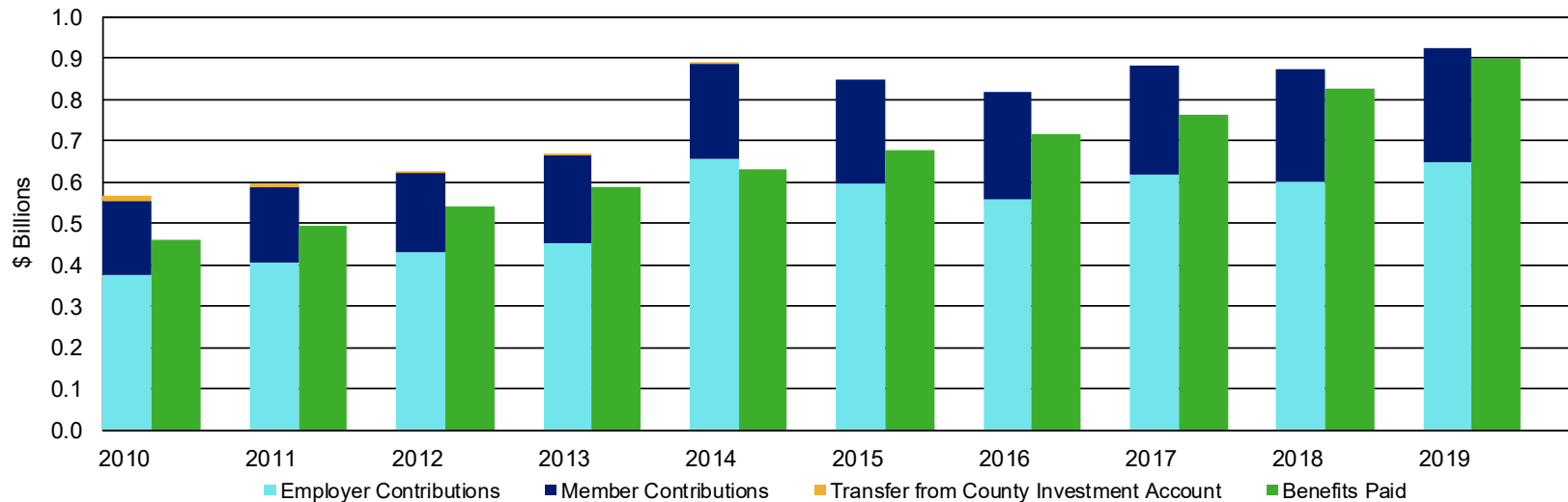
B. Financial Information

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 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 Made with Benefits for Years Ended December 31, 2010 – 2019



Section 2: Actuarial Valuation Results

Determination of Actuarial Value of Assets for Year Ended December 31, 2019

1 Market Value of Assets^{1,2}						\$16,516,108,000
		Actual	Expected	Original	Percent	Unrecognized
2 Calculation of unrecognized return		Return	Return	Amount	Deferred	Amount
a)	Year ended December 31, 2015	\$(51,601,000)	\$833,757,000	\$(885,358,000)	0%	\$0
b)	Year ended December 31, 2016	1,010,548,000	840,469,000	170,079,000	20	34,016,000
c)	Year ended December 31, 2017	1,878,172,000	920,426,000	957,746,000	40	383,098,000
d)	Year ended December 31, 2018	(361,321,000)	1,026,583,000	(1,387,904,000)	60	(832,742,000)
e)	Year ended December 31, 2019	2,123,258,000	1,004,779,000	1,118,479,000	80	<u>894,783,000</u>
f)	Total unrecognized return ³					\$479,155,000
3 Actuarial Value of Assets (1) - (2f)						\$16,036,953,000
4	Ratio of Actuarial Value to Market Value					97.1%
5 Non-valuation reserves:						
a)	Unclaimed member deposit					\$0
b)	Medicare medical insurance reserve					<u>84,000</u>
c)	Subtotal					\$84,000
6 Valuation Value of Assets (3) – (5c)						\$16,036,869,000

¹ Excludes \$150,416,000 in County Investment Account (funded by pension obligation bond proceeds held by OCERS), \$259,285,000 in Prepaid Employer Contributions and \$12,057,000 in O.C. Sanitation District UAAL Deferred Account (after transfer).

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

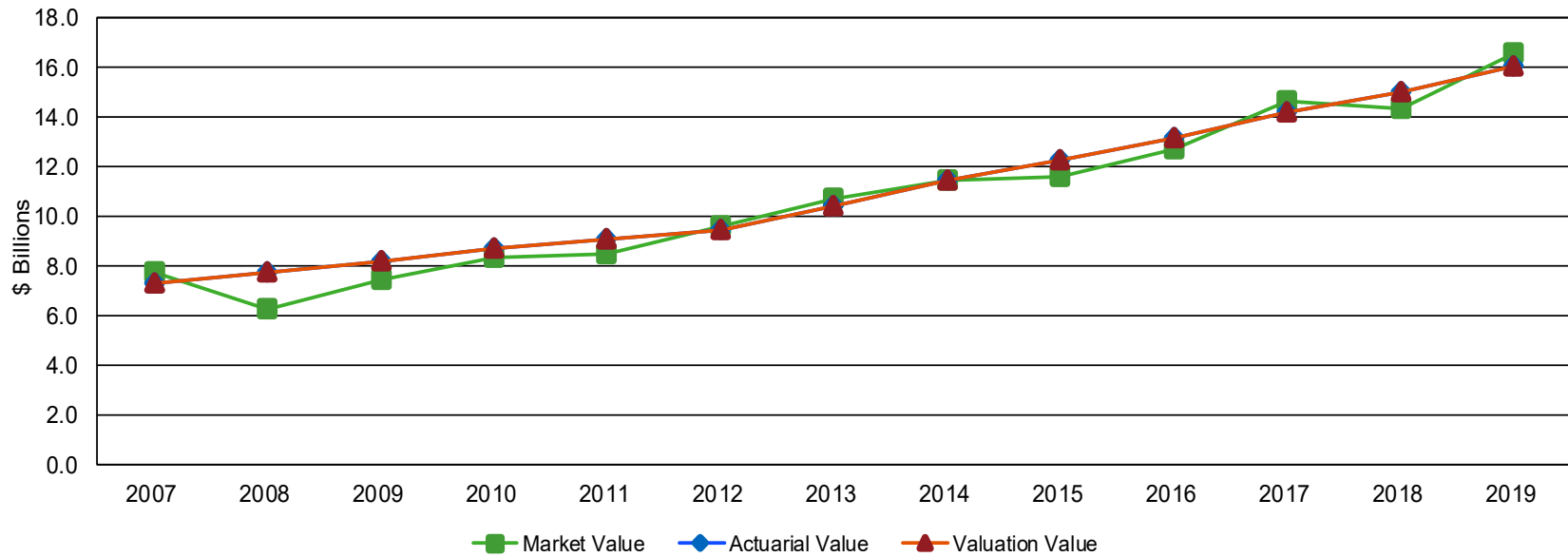
³ Deferred return as of December 31, 2019 recognized in each of the next four years:

(a)	Amount recognized on December 31, 2020	\$171,680,000
(b)	Amount recognized on December 31, 2021	137,664,000
(c)	Amount recognized on December 31, 2022	(53,885,000)
(d)	Amount recognized on December 31, 2023	<u>223,696,000</u>
(e)	Total unrecognized return as of December 31, 2019	\$479,155,000

Section 2: Actuarial Valuation Results

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 – 2019



Section 2: Actuarial Valuation Results

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 \$290.1 million, which includes \$50.5 million from investment losses, a net loss of \$83.5 million from contribution experience (including a gain of \$23.3 million from additional UAAL payments from Vector Control and OCFA and anticipated payments from DOE and U.C.I.¹, a gain of \$18.6 million from transfer from O.C. Sanitation UAAL Deferred Account and a loss of \$125.4 million from all other contribution experience) and \$156.1 million in losses from all other sources. The net experience variation from individual sources other than investments and contributions was 0.7% 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, 2019

1	Net loss from investments ²	\$(50,514,000)
2	Net loss from contribution experience ³	(83,457,000)
3	Net loss from other experience ³	<u>(156,137,000)</u>
4	Net experience loss: 1 + 2 + 3	\$(290,108,000)

¹ 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.

² Details on next page.

³ See *Subsection E* for further details. Does not include the effect of plan or assumption changes, if any.

Section 2: Actuarial Valuation Results

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 14.79% for the year ended December 31, 2019.

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 2019 plan year was 6.66%. 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, 2019 with regard to its investments.

Investment Experience for Year Ended December 31, 2019

	Market Value	Actuarial Value	Valuation Value
1 Net investment income	\$2,123,258,000	\$999,388,000	\$999,389,000
2 Average value of assets	14,353,980,000 ¹	14,998,695,000	14,998,610,000
3 Rate of return: 1 ÷ 2	14.79% ¹	6.66%	6.66%
4 Assumed rate of return	7.00%	7.00%	7.00%
5 Expected investment income: 2 x 4	\$1,004,779,000	\$1,049,909,000	\$1,049,903,000
6 Actuarial gain/(loss): 1 - 5	\$1,118,479,000	\$(50,521,000)	\$(50,514,000)

¹ Return on market value was calculated using a modified dollar-weighted approach based on pension plan assets net of accounting liabilities. Actual investment income on net pension plan assets was \$2,123,258,000 during 2019 after including both the administrative expenses and discount for prepaid contributions while excluding the income credited to County Investment Account and O.C. Sanitation District UAAL Deferred Account. Without these adjustments, the actual investment income was \$2,183,808,000.

Section 2: Actuarial Valuation Results

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: 2010 – 2019

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
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%
2019	2,123,258,000	14.79%	999,388,000	6.66%	999,389,000	6.66%
Most recent five-year average return		6.82%	6.17%		6.17%	
Most recent ten-year average return		7.13%	5.90%		5.90%	

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.

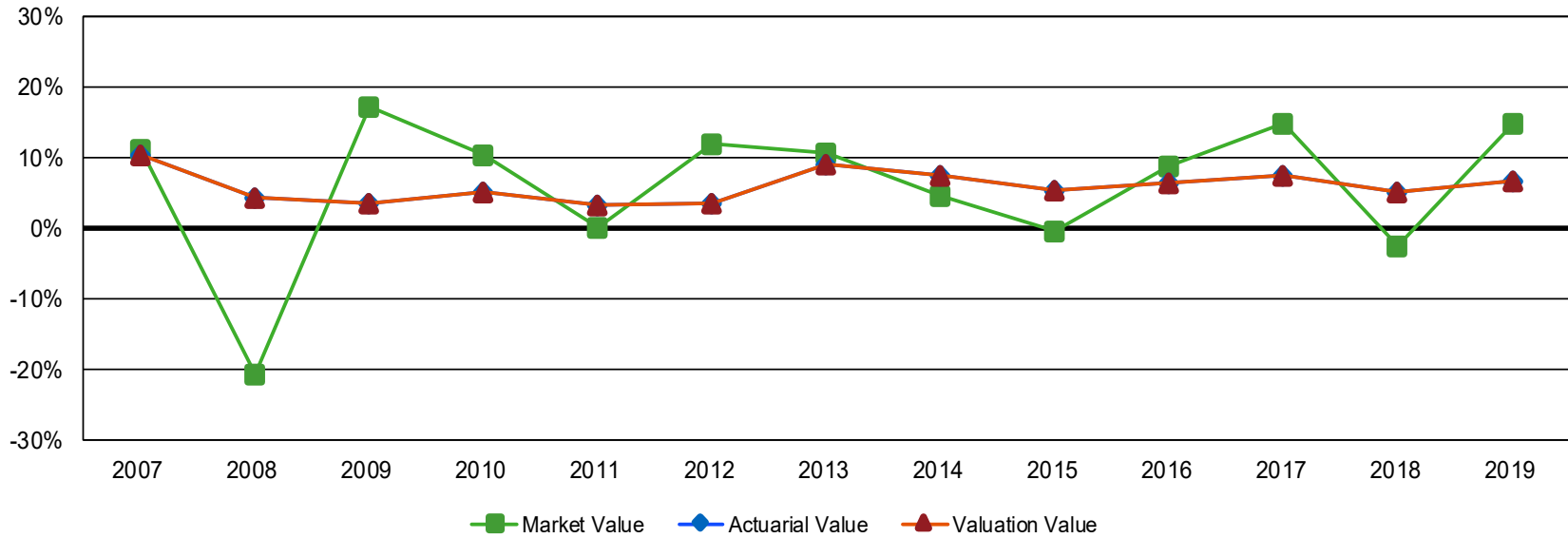
¹ Net of administrative and investment expenses.

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.

Section 2: Actuarial Valuation Results

Section 2, 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 Ended December 31, 2007 – 2019



Section 2: Actuarial Valuation Results

Contributions

Contributions for the year ended December 31, 2019 totaled \$923.0 million¹, compared to the projected amount of \$1,002.6 million. This resulted in a net loss of \$83.5 million from contribution experience for the year, when adjusted for timing.

Non-Investment 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), and
- salary increases (greater or smaller than projected),
- cost-of-living adjustments (COLAs) higher or lower than anticipated.

The net loss from this other experience for the year ended December 31, 2019 amounted to \$156.1 million, which is 0.7% of the Actuarial Accrued Liability. See Subsection E for a detailed development of the Unfunded Actuarial Accrued Liability.

¹ Excluding \$20.1 million in additional contributions made by O.C. Sanitation District and Transportation Corridor Agency to pay off their UAAL as of December 31, 2018 and including the \$18.6 million transfer from O.C. Sanitation District UAAL Deferred Account

Section 2: Actuarial Valuation Results

D. Other Changes in the Actuarial Accrued Liability

The Actuarial Accrued Liability as of December 31, 2019 is 21.9 billion, an increase of \$1.2 billion, or 5.9%, 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*.

Section 2: Actuarial Valuation Results

E. Development of Unfunded Actuarial Accrued Liability

Development for Year Ended December 31, 2019

1	Unfunded actuarial accrued liability at beginning of year (before adjustments for additional UAAL contributions)	\$5,708,929,000
	a) Additional UAAL contributions from OCSD and TCA ¹	<u>(20,143,000)</u>
2	Unfunded actuarial accrued liability at beginning of year after adjustments for additional UAAL contributions)	\$5,688,786,000
3	Normal cost at middle of year	516,408,000
4	Expected employer and member contributions	(1,002,599,000)
5	Interest	<u>387,158,000</u>
6	Expected Unfunded Actuarial Accrued Liability at end of year	\$5,589,753,000
7	Changes due to:	
	a) Investment losses (on smoothed value of assets)	\$50,514,000
	b) Additional UAAL payments from Vector Control and OCFA and anticipated payments ² from DOE and U.C.I.	(23,327,000)
	c) Transfer from O.C. Sanitation District UAAL Deferred Account	(18,631,000)
	d) Difference in actual versus expected contributions (including loss from phase-in)	125,415,000 ³
	e) Difference in actual versus expected salary increases	(52,716,000)
	f) Difference in actual versus expected COLA increases	131,220,000 ⁴
	g) Other experience loss	<u>77,633,000</u>
	Total changes	<u>\$290,108,000</u>
8	Unfunded actuarial accrued liability at end of year	\$5,879,861,000

Note: The sum of items 7b, 7c and 7d equals the "Net loss from contribution experience" shown in Subsection C.

The sum of items 7e, 7f and 7g equals the "Net loss from other experience" shown in Subsection C.

¹ Effect of \$8 million in additional contributions for O.C. Sanitation District and \$12 million in additional contributions for Transportation Corridor Agency to pay off their UAAL as of December 31, 2018.

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 prior valuation.

³ Includes \$24 million contribution loss from the phase-in of the UAAL cost impact due to changes in actuarial assumptions in 2017.

⁴ Includes an actual loss from the payment of 0.25% higher COLA (relative to the 2.75% inflation assumption) for the December 31, 2019 valuation plus an anticipated 0.25% for each of the next four years because of an accumulation of a 1.00% COLA Bank in this valuation.

Section 2: Actuarial Valuation Results

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, 2019, the average recommended employer contribution is 41.49% 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, 2019 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 Ended December 31

	2019		2018	
	Amount (\$ in '000s)	% of Projected Compensation	Amount (\$ in '000s)	% of Projected Compensation
1 Total normal cost	\$529,849	27.14%	\$516,408	27.54%
2 Expected member normal cost contributions	<u>(240,270)</u>	<u>(12.31%)</u>	<u>(233,805)</u>	<u>(12.47%)</u>
3 Employer normal cost: (1) + (2)	\$289,579	14.83%	\$282,603	15.07%
4 Actuarial accrued liability	21,916,730		20,703,349	
5 Valuation Value of Assets	<u>16,036,869</u>		<u>14,994,420</u>	
6 Unfunded actuarial accrued liability (UAAL): (4) - (5)	\$5,879,861		\$5,708,929	
7 Payment on UAAL	\$520,532	26.66%	\$467,926	24.95% ¹
9 Projected compensation	\$1,952,534		\$1,875,370	
10 Total average recommended employer contribution: (3) + (7)	\$810,111	41.49%	\$750,529	40.02%

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

¹ These rates reflect 2/3 phase-in UAAL cost impact of the changes in actuarial assumptions from the December 31, 2017 valuation.

Section 2: Actuarial Valuation Results

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 from December 31, 2018 to December 31, 2019

	Contribution Rate	Estimated Annual Dollar Amount ¹ (\$ in '000s)
Average Recommended Employer Contribution as of December 31, 2018 (before adjustments for additional UAAL contributions and phase-in)	40.80%	\$796,667
• Adjustment to FY20-21 rates for additional UAAL contributions from OCSD and TCA	(0.09%)	(1,779)
• Effect of three-year phase-in of UAAL cost impact due to changes in actuarial assumptions	<u>(1.23%)</u>	<u>(23,939)</u>
Average Recommended Employer Contribution as of December 31, 2018 (after adjustments for additional UAAL contributions and phase-in)	39.48%	\$770,949
• Effect of investment loss (after smoothing)	0.18%	\$3,515
• Effect of additional UAAL contributions from OCFA	(0.07%)	(1,367)
• Effect of \$18.6 million asset transfer from O.C. Sanitation District UAAL Deferred Account	(0.07%)	(1,367)
• Effect of difference in actual versus expected contributions (including loss from phase-in)	0.46% ²	8,982
• Effect of difference in actual versus expected COLA increases	0.48% ³	9,372
• Effect of difference in actual versus expected salary increases	(0.19%)	(3,710)
• Effect of growth in total payroll greater than expected	(0.21%)	(4,100)
• Effect of other experience loss	0.20% ⁴	3,898
• Effect of three-year phase-in of UAAL cost impact due to changes in actuarial assumptions	<u>1.23%</u>	<u>23,939</u>
Total change	2.01%	\$39,162
Average Recommended Employer Contribution as of December 31, 2019	41.49%	\$810,111

¹ Based on December 31, 2018 projected annual compensation of \$1,952,534,000.

² Includes 0.09% of pay contribution loss from the phase-in of the UAAL cost impact due to changes in actuarial assumptions in 2017.

³ Includes an actual loss from the payment of 0.25% higher COLA (relative to the 2.75% inflation assumption) for the December 31, 2019 valuation plus an anticipated 0.25% for each of the next four years because of an accumulation of a 1.00% COLA Bank in this valuation.

⁴ Includes an adjustment of 0.11% to reflect the anticipated contribution loss due to the 18-month delay between date of valuation and date of rate implementation.

Section 2: Actuarial Valuation Results

Reconciliation of Average Recommended Member Contribution Rate

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

Reconciliation from December 31, 2018 to December 31, 2019

	Contribution Rate	Estimated Annual Dollar Amount ¹ (\$ in '000s)
Average Recommended Member Contribution as of December 31, 2018²	12.29%	\$239,938
• Effect of changes in member demographics	<u>0.02%</u>	<u>332</u>
Total change	0.02%	\$332
Average Recommended Member Contribution as of December 31, 2019	12.31%	\$240,270

¹ Based on December 31, 2019 projected annual compensation of \$1,952,534,000.

² Rates have been recalculated by applying the individual entry age based rates determined in the December 31, 2018 valuation to the System membership as of December 31, 2019.

Section 2: Actuarial Valuation Results

Recommended Employer Contribution Rate

	December 31, 2019 Actuarial Valuation		December 31, 2018 Actuarial Valuation	
	Contribution Rate	Estimated Annual Dollar Amount ² (\$ in '000s)	Contribution Rate ¹	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	10.68%	\$4,348	10.73%	\$4,368
UAAL ^{3,4}	<u>5.16%</u>	<u>2,101</u>	<u>5.06%</u>	<u>2,060</u>
Total Contribution	15.84%	\$6,449	15.79%	\$6,428
Rate Group #1 – Plan U (2.5% @ 67 PEPR)⁶				
Normal Cost	10.05%	\$5,016	9.93%	\$4,956
UAAL ^{3,4}	<u>5.16%</u>	<u>2,575</u>	<u>5.06%</u>	<u>2,525</u>
Total Contribution	15.21%	\$7,591	14.99%	\$7,481
Rate Group #1 – Plans A, B and U Combined				
Normal Cost	10.33%	\$9,364	10.29%	\$9,324
UAAL ^{3,4}	<u>5.16%</u>	<u>4,676</u>	<u>5.06%</u>	<u>4,585</u>
Total Contribution	15.49%	\$14,040	15.35%	\$13,909

¹ These rates reflect 2/3 phase-in UAAL cost impact of the changes in actuarial assumptions from the December 31, 2017 valuation.

² Amounts are based on December 31, 2019 projected compensation as shown on the page 45.

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

⁴ These are “net” UAAL contribution rate for County and IHSS Public Authority without reflecting the UAAL contributions required for Vector Control, Cypress Parks and Recreation, U.C.I. and DOE.

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

Section 2: Actuarial Valuation Results

Recommended Employer Contribution Rate (continued)

	December 31, 2019 Actuarial Valuation		December 31, 2018 Actuarial Valuation	
	Contribution Rate	Estimated Annual Dollar Amount ² (\$ in '000s)	Contribution Rate ¹	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	14.34%	\$111,223	14.36%	\$111,378
UAAL ³	27.38%	212,363	25.05%	194,291
Total Contribution	41.72%	\$323,586	39.41%	\$305,669
Rate Group #2 – Plans I and J (2.7% @ 55 – non-OCFA, Children and Families Commission)				
Normal Cost	14.34%	\$79	14.36%	\$80
UAAL ^{3,4}	5.36%	30	3.26%	18
Total Contribution	19.70%	\$109	17.62%	\$98
Rate Group #2 – Plans O and P (1.62% @ 65)				
Normal Cost	6.10%	\$917	6.23%	\$937
UAAL ³	27.38%	4,116	25.05%	3,766
Total Contribution	33.48%	\$5,033	31.28%	\$4,703
Rate Group #2 – Plan S (2.0% @ 57)				
Normal Cost	12.61%	\$247	12.13%	\$237
UAAL ³	27.38%	536	25.05%	490
Total Contribution	39.99%	\$783	37.18%	\$727
Rate Group #2 – Plan T (1.62% @ 65 PEPRA)⁵				
Normal Cost	7.14%	\$24,248	7.12%	\$24,180
UAAL ³	27.38%	92,985	25.05%	85,072
Total Contribution	34.52%	\$117,233	32.17%	\$109,252

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 46.

¹ These rates reflect 2/3 phase-in UAAL cost impact of the changes in actuarial assumptions from the December 31, 2017 valuation.

² Amounts are based on December 31, 2019 projected compensation as shown on the page 45.

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

Section 2: Actuarial Valuation Results

Recommended Employer Contribution Rate (continued)

	December 31, 2019 Actuarial Valuation		December 31, 2018 Actuarial Valuation	
	Contribution Rate	Estimated Annual Dollar Amount ² (\$ in '000s)	Contribution Rate ¹	Estimated Annual Dollar Amount ² (\$ in '000s)
Rate Group #2 – Plan U (2.5% @ 67 PEPRAs, non-Children and Families Commission)⁵				
Normal Cost	8.81%	\$2,343	8.78%	\$2,335
UAAL ³	<u>27.38%</u>	<u>7,283</u>	<u>25.05%</u>	<u>6,663</u>
Total Contribution	36.19%	\$9,626	33.83%	\$8,998
Rate Group #2 – Plan U (2.5% @ 67 PEPRAs, Children and Families Commission)⁵				
Normal Cost	8.81%	\$64	8.78%	\$64
UAAL ^{3,4}	<u>5.36%</u>	<u>39</u>	<u>3.26%</u>	<u>24</u>
Total Contribution	14.17%	\$103	12.04%	\$88
Rate Group #2 – Plan W (1.62% @ 65 PEPRAs)⁶				
Normal Cost	8.54%	\$13	8.73%	\$13
UAAL ³	<u>27.38%</u>	<u>42</u>	<u>25.05%</u>	<u>38</u>
Total Contribution	35.92%	\$55	33.78%	\$51
Rate Group #2 – Plans I, J, O, P, S, T, U and W Combined				
Normal Cost	11.99%	\$139,134	12.00%	\$139,224
UAAL ³	<u>27.36%</u>	<u>317,394</u>	<u>25.03%</u>	<u>290,362</u>
Total Contribution	39.35%	\$456,528	37.03%	\$429,586

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 46.

¹ These rates reflect 2/3 phase-in UAAL cost impact of the changes in actuarial assumptions from the December 31, 2017 valuation.

² Amounts are based on December 31, 2019 projected compensation as shown on the page 45.

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 members hired on or after January 1, 2013.

Section 2: Actuarial Valuation Results

Recommended Employer Contribution Rate (continued)

	December 31, 2019 Actuarial Valuation		December 31, 2018 Actuarial Valuation	
	Contribution Rate ¹	Estimated Annual Dollar Amount ³ (\$ in '000s)	Contribution Rate ²	Estimated Annual Dollar Amount ³ (\$ in '000s)
Rate Group #3 – Plans G and H (2.5% @ 55 – OCSD)				
Normal Cost	13.22%	\$5,844	13.24%	\$5,853
UAAL ⁴	<u>0.00%</u>	<u>0</u>	<u>0.00%</u>	<u>0</u>
Total Contribution	13.22%	\$5,844	13.24%	\$5,853
Rate Group #3 – Plan B (1.64% @ 57 – OCSD)				
Normal Cost	11.23%	\$714	11.11%	\$706
UAAL	<u>0.00%</u>	<u>0</u>	<u>0.00%</u>	<u>0</u>
Total Contribution	11.23%	\$714	11.11%	\$706
Rate Group #3 – Plan U (2.5% @ 67 PEPR)⁵				
Normal Cost	9.88%	\$2,552	10.02%	\$2,588
UAAL	<u>0.00%</u>	<u>0</u>	<u>0.00%</u>	<u>0</u>
Total Contribution	9.88%	\$2,552	10.02%	\$2,588
Rate Group #3 – Plans B, G, H and U Combined				
Normal Cost	11.93%	\$9,110	11.97%	\$9,147
UAAL	<u>0.00%</u>	<u>0</u>	<u>0.00%</u>	<u>0</u>
Total Contribution	11.93%	\$9,110	11.97%	\$9,147

¹ These rates are after adjustment for \$18,631,000 asset transfer from O.C. Sanitation District UAAL Deferred Account.

² These rates are after adjustment to the contribution rates for FY 20-21 for additional UAAL contributions made during calendar year 2019.

³ Amounts are based on December 31, 2019 projected compensation as shown on the page 45.

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.

Section 2: Actuarial Valuation Results

Recommended Employer Contribution Rate (continued)

	December 31, 2019 Actuarial Valuation		December 31, 2018 Actuarial Valuation	
	Contribution Rate	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	11.97%	\$10,434	12.03%	\$10,486
UAAL ³	<u>19.54%</u>	<u>17,033</u>	<u>18.60%</u>	<u>16,213</u>
Total Contribution	31.51%	\$27,467	30.63%	\$26,699
Rate Group #5 – Plan U (2.5% @ 67 PEPR)⁴				
Normal Cost	11.59%	\$2,991	11.32%	\$2,922
UAAL ³	<u>19.54%</u>	<u>5,043</u>	<u>18.60%</u>	<u>4,801</u>
Total Contribution	31.13%	\$8,034	29.92%	\$7,723
Rate Group #5 – Plans A, B and U Combined				
Normal Cost	11.88%	\$13,425	11.87%	\$13,408
UAAL ³	<u>19.54%</u>	<u>22,076</u>	<u>18.60%</u>	<u>21,014</u>
Total Contribution	31.42%	\$35,501	30.47%	\$34,422

¹ These rates reflect 2/3 phase-in UAAL cost impact of the changes in actuarial assumptions from the December 31, 2017 valuation.

² Amounts are based on December 31, 2019 projected compensation as shown on the page 45.

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.

Section 2: Actuarial Valuation Results

Recommended Employer Contribution Rate (continued)

	December 31, 2019 Actuarial Valuation		December 31, 2018 Actuarial Valuation	
	Contribution Rate	Estimated Annual Dollar Amount ² (\$ in '000s)	Contribution Rate ¹	Estimated Annual Dollar Amount ² (\$ in '000s)
Rate Group #9 – Plans M and N (2.0% @ 55 – TCA)				
Normal Cost	14.23%	\$569	14.51%	\$580
UAAL ³	<u>0.39%</u>	<u>16</u>	<u>0.00%</u>	<u>0</u>
Total Contribution	14.62%	\$585	14.51%	\$580
Rate Group #9 – Plan U (2.5% @ 67 PEPR)⁴				
Normal Cost	11.14%	\$372	11.13%	\$372
UAAL ³	<u>0.39%</u>	<u>13</u>	<u>0.00%</u>	<u>0</u>
Total Contribution	11.53%	\$385	11.13%	\$372
Rate Group #9 – Plans M, N and U Combined				
Normal Cost	12.83%	\$941	12.98%	\$952
UAAL ³	<u>0.39%</u>	<u>29</u>	<u>0.00%</u>	<u>0</u>
Total Contribution	13.22%	\$970	12.98%	\$952

¹ These rates are after adjustment to the contribution rates for FY 20-21 for additional UAAL contributions made during calendar year 2019.

² Amounts are based on December 31, 2019 projected compensation as shown on the page 45.

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.

Section 2: Actuarial Valuation Results

Recommended Employer Contribution Rate (continued)

	December 31, 2019 Actuarial Valuation		December 31, 2018 Actuarial Valuation	
	Contribution Rate	Estimated Annual Dollar Amount ² (\$ in '000s)	Contribution Rate ¹	Estimated Annual Dollar Amount ² (\$ in '000s)
Rate Group #10 – Plans I and J (2.7% @ 55 – OCFA)				
Normal Cost	14.75%	\$2,056	14.71%	\$2,050
UAAL ³	<u>14.06%</u>	<u>1,960</u>	<u>14.96%</u>	<u>2,085</u>
Total Contribution	28.81%	\$4,016	29.67%	\$4,135
Rate Group #10 – Plans M and N (2.0% @ 55 – OCFA)				
Normal Cost	13.68%	\$611	13.50%	\$603
UAAL ³	<u>14.06%</u>	<u>628</u>	<u>14.96%</u>	<u>669</u>
Total Contribution	27.74%	\$1,239	28.46%	\$1,272
Rate Group #10 – Plan U (2.5% @ 67 PEPR A)⁴				
Normal Cost	10.05%	\$1,326	10.16%	\$1,340
UAAL ³	<u>14.06%</u>	<u>1,855</u>	<u>14.96%</u>	<u>1,974</u>
Total Contribution	24.11%	\$3,181	25.12%	\$3,314
Rate Group #10 – Plans I, J, M, N and U Combined				
Normal Cost	12.64%	\$3,993	12.64%	\$3,993
UAAL ³	<u>14.06%</u>	<u>4,443</u>	<u>14.96%</u>	<u>4,728</u>
Total Contribution	26.70%	\$8,436	27.60%	\$8,721

¹ These rates reflect 2/3 phase-in UAAL cost impact of the changes in actuarial assumptions from the December 31, 2017 valuation.

² Amounts are based on December 31, 2019 projected compensation as shown on the page 45.

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.

Section 2: Actuarial Valuation Results

Recommended Employer Contribution Rate (continued)

	December 31, 2019 Actuarial Valuation		December 31, 2018 Actuarial Valuation	
	Contribution Rate	Estimated Annual Dollar Amount ² (\$ in '000s)	Contribution Rate ¹	Estimated Annual Dollar Amount ² (\$ in '000s)
Rate Group #11 – Plans M and N, future service (2.0% @ 55 – Cemetery)				
Normal Cost	11.62%	\$133	12.05%	\$138
UAAL ^{3,4}	<u>3.01%</u>	<u>34</u>	<u>0.00%</u>	<u>0</u>
Total Contribution	14.63%	\$167	12.05%	\$138
Rate Group #11 – Plan U (2.5% @ 67 PEPRAs)⁵				
Normal Cost	12.25%	\$65	12.33%	\$65
UAAL ^{3,4}	<u>3.01%</u>	<u>16</u>	<u>0.00%</u>	<u>0</u>
Total Contribution	15.26%	\$81	12.33%	\$65
Rate Group #11 – Plans M, N and U Combined				
Normal Cost	11.83%	\$198	12.13%	\$203
UAAL ^{3,4}	<u>3.01%</u>	<u>50</u>	<u>0.00%</u>	<u>0</u>
Total Contribution	14.84%	\$248	12.13%	\$203

¹ These rates reflect 2/3 phase-in UAAL cost impact of the changes in actuarial assumptions from the December 31, 2017 valuation.

² Amounts are based on December 31, 2019 projected compensation as shown on the page 45.

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.

Section 2: Actuarial Valuation Results

Recommended Employer Contribution Rate (continued)

	December 31, 2019 Actuarial Valuation		December 31, 2018 Actuarial Valuation	
	Contribution Rate	Estimated Annual Dollar Amount ¹ (\$ in '000s)	Contribution Rate	Estimated Annual Dollar Amount ¹ (\$ in '000s)
Rate Group #12 – Plans G and H, future service (2.5% @ 55 – Law Library)				
Normal Cost	14.20%	\$130	14.28%	\$131
UAAL ^{2,3}	<u>0.19%</u>	<u>2</u>	<u>1.77%</u>	<u>16</u>
Total Contribution	14.39%	\$132	16.05%	\$147
Rate Group #12 – Plan U (2.5% @ 67 PEPR)⁴				
Normal Cost	10.37%	\$21	10.32%	\$21
UAAL ^{2,3}	<u>0.19%</u>	<u>0</u>	<u>1.77%</u>	<u>4</u>
Total Contribution	10.56%	\$21	12.09%	\$25
Rate Group #12 – Plans G, H, future service, and U Combined				
Normal Cost	13.49%	\$151	13.58%	\$152
UAAL ^{2,3}	<u>0.19%</u>	<u>2</u>	<u>1.77%</u>	<u>20</u>
Total Contribution	13.68%	\$153	15.35%	\$172

¹ Amounts are based on December 31, 2019 projected compensation as shown on the page 45.

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.

Section 2: Actuarial Valuation Results

Recommended Employer Contribution Rate (continued)

	December 31, 2019 Actuarial Valuation		December 31, 2018 Actuarial Valuation	
	Contribution Rate	Estimated Annual Dollar Amount ² (\$ in '000s)	Contribution Rate ¹	Estimated Annual Dollar Amount ² (\$ in '000s)
Rate Group #6 – Plans E and F (3% @ 50 – Probation)				
Normal Cost	23.25%	\$13,569	23.45%	\$13,686
UAAL ³	<u>36.92%</u>	<u>21,547</u>	<u>32.28%</u>	<u>18,839</u>
Total Contribution	60.17%	\$35,116	55.73%	\$32,525
Rate Group #6 – Plan V (2.7% @ 57 PEPR)⁴				
Normal Cost	16.82%	\$796	16.76%	\$793
UAAL ³	<u>36.92%</u>	<u>1,747</u>	<u>32.28%</u>	<u>1,527</u>
Total Contribution	53.74%	\$2,543	49.04%	\$2,320
Rate Group #6 – Plans E, F and V Combined				
Normal Cost	22.77%	\$14,365	22.95%	\$14,479
UAAL ³	<u>36.92%</u>	<u>23,294</u>	<u>32.28%</u>	<u>20,366</u>
Total Contribution	59.69%	\$37,659	55.23%	\$34,845

¹ These rates reflect 2/3 phase-in UAAL cost impact of the changes in actuarial assumptions from the December 31, 2017 valuation.

² Amounts are based on December 31, 2019 projected compensation as shown on the page 45.

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.

Section 2: Actuarial Valuation Results

Recommended Employer Contribution Rate (continued)

	December 31, 2019 Actuarial Valuation		December 31, 2018 Actuarial Valuation	
	Contribution Rate	Estimated Annual Dollar Amount ² (\$ in '000s)	Contribution Rate ¹	Estimated Annual Dollar Amount ² (\$ in '000s)
Rate Group #7 – Plans E and F (3% @ 50 – Law Enforcement)				
Normal Cost	26.57%	\$38,282	26.64%	\$38,382
UAAL ³	<u>43.65%</u>	<u>62,890</u>	<u>40.71%</u>	<u>58,654</u>
Total Contribution	70.22%	\$101,172	67.35%	\$97,036
Rate Group #7 – Plans Q and R (3% @ 55 – Law Enforcement)				
Normal Cost	23.58%	\$11,375	23.48%	\$11,327
UAAL ³	<u>43.65%</u>	<u>21,057</u>	<u>40.71%</u>	<u>19,639</u>
Total Contribution	67.23%	\$32,432	64.19%	\$30,966
Rate Group #7 – Plan V (2.7% @ 57 PEPR A)⁴				
Normal Cost	18.46%	\$12,488	19.04%	\$12,881
UAAL ³	<u>43.65%</u>	<u>29,529</u>	<u>40.71%</u>	<u>27,540</u>
Total Contribution	62.11%	\$42,017	59.75%	\$40,421
Rate Group #7 – Plans E, F, Q, R and V Combined				
Normal Cost	23.90%	\$62,145	24.08%	\$62,590
UAAL ³	<u>43.65%</u>	<u>113,476</u>	<u>40.71%</u>	<u>105,833</u>
Total Contribution	67.55%	\$175,621	64.79%	\$168,423

¹ These rates reflect 2/3 phase-in UAAL cost impact of the changes in actuarial assumptions from the December 31, 2017 valuation.

² Amounts are based on December 31, 2019 projected compensation as shown on the page 45.

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.

Section 2: Actuarial Valuation Results

Recommended Employer Contribution Rate (continued)

	December 31, 2019 Actuarial Valuation		December 31, 2018 Actuarial Valuation	
	Contribution Rate	Estimated Annual Dollar Amount ² (\$ in '000s)	Contribution Rate ¹	Estimated Annual Dollar Amount ² (\$ in '000s)
Rate Group #8 – Plans E and F (3% @ 50 – OCFA)				
Normal Cost	27.48%	\$27,411	26.97%	\$26,903
UAAL ³	<u>23.79%</u>	<u>23,731</u>	<u>23.84%</u>	<u>23,780</u>
Total Contribution	51.27%	\$51,142	50.81%	\$50,683
Rate Group #8 – Plans Q and R (3% @ 55 – OCFA)				
Normal Cost ⁴	25.77%	\$4,749	21.83%	\$4,023
UAAL ³	<u>23.79%</u>	<u>4,384</u>	<u>23.84%</u>	<u>4,393</u>
Total Contribution	49.56%	\$9,133	45.67%	\$8,416
Rate Group #8 – Plan V (2.7% @ 57 PEPRAs)⁵				
Normal Cost	15.66%	\$4,593	15.27%	\$4,478
UAAL ³	<u>23.79%</u>	<u>6,977</u>	<u>23.84%</u>	<u>6,992</u>
Total Contribution	39.45%	\$11,570	39.11%	\$11,470
Rate Group #8 – Plans E, F, Q, R and V Combined				
Normal Cost	24.92%	\$36,753	24.00%	\$35,404
UAAL ³	<u>23.79%</u>	<u>35,092</u>	<u>23.84%</u>	<u>35,165</u>
Total Contribution	48.71%	\$71,845	47.84%	\$70,569

¹ These rates reflect 2/3 phase-in UAAL cost impact of the changes in actuarial assumptions from the December 31, 2017 valuation.

² Amounts are based on December 31, 2019 projected compensation as shown on the page 45.

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

⁴ The increase in the employer Normal Cost rate from last year to this year is primarily due to the 61 new hires from the City of Garden Grove. The average entry age has changed from 26.4 to 32.0.

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

Section 2: Actuarial Valuation Results

Recommended Employer Contribution Rate (continued)

	December 31, 2019 Actuarial Valuation		December 31, 2018 Actuarial Valuation	
	Contribution Rate	Estimated Annual Dollar Amount ² (\$ in '000s)	Contribution Rate ¹	Estimated Annual Dollar Amount ² (\$ in '000s)
Rate Groups #1 – #12				
Normal Cost	14.83%	\$289,579	14.79%	\$288,876
UAAL ³	<u>26.66%</u>	<u>520,532</u>	<u>24.69%</u>	<u>482,073</u>
Total Contribution	41.49%	\$810,111	39.48%	\$770,949

¹ These rates reflect 2/3 phase-in UAAL cost impact of the changes in actuarial assumptions from the December 31, 2017 valuation.

² Amounts are based on December 31, 2019 projected compensation (\$ in '000s):

General Employers		General Employers		Safety Employers	
Rate Group #1 – Plans A and B	\$40,712	Rate Group #3 – Plans G and H	\$44,209	Rate Group #6 – Plans E and F	\$58,362
Rate Group #1 – Plan U	49,908	Rate Group #3 – Plan B	6,357	Rate Group #6 – Plan V	4,731
Rate Group #2 – Plans I and J		Rate Group #3 – Plan U	25,826	Rate Group #7 – Plans E and F	144,078
non-Children and Families Commission	775,614	Rate Group #5 – Plans A and B	87,168	Rate Group #7 – Plans Q and R	48,241
Rate Group #2 – Plans I and J		Rate Group #5 – Plan U	25,811	Rate Group #7 – Plan V	67,650
Children and Families Commission	554	Rate Group #9 – Plans M and N	3,996	Rate Group #8 – Plans E and F	99,750
Rate Group #2 – Plans O and P	15,033	Rate Group #9 – Plan U	3,339	Rate Group #8 – Plans Q and R	18,428
Rate Group #2 – Plan S	1,956	Rate Group #10 – Plans I and J	13,937	Rate Group #8 – Plan V	29,328
Rate Group #2 – Plan T	339,610	Rate Group #10 – Plans M and N	4,470		
Rate Group #2 – Plan U		Rate Group #10 – Plan U	13,192		
non-Children and Families Commission	26,599	Rate Group #11 – Plans M and N	1,143		
Rate Group #2 – Plan U		Rate Group #11 – Plan U	531		
Children and Families Commission	730	Rate Group #12 – Plans G and H	917		
Rate Group #2 – Plan W	152	Rate Group #12 – Plan U	202		
				Total Combined	\$1,952,534

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

Section 2: Actuarial Valuation Results

Recommended Employer Contribution Rate (continued)

	December 31, 2019 Actuarial Valuation		December 31, 2018 Actuarial Valuation	
	Contribution Rate ²	Contribution Rate ³	Contribution Rate ^{1,2}	Contribution Rate ^{1,3}
Rate Group #2 – Plans I and J (2.7% @ 55 – non-OCFA)				
Normal Cost	14.34%	14.34%	14.36%	14.36%
UAAL ⁴	<u>26.16%</u>	<u>27.38%</u>	<u>23.91%</u>	<u>25.05%</u>
Total Contributions	40.50%	41.72%	38.27%	39.41%
Rate Group #2 – Plan U (2.5% @ 67 PEPR)⁵				
Normal Cost	8.81%	8.81%	8.78%	8.78%
UAAL ⁴	<u>26.16%</u>	<u>27.38%</u>	<u>23.91%</u>	<u>25.05%</u>
Total Contributions	34.97%	36.19%	32.69%	33.83%

¹ These rates reflect 2/3 phase-in UAAL cost impact of the changes in actuarial assumptions from the December 31, 2017 valuation.

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.

Section 2: Actuarial Valuation Results

“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, 2019 Pick Up Percentage		December 31, 2018 Pick Up Percentage	
General Members				
Rate Group #1 Plan A/B (non-OCTA, non-OCSD)	Plan A: 100.00%	Plan B: 98.37%	Plan A: 100.00%	Plan B: 98.28%
Rate Group #2 (2.7% @ 55 – non-OCFA)	Plan I: 99.40%	Plan J: 98.52%	Plan I: 99.38%	Plan J: 98.45%
Rate Group #2 (1.62% @ 65)	Plan O: N/A	Plan P: 97.76%	Plan O: N/A	Plan P: 97.56%
Rate Group #2 (2.0% @ 57)		Plan S: 97.94%		Plan S: 97.92%
Rate Group #3 (2.5% @ 55 – OCSD)	Plan G: 100.00%	Plan H: 98.67%	Plan G: 100.00%	Plan H: 98.61%
Rate Group #3 (1.64% @ 57 – OCSD)		Plan B: 97.83%		Plan B: 97.71%
Rate Group #5 Plan A/B (OCTA)	Plan A: 100.00%	Plan B: 97.77%	Plan A: 100.00%	Plan B: 97.63%
Rate Group #9 (2.0% @ 55 – TCA)	Plan M: N/A	Plan N: 98.59%	Plan M: N/A	Plan N: 98.39%
Rate Group #10 (2.7% @ 55 – OCFA)	Plan I: N/A	Plan J: 98.71%	Plan I: N/A	Plan J: 98.62%
Rate Group #10 (2.0% @ 55 – OCFA)	Plan M: N/A	Plan N: 97.70%	Plan M: N/A	Plan N: 97.50%
Rate Group #11 (2.0% @ 55 – Cemetery)	Plan M: N/A	Plan N: 98.69%	Plan M: N/A	Plan N: 98.61%
Rate Group #12 (2.5% @ 55 – Law Library)	Plan G: N/A	Plan H: 98.82%	Plan G: N/A	Plan H: 98.86%
Safety Members				
Rate Group #6 (3.0% @ 50 – Probation)	Plan E: N/A	Plan F: 99.49%	Plan E: N/A	Plan F: 99.47%
Rate Group #7 (3.0% @ 50 – Law Enforcement)	Plan E: N/A	Plan F: 99.73%	Plan E: N/A	Plan F: 99.71%
Rate Group #7 (3.0% @ 55 – Law Enforcement)	Plan Q: N/A	Plan R: 99.47%	Plan Q: N/A	Plan R: 99.42%
Rate Group #8 (3.0% @ 50 – OCFA)	Plan E: N/A	Plan F: 99.66%	Plan E: N/A	Plan F: 99.64%
Rate Group #8 (3.0% @ 55 – OCFA)	Plan Q: N/A	Plan R: 99.33%	Plan Q: N/A	Plan R: 99.43%

Section 2: Actuarial Valuation Results

“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	31
Cemetery District	102	28
Law Library	103	41
Retirement System	105	31
OCFA	106	33
Transportation Corridor Agency	109	36
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	42
Safety		
Probation	101	27
Law Enforcement	101	27
OCFA	106	29

Section 2: Actuarial Valuation Results

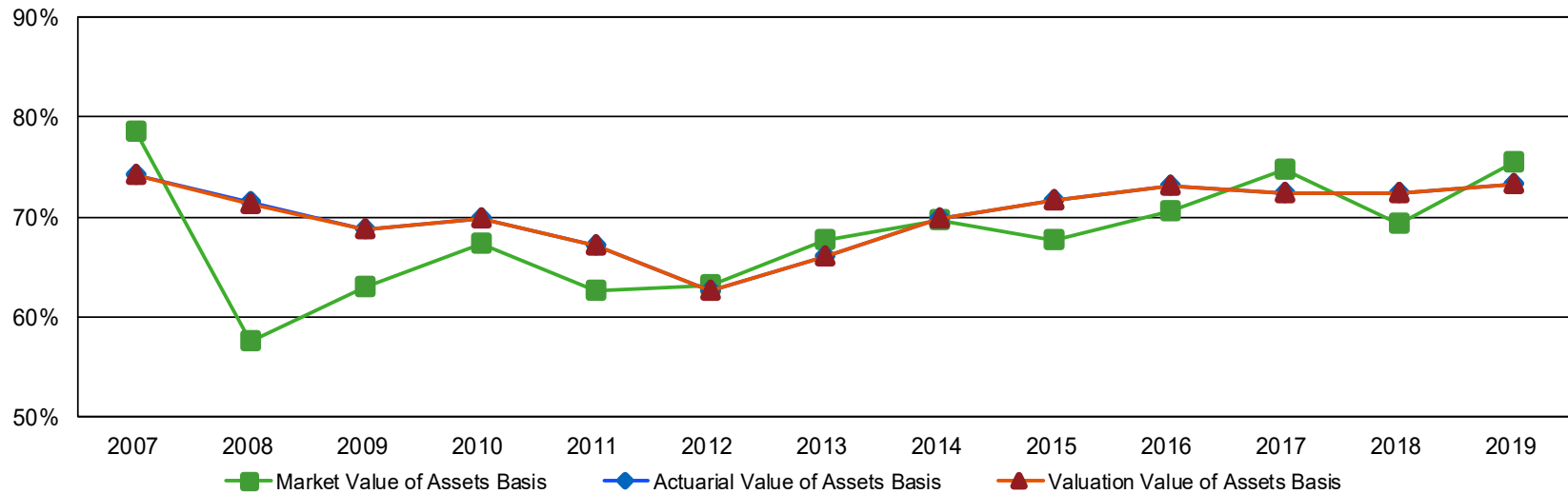
G. Funded Status

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. Higher ratios indicate a relatively well-funded plan while lower ratios may indicate recent changes to actuarial assumptions, 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 Plan assets to cover the estimated cost of settling the 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 Years Ended December 31, 2007 – 2019



Section 2: Actuarial Valuation Results

Schedule of Funding Progress for Years Ended December 31, 2010 – 2019

Actuarial Valuation Date as of December 31	Valuation Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b) - (a)	Funded Ratio (%) (a) / (b)	Projected Covered Payroll (c)	UAAL as a Percentage of Projected Covered Payroll (%) [(b) - (a)] / (c)
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%
2019	16,036,869,000	21,916,730,000	5,879,861,000	73.17%	1,952,534,000	301.14%

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	Actuarial Valuation Date December 31	Funded Ratio Based on Net Market Value of Assets
2010	67.25%	2015	67.73%
2011	62.60%	2016	70.58%
2012	63.17%	2017	74.62%
2013	67.65%	2018	69.31%
2014	69.63%	2019	75.36%

Section 2: Actuarial Valuation Results

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, 2019 (\$ in '000s)	December 31, 2018 (\$ in '000s)
Actuarial present value of future benefits		
• Present value of benefits for retired members and beneficiaries	\$12,631,182	\$11,569,064
• Present value of benefits for inactive vested members	500,271	449,290
• Present value of benefits for active members	<u>13,405,109</u>	<u>13,159,391</u>
Total actuarial present value of future benefits	<u>\$26,536,562</u>	<u>\$25,177,745</u>
Current and future assets		
• Total Valuation Value of Assets	\$16,036,869	\$14,994,420
• Present value of future contributions by members ¹	\$2,130,254	2,048,080
• Present value of future employer contributions for:		
• Entry age normal cost	2,489,578	2,426,316
• Unfunded actuarial accrued liability	<u>5,879,861</u>	<u>5,708,929</u>
Total of current and future assets	<u>\$26,536,562</u>	<u>\$25,177,745</u>

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

Section 2: Actuarial Valuation Results

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 8.5. This means that a 1% asset gain or loss (relative to the assumed investment return) translates to about 8.5% 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 11.2, but is 9.9 for General compared to 15.3 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.

Section 2: Actuarial Valuation Results

Volatility Ratios for Years Ended 2010 – 2019

Year Ended December 31	Asset Volatility Ratio			Liability Volatility Ratio		
	General	Safety	Total	General	Safety	Total
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
2019	7.5	11.5	8.5	9.9	15.3	11.2

Section 2: Actuarial Valuation Results

J. Risk Assessment

Since the actuarial valuation results are dependent on a fixed set of assumptions and data as of a specific date, there is risk that emerging results may differ, perhaps significantly, as actual experience is fluid and will not exactly track current assumptions. This potential divergence may have a significant impact on the future financial condition of the plan.

This report does not contain a detailed analysis of the potential range of future measurements, but does include a concise discussion of some of the primary risks that may affect the Plan's future financial condition. We recommend a more detailed assessment of the risks to provide the Board with a better understanding of the risks inherent in the Plan that can inform both financial preparation and future decision making. This assessment would enable us to work with the Board to highlight and illustrate particular risks or potential future outcomes they may be interested in discussing and could include scenario testing, sensitivity testing, stress testing and stochastic modeling. As noted in the valuation highlights section of this report the results of our more detailed risk assessment will be provided in a separate stand-alone report. We will include within that report investment return scenarios that demonstrate the effects of short-term market volatility on funded status and contribution rates, which may aid in illustrating the effect on the plan of market volatility that can result from events such as COVID-19.

This section provides descriptions and basic assessments of the primary risks that are likely to have an ongoing influence on the Plan's financial health, as well as a discussion of historical trends and maturity measures:

Risk Assessments

- Asset/Liability Mismatch Risk (the potential that future plan experience does not affect asset and liability values in the same way, causing them to diverge)

The most significant asset/liability mismatch risk to the Plan is investment risk, as discussed below. In fact, investment risk has the potential to impact asset/liability mismatch in two ways. The first mismatch is evident in annual valuations: when asset values deviate from assumptions they are typically independent from liability changes. The second mismatch can be caused when systemic asset deviations from assumptions may signal the need for an assumption change, which causes liability values and contribution rates to move in the opposite direction from any change in the expected experience of asset growth rates.

Asset/liability mismatch can also be caused by demographic assumption risk such as longevity, which affects liabilities but have no impact on asset levels. This risk is also discussed below.

- Investment Risk (the risk that investment returns will be different than expected)

The investment return assumption is a long-term, static assumption for valuation purposes even though in reality market experience can be quite volatile in any given year. That volatility can cause significant changes in the financial condition of the Plan, affecting both funded status and contribution rates. The inherent year-to-year volatility is reduced by smoothing through the Actuarial Value of Assets,

Section 2: Actuarial Valuation Results

however investment experience can still have a sizable impact. As discussed in *Section 2, Subsection I, Volatility Ratios*, on page 52, a 1% asset gain or loss (relative to the assumed investment return) translates to about 8.5 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 year-by-year market value rate of return over the last 10 years has ranged from a low of -2.46% to a high of 14.79%.

- Longevity Risk (the risk that mortality experience will be different than expected)

The actuarial valuation includes current life expectancy assumptions and an expectation of future improvement in life expectancy, which are significant assumptions given the relatively long duration of liabilities for pension plans. Emerging plan experience that does not match these expectations will result in increases or decreases in the actuarially determined contribution over time. This risk can be reduced by using tables appropriate for the Plan (public experience tables) that are weighted by benefit levels, and by using generational mortality projections.

- Other Risks

In addition to longevity, the valuation includes a variety of other assumptions that are unlikely to match future experience exactly. One example is projected salary scales over time. As salary is central to the determination of benefits paid in retirement, deviations from the projected salary scales could have a material impact on the benefits anticipated for each member. Examples of demographic assumptions include retirement, termination and disability assumptions, and will likely vary in significance for different groups (for example, disability assumptions are typically more significant for Safety groups).

Some plans also carry significant contribution risk, defined as the potential for actual future contributions deviating from expected future contributions. However, the employer has a proven track-record of making the Actuarially Determined Contributions based on the Board's Actuarial Funding Policy, so contribution risk is minimal.

Evaluation of Historical Trends

Past experience can help demonstrate the sensitivity of key results to the Plan's actual experience. Over the past ten years:

- The funded percentage on the Valuation Value of Assets has increased from 69.8% to 73.2%. This is primarily due to contributions made to amortize the UAAL (i.e., amortizing each gain/loss layer of UAAL over 20 years). For a more detailed history see *Section 2, Subsection G, Funded Status* starting on page 49.
- The geometric average investment return on the Actuarial Value of Assets over the last 10 years was 5.90%. This includes a high of 9.11% return and a low of 3.28%. The average over the last 5 years was 6.17%. For more details see the Investment Return table in *Section 2, Subsection C* on page 25.

Section 2: Actuarial Valuation Results

- Beyond investment losses, the primary source of new UAAL was the strengthening of assumptions through multiple assumption changes. While the assumption changes in 2014 decreased the unfunded liability by \$103 million, the assumption changes in 2017 that changed the discount rate from 7.25% to 7.00% (as well as various other changes) added \$822 million in unfunded liability. For more details on unfunded liability changes see *Section 3, Exhibit H, Table of Amortization Bases* starting on page 86. A graphical representation of historical changes in UAAL by source will be included in the stand-alone risk assessment report.
- The plan's funding policy effectively deals with these unfunded liabilities over time. This can be seen most clearly in the *Section 3, Exhibit I, Projection of UAAL Balances and Payments* provided on pages 98 and 99.

Maturity Measures

In the last 10 years the ratio of members in pay status to active participants has increased from 0.59 to 0.83. An increased ratio indicates that the plan has grown in maturity over time. This is to be expected, but is also informative to understanding plan sensitivity to particular risks. For more details see *Section 2, Subsection A, Member Data* on page 16.

As pension plans mature, the cash needed to fulfill benefit obligations will increase over time. Therefore, cash flow projections and analysis should be performed to assure that the Plan's asset allocation is aligned to meet emerging pension liabilities. Over the past year, benefits paid and contributions received were relatively equal despite the plan having a funded ratio of 73.2%, since the ratio of members in pay status to active participants is still below 1. However, this may change as the plan matures and the ratio of members in pay status to active participants increases to above 1. For more details on historical cash flows see the Comparison of Contributions Made with Benefits in *Section 2, Subsection B* on page 20.

A further discussion of plan maturity measures and how they relate to changes in assets and liabilities is included in *Section 2, Subsection I, Volatility Ratios* on page 53.

Section 3: Supplemental Information

Exhibit A: Table of Plan Coverage

Total Plan

Category	Year Ended December 31		Change From Prior Year
	2019	2018	
Active members in valuation:			
• Number	22,257	21,929	1.5%
• Average age	44.9	45.1	-0.2
• Average years of service	12.5	12.8	-0.3
• Total projected compensation	\$1,952,534,335	\$1,875,371,661	4.1%
• Average projected compensation	\$87,727	\$85,520	2.6%
• Account balances	\$3,116,706,969	\$2,980,107,630	4.6%
• Total active vested members	15,717	15,903	-1.2%
Inactive vested members:¹			
• Number	6,520	6,026	8.2%
• Average Age	44.7	44.9	-0.2
Retired members:			
• Number in pay status	14,449	13,827	4.5%
• Average age	70.1	70.0	0.1
• Average monthly benefit ²	\$4,413	\$4,237	4.2%
Disabled members:			
• Number in pay status	1,505	1,482	1.6%
• Average age	65.7	65.5	0.2
• Average monthly benefit ²	\$3,911	\$3,750	4.3%
Beneficiaries:			
• Number in pay status	2,466	2,365	4.3%
• Average age	73.1	72.9	0.2
• Average monthly benefit ²	\$2,205	\$2,116	4.2%

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.

Section 3: Supplemental Information

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
	2019	2018	
Active members in valuation:			
• Number	1,650	1,613	2.3%
• Average age	42.9	43.0	-0.1
• Average years of service	9.3	9.7	-0.4
• Total projected compensation	\$90,620,091	\$88,176,419	2.8%
• Average projected compensation	\$54,921	\$54,666	0.5%
• Account balances	\$64,253,545	\$60,833,185	5.6%
• Total active vested members	970	911	6.5%
Inactive vested members:¹			
• Number	581	516	12.6%
• Average Age	41.9	41.8	0.1
Retired members:			
• Number in pay status	650	636	2.2%
• Average age	75.2	75.0	0.2
• Average monthly benefit ²	\$2,768	\$2,709	2.2%
Disabled members:			
• Number in pay status	38	37	2.7%
• Average age	68.1	67.2	0.9
• Average monthly benefit ²	\$2,438	\$2,408	1.2%
Beneficiaries:			
• Number in pay status	98	98	0.0%
• Average age	76.7	76.5	0.2
• Average monthly benefit ²	\$1,571	\$1,438	9.2%

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.

Section 3: Supplemental Information

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		Change From Prior Year
	2019	2018	
Active members in valuation:			
• Number	14,339	14,267	0.5%
• Average age	45.4	45.6	-0.2
• Average years of service	12.6	12.8	-0.2
• Total projected compensation	\$1,160,247,859	\$1,127,951,040	2.9%
• Average projected compensation	\$80,916	\$79,060	2.3%
• Account balances	\$2,114,331,924	\$2,035,013,710	3.9%
• Total active vested members	10,068	10,201	-1.3%
Inactive vested members:¹			
• Number	4,371	4,078	7.2%
• Average Age	44.7	44.9	-0.2
Retired members:			
• Number in pay status	9,828	9,432	4.2%
• Average age	71.1	71.0	0.1
• Average monthly benefit ²	\$3,939	\$3,787	4.0%
Disabled members:			
• Number in pay status	570	575	-0.9%
• Average age	67.0	67.0	0
• Average monthly benefit ²	\$2,666	\$2,558	4.2%
Beneficiaries:			
• Number in pay status	1,553	1,489	4.3%
• Average age	75.2	75.0	0.2
• Average monthly benefit ²	\$1,983	\$1,907	4.0%

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.

Section 3: Supplemental Information

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
	2019	2018	
Active members in valuation:			
• Number	608	616	-1.3%
• Average age	47.3	47.3	0.0
• Average years of service	12.3	12.3	0.0
• Total projected compensation	\$76,392,296	\$73,563,905	3.8%
• Average projected compensation	\$125,645	\$119,422	5.2%
• Account balances	\$95,709,705	\$93,152,393	2.7%
• Total active vested members	432	433	-0.2%
Inactive vested members:¹			
• Number	135	117	15.4%
• Average Age	46.7	47.3	-0.6
Retired members:			
• Number in pay status	410	390	5.1%
• Average age	68.4	68.2	0.2
• Average monthly benefit ²	\$5,823	\$5,575	4.4%
Disabled members:			
• Number in pay status	19	17	11.8%
• Average age	65.9	65.8	0.1
• Average monthly benefit ²	\$3,830	\$3,586	6.8%
Beneficiaries:			
• Number in pay status	79	79	0.0%
• Average age	70.2	70.3	-0.1
• Average monthly benefit ²	\$2,536	\$2,406	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.

Section 3: Supplemental Information

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
	2019	2018	
Active members in valuation:			
• Number	1,350	1,279	5.6%
• Average age	49.6	50.1	-0.5
• Average years of service	12.8	13.7	-0.9
• Total projected compensation	\$112,979,357	\$105,327,147	7.3%
• Average projected compensation	\$83,688	\$82,351	1.6%
• Account balances	\$134,348,956	\$130,715,191	2.8%
• Total active vested members	959	993	-3.4%
Inactive vested members:¹			
• Number	636	590	7.8%
• Average Age	49.7	49.6	0.1
Retired members:			
• Number in pay status	992	965	2.8%
• Average age	70.6	70.1	0.5
• Average monthly benefit ²	\$2,659	\$2,568	3.5%
Disabled members:			
• Number in pay status	268	261	2.7%
• Average age	66.9	66.5	0.4
• Average monthly benefit ²	\$2,483	\$2,373	4.6%
Beneficiaries:			
• Number in pay status	187	176	6.3%
• Average age	72.3	71.4	0.9
• Average monthly benefit ²	\$1,452	\$1,380	5.2%

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.

Section 3: Supplemental Information

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
	2019	2018	
Active members in valuation:			
• Number	61	62	-1.6%
• Average age	48.7	48.8	-0.1
• Average years of service	9.2	8.3	0.9
• Total projected compensation	\$7,334,734	\$7,061,833	3.9%
• Average projected compensation	\$120,242	\$113,901	5.6%
• Account balances	\$5,992,102	\$5,011,037	19.6%
• Total active vested members	33	31	6.5%
Inactive vested members:¹			
• Number	67	62	8.1%
• Average Age	45.8	44.9	0.9
Retired members:			
• Number in pay status	51	50	2.0%
• Average age	69.5	68.9	0.6
• Average monthly benefit ²	\$3,276	\$3,073	6.6%
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	72.0	71.0	1.0
• Average monthly benefit ²	\$478	\$464	3.0%

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.

Section 3: Supplemental Information

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
	2019	2018	
Active members in valuation:			
• Number	310	274	13.1%
• Average age	44.7	45.5	-0.8
• Average years of service ¹	10.2	11.2	-1.0
• Total projected compensation	\$31,598,713	\$27,222,325	16.1%
• Average projected compensation	\$101,931	\$99,352	2.6%
• Account balances	\$30,922,866	\$28,959,317	6.8%
• Total active vested members	173	171	1.2%
Inactive vested members:²			
• Number	209	178	17.4%
• Average Age	41.9	42.1	-0.2
Retired members:			
• Number in pay status	172	162	6.2%
• Average age	66.4	66.0	0.4
• Average monthly benefit ³	\$4,662	\$4,550	2.5%
Disabled members:			
• Number in pay status	11	11	0.0%
• Average age	62.2	61.2	1.0
• Average monthly benefit ³	\$3,004	\$2,660	12.9%
Beneficiaries:			
• Number in pay status	13	12	8.3%
• Average age	63.7	65.7	-2.0
• Average monthly benefit ³	\$1,542	\$1,311	17.6%

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.

Section 3: Supplemental Information

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		Change From Prior Year
	2019	2018	
Active members in valuation:			
• Number	24	25	-4.0%
• Average age	49.3	50.3	-1.0
• Average years of service	14.9	16.7	-1.8
• Total projected compensation	\$1,674,297	\$1,643,501	1.9%
• Average projected compensation	\$69,762	\$65,740	6.1%
• Account balances	\$2,226,124	\$2,483,310	-10.4%
• Total active vested members	16	18	-11.1%
Inactive vested members:¹			
• Number	2	2	0.0%
• Average Age	41.1	40.1	1.0
Retired members:			
• Number in pay status	7	4	75.0%
• Average age	72.3	76.2	-3.9
• Average monthly benefit ²	\$3,065	\$2,730	12.3%
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	6	5	20.0%
• Average age	76.5	80.2	-3.7
• Average monthly benefit ²	\$1,501	\$1,523	-1.4%

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.

Section 3: Supplemental Information

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
	2019	2018	
Active members in valuation:			
• Number	14	14	0.0%
• Average age	58.2	57.2	1.0
• Average years of service	17.4	16.4	1.0
• Total projected compensation	\$1,119,047	\$1,095,420	2.2%
• Average projected compensation	\$79,932	\$78,244	2.2%
• Account balances	\$2,652,511	\$2,390,529	11.0%
• Total active vested members	12	12	0.0%
Inactive vested members:¹			
• Number	3	4	-25.0%
• Average Age	45.4	49.6	-4.2
Retired members:			
• Number in pay status	13	12	8.3%
• Average age	72.7	72.2	0.5
• Average monthly benefit ²	\$3,019	\$3,058	-1.3%
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.

Section 3: Supplemental Information

Exhibit A: Table of Plan Coverage (continued)

Rate Group #6 for Plans E, F and V (Probation)

Category	Year Ended December 31		Change From Prior Year
	2019	2018	
Active members in valuation:			
• Number	736	764	-3.7%
• Average age	44.6	44.6	0.0
• Average years of service	17.2	17.1	0.1
• Total projected compensation	\$63,093,762	\$64,229,791	-1.8%
• Average projected compensation	\$85,725	\$84,070	2.0%
• Account balances	\$148,763,700	\$145,104,870	2.5%
• Total active vested members	669	713	-6.2%
Inactive vested members:¹			
• Number	222	222	0.0%
• Average Age	42.4	41.9	0.5
Retired members:			
• Number in pay status	376	332	13.3%
• Average age	65.6	66.0	-0.4
• Average monthly benefit ²	\$5,672	\$5,632	0.7%
Disabled members:			
• Number in pay status	33	31	6.5%
• Average age	55.6	55.9	-0.3
• Average monthly benefit ²	\$3,052	\$2,973	2.7%
Beneficiaries:			
• Number in pay status	28	27	3.7%
• Average age	65.3	64.9	0.4
• Average monthly benefit ²	\$2,469	\$2,444	1.0%

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.

Section 3: Supplemental Information

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		Change From Prior Year
	2019	2018	
Active members in valuation:			
• Number	2,059	2,027	1.6%
• Average age	40.5	40.9	-0.4
• Average years of service	12.6	13.1	-0.5
• Total projected compensation	\$259,968,109	\$246,706,193	5.4%
• Average projected compensation	\$126,259	\$121,710	3.7%
• Account balances	\$348,748,071	\$324,646,722	7.4%
• Total active vested members	1,554	1,608	-3.4%
Inactive vested members:¹			
• Number	194	179	8.4%
• Average Age	43.3	43.3	0.0
Retired members:			
• Number in pay status	1,489	1,402	6.2%
• Average age	64.2	64.0	0.2
• Average monthly benefit ²	\$7,412	\$7,128	4.0%
Disabled members:			
• Number in pay status	370	368	0.5%
• Average age	63.8	63.4	0.4
• Average monthly benefit ²	\$5,465	\$5,266	3.8%
Beneficiaries:			
• Number in pay status	385	370	4.1%
• Average age	68.5	68.1	0.4
• Average monthly benefit ²	\$3,250	\$3,114	4.4%

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.

Section 3: Supplemental Information

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
	2019	2018	
Active members in valuation:			
• Number	1,106	988	11.9%
• Average age	42.5	43.2	-0.7
• Average years of service ¹	12.5	13.9	-1.4
• Total projected compensation	\$147,506,069	\$132,394,088	11.4%
• Average projected compensation	\$133,369	\$134,002	-0.5%
• Account balances	\$168,757,464	\$151,797,366	11.2%
• Total active vested members	831	812	2.3%
Inactive vested members:²			
• Number	100	78	28.2%
• Average Age	41.0	43.5	-2.5
Retired members:			
• Number in pay status	460	441	4.3%
• Average age	65.3	64.9	0.4
• Average monthly benefit ³	\$8,780	\$8,376	4.8%
Disabled members:			
• Number in pay status	196	182	7.7%
• Average age	65.2	65.0	0.2
• Average monthly benefit ²	\$7,035	\$6,912	1.8%
Beneficiaries:			
• Number in pay status	113	105	7.6%
• Average age	63.4	62.8	0.6
• Average monthly benefit ²	\$3,380	\$3,305	2.3%

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. In addition, there were 61 members in Plan R hired from City of Garden Grove in 2019 whose benefit service starts to accrue only effective in calendar year 2019.

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.

Section 3: Supplemental Information

Exhibit B: Members in Active Service as of December 31, 2019 by Age, Years of Service, and Average Projected Compensation

Total Plan

Age	Years of Service									
	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 25	376	373	3	--	--	--	--	--	--	--
	\$60,949	\$60,805	\$78,834	--	--	--	--	--	--	--
25 – 29	1,880	1,659	220	1	--	--	--	--	--	--
	67,613	65,707	81,707	\$128,464	--	--	--	--	--	--
30 – 34	2,703	1,662	775	260	6	--	--	--	--	--
	77,966	71,593	89,986	82,887	\$77,375	--	--	--	--	--
35 – 39	3,055	1,073	691	1,069	218	4	--	--	--	--
	86,849	76,922	95,320	91,754	84,942	\$79,157	--	--	--	--
40 – 44	3,218	688	434	991	824	277	4	--	--	--
	90,823	79,090	95,350	94,882	91,440	96,678	\$79,646	--	--	--
45 – 49	3,418	519	313	703	821	783	275	4	--	--
	96,259	81,998	97,388	91,956	96,900	105,605	103,802	\$135,461	--	--
50 – 54	3,184	427	276	466	594	598	634	189	--	--
	96,439	86,171	98,531	87,770	95,551	101,766	102,689	102,922	--	--
55 – 59	2,271	281	230	372	407	393	339	203	45	1
	93,527	87,627	105,229	89,234	90,376	97,017	93,265	99,210	\$80,804	\$75,640
60 – 64	1,403	145	172	219	252	223	225	120	42	5
	88,351	85,166	99,851	87,084	82,051	90,359	88,327	85,266	94,417	92,808
65 – 69	520	49	47	84	122	87	63	46	14	8
	85,112	95,320	88,065	77,723	84,775	91,621	76,473	88,008	81,464	74,956
70 & over	229	11	18	38	55	43	36	16	8	4
	76,344	69,599	81,075	70,738	81,057	71,284	78,624	81,538	65,256	97,310
Total	22,257	6,887	3,179	4,203	3,299	2,408	1,576	578	109	18
	\$87,727	\$73,964	\$94,322	\$90,607	\$91,816	\$99,649	\$97,149	\$96,399	\$84,993	\$84,920

Section 3: Supplemental Information

Exhibit B: Members in Active Service as of December 31, 2019 by Age, Years of Service, and Average Projected Compensation (continued)

Rate Group #1 for Plans A, B and U (Non-OCTA, Non-OCSD)

Age	Total	Years of Service									
		0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over	
Under 25	54	54	--	--	--	--	--	--	--	--	--
	\$60,137	\$60,137	--	--	--	--	--	--	--	--	--
25 – 29	210	180	30	--	--	--	--	--	--	--	--
	52,190	51,635	\$55,519	--	--	--	--	--	--	--	--
30 – 34	267	172	78	16	1	--	--	--	--	--	--
	52,649	50,562	56,551	\$56,181	\$50,857	--	--	--	--	--	--
35 – 39	227	104	65	46	11	1	--	--	--	--	--
	54,248	50,083	56,745	58,514	60,741	\$57,599	--	--	--	--	--
40 – 44	217	70	42	48	44	13	--	--	--	--	--
	55,009	48,860	57,414	58,141	58,326	57,553	--	--	--	--	--
45 – 49	213	43	35	46	42	31	16	--	--	--	--
	56,547	48,725	56,956	59,809	58,054	59,083	\$58,424	--	--	--	--
50 – 54	151	28	24	34	24	10	29	2	--	--	--
	56,279	48,735	56,153	57,100	57,904	58,617	60,493	\$57,106	--	--	--
55 – 59	124	22	30	17	17	13	18	6	1	--	--
	55,944	49,563	55,828	57,735	57,533	57,857	58,418	58,415	\$58,176	--	--
60 – 64	118	12	30	13	17	6	29	8	3	--	--
	57,043	50,236	56,632	58,684	57,355	57,543	58,311	59,994	58,387	--	--
65 – 69	47	4	8	7	6	2	11	7	1	1	1
	56,618	48,478	57,636	58,335	55,683	56,025	58,286	57,336	54,538	\$54,538	--
70 & over	22	1	3	4	3	4	4	3	--	--	--
	56,010	34,615	55,325	56,756	55,369	56,370	58,549	59,606	--	--	--
Total	1,650	690	345	231	165	80	107	26	5	1	1
	\$54,921	\$51,085	\$56,575	\$58,241	\$57,980	\$58,231	\$58,944	\$58,647	\$57,575	\$54,538	\$54,538

Section 3: Supplemental Information

Exhibit B: Members in Active Service as of December 31, 2019 by Age, Years of Service, and Average Projected Compensation (continued)

Rate Group #2 for Plans I, J, O, P, S, T, U and W

Age	Years of Service									
	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 25	220	219	1	--	--	--	--	--	--	--
	\$52,693	\$52,706	\$49,842	--	--	--	--	--	--	--
25 – 29	1,113	1,010	103	--	--	--	--	--	--	--
	59,621	59,211	63,647	--	--	--	--	--	--	--
30 – 34	1,676	1,109	399	165	3	--	--	--	--	--
	70,671	69,160	76,516	\$66,679	\$71,186	--	--	--	--	--
35 – 39	1,940	707	390	691	150	2	--	--	--	--
	79,190	73,370	86,238	82,183	74,805	\$56,678	--	--	--	--
40 – 44	2,030	476	253	649	484	165	3	--	--	--
	83,152	77,946	86,741	86,704	82,212	81,627	\$73,592	--	--	--
45 – 49	2,197	341	186	502	555	450	160	3	--	--
	88,526	80,924	89,140	86,539	92,533	92,147	85,517	\$123,309	--	--
50 – 54	2,131	250	169	342	398	411	425	136	--	--
	88,321	81,150	88,713	85,018	89,411	93,538	89,592	86,403	--	--
55 – 59	1,556	184	113	282	266	292	239	144	35	1
	87,944	84,888	94,433	84,997	87,977	93,383	85,814	88,940	\$71,993	\$75,640
60 – 64	927	99	74	164	165	170	147	85	19	4
	83,381	84,318	89,768	83,868	79,788	84,947	83,986	78,923	83,068	77,712
65 – 69	368	34	24	65	86	73	41	32	7	6
	83,706	95,375	87,193	77,292	81,126	93,075	73,282	84,853	69,514	77,785
70 & over	181	9	11	32	47	36	25	10	8	3
	76,146	73,062	73,598	72,831	82,547	69,751	76,268	85,648	65,256	102,917
Total	14,339	4,438	1,723	2,892	2,154	1,599	1,040	410	69	14
	\$80,916	\$70,475	\$83,867	\$83,561	\$86,160	\$90,373	\$86,295	\$85,874	\$74,010	\$82,996

Section 3: Supplemental Information

Exhibit B: Members in Active Service as of December 31, 2019 by Age, Years of Service, and Average Projected Compensation (continued)

Rate Group #3 for Plans B, G, H and U (OCSD)

Age	Years of Service									
	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 25	1	1	--	--	--	--	--	--	--	--
	\$87,249	\$87,249	--	--	--	--	--	--	--	--
25 – 29	32	28	4	--	--	--	--	--	--	--
	96,262	96,445	\$94,984	--	--	--	--	--	--	--
30 – 34	57	39	16	2	--	--	--	--	--	--
	103,624	98,899	114,240	\$110,845	--	--	--	--	--	--
35 – 39	101	52	23	19	7	--	--	--	--	--
	117,904	108,655	123,529	131,523	\$131,162	--	--	--	--	--
40 – 44	74	21	20	19	14	--	--	--	--	--
	122,005	112,405	122,857	137,226	114,529	--	--	--	--	--
45 – 49	77	24	13	20	10	2	8	--	--	--
	129,357	120,340	136,853	125,219	139,302	\$130,477	\$141,866	--	--	--
50 – 54	102	15	9	12	19	13	29	5	--	--
	140,524	120,041	142,976	148,930	139,231	151,338	143,553	\$136,612	--	--
55 – 59	84	12	13	19	13	10	13	3	1	--
	136,924	116,204	129,805	133,620	136,330	143,916	160,820	145,519	\$142,214	--
60 – 64	51	4	8	10	9	9	7	4	--	--
	135,763	127,384	125,749	114,255	129,326	153,142	156,682	156,710	--	--
65 – 69	21	5	3	0	6	2	3	1	1	--
	130,995	132,841	107,165	0	137,320	136,829	135,377	147,400	114,091	--
70 & over	8	0	1	0	1	1	3	2	0	--
	113,883	0	132,465	\$0	101,917	145,429	115,613	92,207	0	--
Total	608	201	110	101	79	37	63	15	2	--
	\$125,645	\$109,016	\$124,722	\$131,691	\$131,924	\$147,699	\$146,641	\$138,551	\$128,152	--

Section 3: Supplemental Information

Exhibit B: Members in Active Service as of December 31, 2019 by Age, Years of Service, and Average Projected Compensation (continued)

Rate Group #5 for Plans A, B and U (OCTA)

Age	Years of Service									
	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 25	13	13	--	--	--	--	--	--	--	--
	\$62,119	\$62,119	--	--	--	--	--	--	--	--
25 – 29	76	70	6	--	--	--	--	--	--	--
	61,544	60,304	\$76,004	--	--	--	--	--	--	--
30 – 34	88	64	20	4	--	--	--	--	--	--
	71,631	67,757	82,333	\$80,113	--	--	--	--	--	--
35 – 39	106	50	19	29	8	--	--	--	--	--
	85,638	77,909	102,305	86,741	\$90,361	--	--	--	--	--
40 – 44	154	48	26	34	41	5	--	--	--	--
	84,757	76,472	88,910	88,747	84,492	\$117,755	--	--	--	--
45 – 49	180	56	24	41	39	14	6	--	--	--
	83,080	72,708	94,420	87,689	78,483	102,376	\$87,882	--	--	--
50 – 54	235	58	33	40	55	28	15	6	--	--
	84,312	65,990	100,852	86,331	86,116	86,871	101,180	\$86,344	--	--
55 – 59	247	29	21	38	73	30	30	21	5	--
	88,068	66,108	112,839	93,696	79,953	88,038	97,338	97,433	\$92,319	--
60 – 64	181	18	16	22	42	25	28	16	13	1
	91,471	78,361	87,890	92,848	81,354	101,421	105,453	94,000	87,273	\$153,189
65 – 69	58	3	6	10	18	7	5	4	4	1
	85,341	97,775	83,161	83,409	85,062	68,535	79,294	125,566	83,854	78,398
70 & over	12	1	2	1	3	2	2	--	--	1
	86,187	73,415	110,550	79,674	82,965	91,651	73,684	--	--	80,489
Total	1,350	410	173	219	279	111	86	47	22	3
	\$83,688	\$69,573	\$95,076	\$88,670	\$82,501	\$92,740	\$98,391	\$97,243	\$87,798	\$104,026

Section 3: Supplemental Information

Exhibit B: Members in Active Service as of December 31, 2019 by Age, Years of Service, and Average Projected Compensation (continued)

Rate Group #9 for Plans M, N and U (TCA)

Age	Years of Service									
	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 25	1	1	--	--	--	--	--	--	--	--
	\$78,944	\$78,944	--	--	--	--	--	--	--	--
25 – 29	1	1	--	--	--	--	--	--	--	--
	64,660	64,660	--	--	--	--	--	--	--	--
30 – 34	3	3	--	--	--	--	--	--	--	--
	73,687	73,687	--	--	--	--	--	--	--	--
35 – 39	7	4	1	2	--	--	--	--	--	--
	93,958	94,765	\$101,116	\$88,767	--	--	--	--	--	--
40 – 44	7	3	1	2	1	--	--	--	--	--
	100,570	86,542	147,913	114,407	\$67,635	--	--	--	--	--
45 – 49	11	8	2	--	1	--	--	--	--	--
	124,707	119,287	151,549	--	114,389	--	--	--	--	--
50 – 54	13	5	1	2	3	2	--	--	--	--
	135,166	136,847	129,815	148,527	119,880	\$143,209	--	--	--	--
55 – 59	10	2	1	3	4	--	--	--	--	--
	144,696	151,549	157,552	102,715	169,542	--	--	--	--	--
60 – 64	8	2	2	--	3	1	--	--	--	--
	129,059	110,591	212,858	--	80,643	143,643	--	--	--	--
65 – 69	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
70 & over	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
Total	61	29	8	9	12	3	--	--	--	--
	\$120,242	\$109,178	\$158,151	\$112,394	\$121,813	\$143,353	--	--	--	--

Section 3: Supplemental Information

Exhibit B: Members in Active Service as of December 31, 2019 by Age, Years of Service, and Average Projected Compensation (continued)

Rate Group #10 for Plans I, J, M, N and U (OCFA)

Age	Years of Service									
	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 25	5	5	--	--	--	--	--	--	--	--
	\$66,749	\$66,749	--	--	--	--	--	--	--	--
25 – 29	30	28	2	--	--	--	--	--	--	--
	74,470	73,723	\$84,933	--	--	--	--	--	--	--
30 – 34	33	30	3	--	--	--	--	--	--	--
	85,584	85,644	84,978	--	--	--	--	--	--	--
35 – 39	47	33	6	6	2	--	--	--	--	--
	94,822	91,941	113,772	\$105,977	\$52,042	--	--	--	--	--
40 – 44	45	23	6	9	6	1	--	--	--	--
	100,492	99,594	81,769	109,077	106,181	\$122,098	--	--	--	--
45 – 49	40	14	5	7	10	2	2	--	--	--
	112,826	98,398	133,069	124,703	114,611	146,506	\$79,037	--	--	--
50 – 54	47	8	7	4	13	8	7	--	--	--
	116,523	103,405	148,612	100,721	103,998	130,001	116,312	--	--	--
55 – 59	35	8	6	3	8	5	4	1	--	--
	112,485	124,041	132,664	121,161	90,868	127,556	86,734	\$73,506	--	--
60 – 64	22	4	2	2	11	1	2	--	--	--
	122,430	107,874	200,454	111,751	102,874	145,015	180,468	--	--	--
65 – 69	4	1	--	--	2	1	--	--	--	--
	112,110	71,146	--	--	108,358	160,581	--	--	--	--
70 & over	2	--	--	--	1	--	1	--	--	--
	79,659	--	--	--	61,519	--	\$97,800	--	--	--
Total	310	154	37	31	53	18	16	1	--	--
	\$101,931	\$90,856	\$121,637	\$112,269	\$101,435	\$133,250	\$111,121	\$73,506	--	--

Section 3: Supplemental Information

Exhibit B: Members in Active Service as of December 31, 2019 by Age, Years of Service, and Average Projected Compensation (continued)

Rate Group #11 for Plans M AND N, Future Service, and U (Cemetery)

Age	Years of Service									
	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	2	2	--	--	--	--	--	--	--	--
	\$46,975	\$46,975	--	--	--	--	--	--	--	--
35 – 39	3	1	1	--	1	--	--	--	--	--
	57,242	48,493	\$55,909	--	\$67,326	--	--	--	--	--
40 – 44	4	--	--	2	--	2	--	--	--	--
	73,546	--	--	\$59,851	--	\$87,241	--	--	--	--
45 – 49	1	1	--	--	--	--	--	--	--	--
	106,108	106,108	--	--	--	--	--	--	--	--
50 – 54	9	2	1	1	1	2	--	2	--	--
	69,689	50,467	70,637	161,106	74,244	55,063	--	\$55,075	--	--
55 – 59	2	1	--	--	--	1	--	--	--	--
	78,747	57,233	--	--	--	100,261	--	--	--	--
60 – 64	1	0	--	--	--	1	--	--	--	--
	69,583	0	--	--	--	69,583	--	--	--	--
65 – 69	2	1	--	--	--	--	--	1	--	--
	77,025	53,790	--	--	--	--	--	100,261	--	--
70 & over	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
Total	24	8	2	3	2	6	--	3	--	--
	\$69,762	\$57,563	\$63,273	\$93,603	\$70,785	\$75,742	--	\$70,137	--	--

Section 3: Supplemental Information

Exhibit B: Members in Active Service as of December 31, 2019 by Age, Years of Service, and Average Projected Compensation (continued)

Rate Group #12 for Plans G, H, Future Service, and U (Law Library)

Age	Years of Service									
	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	--	--	--	--	--	--	--	--
	\$54,682	\$54,682	--	--	--	--	--	--	--	--
40 – 44	2	--	--	1	1	--	--	--	--	--
	92,114	--	--	\$107,769	\$76,459	--	--	--	--	--
45 – 49	2	1	--	--	--	1	--	--	--	--
	106,586	147,130	--	--	--	\$66,043	--	--	--	--
50 – 54	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
55 – 59	3	--	--	--	1	1	1	--	--	--
	86,724	--	--	--	107,254	76,459	\$76,459	--	--	--
60 – 64	1	--	1	--	--	--	--	--	--	--
	54,614	--	\$54,614	--	--	--	--	--	--	--
65 – 69	3	--	--	--	1	2	--	--	--	--
	72,179	--	--	--	66,043	75,247	--	--	--	--
70 & over	2	--	--	1	--	--	--	1	--	--
	67,821	--	--	50,750	--	--	--	\$84,892	--	--
Total	14	2	1	2	3	4	1	1	--	--
	\$79,932	\$100,906	\$54,614	\$79,259	\$83,252	\$73,249	\$76,459	\$84,892	--	--

Section 3: Supplemental Information

Exhibit B: Members in Active Service as of December 31, 2019 by Age, Years of Service, and Average Projected Compensation (continued)

Rate Group #6 for Plans E, F and V (Probation)

Age	Years of Service									
	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 25	7	7	--	--	--	--	--	--	--	--
	\$60,506	\$60,506	--	--	--	--	--	--	--	--
25 – 29	31	30	1	--	--	--	--	--	--	--
	61,386	60,469	\$88,904	--	--	--	--	--	--	--
30 – 34	39	23	11	4	1	--	--	--	--	--
	69,021	65,695	75,763	\$67,802	\$76,229	--	--	--	--	--
35 – 39	98	6	9	73	10	--	--	--	--	--
	79,413	74,058	69,411	79,905	88,038	--	--	--	--	--
40 – 44	207	1	3	55	115	32	1	--	--	--
	85,933	64,660	66,707	81,814	86,071	\$94,616	\$97,807	--	--	--
45 – 49	190	2	1	13	58	97	19	--	--	--
	90,977	61,773	51,413	76,233	82,581	95,889	106,778	--	--	--
50 – 54	110	3	--	8	24	37	31	7	--	--
	92,084	70,342	--	74,992	81,736	91,482	102,160	\$114,982	--	--
55 – 59	33	--	2	--	4	15	6	6	--	--
	96,394	--	89,080	--	86,126	90,693	91,434	124,890	--	--
60 – 64	17	--	1	1	2	4	6	1	2	--
	90,259	--	81,189	76,541	83,402	77,400	92,887	91,186	\$125,882	--
65 – 69	3	--	--	1	1	--	1	--	--	--
	92,265	--	--	74,202	95,551	--	107,042	--	--	--
70 & over	1	--	--	--	--	--	1	--	--	--
	97,554	--	--	--	--	--	97,554	--	--	--
Total	736	72	28	155	215	185	65	14	2	--
	\$85,725	\$63,780	\$73,496	\$79,650	\$84,711	\$93,966	\$101,601	\$117,529	\$125,882	--

Section 3: Supplemental Information

Exhibit B: Members in Active Service as of December 31, 2019 by Age, Years of Service, and Average Projected Compensation (continued)

Rate Group #7 for Plans E, F, Q, R and V (Law Enforcement)

Age	Years of Service									
	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 25	61	59	2	--	--	--	--	--	--	--
	\$84,415	\$84,113	\$93,330	--	--	--	--	--	--	--
25 – 29	291	223	67	1	--	--	--	--	--	--
	97,170	91,446	115,754	\$128,464	--	--	--	--	--	--
30 – 34	368	112	199	56	1	--	--	--	--	--
	113,115	93,487	120,547	125,779	\$123,609	--	--	--	--	--
35 – 39	322	37	115	144	25	1	--	--	--	--
	124,139	102,710	123,336	128,742	132,175	\$145,674	--	--	--	--
40 – 44	274	14	29	102	79	50	--	--	--	--
	134,320	115,782	127,319	128,785	140,442	145,193	--	--	--	--
45 – 49	347	7	14	39	72	162	53	--	--	--
	144,687	113,988	130,651	133,462	140,103	147,990	\$156,841	--	--	--
50 – 54	256	50	9	14	29	67	69	18	--	--
	146,140	137,239	144,930	133,495	141,535	141,697	156,056	\$167,248	--	--
55 – 59	96	22	12	8	10	13	15	15	1	--
	145,927	142,706	147,408	148,540	135,207	146,828	140,602	161,184	\$124,618	--
60 – 64	40	3	21	7	--	4	3	2	--	--
	146,856	145,521	153,472	152,707	--	130,024	127,379	121,795	--	--
65 – 69	4	1	--	1	2	--	--	--	--	--
	159,512	151,549	--	188,145	149,177	--	--	--	--	--
70 & over	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
Total	2,059	528	468	372	218	297	140	35	1	--
	\$126,259	\$99,686	\$123,787	\$130,017	\$139,290	\$145,799	\$154,083	\$162,052	\$124,618	--

Section 3: Supplemental Information

Exhibit B: Members in Active Service as of December 31, 2019 by Age, Years of Service, and Average Projected Compensation (continued)

Rate Group #8 for Plans E, F, Q, R and V (OCFA)

Age	Years of Service									
	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 25	14	14	--	--	--	--	--	--	--	--
	\$85,461	\$85,462	--	--	--	--	--	--	--	--
25 – 29	96	89	7	--	--	--	--	--	--	--
	99,559	97,230	\$129,163	--	--	--	--	--	--	--
30 – 34	170	108	49	13	--	--	--	--	--	--
	109,251	97,535	127,473	\$137,905	--	--	--	--	--	--
35 – 39	203	78	62	59	4	--	--	--	--	--
	124,621	104,485	130,835	142,462	\$157,797	--	--	--	--	--
40 – 44	204	32	54	70	39	9	--	--	--	--
	142,920	113,259	143,061	146,689	157,626	\$154,502	--	--	--	--
45 – 49	160	22	33	35	34	24	11	1	--	--
	149,170	109,107	151,960	150,930	152,034	169,257	\$160,576	\$171,920	--	--
50 – 54	130	8	23	9	28	20	29	13	--	--
	160,009	103,696	160,631	145,902	162,437	155,543	167,044	189,277	--	--
55 – 59	81	1	32	2	11	13	13	7	2	--
	152,784	109,445	153,104	142,669	144,127	149,518	151,070	179,788	\$164,909	--
60 – 64	37	3	17	--	3	2	3	4	5	--
	140,337	129,846	131,473	--	138,532	131,040	162,210	144,458	165,153	--
65 – 69	10	--	6	--	--	--	2	1	1	--
	135,898	--	127,482	--	--	--	131,225	181,784	149,854	--
70 & over	1	--	1	--	--	--	--	--	--	--
	130,222	--	130,222	--	--	--	--	--	--	--
Total	1,106	355	284	188	119	68	58	26	8	--
	\$133,369	\$101,089	\$139,880	\$145,464	\$155,437	\$158,373	\$160,752	\$178,871	\$163,180	--

Section 3: Supplemental Information

Exhibit C: Reconciliation of Member Data

	Active Members	Inactive Vested Members ¹	Retired Members	Disabled Members	Beneficiaries	Total
Number as of December 31, 2018	21,929	6,026	13,827	1,482	2,365	45,629
• New members	1,875	192	N/A	N/A	212	2,279
• Terminations – with vested rights	(607)	607	N/A	N/A	N/A	0
• Contribution refunds	(115)	-112	N/A	N/A	N/A	(227)
• Retirements	(821)	-128	949	N/A	N/A	0
• New disabilities	(26)	(7)	(31)	64	N/A	0
• Return to work	52	(49)	(3)	0	N/A	0
• Died with or without beneficiary	(30)	(9)	(304)	(43)	(99)	(485)
• Data adjustments	0	0	11	2	(12)	1
Number as of December 31, 2019	22,257	6,520	14,449	1,505	2,466	47,197

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

Section 3: Supplemental Information

Exhibit D: Summary Statement of Income and Expenses on a Market Value Basis

	Year Ended December 31, 2019	Year Ended December 31, 2018
Net assets at market value at the beginning of the year¹	\$14,349,790,000	\$14,652,607,000
Contribution income:		
• Employer contributions ²	\$642,540,000	\$595,494,000
• Member contributions	279,373,000	270,070,000
• Discount for prepaid contributions	22,049,000	21,218,000
• Transfer from County Investment Account ³	<u>0</u>	<u>0</u>
<i>Net contribution income</i>	\$943,962,000	\$886,782,000
Investment income:		
• Interest, dividends and other income	\$2,248,759,000	\$(241,629,000)
• Less investment and administrative fees	<u>(125,501,000)</u>	<u>(119,692,000)</u>
<i>Net investment income</i>	\$2,123,258,000	\$(361,321,000)
Total income available for benefits	\$3,067,220,000	\$525,461,000
Less benefit payments:		
• Benefits paid	\$(887,653,000)	\$(814,345,000)
• Withdrawal of contributions	<u>(13,249,000)</u>	<u>(13,933,000)</u>
<i>Net benefit payments</i>	\$(900,902,000)	\$(828,278,000)
Change in net assets at market value	\$2,166,318,000	\$(302,817,000)
Net assets at market value at the end of the year¹	\$16,516,108,000	\$14,349,790,000

Note: Results may be slightly off due to rounding.

¹ See footnote 1 on next page for further detail.

² Excludes \$29,884,000 in contributions towards O.C. Sanitation District UAAL Deferred Account as of December 31, 2019. Includes asset transfers of \$18,631,000 and \$14,589,000 as of December 31, 2019 and December 31, 2018, respectively, from O.C. Sanitation District UAAL Deferred Account to valuation assets.

³ Funded by pension obligation bond proceeds held by OCERS.

Section 3: Supplemental Information

Exhibit E: Summary Statement of Plan Assets

	December 31, 2019	December 31, 2018
Cash equivalents	\$415,160,000	\$463,805,000
Accounts receivable:		
• Contributions	\$24,104,000	\$20,834,000
• Investment income	18,054,000	19,170,000
• Securities settlements	335,681,000	115,567,000
• All other	<u>5,462,000</u>	<u>3,223,000</u>
Total accounts receivable	\$383,301,000	\$158,794,000
Investments:		
• Equities	\$8,291,819,000	\$6,773,591,000
• Fixed income investments	2,787,092,000	2,578,702,000
• Alternative investments and diversified credit	5,440,774,000	5,062,529,000
• Security lending collateral	192,379,000	314,333,000
• Fixed assets net of accumulated depreciation	<u>16,060,000</u>	<u>18,542,000</u>
Total investments at market value	<u>\$16,728,124,000</u>	<u>\$14,747,697,000</u>
Total assets	\$17,526,585,000	\$15,370,296,000
Accounts payable:		
• Securities settlements	\$(301,621,000)	\$(228,647,000)
• Securities lending liability	(192,379,000)	(314,333,000)
• All other	<u>(94,719,000)</u>	<u>(99,503,000)</u>
Total accounts payable	\$(588,719,000)	\$(642,483,000)
Net assets at market value¹	\$16,516,108,000	\$14,349,790,000
Net assets at actuarial value	\$16,036,953,000	\$14,994,505,000
Net assets at valuation value	\$16,036,869,000	\$14,994,420,000

Note: Results may be slightly off due to rounding.

¹ The market value excludes \$150,416,000 and \$131,890,000 as of December 31, 2019 and December 31, 2018, respectively, in the County Investment Account (funded by pension obligation bond proceeds held by OCERS), \$259,285,000 and \$246,133,000 as of December 31, 2019 and December 31, 2018, respectively, in the prepaid employer contributions account, \$12,057,000 and \$0 as of December 31, 2019 and December 31, 2018, respectively in the O.C. Sanitation District UAAL Deferred Account (after transfer).

Section 3: Supplemental Information

Exhibit F: Summary of Reported Reserve Information as of December 31, 2019

	Reserves
Used in Development of Valuation Value of Assets:	
• Active Members Reserve (Book Value)	\$3,421,183,000
• Retired Members Reserve (Book Value)	11,728,494,000
• Employer Advanced Reserve (Book Value)	2,772,684,000
• O.C. Sanitation District UAAL Deferred Account Transfer	18,631,000
• ERI Contribution Reserve	12,292,000
• STAR COLA Contribution Reserve	0
• Unrealized Appreciation/(Depreciation) Included in Valuation Value of Assets	<u>(1,916,415,000)</u>
Subtotal: Valuation Value of Assets	\$16,036,869,000
Not Used in Development of Valuation Value of Assets:	
• RMBR	\$0
• Unclaimed Member Deposit	0
• Medicare Medical Insurance Reserve	<u>84,000</u>
Subtotal	\$84,000
Subtotal: Actuarial Value of Assets	\$16,036,953,000
• Unrecognized Investment Income	<u>479,155,000</u>
Subtotal: Market Value of Assets (Net of County Investment Account ¹ and Prepaid Employer Contributions)	\$16,516,108,000
• County Investment Account ¹	150,416,000
• Prepaid Employer Contributions	259,285,000
• O.C. Sanitation District UAAL Deferred Account ²	<u>12,057,000</u>
Total: Gross Market Value of Assets	\$ 16,937,866,000

Note: Results may be slightly off due to rounding.

¹ Funded by pension obligation bond proceeds held by OCERS.

² After asset transfer of \$18,631,000 from O.C. Sanitation District UAAL Deferred Account to valuation assets.

Section 3: Supplemental Information

Exhibit G: Development of the Fund through December 31, 2019

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
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%
2019	664,589,000	279,373,000	2,123,258,000	900,902,000	16,516,108,000	16,036,869,000	97.10%

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.

Section 3: Supplemental Information

Exhibit H: Table of Amortization Bases

Rate Group #1 – Plans A, B and U (non-OCTA, non-OCSD) for Orange County and IHSS

Date Established	Source	Initial Amount (\$ in '000s)	Years Remaining	Outstanding Balance (\$ in '000s)	Annual Payment (\$ in '000s)
December 31, 2012	Restart amortization	\$70,164	14	\$66,190	\$6,120
December 31, 2013	Actuarial (gain) or loss	(5,744)	14	(5,419)	(501)
December 31, 2014	Actuarial (gain) or loss	(2,744)	15	(2,633)	(231)
December 31, 2014	Assumption changes	(6,545)	15	(6,278)	(551)
December 31, 2015	Actuarial (gain) or loss	(1,650)	16	(1,606)	(134)
December 31, 2016	Actuarial (gain) or loss	(9,719)	17	(9,552)	(764)
December 31, 2017	Actuarial (gain) or loss	(5,386)	18	(5,335)	(409)
December 31, 2017	Assumption changes	21,899	18	21,688	1,664
December 31, 2018	Actuarial (gain) or loss	44	19	44	3
December 31, 2019	Actuarial (gain) or loss	(6,588)	20	(6,588)	(470)
Subtotal				\$50,511	\$4,727
Rate Group #1 – Plans A, B and U (non-OCTA, non-OCSD) for O.C. Vector Control ¹				\$1,544	
Rate Group #1 – Plans A, B and U (non-OCTA, non-OCSD) for Department of Education ¹				\$3,576	
Rate Group #1 – Plans A, B and U (non-OCTA, non-OCSD) for U.C.I. ¹				\$33,469	
Rate Group #1 – Plans A, B and U (non-OCTA, non-OCSD) for Cypress Recreation and Parks ¹				\$521	
Rate Group #1 Subtotal				\$89,621	

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, 2018 to December 31, 2019 to reflect the actual contributions, benefit payments and return on their VVAs during 2019. The AALs for these employers are obtained from internal valuation results.

Section 3: Supplemental Information

Exhibit H: Table of Amortization Bases (continued)

Rate Group #2 – Plans I, J, O, P, S, T, U and W

Date Established	Source	Initial Amount (\$ in '000s)	Years Remaining	Outstanding Balance (\$ in '000s)	Annual Payment (\$ in '000s)
December 31, 2012	Restart amortization	\$3,438,555	14	\$3,243,791	\$299,948
December 31, 2013	Actuarial (gain) or loss	(173,790)	14	(163,946)	(15,160)
December 31, 2014	Actuarial (gain) or loss	(78,001)	15	(74,833)	(6,565)
December 31, 2014	Assumption changes	(246,714)	15	(236,693)	(20,763)
December 31, 2015	Actuarial (gain) or loss	(65,063)	16	(63,299)	(5,291)
December 31, 2016	Actuarial (gain) or loss	39,445	17	38,767	3,099
Subtotal ¹				\$2,743,787	\$255,268
December 31, 2017	Actuarial (gain) or loss	\$(59,911)	18	\$(59,331)	\$(4,552)
December 31, 2017	Assumption changes	481,098	18	476,446	36,553
December 31, 2018	Actuarial (gain) or loss	207,573	19	206,843	15,274
December 31, 2019	Actuarial (gain) or loss	186,003	20	186,003	13,256
Subtotal ²				\$809,961	\$60,531
Rate Group #2 Subtotal				\$3,553,748	\$315,799

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.

Section 3: Supplemental Information

Exhibit H: Table of Amortization Bases (continued)

Rate Group #3 – Plans B, G, H and U (OCSD)

Date Established	Source	Initial Amount (\$ in '000s)	Years Remaining	Outstanding Balance (\$ in '000s)	Annual Payment (\$ in '000s)
December 31, 2019	Restart amortization ¹	\$0	0	\$0	\$0
Rate Group #3 Subtotal				\$0	\$0

¹ After transfer of \$18.6 million from O.C. Sanitation District UAAL Deferred Account.

Section 3: Supplemental Information

Exhibit H: Table of Amortization Bases (continued)

Rate Group #5 – Plans A, B and U (OCTA)

Date Established	Source	Initial Amount (\$ in '000s)	Years Remaining	Outstanding Balance (\$ in '000s)	Annual Payment (\$ in '000s)
December 31, 2012	Restart amortization	\$232,513	14	\$219,524	\$20,299
December 31, 2013	Actuarial (gain) or loss	(13,471)	14	(12,718)	(1,176)
December 31, 2014	Actuarial (gain) or loss	4,522	15	4,342	381
December 31, 2014	Assumption changes	(19,944)	15	(19,150)	(1,680)
December 31, 2015	Actuarial (gain) or loss	(933)	16	(909)	(76)
December 31, 2016	Actuarial (gain) or loss	(9,743)	17	(9,584)	(766)
December 31, 2017	Actuarial (gain) or loss	(9,948)	18	(9,852)	(756)
December 31, 2017	Assumption changes	43,481	18	43,060	3,304
December 31, 2018	Actuarial (gain) or loss	22,318	19	22,239	1,642
December 31, 2019	Actuarial (gain) or loss	12,234	20	<u>12,234</u>	<u>872</u>
Rate Group #5 Subtotal				\$249,186	\$22,044

Section 3: Supplemental Information

Exhibit H: Table of Amortization Bases (continued)

Rate Group #9 – Plans M, N and U (TCA)

Date Established	Source	Initial Amount (\$ in '000s)	Years Remaining	Outstanding Balance (\$ in '000s)	Annual Payment (\$ in '000s)
December 31, 2019	Restart amortization ¹ & Actuarial (gain) or loss	\$373	20	<u>\$373</u>	<u>\$27</u>
Rate Group #9 Subtotal				\$373	\$27

¹ After reflecting additional UAAL contribution of \$12.8 million made by TCA during 2019.

Section 3: Supplemental Information

Exhibit H: Table of Amortization Bases (continued)

Rate Group #10 – Plans I, J, M, N and U (OCFA)

Date Established	Source	Initial Amount (\$ in '000s)	Years Remaining	Outstanding Balance (\$ in '000s)	Annual Payment (\$ in '000s)
December 31, 2012	Restart amortization	\$72,750	14	\$68,685	\$6,351
December 31, 2013	Actuarial (gain) or loss	(2,659)	14	(2,510)	(232)
December 31, 2014	Actuarial (gain) or loss	(3,755)	15	(3,606)	(316)
December 31, 2014	Assumption changes	(4,489)	15	(4,311)	(378)
December 31, 2015	Actuarial (gain) or loss	626	16	609	51
December 31, 2016	Actuarial (gain) or loss	134	17	132	11
December 31, 2017	Actuarial (gain) or loss	(15,281)	18	(15,133)	(1,161)
December 31, 2017	Assumption changes	9,159	18	9,071	696
December 31, 2018	Actuarial (gain) or loss	(6,934)	19	(6,910)	(510)
December 31, 2019	Actuarial (gain) or loss	76	20	76	5
Rate Group #10 Subtotal				\$46,103	\$4,517

Section 3: Supplemental Information

Exhibit H: Table of Amortization Bases (continued)

Rate Group #11 – Plans M and N, future service, and U (Cemetery)

Date Established	Source	Initial Amount (\$ in '000s)	Years Remaining	Outstanding Balance (\$ in '000s)	Annual Payment (\$ in '000s)
December 31, 2017	Restart amortization & Assumption changes	\$281	18	\$278	\$21
December 31, 2018	Actuarial (gain) or loss	(244)	19	(243)	(18)
December 31, 2019	Actuarial (gain) or loss	613	20	<u>613</u>	<u>44</u>
Rate Group #11 Subtotal				\$648	\$47

Section 3: Supplemental Information

Exhibit H: Table of Amortization Bases (continued)

Rate Group #12 – Plans G, H, future service, and U (Law Library)

Date Established	Source	Initial Amount (\$ in '000s)	Years Remaining	Outstanding Balance (\$ in '000s)	Annual Payment (\$ in '000s)
December 31, 2017	Restart amortization & Assumption changes	\$13	18	\$12	\$1
December 31, 2018	Actuarial (gain) or loss	221	19	220	16
December 31, 2019	Actuarial (gain) or loss	(201)	20	(201)	(14)
Rate Group #12 Subtotal				\$31	\$3

Section 3: Supplemental Information

Exhibit H: Table of Amortization Bases (continued)

Rate Group #6 – Plans E, F and V (Probation)

Date Established	Source	Initial Amount (\$ in '000s)	Years Remaining	Outstanding Balance (\$ in '000s)	Annual Payment (\$ in '000s)
December 31, 2012	Restart amortization	\$192,912	14	\$182,134	\$16,842
December 31, 2013	Actuarial (gain) or loss	(14,039)	14	(13,256)	(1,226)
December 31, 2014	Actuarial (gain) or loss	(2,596)	15	(2,493)	(219)
December 31, 2014	Assumption changes	36,260	15	34,816	3,054
December 31, 2015	Actuarial (gain) or loss	(10,703)	16	(10,421)	(871)
December 31, 2016	Actuarial (gain) or loss	13,799	17	13,573	1,085
December 31, 2017	Actuarial (gain) or loss	(6,566)	18	(6,503)	(499)
December 31, 2017	Assumption changes	50,030	18	49,546	3,801
December 31, 2018	Actuarial (gain) or loss	8,046	19	8,018	592
December 31, 2019	Actuarial (gain) or loss	8,063	20	8,063	575
Rate Group #6 Subtotal				\$263,477	\$23,134

Section 3: Supplemental Information

Exhibit H: Table of Amortization Bases (continued)

Rate Group #7 – Plans E, F, Q, R and V (Law Enforcement)

Date Established	Source	Initial Amount (\$ in '000s)	Years Remaining	Outstanding Balance (\$ in '000s)	Annual Payment (\$ in '000s)
December 31, 2012	Restart amortization	\$988,833	14	\$933,589	\$86,327
December 31, 2013	Actuarial (gain) or loss	(51,652)	14	(48,766)	(4,509)
December 31, 2014	Actuarial (gain) or loss	(34,729)	15	(33,346)	(2,925)
December 31, 2014	Assumption changes	102,262	15	98,189	8,613
December 31, 2015	Actuarial (gain) or loss	23,666	16	23,043	1,926
December 31, 2016	Actuarial (gain) or loss	39,724	17	39,074	3,124
December 31, 2017	Actuarial (gain) or loss	(27,922)	18	(27,652)	(2,121)
December 31, 2017	Assumption changes	161,417	18	159,856	12,264
December 31, 2018	Actuarial (gain) or loss	69,329	19	69,085	5,102
December 31, 2019	Actuarial (gain) or loss	75,023	20	<u>75,023</u>	<u>5,347</u>
Rate Group #7 Subtotal				\$1,288,095	\$113,148

Section 3: Supplemental Information

Exhibit H: Table of Amortization Bases (continued)

Rate Group #8 – Plans E, F, Q, R and V (OCFA)

Date Established	Source	Initial Amount (\$ in '000s)	Years Remaining	Outstanding Balance (\$ in '000s)	Annual Payment (\$ in '000s)
December 31, 2012	Restart amortization	\$399,947	14	\$377,603	\$34,916
December 31, 2013	Actuarial (gain) or loss	(20,177)	14	(19,050)	(1,762)
December 31, 2014	Actuarial (gain) or loss	(35,400)	15	(33,990)	(2,982)
December 31, 2014	Assumption changes	35,957	15	34,526	3,029
December 31, 2015	Actuarial (gain) or loss	(22,228)	16	(21,644)	(1,809)
December 31, 2016	Actuarial (gain) or loss	(15,736)	17	(15,478)	(1,237)
December 31, 2017	Actuarial (gain) or loss	(43,031)	18	(42,615)	(3,269)
December 31, 2017	Assumption changes	53,637	18	53,118	4,075
December 31, 2018	Actuarial (gain) or loss	39,932	19	39,792	2,938
December 31, 2019	Actuarial (gain) or loss	16,317	20	<u>16,317</u>	<u>1,163</u>
Rate Group #8 Subtotal				\$388,579	\$35,062

Section 3: Supplemental Information

Exhibit H: Table of Amortization Bases (continued)

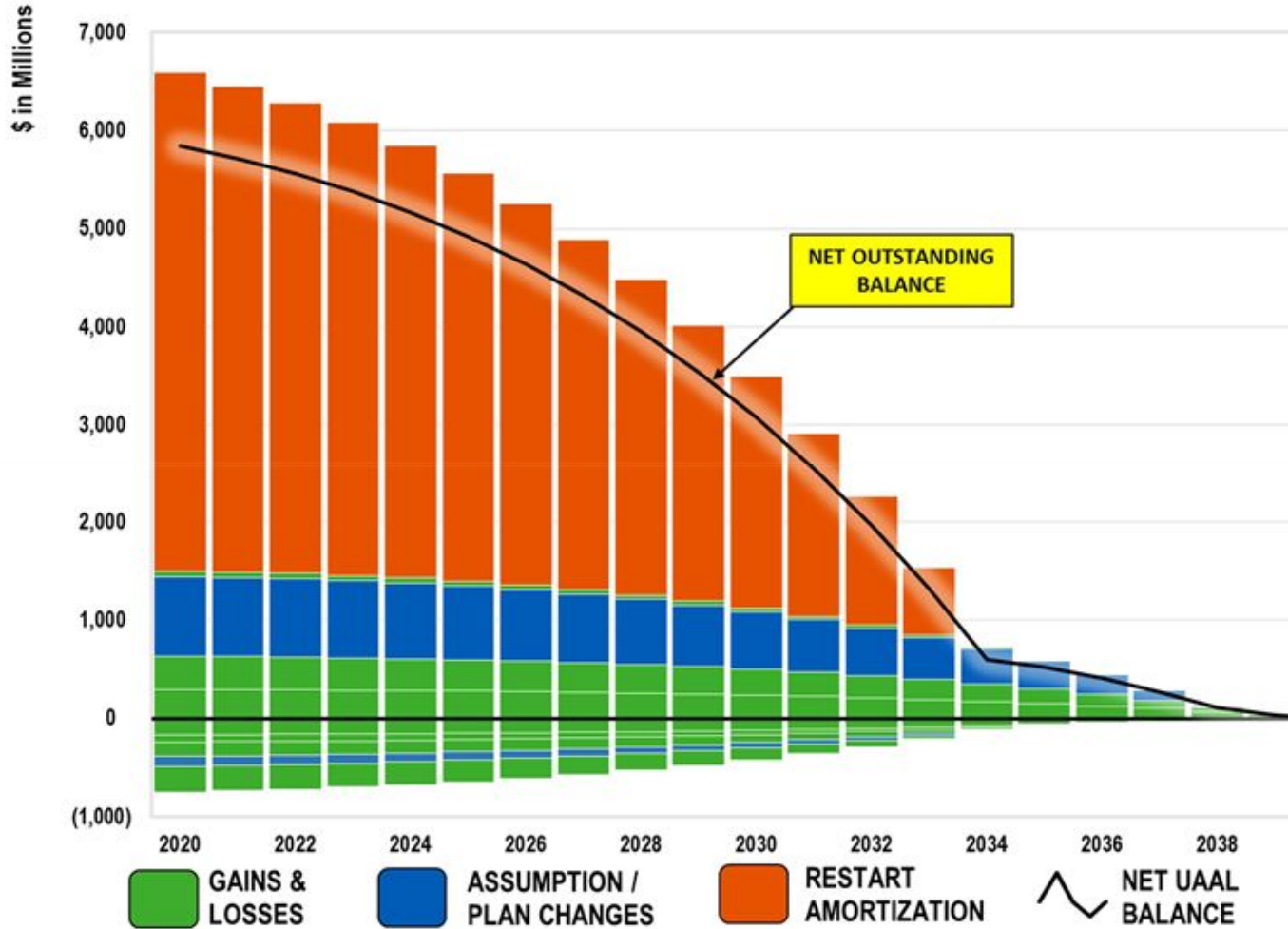
All Rate Groups Combined Excluding O.C. Vector Control,
Department of Education, U.C.I. and Cypress Recreation and Parks

Date Established	Source	Initial Amount (\$ in '000s)	Years Remaining	Outstanding Balance (\$ in '000s)	Annual Payment (\$ in '000s)
December 31, 2012	Restart amortization	\$5,395,674	14	\$5,091,516	\$470,803
December 31, 2013	Actuarial (gain) or loss	(281,532)	14	(265,665)	(24,566)
December 31, 2014	Actuarial (gain) or loss	(152,703)	15	(146,559)	(12,857)
December 31, 2014	Assumption changes	(103,213)	15	(98,901)	(8,676)
December 31, 2015	Actuarial (gain) or loss	(76,285)	16	(74,227)	(6,204)
December 31, 2016	Actuarial (gain) or loss	57,904	17	56,932	4,552
December 31, 2017	Actuarial (gain) or loss	(168,707)	18	(167,076)	(12,817)
December 31, 2017	Assumption changes	821,677	18	813,730	62,429
December 31, 2018	Actuarial (gain) or loss	340,285	19	339,088	25,039
December 31, 2019	Actuarial (gain) or loss	291,913	20	291,913	20,805
Subtotal				\$5,840,751	\$518,508
Rate Group #1 – Plans A, B and U (non-OCTA, non-OCSD) for O.C. Vector Control				\$1,544	
Rate Group #1 – Plans A, B and U (non-OCTA, non-OCSD) for Department of Education				\$3,576	
Rate Group #1 – Plans A, B and U (non-OCTA, non-OCSD) for U.C.I.				\$33,469	
Rate Group #1 – Plans A, B and U (non-OCTA, non-OCSD) for Cypress Recreation and Parks				\$521	
Total				\$5,879,861	

Section 3: Supplemental Information

Exhibit I: Projection of UAAL Balances and Payments

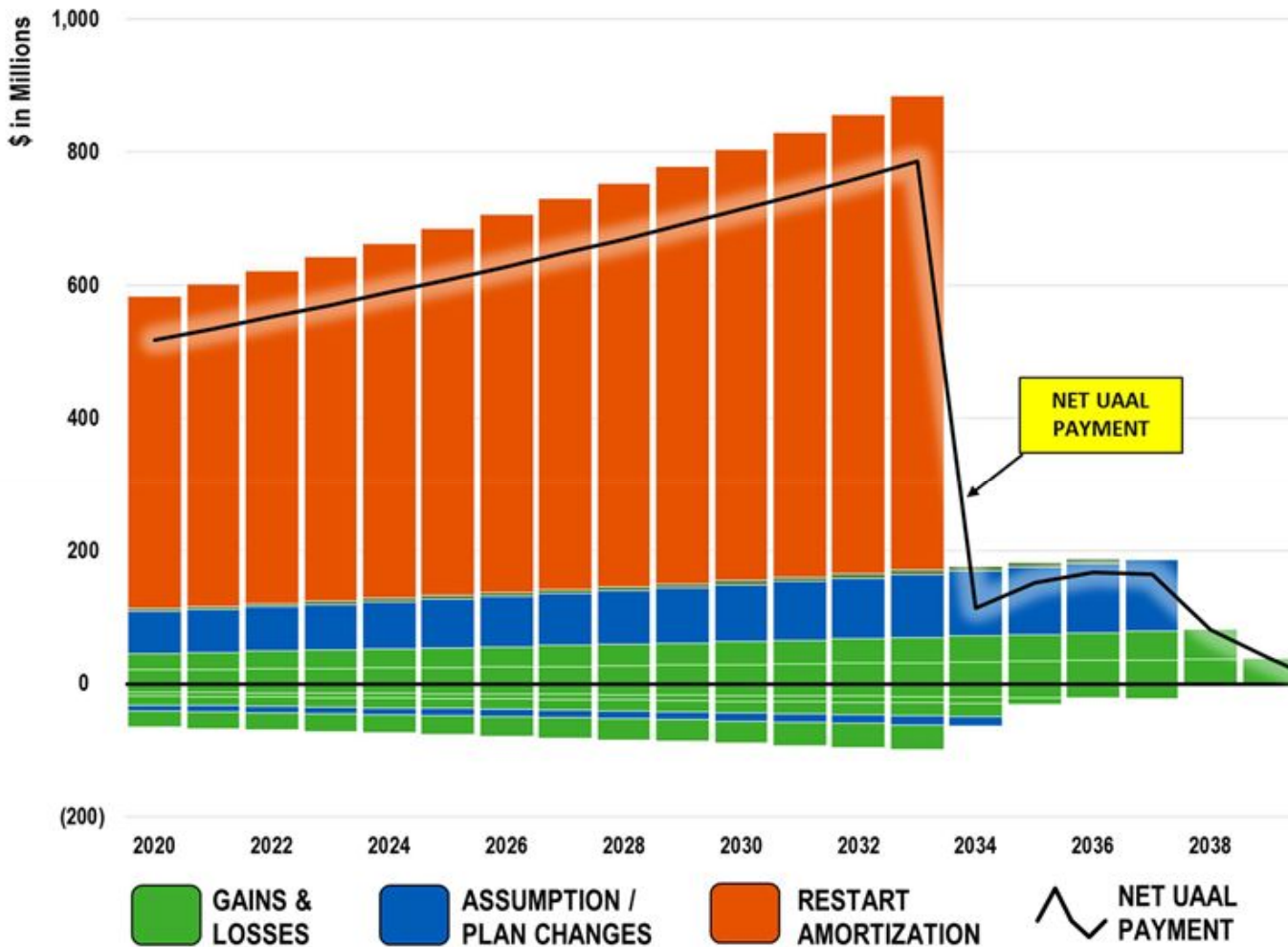
Outstanding Balance of \$5.9 Billion in Net UAAL as of December 31, 2019



Section 3: Supplemental Information

Exhibit I: Projection of UAAL Balances and Payments (continued)

Annual Payments Required to Amortize \$5.9 Billion in Net UAAL as of December 31, 2019



Section 3: Supplemental Information

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:	The single-sum 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 actuarially determined 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. Through the actuarial assumptions, rates of decrements, rates of salary increases, and rates of fund earnings have been forecasted. 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 in actuarial liabilities that are larger than projected. Actuarial gains will shorten the time required for funding of the actuarial balance sheet deficiency while actuarial losses will lengthen the funding period.
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, termination, 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.

Section 3: Supplemental Information

Actuarial Present Value of Future Plan 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 Plan Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive members entitled to either a refund 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. An Actuarial Valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB, such as the Actuarially Determined Contribution (ADC) and the Net Pension Liability (NPL).
Actuarial Value of Assets (AVA):	The value of the Fund'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 ADC.
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 law.
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 UAAL. 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 UAAL. 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 designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

Section 3: Supplemental Information

Assumptions or Actuarial Assumptions:	The estimates upon which the cost of the Fund is calculated, including: <u>Investment return</u> - the rate of investment yield that the Fund will earn over the long-term future; <u>Mortality rates</u> - the death rates of employees and pensioners; life expectancy is based on these rates; <u>Retirement rates</u> - the rate or probability of retirement at a given age or service; <u>Disability rates</u> – the probability of disability retirement at a given age; <u>Termination rates</u> - the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement; <u>Salary increase rates</u> - the rates of salary increase due to inflation and productivity growth.
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 termination.
Defined Benefit Plan:	A retirement plan in which benefits are defined by a formula applied to the member's compensation 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.
Employer Normal Cost:	The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.
Experience Study:	A periodic review and analysis of the actual experience of the Fund 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 as deemed appropriate by the Actuary.
Funded Ratio:	The ratio of the Actuarial Value of Assets (AVA) to the actuarial accrued liability (AAL). Plans sometimes calculate a market funded ratio, using the Market Value of Assets (MVA), rather than the AVA.
Investment Return:	The rate of earnings of the Fund 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.

Section 3: Supplemental Information

Normal Cost:	That portion of the Actuarial Present Value of pension plan benefits and expenses allocated to a valuation year by the Actuarial Cost Method. Any payment in respect of an Unfunded Actuarial Accrued Liability is not part of Normal Cost (see Amortization Payment). For pension plan benefits that are provided in part by employee contributions, Normal Cost refers to the total of employee 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 determining the Amortization Period each year. In theory, if an Open Amortization Period with level percentage of payroll is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never decrease, but will become smaller each year, in relation to covered payroll, if the actuarial assumptions are realized.
Unfunded Actuarial Accrued Liability:	The excess of the Actuarial Accrued Liability over the Actuarial 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.
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 Plan 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.
<u>Economic Assumptions</u>	
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.

Section 4: Actuarial Valuation Basis

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:

Years of Service	Rate (%)	
	General	Safety
Less than 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.

Section 4: Actuarial Valuation Basis

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.

Age	Rate (%) ¹			
	General		Safety	
	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.

Section 4: Actuarial Valuation Basis

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.

Section 4: Actuarial Valuation Basis

Disability Incidence:

Age	Rate (%)			
	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.

Section 4: Actuarial Valuation Basis

Termination:

Years of Service	Rate (%)			
	General All Other	General OCTA	Safety Law & Fire	Safety Probation
Less than 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

Election for Withdrawal of Contributions (%)

Age	Rate (%)			
	General All Other	General OCTA	Safety Law & Fire	Safety Probation
Less than 5	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

Section 4: Actuarial Valuation Basis

Retirement Rates:	Rate (%) ¹				
	Age	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.

Section 4: Actuarial Valuation Basis

Retirement Rates (continued):

Age	Rate (%) 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.

Section 4: Actuarial Valuation Basis

Retirement Rates (continued):	Rate (%) 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.

Section 4: Actuarial Valuation Basis

Retirement Age and Benefit for Deferred Vested Members:	<p>General Retirement Age: 59 Safety Retirement Age: 53</p> <p>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.</p>
Liability Calculation for Current Deferred Vested Members:	<p>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.</p>
Future Benefit Accruals:	<p>1.0 year of service per year of employment. There is no assumption to anticipate conversion of unused sick leave at retirement.</p>
Unknown Data for Members:	<p>Same as those exhibited by members with similar known characteristics. If not specified, members are assumed to be male.</p>
Form of Payment:	<p>All active and inactive members are assumed to elect the unmodified option at retirement.</p>
Percent Married:	<p>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.</p>
Age and Gender of Spouse:	<p>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.</p>

Section 4: Actuarial Valuation Basis

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:

Years of Service	Rate (%)	
	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 terminal pay 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 (14 years remaining as of December 31, 2019).

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.

Section 4: Actuarial Valuation Basis

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.

Section 4: Actuarial Valuation Basis

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 \$230,000 for 2020. 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.

Section 4: Actuarial Valuation Basis

Justification for Change in Actuarial Assumptions:

There have been no changes in actuarial assumptions since the last valuation.

Section 4: Actuarial Valuation Basis

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	<u>2.5% @ 55 Plans (Orange County Sanitation District⁽¹⁾ and Law Library⁽²⁾)</u>
<i>Plan G</i>	General members hired before September 21, 1979.
<i>Plan H</i>	General members hired on or after September 21, 1979.
	<u>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)</u>
<i>Plan I</i>	General members hired before September 21, 1979.
<i>Plan J</i>	General members hired on or after September 21, 1979.
	<u>2.0% @ 55 Plans (Transportation Corridor Agency, Cemetery District⁽⁵⁾ and General OCFA)</u>
<i>Plan M</i>	General members hired before September 21, 1979 and General OCFA members hired on or after July 1, 2011.
<i>Plan N</i>	General members hired on or after September 21, 1979.
	<u>1.62% @ 65 Plans (Orange County Members, Orange County Superior Court, Local Agency Formation Commission and County Managers unit)</u>
<i>Plan O</i>	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.
<i>Plan P</i>	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.

Section 4: Actuarial Valuation Basis

<i>Plan S</i>	<p><u>2.0% @ 57 Plan (City of San Juan Capistrano)</u></p> <p>General members hired on or after July 1, 2012.</p> <p><u>All Other General Employers</u></p>
<i>Plan A</i>	General members hired before September 21, 1979.
<i>Plan B</i>	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	<u>3.0% @ 50 Plans (Law Enforcement, OCFA and Probation Members)</u>
<i>Plan E</i>	Safety members hired before September 21, 1979.
<i>Plan F</i>	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.
	<u>3% @ 55 Plans (Law Enforcement, OCFA)</u>
<i>Plan Q</i>	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.
<i>Plan R</i>	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	<u>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)</u>
<i>Plan T</i>	General members with membership dates on or after January 1, 2013.
	<u>2.5% @ 67 Plan (All Other General Employers, Orange County Attorneys, Orange County Employees Retirement System Management Members)</u>
<i>Plan U</i>	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.
	<u>1.62% @ 65 Plan (City of San Juan Capistrano)</u>
<i>Plan W</i>	General members with membership dates on or after January 1, 2016 and not electing Plan U.
CalPEPRA Safety Plans	<u>2.7% @ 57 Plan (Law Enforcement, OCFA and Probation Members)</u>
<i>Plan V</i>	Safety members with membership dates on or after January 1, 2013.

Section 4: Actuarial Valuation Basis

Final Compensation for Benefit Determination:

<i>Plans A, E, G, I, M, O and Q</i>	Highest consecutive 12 months of compensation earnable (§31462.1) (FAS1).
<i>Plans B, F, H, J, N, P, R and S</i>	Highest consecutive 36 months of compensation earnable (§31462) (FAS3).
<i>Plans T</i>	Highest consecutive 36 months of pensionable compensation (§7522.32 and §7522.34) (FAS3).
<i>Plans U, V and W</i>	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

<i>Plans A, B, G, H, I, J, M, N, O, P, S, T and W</i>	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.
<i>Plan U</i>	Age 52 with 5 years of service (§7522.20(a)) or age 70 regardless of service (§31672.3).

Safety

<i>Plans E, F, Q and R</i>	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.
<i>Plan V</i>	Age 50 with 5 years of service (§7522.25(d)) or age 70 regardless of service (§31672.3).

Section 4: Actuarial Valuation Basis

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
2.5% @ 55 (§31676.18)

Retirement Age	Benefit Formula
50	2.00% x FAS3 x Yrs
55 and over	2.50% x FAS3 x Yrs

General Plan I
2.7% @ 55 (§31676.19)

Retirement Age	Benefit Formula
50	2.00% x FAS1 x Yrs
55 and over	2.70% x FAS1 x Yrs

General Plan J
2.7% @ 55 (§31676.19)

Retirement Age	Benefit Formula
50	2.00% x FAS3 x Yrs
55 and over	2.70% x FAS3 x Yrs

General Plan M
2.0% @ 55 (§31676.16)

Retirement Age	Benefit Formula
50	1.43% x FAS1 x Yrs
55	2.00% x FAS1 x Yrs
60 ⁽²⁾	2.34% x FAS1 x Yrs
62 ⁽²⁾	2.62% x FAS1 x Yrs
65 and over ⁽²⁾	2.62% x FAS1 x Yrs

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

Section 4: Actuarial Valuation Basis

General Plan N
2.0% @ 55 (§31676.16)

Retirement Age	Benefit Formula
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 ⁽¹⁾	2.43% x FAS3 x Yrs

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

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

Section 4: Actuarial Valuation Basis

<i>General Plan A</i> 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
<i>General Plan B</i> (§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
<i>General Plan U</i> (§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
<i>Safety Plan E</i> 3.0% @ 50 (§31664.1)	Retirement Age	Benefit Formula
50 and over	3.00% x FAS1 x Yrs	
<i>Safety Plan F</i> 3.0% @ 50 (§31664.1)	Retirement Age	Benefit Formula
50 and over	3.00% x FAS3 x Yrs	
<i>Safety Plan Q</i> 3.0% @ 55 (§31664.2)	Retirement Age	Benefit Formula
	50	2.29% x FAS1 x Yrs
	55 and over	3.00% x FAS1 x Yrs

Section 4: Actuarial Valuation Basis

<i>Safety Plan R</i> 3.0% @ 55 (§31664.2)	Retirement Age	Benefit Formula
	50	2.29% x FAS3 x Yrs
<i>Safety Plan V (§7522.25(d))</i>	55 and over	3.00% x FAS3 x Yrs
	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

Section 4: Actuarial Valuation Basis

Maximum Benefit:

<i>Plans A, B, E, F, G, H, I, J, M, N, O, P, Q, R, S, T and W</i>	100% of Highest Average Compensation (§31676.01, §31676.1, §31676.12, §31676.16, §31676.18, §31676.19, §31664.1, §31664.2).
<i>Plans U and V</i>	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).

Section 4: Actuarial Valuation Basis

Pre-Retirement Death:	
<i>All Members</i>	
<i>Eligibility</i>	None.
<i>Basic lump sum benefit</i>	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).
<i>Death in line of duty</i>	50% of Final Compensation or 100% of Service Retirement benefit, if greater, payable to spouse or minor children (§31787).
<i>Vested Members</i>	
<i>Eligibility</i>	Five years of service.
<i>Basic benefit</i>	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:	
<i>All Members</i>	
<i>Service Retirement or Ordinary Disability Retirement</i>	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.
<i>Line of Duty Disability</i>	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:	
<i>Less than Five Years of Service</i>	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).
<i>Five or More Years of Service</i>	Refund of accumulated employee contributions with interest. If contributions left on deposit, a member is entitled to earned benefits commencing at any time after eligible to retire (§31700).

Section 4: Actuarial Valuation Basis

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.
<i>Plan A</i>	
<i>Basic</i>	Entry-age based rates that provide for an annuity at age 60 equal to 1/200 of FAS1 (§31621.5).
<i>Cost-of-Living</i>	Entry-age based rates that provide for one-half of future Cost-of-Living costs.
<i>Plan B</i>	
<i>Basic</i>	Entry-age based rates that provide for an annuity at age 60 equal to 1/120 of FAS3 (§31621).
<i>Cost-of-Living</i>	Entry-age based rates that provide for one-half of future Cost-of-Living costs.
<i>Plans G, H, I and J</i>	
<i>Basic</i>	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).
<i>Cost-of-Living</i>	Entry-age based rates that provide for one-half of future Cost-of-Living costs.
<i>Plans M, N, O and P</i>	
<i>Basic</i>	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).
<i>Cost-of-Living</i>	Entry-age based rates that provide for one-half of future Cost-of-Living costs.
<i>Plan S</i>	
<i>Basic</i>	Entry-age based rates that provide for an annuity at age 60 equal to 1/100 of FAS3 (§31621.2).
<i>Cost-of-Living</i>	Entry-age based rates that provide for one-half of future Cost-of-Living costs.
<i>Plans E and Q</i>	
<i>Basic</i>	Entry-age based rates that provide for an annuity at age 50 equal to 1/200 of FAS1 (§31639.5).
<i>Cost-of-Living</i>	Entry-age based rates that provide for one-half of future Cost-of-Living costs.
<i>Plans F and R</i>	
<i>Basic</i>	Entry-age based rates that provide for an annuity at age 50 equal to 1/100 of FAS3 (§31639.25).
<i>Cost-of-Living</i>	Entry-age based rates that provide for one-half of future Cost-of-Living costs.

Section 4: Actuarial Valuation Basis

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.

Section 4: Actuarial Valuation Basis

Exhibit III: Member Contribution Rates

General Tier 1 Members' Contribution Rates Based on the December 31, 2019 Actuarial Valuation
(as a % of monthly payroll)

Entry Age	Plan I (2.7% @ 55)		Plan G (2.5% @ 55)		Plan M (2.0% @ 55) ⁽¹⁾		Plan A (OCTA)	
	Normal	Total	Normal	Total	Normal	Total	Normal	Total
15	7.51%	10.52%	7.51%	10.32%	5.46%	7.94%	3.28%	5.46%
16	7.51%	10.52%	7.51%	10.32%	5.46%	7.94%	3.28%	5.46%
17	7.63%	10.69%	7.63%	10.48%	5.55%	8.07%	3.33%	5.55%
18	7.75%	10.86%	7.75%	10.65%	5.64%	8.20%	3.38%	5.64%
19	7.87%	11.04%	7.87%	10.82%	5.73%	8.33%	3.44%	5.73%
20	8.00%	11.22%	8.00%	11.00%	5.82%	8.46%	3.49%	5.82%
21	8.13%	11.40%	8.13%	11.17%	5.92%	8.60%	3.55%	5.92%
22	8.26%	11.58%	8.26%	11.35%	6.01%	8.73%	3.61%	6.01%
23	8.39%	11.77%	8.39%	11.53%	6.11%	8.88%	3.67%	6.11%
24	8.53%	11.95%	8.53%	11.72%	6.21%	9.02%	3.72%	6.21%
25	8.66%	12.15%	8.66%	11.91%	6.31%	9.16%	3.78%	6.31%
26	8.81%	12.34%	8.81%	12.10%	6.41%	9.31%	3.84%	6.41%
27	8.95%	12.54%	8.95%	12.30%	6.51%	9.46%	3.91%	6.51%
28	9.09%	12.75%	9.09%	12.50%	6.61%	9.61%	3.97%	6.62%
29	9.24%	12.96%	9.24%	12.70%	6.72%	9.77%	4.03%	6.72%
30	9.39%	13.17%	9.39%	12.91%	6.83%	9.92%	4.10%	6.83%
31	9.55%	13.39%	9.55%	13.12%	6.94%	10.08%	4.16%	6.94%
32	9.71%	13.61%	9.71%	13.34%	7.05%	10.25%	4.23%	7.05%
33	9.87%	13.84%	9.87%	13.57%	7.17%	10.41%	4.30%	7.17%
34	10.04%	14.08%	10.04%	13.80%	7.28%	10.58%	4.37%	7.29%
35	10.21%	14.32%	10.21%	14.04%	7.40%	10.76%	4.44%	7.41%
36	10.39%	14.57%	10.39%	14.28%	7.53%	10.94%	4.52%	7.53%
37	10.58%	14.83%	10.58%	14.54%	7.65%	11.12%	4.59%	7.65%
38	10.77%	15.10%	10.77%	14.81%	7.78%	11.31%	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%	15.23%	8.05%	11.70%	4.83%	8.05%

Section 4: Actuarial Valuation Basis

Exhibit III: Member Contribution Rates (continued)

General Tier 1 Members' Contribution Rates Based on the December 31, 2019 Actuarial Valuation
(as a % of monthly payroll)

Entry Age	Plan I (2.7% @ 55)		Plan G (2.5% @ 55)		Plan M (2.0% @ 55) ⁽¹⁾		Plan A (OCTA)	
	Normal	Total	Normal	Total	Normal	Total	Normal	Total
41	11.24%	15.76%	11.24%	15.45%	8.19%	11.90%	4.92%	8.19%
42	11.41%	16.00%	11.41%	15.69%	8.34%	12.12%	5.00%	8.34%
43	11.59%	16.25%	11.59%	15.93%	8.49%	12.34%	5.10%	8.49%
44	11.79%	16.53%	11.79%	16.20%	8.61%	12.51%	5.17%	8.61%
45	12.00%	16.82%	12.00%	16.49%	8.73%	12.69%	5.24%	8.74%
46	12.20%	17.11%	12.20%	16.77%	8.86%	12.88%	5.32%	8.86%
47	12.37%	17.35%	12.37%	17.00%	9.00%	13.07%	5.40%	9.00%
48	12.54%	17.58%	12.54%	17.24%	9.14%	13.28%	5.48%	9.14%
49	12.63%	17.70%	12.63%	17.35%	9.29%	13.50%	5.58%	9.29%
50	12.68%	17.78%	12.68%	17.43%	9.46%	13.74%	5.67%	9.46%
51	12.66%	17.74%	12.66%	17.39%	9.62%	13.97%	5.77%	9.62%
52	12.55%	17.59%	12.55%	17.24%	9.75%	14.17%	5.85%	9.75%
53	12.32%	17.27%	12.32%	16.93%	9.88%	14.36%	5.93%	9.89%
54	11.86%	16.63%	11.86%	16.30%	9.95%	14.46%	5.97%	9.95%
55	11.86%	16.63%	11.86%	16.30%	10.00%	14.52%	6.00%	10.00%
56	11.86%	16.63%	11.86%	16.30%	9.98%	14.49%	5.99%	9.98%
57	11.86%	16.63%	11.86%	16.30%	9.89%	14.37%	5.93%	9.89%
58	11.86%	16.63%	11.86%	16.30%	9.71%	14.11%	5.83%	9.71%
59	11.86%	16.63%	11.86%	16.30%	9.35%	13.58%	5.61%	9.35%
60	11.86%	16.63%	11.86%	16.30%	9.35%	13.58%	5.61%	9.35%
COLA Loading:		40.19%		37.43%		45.29%		66.70%

⁽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 and Promotion (See Section 4, Exhibit I)

Additional Cashouts: See Section 4, Exhibit I

Section 4: Actuarial Valuation Basis

Exhibit III: Member Contribution Rates (continued)

General Tier 1 Members' Contribution Rates Based on the December 31, 2019 Actuarial Valuation
(as a % of monthly payroll)

Entry Age	Plan A (Non-OCTA)	
	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%

Section 4: Actuarial Valuation Basis

Exhibit III: Member Contribution Rates (continued)

General Tier 1 Members' Contribution Rates Based on the December 31, 2019 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%
<i>COLA Loading:</i>		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 and Promotion (See Section 4, Exhibit I)
Additional Cashouts:	See Section 4, Exhibit I

Section 4: Actuarial Valuation Basis

Exhibit III: Member Contribution Rates (continued)

General Tier 2 Members' Contribution Rates Based on the December 31, 2019 Actuarial Valuation
(as a % of monthly payroll)

Entry Age	Plan J (2.7% @ 55 non OCFA)		Plan H (2.5% @ 55 OCSD)		Plan N (2.0% @ 55) ⁽¹⁾		Plan B (OCTA)	
	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%	10.40%	7.42%	10.19%	5.40%	7.84%	5.40%	7.56%
19	7.54%	10.56%	7.54%	10.36%	5.49%	7.97%	5.49%	7.68%
20	7.66%	10.73%	7.66%	10.52%	5.57%	8.10%	5.57%	7.80%
21	7.78%	10.90%	7.78%	10.69%	5.66%	8.23%	5.66%	7.93%
22	7.90%	11.08%	7.90%	10.86%	5.75%	8.36%	5.75%	8.06%
23	8.03%	11.26%	8.03%	11.03%	5.85%	8.49%	5.85%	8.19%
24	8.16%	11.44%	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%	11.81%	8.42%	11.58%	6.13%	8.91%	6.13%	8.58%
27	8.56%	12.00%	8.56%	11.76%	6.23%	9.05%	6.23%	8.72%
28	8.70%	12.19%	8.70%	11.95%	6.33%	9.20%	6.33%	8.86%
29	8.84%	12.39%	8.84%	12.15%	6.43%	9.34%	6.43%	9.00%
30	8.98%	12.59%	8.98%	12.35%	6.53%	9.49%	6.53%	9.15%
31	9.13%	12.80%	9.13%	12.55%	6.64%	9.65%	6.64%	9.30%
32	9.28%	13.01%	9.28%	12.76%	6.75%	9.80%	6.75%	9.45%
33	9.44%	13.23%	9.44%	12.97%	6.86%	9.96%	6.86%	9.60%
34	9.60%	13.46%	9.60%	13.19%	6.97%	10.12%	6.97%	9.75%
35	9.76%	13.69%	9.76%	13.42%	7.08%	10.29%	7.08%	9.91%
36	9.93%	13.92%	9.93%	13.65%	7.20%	10.46%	7.20%	10.08%
37	10.09%	14.15%	10.09%	13.87%	7.32%	10.63%	7.32%	10.24%
38	10.24%	14.36%	10.24%	14.08%	7.44%	10.81%	7.44%	10.42%
39	10.38%	14.56%	10.38%	14.27%	7.56%	10.99%	7.56%	10.59%
40	10.53%	14.76%	10.53%	14.47%	7.69%	11.18%	7.69%	10.77%

Section 4: Actuarial Valuation Basis

Exhibit III: Member Contribution Rates (continued)

General Tier 2 Members' Contribution Rates Based on the December 31, 2019 Actuarial Valuation
(as a % of monthly payroll)

Entry Age	Plan J (2.7% @ 55 non OCFA)		Plan H (2.5% @ 55 OCSD)		Plan N (2.0% @ 55) ⁽¹⁾		Plan B (OCTA)	
	Normal	Total	Normal	Total	Normal	Total	Normal	Total
41	10.68%	14.97%	10.68%	14.68%	7.83%	11.37%	7.83%	10.96%
42	10.84%	15.20%	10.84%	14.90%	7.95%	11.56%	7.95%	11.14%
43	11.01%	15.43%	11.01%	15.13%	8.07%	11.73%	8.07%	11.30%
44	11.18%	15.67%	11.18%	15.36%	8.18%	11.89%	8.18%	11.46%
45	11.34%	15.89%	11.34%	15.58%	8.30%	12.06%	8.30%	11.62%
46	11.48%	16.09%	11.48%	15.77%	8.42%	12.23%	8.42%	11.79%
47	11.58%	16.23%	11.58%	15.91%	8.54%	12.41%	8.54%	11.96%
48	11.63%	16.31%	11.63%	15.99%	8.68%	12.60%	8.68%	12.15%
49	11.63%	16.30%	11.63%	15.98%	8.81%	12.80%	8.81%	12.34%
50	11.56%	16.20%	11.56%	15.88%	8.93%	12.98%	8.93%	12.51%
51	11.40%	15.98%	11.40%	15.67%	9.05%	13.14%	9.05%	12.67%
52	11.12%	15.59%	11.12%	15.29%	9.12%	13.26%	9.12%	12.77%
53	11.48%	16.10%	11.48%	15.78%	9.17%	13.32%	9.17%	12.84%
54	11.86%	16.63%	11.86%	16.30%	9.17%	13.32%	9.17%	12.83%
55	11.86%	16.63%	11.86%	16.30%	9.11%	13.23%	9.11%	12.75%
56	11.86%	16.63%	11.86%	16.30%	8.98%	13.05%	8.98%	12.58%
57	11.86%	16.63%	11.86%	16.30%	8.77%	12.74%	8.77%	12.28%
58	11.86%	16.63%	11.86%	16.30%	9.05%	13.15%	9.05%	12.67%
59	11.86%	16.63%	11.86%	16.30%	9.35%	13.58%	9.35%	13.09%
60	11.86%	16.63%	11.86%	16.30%	9.35%	13.58%	9.35%	13.09%
COLA Loading:		40.19%		37.43%		45.29%		40.02%

⁽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 and Promotion (See Section 4, Exhibit I)
Additional Cashouts: See Section 4, Exhibit I

Section 4: Actuarial Valuation Basis

Exhibit III: Member Contribution Rates (continued)

General Tier 2 Members' Contribution Rates Based on the December 31, 2019 Actuarial Valuation
(as a % of monthly payroll)

Entry Age	Plan B (non OCTA, non OCSD)		Plan J (2.7% @ 55 OCFA)		Plan P (1.62% @ 65)		Plan B (OCSD)	
	Normal	Total	Normal	Total	Normal	Total	Normal	Total
15	5.23%	7.23%	7.18%	10.05%	5.23%	6.64%	5.23%	7.28%
16	5.23%	7.23%	7.18%	10.05%	5.23%	6.64%	5.23%	7.28%
17	5.31%	7.35%	7.30%	10.21%	5.31%	6.75%	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%	10.54%	5.49%	6.96%	5.49%	7.64%
20	5.57%	7.71%	7.66%	10.71%	5.57%	7.08%	5.57%	7.76%
21	5.66%	7.83%	7.78%	10.88%	5.66%	7.19%	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%	11.23%	5.85%	7.42%	5.85%	8.14%
24	5.94%	8.22%	8.16%	11.41%	5.94%	7.54%	5.94%	8.27%
25	6.03%	8.35%	8.29%	11.60%	6.03%	7.66%	6.03%	8.40%
26	6.13%	8.48%	8.42%	11.78%	6.13%	7.78%	6.13%	8.53%
27	6.23%	8.62%	8.56%	11.97%	6.23%	7.91%	6.23%	8.67%
28	6.33%	8.75%	8.70%	12.17%	6.33%	8.03%	6.33%	8.81%
29	6.43%	8.89%	8.84%	12.36%	6.43%	8.16%	6.43%	8.95%
30	6.53%	9.04%	8.98%	12.57%	6.53%	8.29%	6.53%	9.10%
31	6.64%	9.18%	9.13%	12.77%	6.64%	8.43%	6.64%	9.24%
32	6.75%	9.33%	9.28%	12.99%	6.75%	8.56%	6.75%	9.39%
33	6.86%	9.48%	9.44%	13.20%	6.86%	8.70%	6.86%	9.54%
34	6.97%	9.64%	9.60%	13.43%	6.97%	8.84%	6.97%	9.70%
35	7.08%	9.79%	9.76%	13.66%	7.08%	8.99%	7.08%	9.86%
36	7.20%	9.96%	9.93%	13.89%	7.20%	9.14%	7.20%	10.02%
37	7.32%	10.12%	10.09%	14.12%	7.32%	9.29%	7.32%	10.19%
38	7.44%	10.29%	10.24%	14.33%	7.44%	9.44%	7.44%	10.36%
39	7.56%	10.46%	10.38%	14.53%	7.56%	9.60%	7.56%	10.53%
40	7.69%	10.64%	10.53%	14.73%	7.69%	9.77%	7.69%	10.71%

Section 4: Actuarial Valuation Basis

Exhibit III: Member Contribution Rates (continued)

General Tier 2 Members' Contribution Rates Based on the December 31, 2019 Actuarial Valuation
(as a % of monthly payroll)

Entry Age	Plan B (non OCTA, non OCSD)		Plan J (2.7% @ 55 OCFA)		Plan P (1.62% @ 65)		Plan B (OCSD)	
	Normal	Total	Normal	Total	Normal	Total	Normal	Total
41	7.83%	10.83%	10.68%	14.94%	7.83%	9.94%	7.83%	10.90%
42	7.95%	11.00%	10.84%	15.16%	7.95%	10.10%	7.95%	11.07%
43	8.07%	11.17%	11.01%	15.40%	8.07%	10.25%	8.07%	11.24%
44	8.18%	11.32%	11.18%	15.64%	8.18%	10.39%	8.18%	11.39%
45	8.30%	11.48%	11.34%	15.86%	8.30%	10.54%	8.30%	11.55%
46	8.42%	11.64%	11.48%	16.05%	8.42%	10.69%	8.42%	11.72%
47	8.54%	11.82%	11.58%	16.19%	8.54%	10.85%	8.54%	11.89%
48	8.68%	12.00%	11.63%	16.27%	8.68%	11.01%	8.68%	12.08%
49	8.81%	12.19%	11.63%	16.27%	8.81%	11.18%	8.81%	12.26%
50	8.93%	12.36%	11.56%	16.17%	8.93%	11.34%	8.93%	12.44%
51	9.05%	12.51%	11.40%	15.95%	9.05%	11.48%	9.05%	12.59%
52	9.12%	12.62%	11.12%	15.56%	9.12%	11.58%	9.12%	12.70%
53	9.17%	12.68%	11.48%	16.06%	9.17%	11.64%	9.17%	12.76%
54	9.17%	12.68%	11.86%	16.59%	9.17%	11.63%	9.17%	12.76%
55	9.11%	12.60%	11.86%	16.59%	9.11%	11.56%	9.11%	12.68%
56	8.98%	12.43%	11.86%	16.59%	8.98%	11.41%	8.98%	12.51%
57	8.77%	12.13%	11.86%	16.59%	8.77%	11.13%	8.77%	12.21%
58	9.05%	12.52%	11.86%	16.59%	9.05%	11.49%	9.05%	12.60%
59	9.35%	12.93%	11.86%	16.59%	9.35%	11.87%	9.35%	13.02%
60	9.35%	12.93%	11.86%	16.59%	9.35%	11.87%	9.35%	13.02%
COLA Loading:		38.32%		39.89%		26.95%		39.21%

Interest: 7.00% per annum

Mortality: See Section 4, Exhibit I

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

Additional Cashouts: See Section 4, Exhibit I

Section 4: Actuarial Valuation Basis

Exhibit III: Member Contribution Rates (continued)

General Tier 2 Members' Contribution Rates Based on the December 31, 2019 Actuarial Valuation
(as a % of monthly payroll)

Entry Age	Plan N (OCFA)		Plan S (City of SJC)		Plan H (2.5% @ 55 Law Library)	
	Normal	Total	Normal	Total	Normal	Total
15	5.23%	7.69%	6.28%	8.74%	7.18%	9.90%
16	5.23%	7.69%	6.28%	8.74%	7.18%	9.90%
17	5.31%	7.81%	6.38%	8.88%	7.30%	10.06%
18	5.40%	7.94%	6.48%	9.03%	7.42%	10.22%
19	5.49%	8.06%	6.58%	9.17%	7.54%	10.39%
20	5.57%	8.19%	6.69%	9.32%	7.66%	10.55%
21	5.66%	8.32%	6.80%	9.47%	7.78%	10.72%
22	5.75%	8.46%	6.90%	9.62%	7.90%	10.89%
23	5.85%	8.59%	7.02%	9.77%	8.03%	11.07%
24	5.94%	8.73%	7.13%	9.93%	8.16%	11.24%
25	6.03%	8.87%	7.24%	10.09%	8.29%	11.43%
26	6.13%	9.01%	7.36%	10.25%	8.42%	11.61%
27	6.23%	9.16%	7.47%	10.42%	8.56%	11.80%
28	6.33%	9.30%	7.59%	10.58%	8.70%	11.99%
29	6.43%	9.45%	7.72%	10.75%	8.84%	12.18%
30	6.53%	9.60%	7.84%	10.92%	8.98%	12.38%
31	6.64%	9.76%	7.97%	11.10%	9.13%	12.59%
32	6.75%	9.92%	8.10%	11.28%	9.28%	12.79%
33	6.86%	10.08%	8.23%	11.46%	9.44%	13.01%
34	6.97%	10.24%	8.36%	11.65%	9.60%	13.23%
35	7.08%	10.41%	8.50%	11.84%	9.76%	13.46%
36	7.20%	10.58%	8.64%	12.03%	9.93%	13.69%
37	7.32%	10.76%	8.78%	12.23%	10.09%	13.91%
38	7.44%	10.94%	8.93%	12.44%	10.24%	14.12%
39	7.56%	11.12%	9.08%	12.65%	10.38%	14.31%
40	7.69%	11.31%	9.23%	12.87%	10.53%	14.51%

Section 4: Actuarial Valuation Basis

Exhibit III: Member Contribution Rates (continued)

General Tier 2 Members' Contribution Rates Based on the December 31, 2019 Actuarial Valuation
(as a % of monthly payroll)

Entry Age	Plan N (OCFA)		Plan S (City of SJC)		Plan H (2.5% @ 55 Law Library)	
	Normal	Total	Normal	Total	Normal	Total
41	7.83%	11.51%	9.39%	13.09%	10.68%	14.72%
42	7.95%	11.69%	9.55%	13.30%	10.84%	14.94%
43	8.07%	11.87%	9.69%	13.50%	11.01%	15.17%
44	8.18%	12.03%	9.82%	13.69%	11.18%	15.41%
45	8.30%	12.20%	9.96%	13.88%	11.34%	15.62%
46	8.42%	12.38%	10.10%	14.08%	11.48%	15.82%
47	8.54%	12.56%	10.25%	14.29%	11.58%	15.95%
48	8.68%	12.75%	10.41%	14.51%	11.63%	16.03%
49	8.81%	12.95%	10.57%	14.73%	11.63%	16.03%
50	8.93%	13.13%	10.72%	14.94%	11.56%	15.93%
51	9.05%	13.30%	10.85%	15.12%	11.40%	15.71%
52	9.12%	13.41%	10.95%	15.25%	11.12%	15.33%
53	9.17%	13.48%	11.00%	15.33%	11.48%	15.83%
54	9.17%	13.47%	11.00%	15.32%	11.86%	16.35%
55	9.11%	13.39%	10.93%	15.23%	11.86%	16.35%
56	8.98%	13.21%	10.78%	15.02%	11.86%	16.35%
57	8.77%	12.89%	10.52%	14.66%	11.86%	16.35%
58	9.05%	13.31%	10.86%	15.14%	11.86%	16.35%
59	9.35%	13.74%	11.22%	15.63%	11.86%	16.35%
60	9.35%	13.74%	11.22%	15.63%	11.86%	16.35%
COLA Loading:		47.00%		39.34%		37.83%

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

Section 4: Actuarial Valuation Basis

Exhibit III: Member Contribution Rates (continued)

General CalPEPRA Members' Contribution Rates Based on the December 31, 2019 Actuarial Valuation
(as a % of monthly payroll)

Entry Age	Rate Group 1 (Plan U)		Rate Group 2 (Plan T)		Rate Group 2 (Plan U)		Rate Group 2 (Plan W)	
	Normal	Total	Normal	Total	Normal	Total	Normal	Total
15	6.31%	8.54%	3.91%	5.24%	5.55%	7.55%	3.61%	4.72%
16	6.31%	8.54%	3.91%	5.24%	5.55%	7.55%	3.61%	4.72%
17	6.02%	8.15%	3.97%	5.33%	5.30%	7.20%	3.67%	4.80%
18	5.72%	7.74%	4.03%	5.41%	5.03%	6.84%	3.73%	4.88%
19	5.81%	7.87%	4.10%	5.50%	5.11%	6.95%	3.79%	4.95%
20	5.90%	8.00%	4.16%	5.59%	5.20%	7.06%	3.85%	5.03%
21	6.00%	8.13%	4.23%	5.68%	5.28%	7.18%	3.91%	5.11%
22	6.10%	8.26%	4.30%	5.77%	5.36%	7.30%	3.97%	5.20%
23	6.19%	8.39%	4.37%	5.86%	5.45%	7.41%	4.04%	5.28%
24	6.29%	8.53%	4.44%	5.96%	5.54%	7.53%	4.10%	5.37%
25	6.40%	8.66%	4.51%	6.05%	5.63%	7.65%	4.17%	5.45%
26	6.50%	8.80%	4.58%	6.15%	5.72%	7.78%	4.24%	5.54%
27	6.60%	8.94%	4.66%	6.25%	5.81%	7.90%	4.30%	5.63%
28	6.71%	9.09%	4.73%	6.35%	5.91%	8.03%	4.37%	5.72%
29	6.82%	9.23%	4.81%	6.45%	6.00%	8.16%	4.44%	5.81%
30	6.93%	9.38%	4.89%	6.56%	6.10%	8.29%	4.52%	5.90%
31	7.04%	9.53%	4.96%	6.66%	6.19%	8.42%	4.59%	6.00%
32	7.15%	9.69%	5.04%	6.77%	6.29%	8.56%	4.66%	6.10%
33	7.27%	9.84%	5.13%	6.88%	6.40%	8.70%	4.74%	6.20%
34	7.38%	10.00%	5.21%	6.99%	6.50%	8.84%	4.82%	6.30%
35	7.50%	10.16%	5.30%	7.11%	6.60%	8.98%	4.90%	6.40%
36	7.62%	10.33%	5.39%	7.23%	6.71%	9.12%	4.98%	6.51%
37	7.75%	10.49%	5.48%	7.35%	6.82%	9.27%	5.06%	6.62%
38	7.87%	10.66%	5.57%	7.47%	6.93%	9.42%	5.15%	6.73%
39	8.00%	10.84%	5.66%	7.60%	7.04%	9.57%	5.23%	6.85%
40	8.13%	11.01%	5.76%	7.73%	7.16%	9.73%	5.33%	6.97%
41	8.26%	11.19%	5.86%	7.87%	7.27%	9.89%	5.42%	7.09%

Section 4: Actuarial Valuation Basis

Exhibit III: Member Contribution Rates (continued)

General CalPEPRA Members' Contribution Rates Based on the December 31, 2019 Actuarial Valuation
(as a % of monthly payroll)

Entry Age	Rate Group 1 (Plan U)		Rate Group 2 (Plan T)		Rate Group 2 (Plan U)		Rate Group 2 (Plan W)	
	Normal	Total	Normal	Total	Normal	Total	Normal	Total
42	8.40%	11.38%	5.96%	8.00%	7.39%	10.05%	5.51%	7.20%
43	8.54%	11.57%	6.05%	8.12%	7.52%	10.22%	5.59%	7.31%
44	8.68%	11.76%	6.14%	8.24%	7.64%	10.39%	5.67%	7.42%
45	8.83%	11.96%	6.22%	8.35%	7.77%	10.57%	5.75%	7.52%
46	8.98%	12.17%	6.32%	8.48%	7.90%	10.75%	5.84%	7.64%
47	9.14%	12.38%	6.41%	8.61%	8.04%	10.94%	5.93%	7.75%
48	9.30%	12.60%	6.52%	8.75%	8.18%	11.13%	6.02%	7.88%
49	9.45%	12.80%	6.62%	8.89%	8.32%	11.31%	6.12%	8.01%
50	9.60%	13.00%	6.72%	9.02%	8.45%	11.48%	6.21%	8.13%
51	9.73%	13.18%	6.81%	9.14%	8.56%	11.65%	6.30%	8.24%
52	9.87%	13.37%	6.88%	9.23%	8.69%	11.81%	6.36%	8.32%
53	10.02%	13.57%	6.93%	9.30%	8.82%	11.99%	6.40%	8.37%
54	10.17%	13.78%	6.94%	9.31%	8.95%	12.17%	6.41%	8.39%
55	10.34%	14.00%	6.91%	9.28%	9.10%	12.37%	6.39%	8.36%
56	10.50%	14.23%	6.85%	9.19%	9.24%	12.57%	6.33%	8.28%
57	10.66%	14.44%	6.73%	9.03%	9.38%	12.76%	6.22%	8.13%
58	10.80%	14.63%	6.94%	9.32%	9.51%	12.93%	6.42%	8.39%
59	10.91%	14.78%	7.17%	9.63%	9.60%	13.06%	6.63%	8.67%
60	10.98%	14.88%	7.17%	9.63%	9.67%	13.14%	6.63%	8.67%
61	11.00%	14.90%	7.17%	9.63%	9.68%	13.17%	6.63%	8.67%
62	10.97%	14.85%	7.17%	9.63%	9.65%	13.12%	6.63%	8.67%
63	10.86%	14.71%	7.17%	9.63%	9.56%	12.99%	6.63%	8.67%
64	10.67%	14.45%	7.17%	9.63%	9.39%	12.76%	6.63%	8.67%
65	11.01%	14.91%	7.17%	9.63%	9.69%	13.18%	6.63%	8.67%
66 & Over	11.37%	15.41%	7.17%	9.63%	10.01%	13.61%	6.63%	8.67%
<i>COLA Loading:</i>		35.44%		34.21%		35.98%		30.78%

Section 4: Actuarial Valuation Basis

Interest: 7.00% per annum

Mortality: See *Section 4, Exhibit I*

Salary Increase: Inflation (2.75%) + Across-the-Board Increase (0.50%) + Merit and Promotion (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 2020 is equal to \$151,549 (reference: Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2020 (reference: Section 7522.10(d)).

Section 4: Actuarial Valuation Basis

Exhibit III: Member Contribution Rates (continued)

General CalPEPRA Members' Contribution Rates Based on the December 31, 2019 Actuarial Valuation
(as a % of monthly payroll)

Entry Age	Rate Group 3 (Plan U)		Rate Group 5 (Plan U)		Rate Group 9 (Plan U)		Rate Group 10 (Plan U)	
	Normal	Total	Normal	Total	Normal	Total	Normal	Total
15	5.84%	7.90%	6.60%	8.97%	6.03%	8.11%	6.05%	8.20%
16	5.84%	7.90%	6.60%	8.97%	6.03%	8.11%	6.05%	8.20%
17	5.57%	7.54%	6.30%	8.56%	5.75%	7.73%	5.77%	7.82%
18	5.29%	7.16%	5.98%	8.13%	5.46%	7.34%	5.48%	7.43%
19	5.37%	7.27%	6.08%	8.26%	5.55%	7.46%	5.57%	7.55%
20	5.46%	7.39%	6.18%	8.40%	5.64%	7.59%	5.66%	7.67%
21	5.55%	7.51%	6.28%	8.53%	5.73%	7.71%	5.76%	7.80%
22	5.64%	7.63%	6.38%	8.67%	5.83%	7.83%	5.85%	7.92%
23	5.73%	7.76%	6.49%	8.81%	5.92%	7.96%	5.94%	8.05%
24	5.82%	7.88%	6.59%	8.96%	6.02%	8.09%	6.04%	8.18%
25	5.92%	8.01%	6.70%	9.10%	6.11%	8.22%	6.14%	8.31%
26	6.01%	8.14%	6.81%	9.25%	6.21%	8.35%	6.24%	8.45%
27	6.11%	8.27%	6.91%	9.40%	6.31%	8.49%	6.34%	8.58%
28	6.21%	8.40%	7.03%	9.55%	6.41%	8.62%	6.44%	8.72%
29	6.31%	8.54%	7.14%	9.70%	6.52%	8.76%	6.54%	8.86%
30	6.41%	8.68%	7.25%	9.86%	6.62%	8.90%	6.65%	9.00%
31	6.51%	8.82%	7.37%	10.01%	6.73%	9.05%	6.75%	9.15%
32	6.62%	8.96%	7.49%	10.18%	6.83%	9.19%	6.86%	9.30%
33	6.72%	9.10%	7.61%	10.34%	6.94%	9.34%	6.97%	9.44%
34	6.83%	9.25%	7.73%	10.51%	7.06%	9.49%	7.09%	9.60%
35	6.94%	9.40%	7.86%	10.67%	7.17%	9.64%	7.20%	9.75%
36	7.05%	9.55%	7.98%	10.85%	7.29%	9.80%	7.32%	9.91%
37	7.17%	9.70%	8.11%	11.02%	7.40%	9.96%	7.43%	10.07%
38	7.28%	9.86%	8.24%	11.20%	7.52%	10.12%	7.55%	10.23%
39	7.40%	10.02%	8.38%	11.38%	7.65%	10.28%	7.68%	10.40%
40	7.52%	10.18%	8.51%	11.57%	7.77%	10.45%	7.80%	10.57%
41	7.65%	10.35%	8.65%	11.76%	7.90%	10.62%	7.93%	10.74%

Section 4: Actuarial Valuation Basis

Exhibit III: Member Contribution Rates (continued)

General CalPEPRA Members' Contribution Rates Based on the December 31, 2019 Actuarial Valuation
(as a % of monthly payroll)

Entry Age	Rate Group 3 (Plan U)		Rate Group 5 (Plan U)		Rate Group 9 (Plan U)		Rate Group 10 (Plan U)	
	Normal	Total	Normal	Total	Normal	Total	Normal	Total
42	7.77%	10.52%	8.80%	11.95%	8.03%	10.80%	8.06%	10.92%
43	7.90%	10.70%	8.94%	12.15%	8.16%	10.98%	8.19%	11.10%
44	8.03%	10.88%	9.09%	12.35%	8.30%	11.16%	8.33%	11.29%
45	8.17%	11.06%	9.25%	12.56%	8.44%	11.35%	8.47%	11.48%
46	8.31%	11.25%	9.40%	12.78%	8.58%	11.54%	8.62%	11.67%
47	8.45%	11.44%	9.57%	13.00%	8.73%	11.74%	8.77%	11.88%
48	8.60%	11.65%	9.74%	13.23%	8.89%	11.95%	8.92%	12.09%
49	8.75%	11.84%	9.90%	13.45%	9.03%	12.15%	9.07%	12.28%
50	8.88%	12.02%	10.05%	13.65%	9.17%	12.33%	9.21%	12.47%
51	9.00%	12.19%	10.19%	13.84%	9.30%	12.51%	9.34%	12.65%
52	9.13%	12.36%	10.34%	14.04%	9.43%	12.69%	9.47%	12.83%
53	9.27%	12.55%	10.49%	14.25%	9.57%	12.87%	9.61%	13.02%
54	9.41%	12.74%	10.65%	14.47%	9.72%	13.07%	9.76%	13.22%
55	9.56%	12.94%	10.82%	14.70%	9.88%	13.28%	9.92%	13.43%
56	9.72%	13.15%	11.00%	14.94%	10.04%	13.50%	10.08%	13.65%
57	9.86%	13.35%	11.16%	15.17%	10.19%	13.70%	10.23%	13.86%
58	10.00%	13.53%	11.31%	15.37%	10.33%	13.89%	10.37%	14.04%
59	10.10%	13.67%	11.43%	15.52%	10.43%	14.02%	10.47%	14.18%
60	10.16%	13.76%	11.50%	15.63%	10.50%	14.12%	10.54%	14.28%
61	10.18%	13.78%	11.52%	15.65%	10.51%	14.14%	10.56%	14.30%
62	10.15%	13.73%	11.48%	15.60%	10.48%	14.09%	10.52%	14.25%
63	10.05%	13.60%	11.37%	15.45%	10.38%	13.95%	10.42%	14.11%
64	9.87%	13.36%	11.17%	15.17%	10.19%	13.71%	10.23%	13.86%
65	10.19%	13.79%	11.53%	15.67%	10.52%	14.15%	10.57%	14.31%
66 & Over	10.52%	14.24%	11.91%	16.18%	10.87%	14.62%	10.91%	14.78%
<i>COLA Loading:</i>		35.35%		35.88%		34.48%		35.45%

Section 4: Actuarial Valuation Basis

Interest: 7.00% per annum

Mortality: See *Section 4, Exhibit I*

Salary Increase: Inflation (2.75%) + Across-the-Board Increase (0.50%) + Merit and Promotion (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 2020 is equal to \$151,549 (reference: Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2020 (reference: Section 7522.10(d)).

Section 4: Actuarial Valuation Basis

Exhibit III: Member Contribution Rates (continued)

General CalPEPRA Members' Contribution Rates Based on the December 31, 2019 Actuarial Valuation
(as a % of monthly payroll)

Entry Age	Rate Group 11 (Plan U)		Rate Group 12 (Plan U)	
	Normal	Total	Normal	Total
15	6.62%	8.90%	5.85%	7.76%
16	6.62%	8.90%	5.85%	7.76%
17	6.32%	8.49%	5.58%	7.40%
18	6.00%	8.06%	5.30%	7.03%
19	6.10%	8.19%	5.38%	7.15%
20	6.20%	8.33%	5.47%	7.26%
21	6.30%	8.46%	5.56%	7.38%
22	6.40%	8.60%	5.65%	7.50%
23	6.51%	8.74%	5.74%	7.62%
24	6.61%	8.88%	5.83%	7.74%
25	6.72%	9.02%	5.93%	7.87%
26	6.83%	9.17%	6.02%	8.00%
27	6.94%	9.32%	6.12%	8.13%
28	7.05%	9.47%	6.22%	8.26%
29	7.16%	9.62%	6.32%	8.39%
30	7.28%	9.77%	6.42%	8.52%
31	7.39%	9.93%	6.52%	8.66%
32	7.51%	10.09%	6.63%	8.80%
33	7.63%	10.25%	6.73%	8.94%
34	7.75%	10.42%	6.84%	9.08%
35	7.88%	10.58%	6.95%	9.23%
36	8.01%	10.75%	7.07%	9.38%
37	8.14%	10.93%	7.18%	9.53%
38	8.27%	11.11%	7.30%	9.69%
39	8.40%	11.29%	7.41%	9.84%
40	8.54%	11.47%	7.54%	10.00%
41	8.68%	11.66%	7.66%	10.17%

Section 4: Actuarial Valuation Basis

Exhibit III: Member Contribution Rates (continued)

General Tier 2 Members' Contribution Rates Based on the December 31, 2019 Actuarial Valuation
(as a % of monthly payroll)

Entry Age	Rate Group 11 (Plan U)		Rate Group 12 (Plan U)	
	Normal	Total	Normal	Total
42	8.82%	11.85%	7.79%	10.34%
43	8.97%	12.05%	7.91%	10.51%
44	9.12%	12.25%	8.05%	10.68%
45	9.27%	12.46%	8.18%	10.86%
46	9.43%	12.67%	8.32%	11.05%
47	9.60%	12.89%	8.47%	11.24%
48	9.77%	13.12%	8.62%	11.44%
49	9.93%	13.33%	8.76%	11.63%
50	10.08%	13.54%	8.89%	11.81%
51	10.22%	13.73%	9.02%	11.97%
52	10.37%	13.93%	9.15%	12.15%
53	10.52%	14.13%	9.28%	12.33%
54	10.68%	14.35%	9.43%	12.52%
55	10.85%	14.58%	9.58%	12.72%
56	11.03%	14.82%	9.73%	12.92%
57	11.20%	15.04%	9.88%	13.12%
58	11.35%	15.24%	10.01%	13.29%
59	11.46%	15.39%	10.11%	13.43%
60	11.54%	15.49%	10.18%	13.51%
61	11.55%	15.52%	10.20%	13.54%
62	11.52%	15.47%	10.16%	13.49%
63	11.40%	15.32%	10.06%	13.36%
64	11.20%	15.04%	9.88%	13.12%
65	11.56%	15.53%	10.20%	13.55%
66 & Over	11.94%	16.04%	10.54%	13.99%
<i>COLA Loading:</i>		34.33%		32.76%

Section 4: Actuarial Valuation Basis

Interest: 7.00% per annum

Mortality: See *Section 4, Exhibit I*

Salary Increase: Inflation (2.75%) + Across-the-Board Increase (0.50%) + Merit and Promotion (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 2020 is equal to \$151,549 (reference: Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2020 (reference: Section 7522.10(d)).

Section 4: Actuarial Valuation Basis

Exhibit III: Member Contribution Rates (continued)

Safety Tier 2 Members' Contribution Rates Based on the December 31, 2019 Actuarial Valuation
(as a % of monthly payroll)

Entry Age	Plan F (OCFA)		Plan F (Law Enforcement)		Plan F (Probation)	
	Normal	Total	Normal	Total	Normal	Total
15	8.87%	15.06%	9.11%	15.59%	9.01%	15.05%
16	8.87%	15.06%	9.11%	15.59%	9.01%	15.05%
17	8.99%	15.26%	9.22%	15.80%	9.13%	15.24%
18	9.10%	15.46%	9.34%	16.00%	9.24%	15.44%
19	9.22%	15.67%	9.47%	16.21%	9.37%	15.65%
20	9.35%	15.87%	9.59%	16.43%	9.49%	15.85%
21	9.47%	16.09%	9.72%	16.64%	9.62%	16.06%
22	9.60%	16.30%	9.85%	16.86%	9.74%	16.28%
23	9.73%	16.52%	9.98%	17.09%	9.87%	16.50%
24	9.86%	16.75%	10.11%	17.32%	10.01%	16.72%
25	10.00%	16.98%	10.25%	17.55%	10.14%	16.95%
26	10.13%	17.21%	10.39%	17.79%	10.28%	17.18%
27	10.28%	17.45%	10.53%	18.04%	10.43%	17.42%
28	10.42%	17.70%	10.68%	18.29%	10.57%	17.67%
29	10.57%	17.96%	10.83%	18.56%	10.73%	17.92%
30	10.73%	18.22%	10.99%	18.82%	10.88%	18.18%
31	10.89%	18.50%	11.15%	19.10%	11.05%	18.45%
32	11.05%	18.77%	11.31%	19.38%	11.21%	18.72%
33	11.21%	19.04%	11.47%	19.65%	11.36%	18.99%
34	11.37%	19.31%	11.63%	19.92%	11.52%	19.25%
35	11.53%	19.59%	11.80%	20.20%	11.69%	19.52%
36	11.71%	19.89%	11.97%	20.50%	11.86%	19.82%
37	11.90%	20.21%	12.16%	20.82%	12.05%	20.13%
38	12.08%	20.52%	12.34%	21.13%	12.23%	20.44%
39	12.26%	20.83%	12.51%	21.43%	12.41%	20.73%
40	12.41%	21.07%	12.65%	21.66%	12.55%	20.96%

Section 4: Actuarial Valuation Basis

Exhibit III: Member Contribution Rates (continued)

Safety Tier 2 Members' Contribution Rates Based on the December 31, 2019 Actuarial Valuation
(as a % of monthly payroll)

Entry Age	Plan F (OCFA)		Plan F (Law Enforcement)		Plan F (Probation)	
	Normal	Total	Normal	Total	Normal	Total
41	12.52%	21.27%	12.75%	21.83%	12.65%	21.14%
42	12.59%	21.38%	12.80%	21.92%	12.71%	21.24%
43	12.60%	21.40%	12.79%	21.91%	12.71%	21.24%
44	12.56%	21.33%	12.72%	21.79%	12.66%	21.14%
45	12.44%	21.13%	12.57%	21.52%	12.52%	20.91%
46	12.21%	20.73%	12.28%	21.03%	12.25%	20.47%
47	11.77%	19.99%	11.77%	20.16%	11.77%	19.67%
48	12.14%	20.62%	12.14%	20.80%	12.14%	20.29%
49	12.54%	21.29%	12.54%	21.47%	12.54%	20.94%
50	12.54%	21.29%	12.54%	21.47%	12.54%	20.94%
51	12.54%	21.29%	12.54%	21.47%	12.54%	20.94%
52	12.54%	21.29%	12.54%	21.47%	12.54%	20.94%
53	12.54%	21.29%	12.54%	21.47%	12.54%	20.94%
54	12.54%	21.29%	12.54%	21.47%	12.54%	20.94%
55	12.54%	21.29%	12.54%	21.47%	12.54%	20.94%
56	12.54%	21.29%	12.54%	21.47%	12.54%	20.94%
57	12.54%	21.29%	12.54%	21.47%	12.54%	20.94%
58	12.54%	21.29%	12.54%	21.47%	12.54%	20.94%
59	12.54%	21.29%	12.54%	21.47%	12.54%	20.94%
60	12.54%	21.29%	12.54%	21.47%	12.54%	20.94%
COLA Loading:		69.84%		71.26%		67.06%

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

Section 4: Actuarial Valuation Basis

Exhibit III: Member Contribution Rates (continued)

Safety Tier 2 Members' Contribution Rates Based on the December 31, 2019 Actuarial Valuation
(as a % of monthly payroll)

Entry Age	Plan R (OCFA)		Plan R (Law Enforcement)	
	Normal	Total	Normal	Total
15	8.87%	14.70%	9.11%	14.62%
16	8.87%	14.70%	9.11%	14.62%
17	8.99%	14.89%	9.22%	14.81%
18	9.10%	15.09%	9.34%	15.00%
19	9.22%	15.29%	9.47%	15.20%
20	9.35%	15.49%	9.59%	15.40%
21	9.47%	15.70%	9.72%	15.60%
22	9.60%	15.91%	9.85%	15.81%
23	9.73%	16.12%	9.98%	16.02%
24	9.86%	16.34%	10.11%	16.23%
25	10.00%	16.57%	10.25%	16.45%
26	10.13%	16.80%	10.39%	16.68%
27	10.28%	17.03%	10.53%	16.91%
28	10.42%	17.27%	10.68%	17.15%
29	10.57%	17.52%	10.83%	17.39%
30	10.73%	17.78%	10.99%	17.64%
31	10.89%	18.05%	11.15%	17.91%
32	11.05%	18.32%	11.31%	18.16%
33	11.21%	18.58%	11.47%	18.42%
34	11.37%	18.84%	11.63%	18.67%
35	11.53%	19.12%	11.80%	18.94%
36	11.71%	19.41%	11.97%	19.22%
37	11.90%	19.72%	12.16%	19.51%
38	12.08%	20.03%	12.34%	19.81%
39	12.26%	20.33%	12.51%	20.08%
40	12.41%	20.57%	12.65%	20.30%

Section 4: Actuarial Valuation Basis

Exhibit III: Member Contribution Rates (continued)

Safety Tier 2 Members' Contribution Rates Based on the December 31, 2019 Actuarial Valuation
(as a % of monthly payroll)

Entry Age	Plan R (OCFA)		Plan R (Law Enforcement)	
	Normal	Total	Normal	Total
41	12.52%	20.75%	12.75%	20.47%
42	12.59%	20.86%	12.80%	20.55%
43	12.60%	20.88%	12.79%	20.53%
44	12.56%	20.82%	12.72%	20.43%
45	12.44%	20.62%	12.57%	20.18%
46	12.21%	20.23%	12.28%	19.72%
47	11.77%	19.51%	11.77%	18.90%
48	12.14%	20.13%	12.14%	19.49%
49	12.54%	20.78%	12.54%	20.12%
50	12.54%	20.78%	12.54%	20.12%
51	12.54%	20.78%	12.54%	20.12%
52	12.54%	20.78%	12.54%	20.12%
53	12.54%	20.78%	12.54%	20.12%
54	12.54%	20.78%	12.54%	20.12%
55	12.54%	20.78%	12.54%	20.12%
56	12.54%	20.78%	12.54%	20.12%
57	12.54%	20.78%	12.54%	20.12%
58	12.54%	20.78%	12.54%	20.12%
59	12.54%	20.78%	12.54%	20.12%
60	12.54%	20.78%	12.54%	20.12%
<i>COLA Loading:</i>		65.75%		60.53%

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

Section 4: Actuarial Valuation Basis

Exhibit III: Member Contribution Rates (continued)

Safety CalPEPRA Members' Contribution Rates Based on the December 31, 2019 Actuarial Valuation
(as a % of monthly payroll)

Entry Age	Rate Group 6 (Plan V)		Rate Group 7 (Plan V)		Rate Group 8 (Plan V)	
	Normal	Total	Normal	Total	Normal	Total
15	9.83%	14.01%	10.51%	15.05%	9.20%	13.24%
16	9.83%	14.01%	10.51%	15.05%	9.20%	13.24%
17	9.96%	14.20%	10.64%	15.24%	9.32%	13.42%
18	10.09%	14.38%	10.78%	15.44%	9.44%	13.59%
19	10.22%	14.57%	10.92%	15.64%	9.57%	13.77%
20	10.35%	14.76%	11.07%	15.85%	9.69%	13.95%
21	10.49%	14.95%	11.21%	16.05%	9.82%	14.13%
22	10.63%	15.15%	11.36%	16.26%	9.95%	14.32%
23	10.77%	15.35%	11.51%	16.48%	10.08%	14.50%
24	10.91%	15.55%	11.66%	16.70%	10.21%	14.69%
25	11.05%	15.75%	11.81%	16.92%	10.34%	14.89%
26	11.20%	15.96%	11.97%	17.14%	10.48%	15.09%
27	11.35%	16.18%	12.13%	17.37%	10.62%	15.29%
28	11.50%	16.39%	12.29%	17.60%	10.76%	15.49%
29	11.65%	16.61%	12.46%	17.84%	10.91%	15.70%
30	11.81%	16.84%	12.62%	18.08%	11.06%	15.91%
31	11.97%	17.07%	12.80%	18.33%	11.21%	16.13%
32	12.14%	17.30%	12.97%	18.58%	11.36%	16.35%
33	12.31%	17.55%	13.16%	18.84%	11.52%	16.58%
34	12.48%	17.79%	13.34%	19.11%	11.68%	16.82%
35	12.66%	18.05%	13.53%	19.38%	11.85%	17.06%
36	12.85%	18.31%	13.73%	19.66%	12.02%	17.31%
37	13.04%	18.59%	13.93%	19.96%	12.20%	17.56%
38	13.24%	18.87%	14.15%	20.26%	12.39%	17.83%
39	13.43%	19.15%	14.36%	20.56%	12.57%	18.10%
40	13.63%	19.43%	14.57%	20.86%	12.76%	18.36%
41	13.82%	19.70%	14.77%	21.16%	12.94%	18.62%

Section 4: Actuarial Valuation Basis

Exhibit III: Member Contribution Rates (continued)

Safety CalPEPRA Members' Contribution Rates Based on the December 31, 2019 Actuarial Valuation
(as a % of monthly payroll)

Entry Age	Rate Group 6 (Plan V)		Rate Group 7 (Plan V)		Rate Group 8 (Plan V)	
	Normal	Total	Normal	Total	Normal	Total
42	14.03%	20.00%	14.99%	21.47%	13.13%	18.90%
43	14.25%	20.31%	15.23%	21.81%	13.34%	19.19%
44	14.48%	20.64%	15.48%	22.17%	13.56%	19.51%
45	14.72%	20.98%	15.73%	22.52%	13.77%	19.82%
46	14.94%	21.29%	15.97%	22.87%	13.98%	20.13%
47	15.12%	21.56%	16.16%	23.15%	14.16%	20.38%
48	15.27%	21.77%	16.32%	23.38%	14.29%	20.57%
49	15.36%	21.90%	16.42%	23.52%	14.38%	20.70%
50	15.39%	21.94%	16.45%	23.56%	14.41%	20.74%
51	15.37%	21.90%	16.42%	23.52%	14.38%	20.70%
52	15.25%	21.73%	16.30%	23.34%	14.27%	20.54%
53	14.99%	21.37%	16.03%	22.95%	14.04%	20.20%
54	14.52%	20.69%	15.51%	22.22%	13.59%	19.56%
55	14.97%	21.34%	16.00%	22.92%	14.02%	20.17%
56 & Over	15.46%	22.03%	16.52%	23.66%	14.47%	20.82%
COLA Loading:		42.55%		43.21%		43.94%

Interest: 7.00% per annum

Mortality: See Section 4, Exhibit I

Salary Increase: Inflation (2.75%) + Across-the-Board Increase (0.50%) + Merit and Promotion (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 2020 is equal to \$151,549 (reference: Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2020 (reference: Section 7522.10(d)).

Section 4: Actuarial Valuation Basis

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, 2019 Valuation	December 31, 2018 Valuation
General Members		
Rate Group #1 – Plans A, B and U (non-OCTA, non-OCSD)	82.53%	80.75%
Rate Group #2 – Plans I, J, O, P, S, T, U and W (County et al.)	70.64%	70.14%
Rate Group #3 – Plans B, G, H and U (OCSD) ¹	100.00%	98.91%
Rate Group #5 – Plans A, B and U (OCTA)	75.38%	75.00%
Rate Group #9 – Plans M, N and U (TCA)	99.29%	74.02%
Rate Group #10 – Plans I, J, M, N and U (OCFA)	82.58%	80.62%
Rate Group #11 – Plans M and N, future service, and U (Cemetery)	94.39%	99.65%
Rate Group #12 – Plans G, H, future service, and U (Law Library)	99.72%	97.84%
Safety Members		
Rate Group #6 – Plans E, F and V (Probation)	71.80%	70.34%
Rate Group #7 – Plans E, F, Q, R and V (Law Enforcement)	70.33%	69.67%
Rate Group #8 – Plans E, F, Q, R and V (OCFA)	79.69%	78.70%

² Reflects asset transfers of \$18,631,000 and \$14,589,000 as of December 31, 2019 and December 31, 2018, respectively, from O.C. Sanitation District UAAL Deferred Account to valuation assets.

Section 4: Actuarial Valuation Basis

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, 2018 (before adjustments for additional UAAL contributions and phase-in)	16.09%	38.22%	12.83%	31.63%
• Adjustment to FY20-21 rates for additional UAAL contributions from OCSD and TCA	0.00%	0.00%	(0.86%)	0.00%
• Effect of three-year phase-in of UAAL cost impact due to changes in actuarial assumptions	<u>(0.74%)</u>	<u>(1.19%)</u>	<u>0.00%</u>	<u>(1.16%)</u>
Average Recommended Employer Contribution as of December 31, 2018 (after adjustments for additional UAAL contributions and phase-in)	15.35%	37.03%	11.97%	30.47%
• Effect of investment loss (after smoothing)	0.08%	0.17%	0.22%	0.15%
• Effect of additional UAAL contributions from OCFA	0.00%	0.00%	0.00%	0.00%
• Effect of \$18.6 million asset transfer from O.C. Sanitation District UAAL Deferred Account	0.00%	0.00%	(1.74%)	0.00%
• Effect of difference in actual versus expected contributions (including loss from phase-in)	0.14%	0.55%	0.15%	0.51%
• Effect of difference in actual versus expected COLA increases	0.14%	0.44%	0.46%	0.41%
• Effect of difference in actual versus expected salary increases	(0.60%)	(0.35%)	0.46%	(0.25%)
• Effect of growth in total payroll greater than expected	0.03%	0.10%	0.00%	(0.73%)
• Effect of other experience (gain)/loss ²	(0.39%)	0.22%	0.41%	(0.30%)
• Effect of three-year phase-in of UAAL cost impact due to changes in actuarial assumptions	<u>0.74%</u>	<u>1.19%</u>	<u>0.00%</u>	<u>1.16%</u>
Total change	0.14%	2.32%	(0.04%)	0.95%
Average Recommended Employer Contribution as of December 31, 2019	15.49%	39.35%	11.93%	31.42%

¹ Includes only the "net" UAAL contribution rate for County and IHSS Public Authority without reflecting the UAAL contributions required for Vector Control, Cypress Parks and Recreation, U.C.I. and DOE.

² Net of an adjustment to reflect 18-month delay between date of valuation and date of rate implementation for all actuarial experience.

Section 4: Actuarial Valuation Basis

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, 2018 (before adjustments for additional UAAL contributions and phase-in)	28.27%	28.54%	12.35%	15.35%
• Adjustment to FY20-21 rates for additional UAAL contributions from OCSD and TCA	(15.29%)	0.00%	0.00%	0.00%
• Effect of three-year phase-in of UAAL cost impact due to changes in actuarial assumptions	<u>0.00%</u>	<u>(0.94%)</u>	<u>(0.22%)¹</u>	<u>0.00%</u>
Average Recommended Employer Contribution as of December 31, 2018 (after adjustments for additional UAAL contributions and phase-in)	12.98%	27.60%	12.13%	15.35%
• Effect of investment loss (after smoothing)	0.14%	0.15%	0.14%	0.22%
• Effect of additional UAAL contributions from OCFA	0.00%	(1.55%)	0.00%	0.00%
• Effect of \$18.6 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)	(0.31%)	(0.20%)	0.12%	0.25%
• Effect of difference in actual versus expected COLA increases	0.29%	0.52%	0.18%	0.38%
• Effect of difference in actual versus expected salary increases	0.16%	0.44%	(0.17%)	(0.71%)
• Effect of growth in total payroll greater than expected	(0.09%)	(1.77%)	0.00%	0.02%
• Effect of other experience (gain)/loss ^{2,3}	0.05%	0.57%	2.22%	(1.83%)
• Effect of three-year phase-in of UAAL cost impact due to changes in actuarial assumptions	<u>0.00%</u>	<u>0.94%</u>	<u>0.22%¹</u>	<u>0.00%</u>
Total change	0.24%	(0.90%)	2.71%	(1.67%)
Average Recommended Employer Contribution as of December 31, 2019	13.22%	26.70%	14.84%	13.68%

¹ The phase-in adjustment for Rate Group #11 has been adjusted from -0.48% to -0.22% so that the UAAL contribution won't become negative after applying the phase-in (we have limited that to 0%).

² Net of an adjustment to reflect 18-month delay between date of valuation and date of rate implementation for all actuarial experience.

³ Effect of other experience (gain)/loss for RG #11 includes: 1.21% due to retirement loss and 1.07% due to previous unreported beneficiary. RG #12 includes: -0.76% due to retirement gain and -0.22% due to termination gain.

Section 4: Actuarial Valuation Basis

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, 2018 (before adjustments for additional UAAL contributions and phase-in)	57.36%	66.64%	48.99%
• Adjustment to FY20-21 rates for additional UAAL contributions from OCSD and TCA	0.00%	0.00%	0.00%
• Effect of three-year phase-in of UAAL cost impact due to changes in actuarial assumptions	<u>(2.13%)</u>	<u>(1.85%)</u>	<u>(1.15%)</u>
Average Recommended Employer Contribution as of December 31, 2018 (after adjustments for additional UAAL contributions and phase-in)	55.23%	64.79%	47.84%
• Effect of investment loss (after smoothing)	0.24%	0.26%	0.23%
• Effect of additional UAAL contributions from OCFA	0.00%	0.00%	(0.60%)
• Effect of \$18.6 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)	0.90%	0.41%	0.16%
• Effect of difference in actual versus expected COLA increases	0.53%	0.73%	0.52%
• Effect of difference in actual versus expected salary increases	(0.87%)	0.31%	0.30%
• Effect of growth in total payroll greater than expected	1.74%	(0.85%)	(1.82%)
• Effect of other experience (gain)/loss ^{1,2}	(0.21%)	0.05%	0.93%
• Effect of three-year phase-in of UAAL cost impact due to changes in actuarial assumptions	<u>2.13%</u>	<u>1.85%</u>	<u>1.15%</u>
Total change	4.46%	2.76%	0.87%
Average Recommended Employer Contribution as of December 31, 2019	59.69%	67.55%	48.71%

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 RG #8 includes: 0.92% increase in the employer Normal Cost rate due to the 61 new hires from the City of Garden Grove. The average entry age has changed from 26.4 to 32.0.

Section 4: Actuarial Valuation Basis

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 (before adjustments for additional UAAL contributions)	\$96,456	\$3,429,915	\$7,753	\$241,221
a) Additional UAAL contributions from OCSD and TCA ¹	<u>0</u>	<u>0</u>	<u>(7,753)</u>	<u>0</u>
2 Unfunded Actuarial Accrued Liability at beginning of year (after adjustments for additional UAAL contributions)	\$96,456	\$3,429,915	\$0	\$241,221
3 Total Normal Cost at middle of year	17,606	266,198	17,605	23,263
4 Expected employer and member contributions	(22,720)	(561,925)	(17,605)	(44,075)
5 Interest	<u>6,672</u>	<u>233,557</u>	<u>0</u>	<u>16,543</u>
6 Expected Unfunded Actuarial Accrued Liability at end of year	\$98,014	\$3,367,745	\$0	\$236,952
7 Changes due to:				
a) Investment losses (on smoothed value of assets)	\$1,338	\$27,067	\$2,347	\$2,422
b) Effect of additional UAAL contributions from OCFA, Vector Control, DOE, and UCI	(4,100)	0	0	0
c) Transfer from O.C. Sanitation District UAAL Deferred Account	0	0	(18,631)	0
d) Difference in actual versus expected contributions (including loss from phase-in)	1,801	88,824	1,603	8,112
e) Difference in actual versus expected salary increases	(7,606)	(57,650)	4,962	(3,953)
f) Difference in actual versus expected COLA increases	2,862	72,275	4,887	6,575
g) Other experience (gain)/loss	<u>(2,688)</u>	<u>55,487</u>	<u>4,832</u>	<u>(922)</u>
Total changes	\$(8,393)	\$186,003	\$0	\$12,234
8 Unfunded Actuarial Accrued Liability at end of year	\$89,621	\$3,553,748	\$0	\$249,186

¹ Effect of \$8 million in additional contributions for O.C. Sanitation District to pay off their UAAL as of December 31, 2018.

Section 4: Actuarial Valuation Basis

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 #9	RG #10	RG #11	RG #12
1 Unfunded Actuarial Accrued Liability at beginning of year (before adjustments for additional UAAL contributions)	\$12,390	\$47,228	\$36	\$233
a) Additional UAAL contributions from OCSD and TCA ¹	<u>(12,390)</u>	<u>0</u>	<u>0</u>	<u>0</u>
2 Unfunded Actuarial Accrued Liability at beginning of year (after adjustments for additional UAAL contributions)	\$0	\$47,228	\$36	\$233
3 Total Normal Cost at middle of year	1,685	6,720	364	294
4 Expected employer and member contributions	(1,685)	(11,048)	(368)	(314)
5 Interest	<u>0</u>	<u>3,127</u>	<u>3</u>	<u>19</u>
6 Expected Unfunded Actuarial Accrued Liability at end of year	\$0	\$46,027	\$35	\$232
7 Changes due to:				
a) Investment losses (on smoothed value of assets)	\$146	\$667	\$34	\$35
b) Effect of additional UAAL contributions from OCFA, Vector Control, DOE, and UCI	0	(6,855)	0	0
c) Transfer from O.C. Sanitation District UAAL Deferred Account	0	0	0	0
d) Difference in actual versus expected contributions (including loss from phase-in)	(323)	(879)	29	39
e) Difference in actual versus expected salary increases	168	1,951	(39)	(112)
f) Difference in actual versus expected COLA increases	303	2,285	42	59
g) Other experience (gain)/loss	<u>79</u>	<u>2,907</u>	<u>547</u>	<u>(222)</u>
Total changes	\$373	\$76	\$613	\$(201)
8 Unfunded Actuarial Accrued Liability at end of year	\$373	\$46,103	\$648	\$31

¹ Effect of \$12 million in additional contributions for Transportation Corridor Agency to pay off their UAAL as of December 31, 2018.

Section 4: Actuarial Valuation Basis

Exhibit VI: Reconciliation of UAAL by Rate Group (continued)

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

	RG #6	RG #7	RG #8
1 Unfunded Actuarial Accrued Liability at beginning of year (before adjustments for additional UAAL contributions)	\$259,769	\$1,234,367	\$379,561
a) Additional UAAL contributions from OCSD and TCA	<u>0</u>	<u>0</u>	<u>0</u>
2 Unfunded Actuarial Accrued Liability at beginning of year (after adjustments for additional UAAL contributions)	\$259,769	\$1,234,367	\$379,561
3 Total Normal Cost at middle of year	25,530	102,992	54,151
4 Expected employer and member contributions	(47,632)	(207,991)	(87,236)
5 Interest	17,747	83,704	25,786
6 Expected Unfunded Actuarial Accrued Liability at end of year	\$255,414	\$1,213,072	\$372,262
7 Changes due to:			
a) Investment losses (on smoothed value of assets)	\$2,098	\$9,602	\$4,758
b) Effect of additional UAAL contributions from OCFA, Vector Control, DOE, and UCI	0	0	(12,372)
c) Transfer from O.C. Sanitation District UAAL Deferred Account	0	0	0
d) Difference in actual versus expected contributions (including loss from phase-in)	7,992	14,963	3,254
e) Difference in actual versus expected salary increases	(7,746)	11,137	6,172
f) Difference in actual versus expected COLA increases	4,695	26,520	10,717
g) Other experience (gain)/loss	<u>1,024</u>	<u>12,801</u>	<u>3,788</u>
Total changes	\$8,063	\$75,023	\$16,317
8 Unfunded Actuarial Accrued Liability at end of year	\$263,477	\$1,288,095	\$388,579

5642993v6/05794.001

Orange County Employees Retirement System

Risk Assessment

**Based on the Actuarial Valuation and Review
as of December 31, 2019**

July 9, 2020

**Paul Angelo, FSA, MAAA, FCA, EA
Andy Yeung, ASA, MAAA, FCA, EA
Todd Tauzer, FSA, MAAA, FCA, CERA**

Table of Contents

Section 1: Introduction and Executive Summary 3
 Introduction 3
 Executive Summary 5

Section 2: Key Plan Risks on Funded Status, Unfunded Actuarial Accrued Liabilities, and Employer Contribution Rates ... 7
 Evaluation of Historical Trends 7
 Assessment of Primary Risk Factors Going Forward 14
 Plan Maturity Measures that Affect Primary Risks 20

Appendix: Actuarial Assumptions & Methods, Actuarial Certification, and Detailed Scenario Test Results 25
 A: Actuarial Assumptions & Methods 25
 B: Actuarial Certification 27
 C: Detailed Scenario Test Results 28

Section 1: Introduction and Executive Summary

Introduction

The purpose of this report is to assist the Board of Retirement,¹ participating employers and members and other stakeholders to better understand and assess the risk profile of the System, as well as the particular risks inherent in using a fixed set of actuarial assumptions in preparing the results in our December 31, 2019 funding valuation for Orange County Employees Retirement System (OCERS).

The results included in our December 31, 2019 funding valuation report for the Plan were prepared based on a specific set of economic and non-economic actuarial assumptions under the premise that future experience of OCERS would be consistent with those assumptions. While those assumptions are generally reviewed every three years (with the assumptions from the last triennial experience study adopted by the Board of Retirement for use starting with the December 31, 2017 valuation),² there is a risk that emerging results may differ significantly as actual experience is fluid and will not completely track current assumptions.

It is important to note that this risk assessment is based on plan assets as of December 31, 2019. Due to the COVID-19 pandemic, market conditions have changed significantly since the valuation date. The Plan's actuarial status does not reflect short-term fluctuations of the market, but rather is based on the market values on the last day of the Plan Year. While it is impossible to determine how the market will perform over the next several months, and how that will affect the results of next year's valuation, the single year investment return scenario test included within this report provides an illustration of the impact of short term market fluctuations on the plan. Additionally, Segal is available to prepare other projections of selected potential outcome scenarios upon request.

Actuarial Standard of Practice on Risk Assessment

The Actuarial Standards Board approved the Actuarial Standard of Practice No. 51 (ASOP 51) regarding risk assessment when performing a funding valuation and it was effective with OCERS' December 31, 2018 actuarial valuation for benefits provided by the Plan. ASOP 51 requires actuaries to identify and assess risks that "may reasonably be anticipated to significantly affect the plan's future financial condition." Examples of key risks listed that are particularly relevant to

¹ This risk report has been prepared at the request of the Board of Retirement to assist in administering the Plan. This risk report may not otherwise be copied or reproduced in any form without the consent of the Board of Retirement and may only be provided to other parties in its entirety, unless expressly authorized by Segal. The measurements shown in this risk report may not be applicable for other purposes.

² The next triennial experience study is currently in progress and the assumptions approved by the Board will be used in the December 31, 2020 actuarial valuation

OCERS are asset/liability mismatch risk, investment risk, and longevity and other demographic risks. ASOP 51 also requires an actuary to consider if there is any ongoing contribution risk to the plan; however, it does not require the actuary to evaluate the particular ability or willingness 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 initial assessment can be strictly a qualitative discussion about potential adverse experience and the possible effect on future results, but it may also include quantitative numerical demonstrations where informative. The actuary is also encouraged to consider a recommendation as to whether a more detailed risk assessment would be significantly beneficial for the intended user in order to examine particular financial risks. When making that recommendation, the actuary will take into account such factors as the plan's design, risk profile, maturity, size, funded status, asset allocation, cash flow, possible insolvency and current market conditions. This report incorporates a more detailed risk assessment as agreed upon with OCERS.

Plan Risk Assessment

In Section 2, we start by discussing some of the historical factors that have caused changes in OCERS' funded status and employer contribution rates. It is important to understand how the combination of decisions and experience has led to the current financial status of the plan.

We follow this with a discussion of the most significant risk factors going forward. Even though we have not included a numerical analysis of all the risk factors, based on our discussions with OCERS we have illustrated the impact on the funded status and employer contribution rates using relevant economic scenario tests. These tests illustrate the effect of future investment returns on the portfolio coming in differently from the current 7.00% annual investment return assumption used in the December 31, 2019 valuation. ASOP 51 also requires disclosure of plan maturity measures and other historical information that are significant to understanding the risks associated with the Plan and this information is included in this report.

Executive Summary

Historical Funded Status and Employer Contribution Rates

The following table provides a summary of financial changes to the Plan over the last 10 valuations. The unfunded actuarial accrued liability (UAAL)³ and contribution rates⁴ increased primarily as a result of the strengthening of the actuarial assumptions used in preparing the valuations and unfavorable investment experience that were offset to some degree by favorable non-investment experience.

Valuation Date	Market Value Basis		Valuation Value Basis		Total (Aggregate) Employer Contribution Rate (% of Payroll)
	Funded Status	UAAL	Funded Status	UAAL	
December 31, 2010	67.3%	\$4,068.0 M	69.8%	\$3,753.3 M	31.01%
December 31, 2019	75.4%	\$5,400.7 M	73.2%	\$5,879.9 M	41.49%

Future Funded Status and Employer Contribution Rates

In this report, we highlight key factors besides assumption changes that may affect the financial profile of the Plan going forward. As investment experience in the past 10 years has had a significant impact on the funded status and employer contribution rates, we have also provided deterministic projections (using select scenarios for illustration) under hypothetical favorable and unfavorable future market experience so that the impact of market performance can be better understood.

The total (aggregate) employer contribution rate for the plan is 41.49% of total payroll in the December 31, 2019 valuation.

Using a deterministic projection, this report shows the effect of either unfavorable (0.00%) or favorable (14.00%) hypothetical market returns for 2020 on key valuation results. In particular, the changes in the total employer contribution rate (relative to the December 31, 2019 valuation aggregate employer contribution rate of 41.49%) in the December 31, 2020 valuation and in the December 31, 2024 valuation (when all the investment gains or losses are fully recognized at the end of the five-year asset smoothing period) are as shown in the following table:

³ For example, the UAAL increased by \$935 million and \$854 million in the December 31, 2012 and December 31, 2017 valuations, respectively, as a result of the two immediately preceding experience studies.

⁴ For example, the increase in the employer's total rate (normal cost plus UAAL) was 4.63% in the December 31, 2012 valuation and 4.81% in the December 31, 2017 valuation, as a result of the two immediately preceding experience studies.

Contribution Rate Change	2020 Single Plan-Year Investment Return		
	0.00%	7.00% (Baseline)	14.00%
December 31, 2020	0.0% of payroll	-0.8% of payroll	-1.7% of payroll
December 31, 2024	1.6% of payroll	-3.0% of payroll	-7.6% of payroll

Under the favorable (14.00%) hypothetical market return scenario for 2020, the System would be expected to reach full funding by December 31, 2032 and the total employer contribution rate would be comprised of only normal cost contributions. Furthermore, under all three hypothetical market return scenarios for 2020, the System would be expected to reach full funding within 20 years and the total employer contribution rate would be expected to approach about 11% of payroll.⁵ This means that the Board's funding policy is very effective in achieving the general policy goal of providing for the long-term full funding of the costs of the benefits paid by OCERS.

Plan Maturity Measures

During the past 10 valuations, the System has become more mature as evidenced by an increase in the ratio of members in pay status (retirees and beneficiaries) to active members (as shown in *Section 2, Chart 8 on page 22*) and by an increase in the ratios of plan assets and liabilities to active member payroll (as shown in *Section 2, Chart 9 on page 23* and *Chart 10 on page 24*, respectively). We expect these trends to continue going forward. This is significant for understanding the volatility of both historical and future employer contribution rates because any increase in UAAL due to unfavorable investment and non-investment experience for the relatively larger group of non-active members would have to be amortized and funded over the payroll of the relatively smaller group of only active members. Put another way, as a plan grows more mature, its contribution rate becomes more sensitive to investment volatility and liability changes. As OCERS continues to mature with time, its risk profile will continue to evolve in this way and contributions will grow more sensitive to plan experience.

⁵ Assuming no further assumption changes, method changes or experience that differs significantly from assumptions.

Section 2: Key Plan Risks on Funded Status, Unfunded Actuarial Accrued Liabilities, and Employer Contribution Rates

Evaluation of Historical Trends

Funded Status and Change in Unfunded Actuarial Accrued Liabilities

One common measure of OCERS' financial status is the funded ratio. This ratio compares the valuation⁶ and market value of assets to the actuarial accrued liabilities (AAL)⁷ of OCERS. The overall level of funding of OCERS has only slightly increased as a result of strengthening of the economic and non-economic assumptions especially in the two triennial experience studies recommending assumptions used in the December 31, 2012 and 2017 valuations. Unfavorable investment experience also had an impact. The funded ratios and UAAL for the past 10 valuations from December 31, 2010 to 2019 measured using both valuation and market value of assets are provided in *Chart 1*.

The factors that caused the changes in the UAAL for the past 10 valuations from December 31, 2010 to 2019 are specified in *Chart 2*. The results in *Chart 2* reflect the changes in the investment return assumption from 7.75% to 7.25% in the December 31, 2012 valuation and from 7.25% to 7.00% in the December 31, 2017 valuation. These reductions together with the changes in the mortality tables and other assumptions from the two triennial experience studies recommending assumptions used in the December 31, 2012 and 2017 valuations have had by far the most impact on the UAAL for OCERS⁸ followed by the unfavorable investment experience during 2010 to 2019.

Chart 2 also shows that the unfavorable investment experience was offset to some extent by favorable non-investment experience. The non-investment experience includes smaller salary increases received by active members and smaller cost-of-living-adjustment (COLA) increases received by retirees and beneficiaries than those expected under the actuarial assumptions. The non-investment experience also includes the scheduled delay in implementing the contribution rates determined in the annual valuation.

⁶ The valuation value of assets is equal to the market value of assets excluding unrecognized returns from the last few years and any non-valuation reserves. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized over a five-year period.

⁷ For the actives, the actuarial accrued liability is the value of the accumulated normal costs allocated to the years before the valuation date. For the pensioners, beneficiaries and inactive vested members, the actuarial accrued liability is the single-sum present value of the lifetime benefit expected to be paid to those members.

⁸ For instance, the UAAL increased by \$935 million and \$854 million in the December 31, 2012 and December 31, 2017 valuations, respectively, as a result of the two immediately preceding experience studies.

It is important to note that OCERS has taken significant strides in risk management and resulting long-term plan sustainability. This includes strengthening of assumptions, particularly the expected return discount rate, and adopting a funding policy that eliminates negative amortization and promotes intergenerational equity. These changes may result in higher contributions in the short term, but in the medium to longer term avoid both deferring contributions and allowing unmanaged growth in the unfunded liability. We believe these actions are essential for OCERS' fiscal health going forward.

Chart 1

Funded Ratio (Percentages) and Dollar UAAL (\$ Millions)
in December 31, 2010 to 2019 Valuations

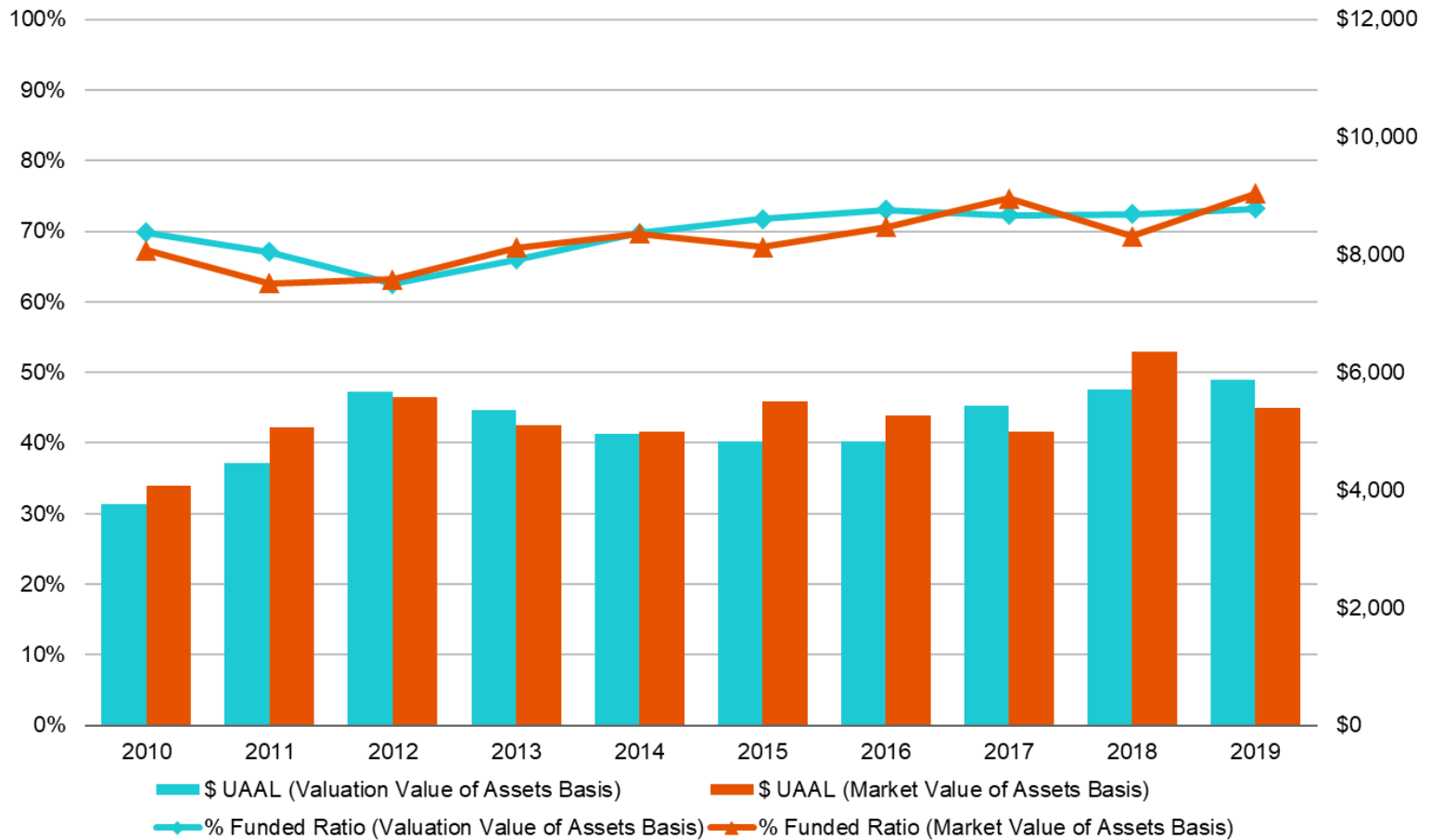
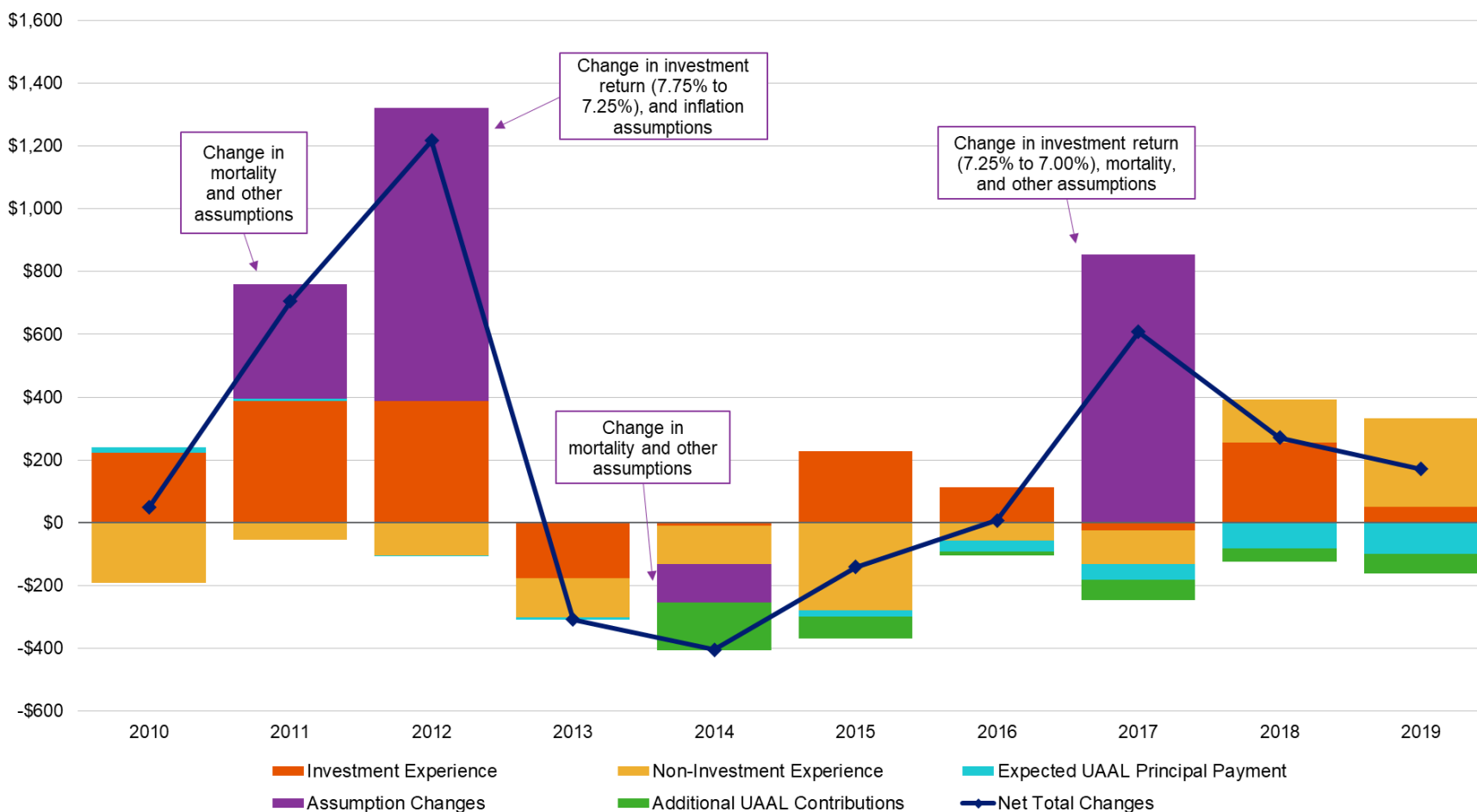


Chart 2

Factors that Changed UAAL in December 31, 2010 to 2019 Valuations (\$ Millions)



Note: The primary source of investment losses shown starting in the December 31, 2010 valuation is the 2008 market decline (“the Great Recession”), which was recognized in the valuation value of assets over five years.

Employer Contribution Rates

The total (normal cost⁹ plus UAAL payment) employer contribution rates determined in the December 31, 2010 to 2019 valuations are provided in *Chart 3* and the factors that caused the changes in the total aggregate employer rates¹⁰ are provided in *Chart 4*.

Except for the increase caused by using new actuarial assumptions in the December 31, 2012 valuation, the employer's aggregate normal cost rates in *Chart 3* have stayed relatively flat during the last 10 years. The changes to the employer's aggregate normal cost rates from assumption changes were offset to some degree by the plan changes under the Public Employees' Pension Reform Act of 2013 (PEPRA) as new members have been enrolled in the lower cost PEPRA benefit tiers starting on January 1, 2013.

Chart 4 shows that the changes in the investment return, mortality tables inflation and other assumptions from the two triennial experience studies performed before those two valuations have had by far the most impact on increasing the UAAL contribution rates¹¹ for the employers. The next greatest impact was from the unfavorable investment experience in 2008, that was recognized from 2009 to 2012 under OCERS' asset smoothing policy.

⁹ The normal cost is the amount of contributions required to fund the portion of the level cost of the member's projected retirement benefit that is allocated to the current year of service.

¹⁰ There are separate contribution rates determined in the valuation for the General and Safety membership groups and for the different benefit tiers and employers. The aggregate contribution rates have been calculated based on an average of those rates weighted by the payrolls of the active members reported in those valuations.

¹¹ For instance, the increase in the employer's total rate (normal cost plus UAAL) was 4.63% in the December 31, 2012 valuation and 4.81% in the December 31, 2017 valuation, as a result of the two experience studies.

Chart 3

Employer Contribution Rates in December 31, 2010 to 2019 Valuations
(% of Payroll)

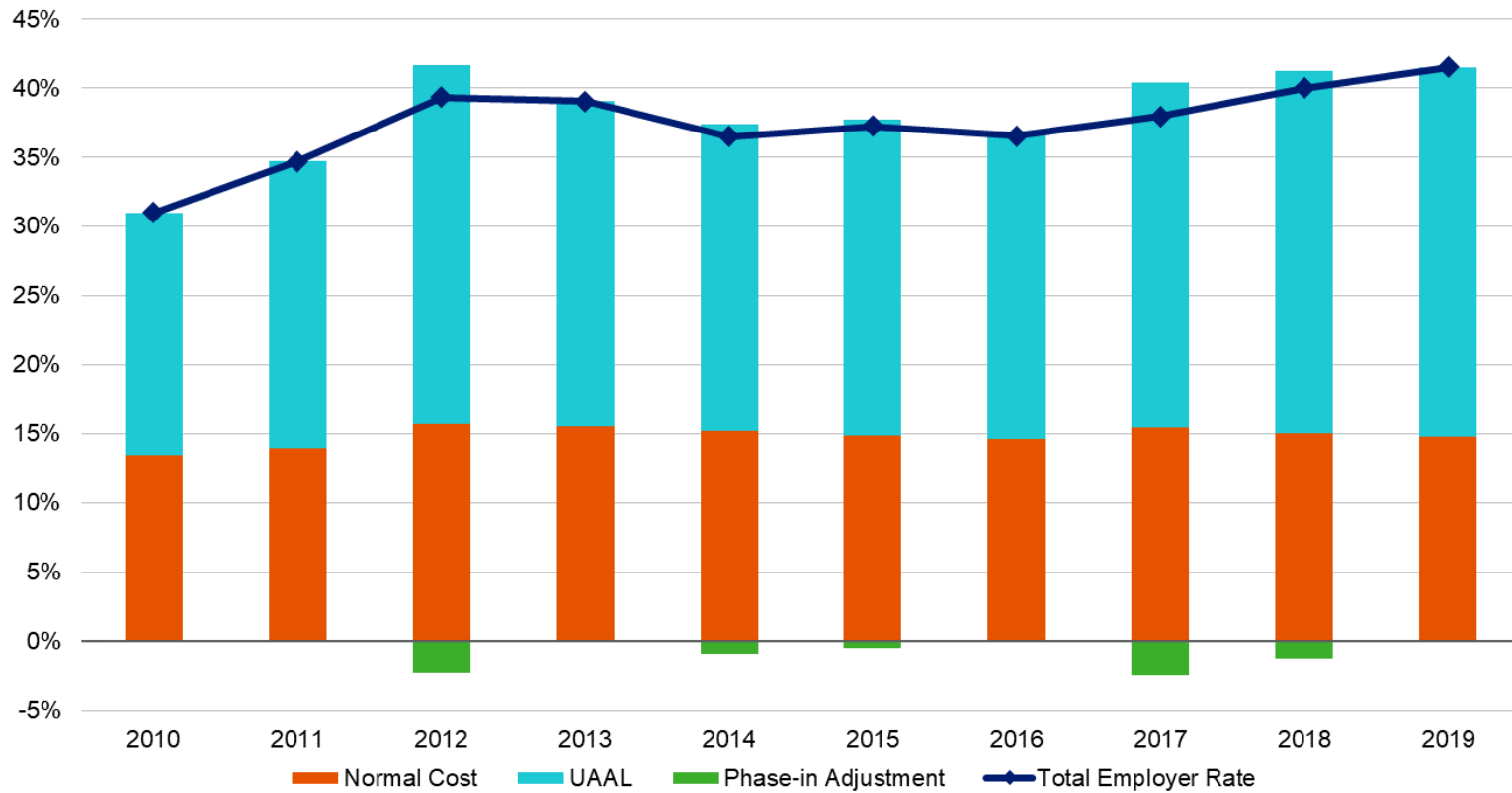
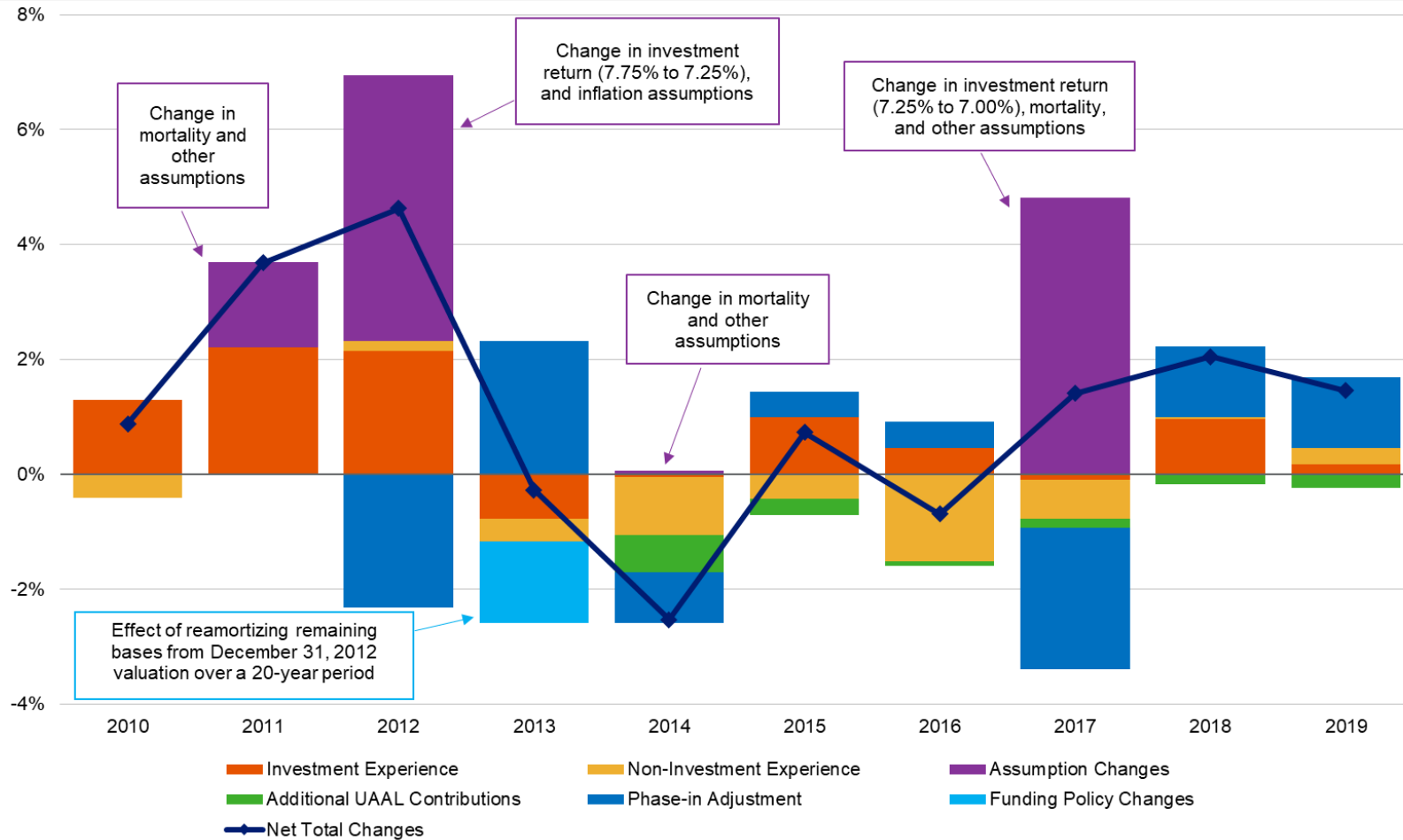


Chart 4

Factors that Affected Employer Contribution Rates in December 31, 2010 to 2019 Valuations (% of Payroll)



Note: The primary source of investment losses shown starting in the December 31, 2010 valuation is the 2008 market decline (“the Great Recession”), which was recognized in the valuation value of assets over five years.

Assessment of Primary Risk Factors Going Forward

As discussed in the Evaluation of Historical Trends section, in the 2010 to 2019 valuations the funded ratios and the employer contribution rates have changed mainly as a result of changes in actuarial assumptions, investment experience, and non-investment experience.

In general, we anticipate the following risk factors to have an ongoing influence on those financial metrics in our future valuations:

- Asset/liability mismatch risk – the potential that future plan experience does not affect asset and liability values in the same way, causing them to diverge.

The most significant asset/liability mismatch risk to OCERS is investment risk, as defined below. In fact, investment risk has the potential to impact asset/liability mismatch in two ways. The first mismatch is evident in annual valuations: when asset values deviate from assumptions, those changes are essentially independent from liability changes. The second mismatch can be caused when systemic asset deviations from assumptions may signal the need for an assumption change, which causes liability values and contribution rates to move in the opposite direction from the experience of the asset values.

Asset/liability mismatch can also be caused by longevity and other demographic assumption risks, which affect liabilities but have no impact on asset levels. These risks are also discussed below.

It may be informative to use the asset volatility and liability volatility ratios and associated contribution rate impacts provided in the following Plan Maturity Measures section when discussing with the employers the effect of unfavorable or favorable actuarial experience on the assets and the liabilities of OCERS.

- Investment risk – the potential that future market returns will be different from the current expected 7.00% annual return assumption.

The investment return assumption is a long-term, deterministic assumption for valuation purposes even though in reality market experience can be quite volatile in any given year. We have included deterministic scenario tests later in this section so that OCERS can better understand the risk associated with earning either less or more than the assumed rate.

Also, the Board has a policy of reviewing the investment return and the other actuarial assumptions generally every three years, with the next triennial experience study (recommending assumptions for the December 31, 2020 actuarial valuations) currently in progress.

- Longevity and other demographic risks – the potential that mortality or other demographic experience will be different than expected.

Changes to the mortality tables were the most significant change to the non-economic assumptions in the last experience study. As can be observed from *Charts 2 and 4*, there has been relatively small impact on the UAAL and employer contribution rates due to non-investment related experience relative to that assumed in the last 10 valuations. However, in the last triennial experience study recommending assumptions for the December 31, 2017 valuation, we alerted the Board that it should consider a new benefit weighted mortality basis when choosing the next mortality table, pending the availability of mortality experience from the Society of Actuaries (SOA) that includes data from public sector retirement plans.¹² In January 2019, the SOA published the public sector mortality tables. While it is premature to estimate the impact of applying those new mortality tables on employer and employee contribution rates until we perform the next triennial experience study recommending assumptions for the December 31, 2020 valuation, the Board should still be aware that there may be some increase in liabilities and contribution rates particularly for the General members.

- Contribution risk – the potential that actual future contributions will be different from expected future contributions.

ASOP 51 does not require the actuary to evaluate the particular ability or willingness of the plan sponsor or other contributing entity to make contributions to the plan when due. However, it does require the actuary to consider the potential for and impact of actual contributions deviating from expected in the future. OCERS' employers have a well-established practice of making the ADC determined in the annual actuarial valuations, based on the Board of Retirement's Actuarial Funding Policy. As a result, in practice OCERS has essentially no contribution risk.

Furthermore, when ADCs determined in accordance with the OCERS Actuarial Funding Policy are made in the future by the employers (and contributions required by the statute are made by the employees), it is anticipated that the System would have enough assets to provide all future benefits promised to the current members enrolled in the System, if all of the actuarial assumptions used in the valuation are met.

The ASOP also lists interest rate risk as an example of a potential risk to consider. However, the valuations of your plan's liabilities are not linked directly to market interest rates so the resulting interest rate risk exposure is minimal.

Scenario Tests: Deterministic Projections

Since the funded ratio, UAAL and the employer contribution rates have fluctuated as a result of deviation in investment experience in the last 10 valuations, we have examined the risk for OCERS associated with earning either lower or higher than the assumed rate of 7.00% in future valuations using projections under a deterministic approach.

¹² We note that a similar recommendation to use benefit weighted mortality tables was made OCERS' actuarial auditor in 2018.

To measure such risk, we have included scenario tests to study the change in the UAAL and contribution rates if OCERS were to earn a market return lower or higher than 7.00% in the next year following the December 31, 2019 valuations. In *Charts 5, 6 and 7*, we show the aggregate employer contribution rates, funded ratios, and UAAL respectively assuming that the System's portfolio market return in 2020 will be as follows:

Scenario 1: 0.00%,
 Scenario 2: 7.00% (baseline)
 Scenario 3: 14.00%.

The following table summarizes the resulting contribution changes (relative to the December 31, 2019 valuation aggregate employer contribution rate of 41.49%) in the next valuation (i.e., December 31, 2020) as well as in the December 31, 2024 valuation when all of the investment gains and losses are fully recognized in the (smoothed) valuation value of assets.

Contribution Rate Change	2020 Single Plan-Year Investment Return		
	0.00%	7.00% (Baseline)	14.00%
December 31, 2020	0.0% of payroll	-0.8% of payroll	-1.7% of payroll
December 31, 2024	1.6% of payroll	-3.0% of payroll	-7.6% of payroll

Under the favorable (14.00%) hypothetical market return scenario for 2020, the System would be expected to completely pay off the unfunded liability and reach full funding by December 31, 2032. At that time the total employer contribution rate would be comprised of only normal cost contributions. Furthermore, under all three hypothetical market return scenarios for 2020, the System would be expected to reach full funding within 20 years and the total employer contribution rate would be expected to approach about 11% of payroll.¹³ This means that the Board's funding policy is very effective in achieving the general policy goal of achieving the long-term full funding of the costs of the benefits paid by OCERS.

While we have not assigned a probability on the 2020 market return coming in at these rates, the Board and other stakeholders monitoring OCERS should still be able to interpolate in order to estimate the funded status and employer contribution rates for the December 31, 2020 and next several valuations as the actual investment experience for the 2020 year becomes available throughout the year. Additionally, comparable experience in upcoming future years is likely to have a similar impact on the System absent any significant plan or assumption changes.

¹³ Assuming no further assumption changes, method changes or experience that differs significantly from assumptions.

Chart 5

Projected Employer Contribution Rates Under
Three Hypothetical Market Return Scenarios for 2020
(% of Payroll)

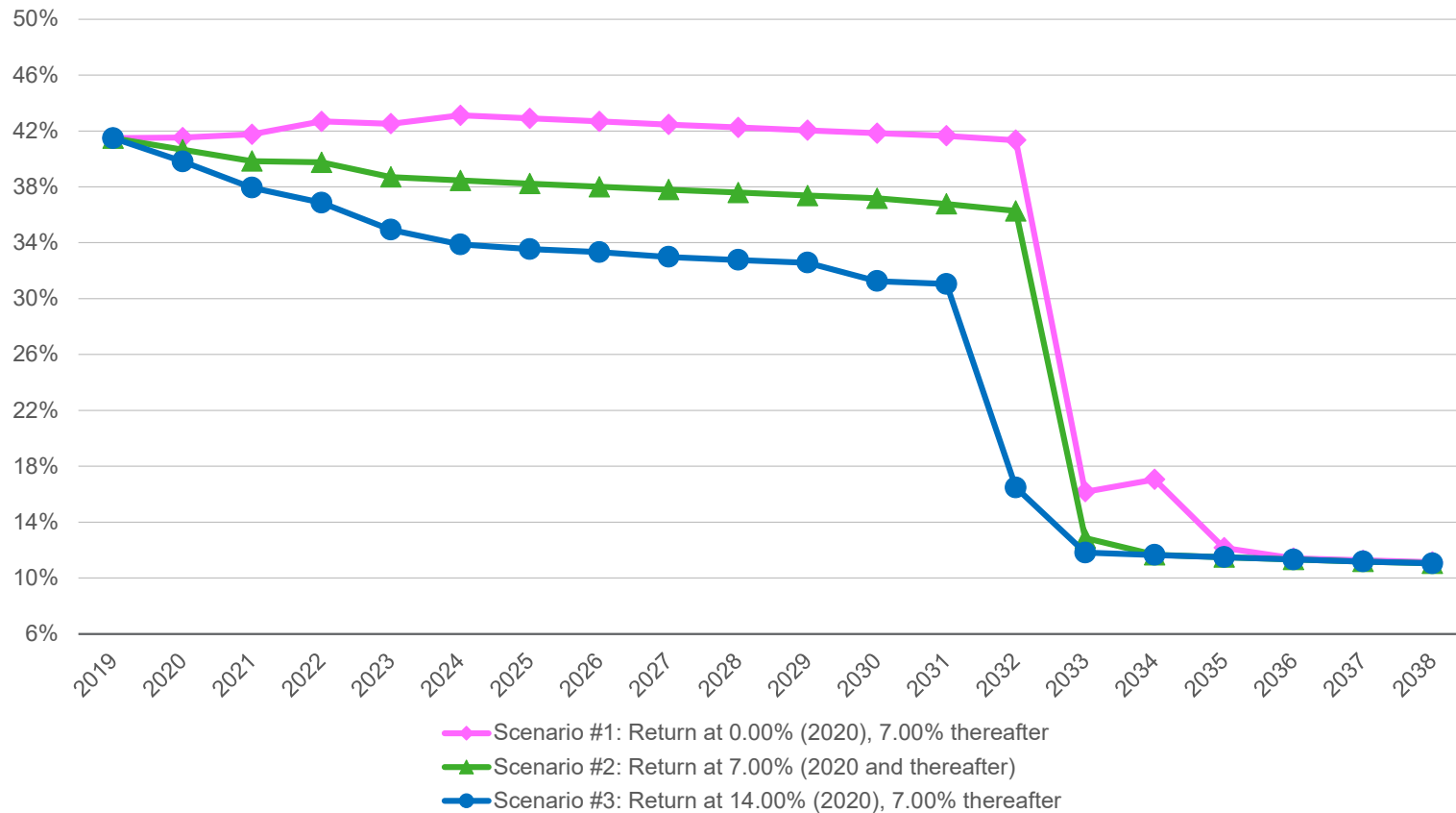


Chart 6

Projected Funded Ratios (on Valuation Value of Assets Basis) Under Three Hypothetical Market Return Scenarios for 2020

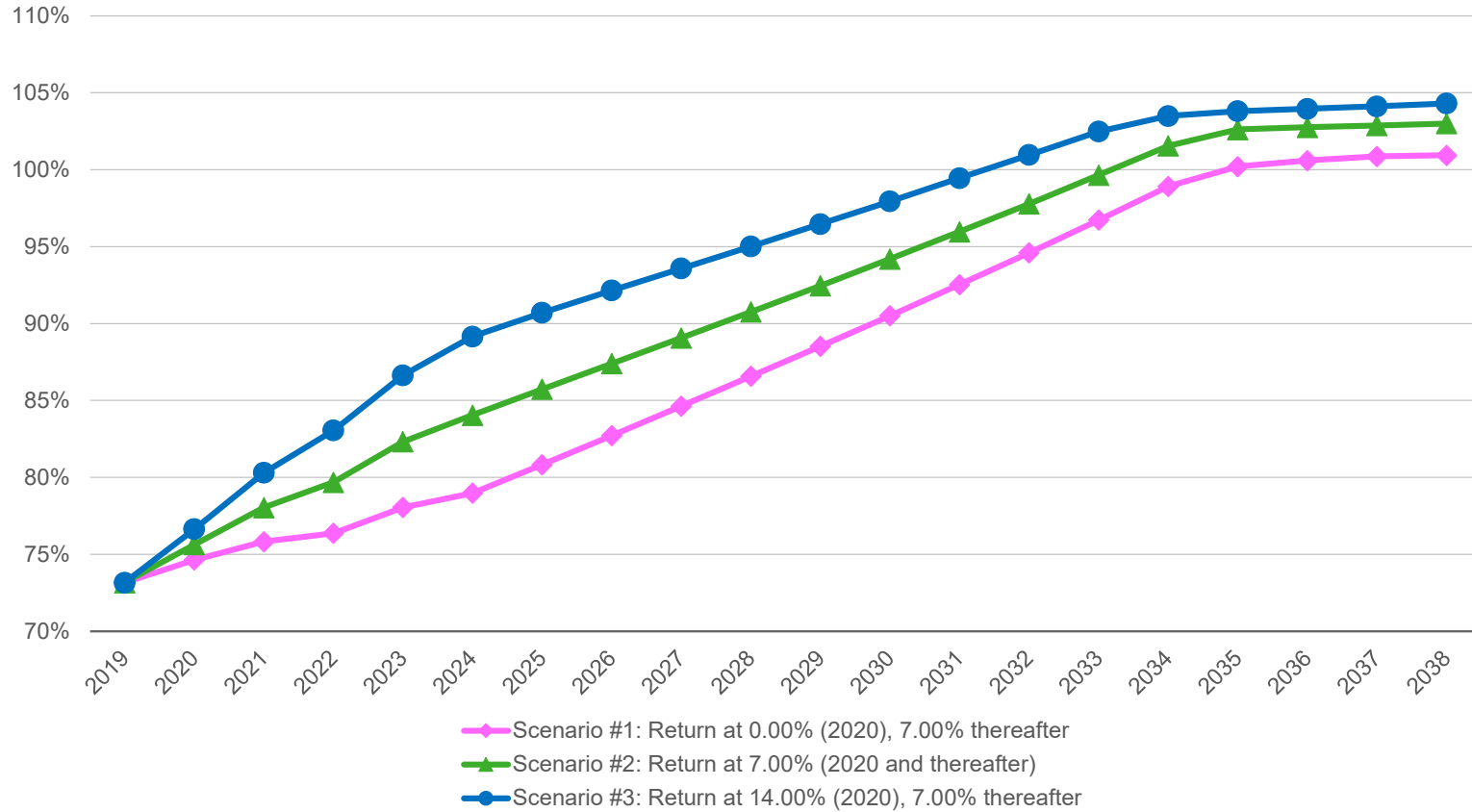
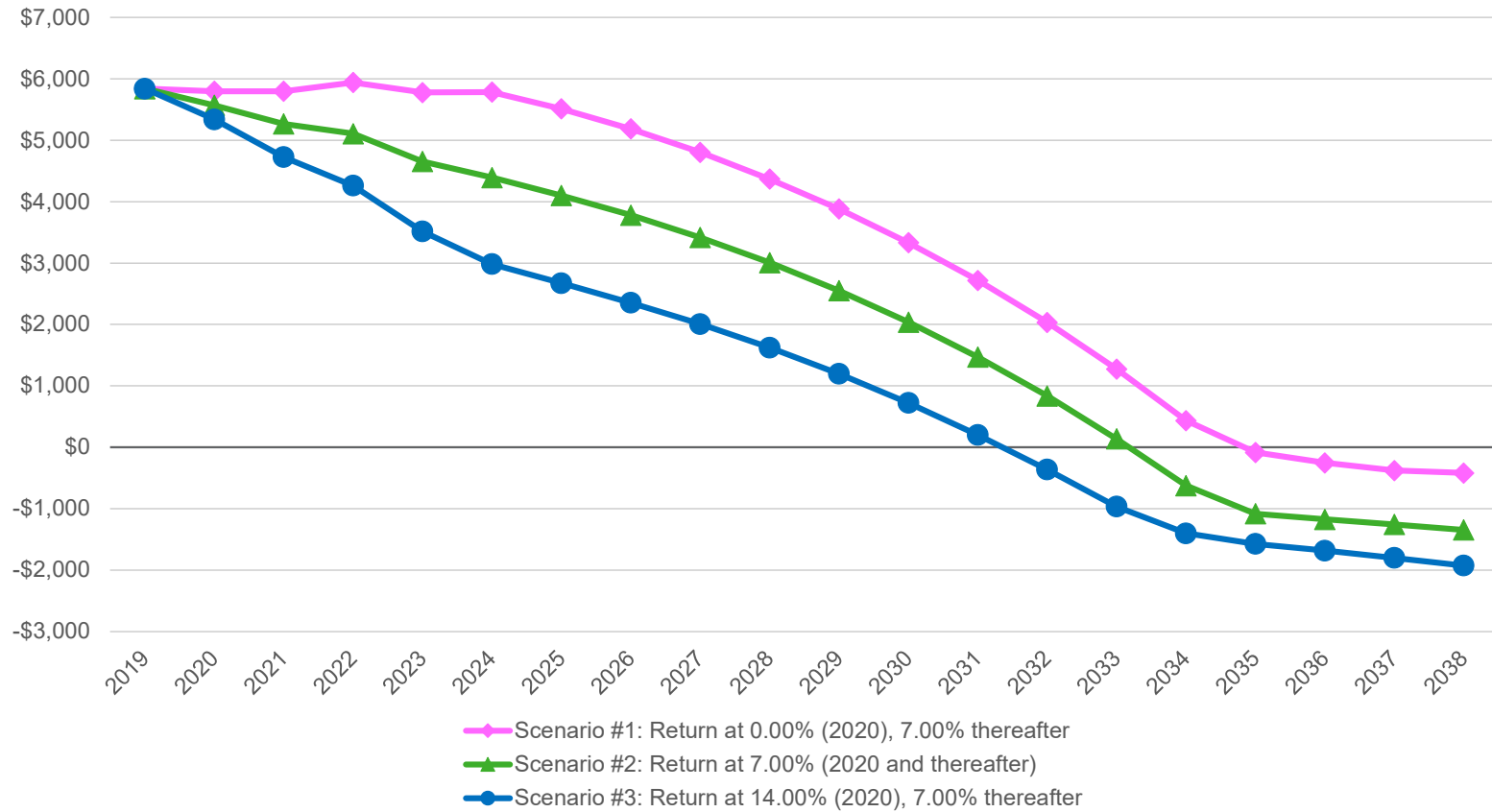


Chart 7

Projected UAAL (on Valuation Value of Assets Basis) Under
Three Hypothetical Market Return Scenarios for 2020
(\$ Millions)



Plan Maturity Measures that Affect Primary Risks

The annual actuarial valuation considers the number and demographic characteristics of covered members, including active members and non-active members (inactive vested, retirees and beneficiaries). In the past 10 valuations from December 31, 2010 to 2019, OCERS has become more mature, indicated by the continued increase in the ratio of non-active to active members covered by the System as shown in *Chart 8*. The Chart also shows the ratio of members in pay status (retirees and beneficiaries) to active members. This ratio excludes the inactive vested members who have relatively smaller liabilities. The increase in the ratios is significant because any increase in UAAL due to unfavorable future investment and non-investment experience for a plan with a relatively larger group of non-active members would have to be amortized and funded using the payroll of a relatively smaller group of active members.

Besides the ratio of members in pay status to active members, another indicator of a more mature plan is relatively large amounts of assets and/or liabilities compared to active member payroll, which leads to increasing volatility in the level of required contributions. The **Asset Volatility Ratio (AVR)**, which is equal to the market value of assets divided by total payroll, provides an indication of contribution sensitivity to changes in the current level of assets and is detailed in *Chart 9*. The **Liability Volatility Ratio (LVR)**, which is equal to the actuarial accrued liability divided by payroll, provides an indication of the contribution sensitivity to changes in the current level of liability and is detailed in *Chart 10*. Over time, the AVR should approach the LVR because when a plan is fully funded the assets will equal the liabilities. As such, the LVR also indicates the long-term contribution sensitivity to the asset volatility, as the plan approaches full funding.

In particular, OCERS' AVR was 8.5 as of December 31, 2019. This means that a 1% asset gain or loss in 2020 (relative to the assumed investment return) would amount to 8.5% of one year's payroll. Similarly, OCERS' LVR was 11.2 as of December 31, 2019, so a 1% liability gain or loss in 2020 would amount to 11.2% of one year's payroll.¹⁴ Based on OCERS' policy to amortize actuarial experience over a period of 20 years, there would be a 0.6% of payroll decrease or increase in the required contribution rate for each 1% asset gain or loss, respectively, and a 0.8% of payroll decrease or increase in the required contribution rate for each 1% liability gain or loss, respectively.

It is also informative to note that the AVR and LVR for OCERS' Safety groups are higher than for the General groups. This means that both investment volatility and assumption changes will have a greater impact on the contribution rates of Safety groups than General groups. This is illustrated in the following table:

¹⁴ The 8.5 and 11.2 are the AVR and LVR, respectively, for the entire System. There are considerable differences in those ratios for the General and Safety membership groups.

December 31, 2019				
Employee Group	AVR	10% Investment Loss Compares to	LVR	10% Liability Change Compares to
General	7.5	75% of payroll	9.9	99% of payroll
Safety	11.5	115% of payroll	15.3	153% of payroll
Combined	8.5	85% of payroll	11.2	112% of payroll

Chart 8

Ratios of Members in Pay-Status (Retirees and Beneficiaries) to Active Members & Non-Active Members (Inactive Vested, Retirees and Beneficiaries) to Active Members in December 31, 2010 to 2019 Valuations

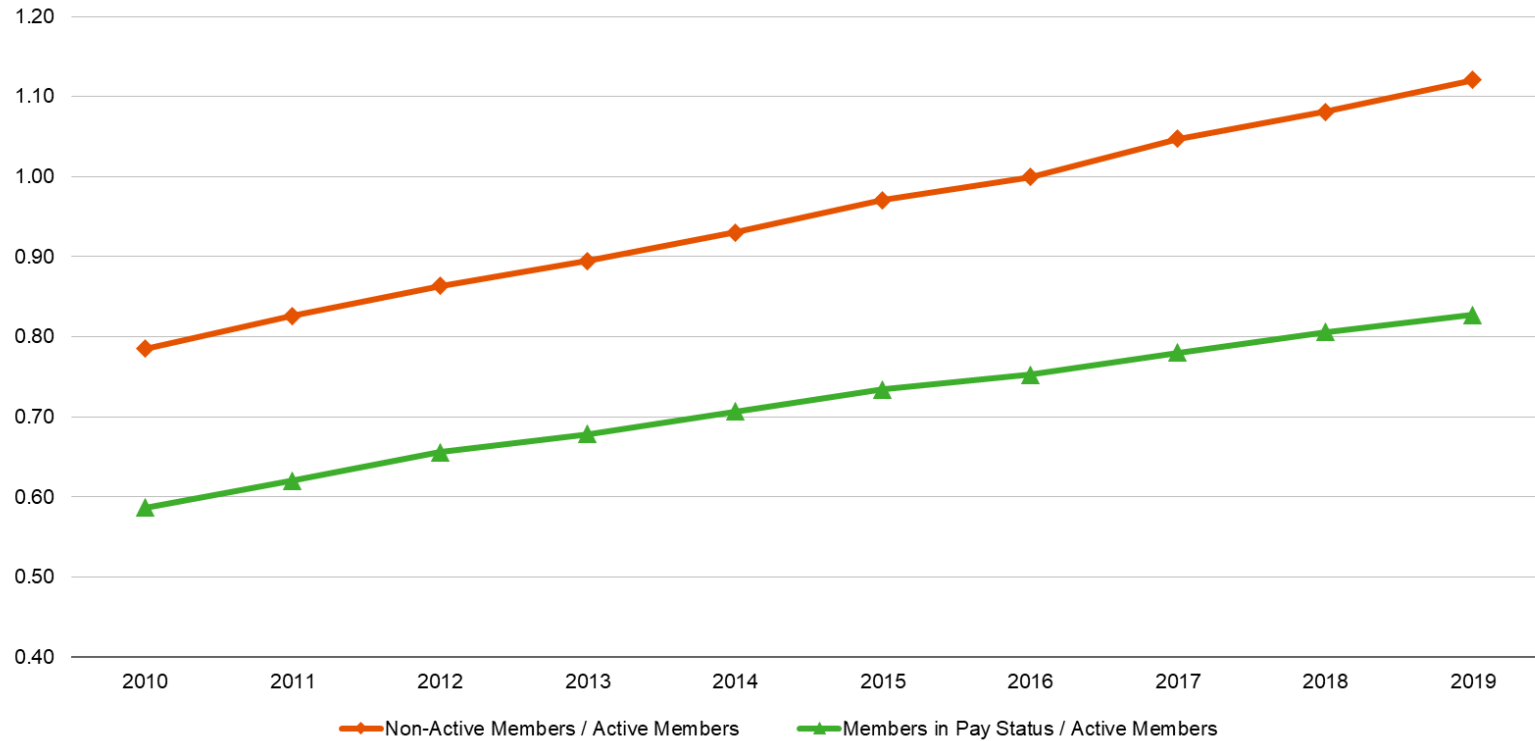


Chart 9

Asset Volatility Ratios in December 31, 2010 to 2019 Valuations

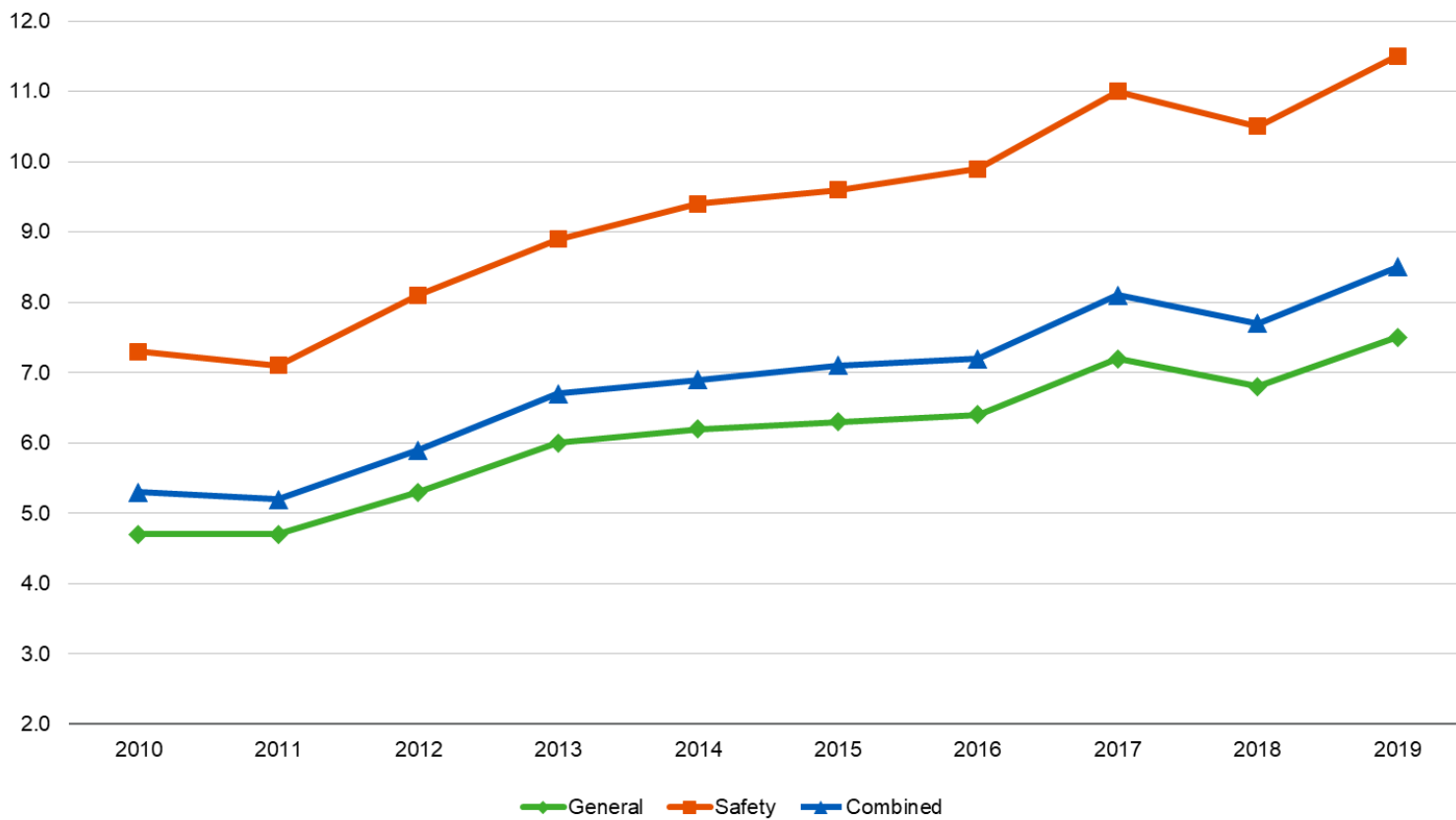
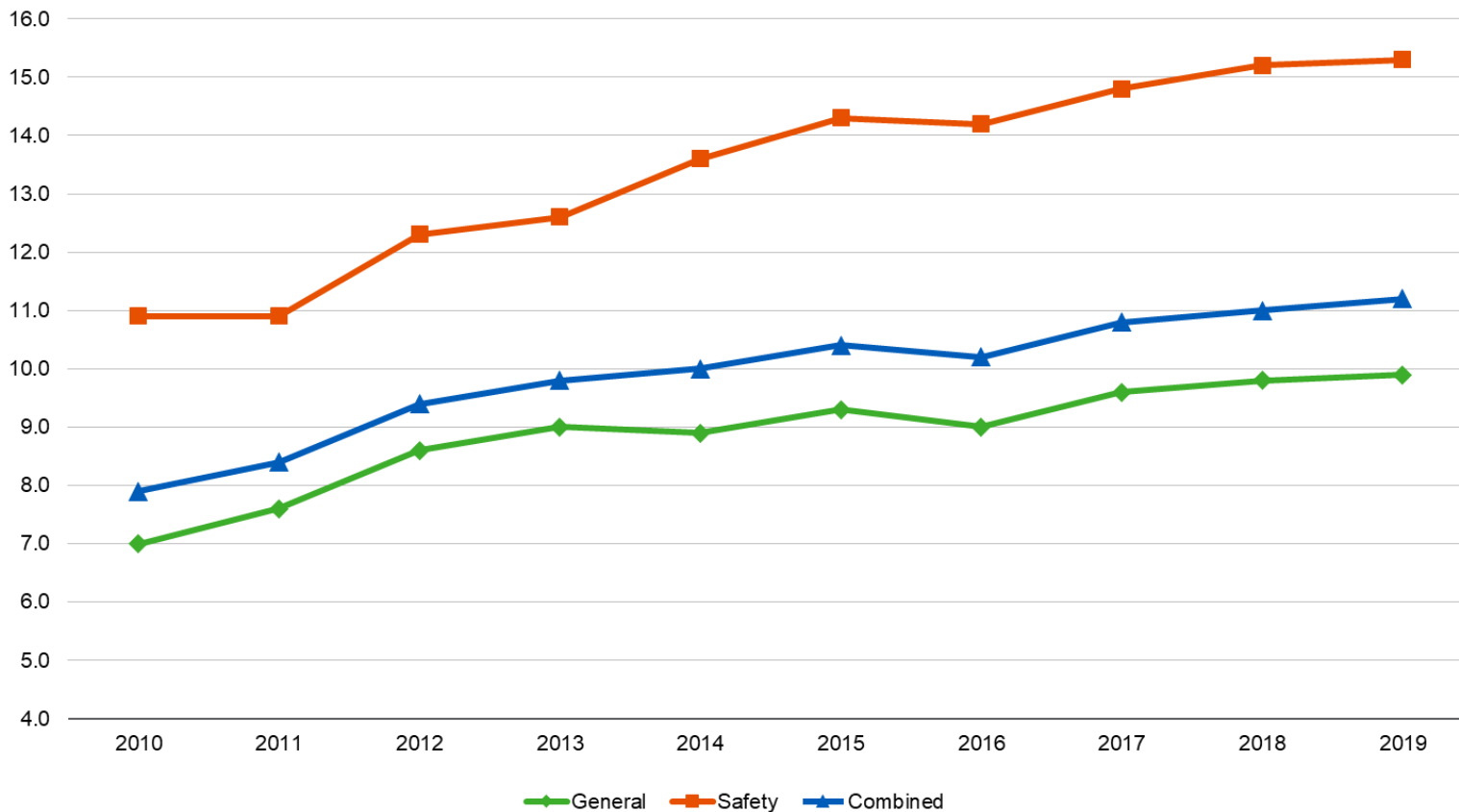


Chart 10

Liability Volatility Ratios in December 31, 2010 to 2019 Valuations



Appendix: Actuarial Assumptions & Methods, Actuarial Certification, and Detailed Scenario Test Results

A: Actuarial Assumptions & Methods

Unless otherwise noted, the results included in this report have been prepared based on the assumptions and methods used in preparing the December 31, 2019 valuation.

Deterministic Projection

In addition, we have prepared the deterministic projection using the following assumptions and methods applied in the December 31, 2019 actuarial valuation:

- Non-economic assumptions will remain unchanged.
- Retirement benefit formulas will remain unchanged.
- 1937 Act and PEPRA statutes will remain unchanged.
- UAAL amortization method will remain unchanged (i.e., 20-year layers and level percent of pay).
- Economic assumptions will remain unchanged, including the annual 7.00% investment earnings and 3.25% active payroll growth assumptions.
- Deferred investment gains and losses will be recognized over a five-year period.
- All other actuarial assumptions used in the December 31, 2019 actuarial valuation will be realized.

Other Considerations

The results presented in this report are intended to provide insight into key plan risks that can inform financial preparation and future decision making. However, we emphasize that deterministic projections, by their nature, are not a guarantee of future results. The modeling projections are intended to serve as illustrations of future financial outcomes that are based on the information available to us at the time the modeling is undertaken and completed, and the agreed-upon assumptions and methodologies described herein. Emerging results may differ significantly if the actual experience proves to be different from these assumptions or if alternative methodologies are used. Actual experience may differ due to such variables as demographic experience, the economy, stock market performance and the regulatory environment.

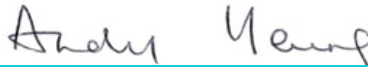
B: Actuarial Certification

The actuarial calculations in this report were completed under the supervision of Andy Yeung, ASA, MAAA, FCA, Enrolled Actuary.

The actuarial opinions expressed in this report were prepared by Paul Angelo, FSA, MAAA, FCA, Enrolled Actuary, Andy Yeung, ASA, MAAA, FCA, Enrolled Actuary, and Todd Tauzer, FSA, MAAA, FCA, CERA. 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.



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



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



Todd Tauzer, FSA, MAAA, FCA, CERA
Vice President and Consulting Actuary

C: Detailed Scenario Test Results

The following table contains detailed results from each of the three hypothetical market return scenario projections.

- Scenario 1: Return at 0.00% (2020), 7.00% thereafter
- Scenario 2: Return at 7.00% (2020 and thereafter)
- Scenario 3: Return at 14.00% (2020), 7.00% thereafter

	Projected Employer Rates (% of Payroll)			Projected Funded Ratio (Valuation Value Basis)			Projected UAAL (\$ Millions)		
	Scenario 1	Scenario 2	Scenario 3	Scenario 1	Scenario 2	Scenario 3	Scenario 1	Scenario 2	Scenario 3
2019	41.5%	41.5%	41.5%	73.2%	73.2%	73.2%	5,841	5,841	5,841
2020	41.5%	40.7%	39.8%	74.6%	75.6%	76.6%	5,799	5,571	5,341
2021	41.8%	39.8%	37.9%	75.8%	78.0%	80.3%	5,800	5,267	4,727
2022	42.7%	39.8%	36.9%	76.4%	79.7%	83.1%	5,943	5,109	4,262
2023	42.5%	38.7%	34.9%	78.1%	82.3%	86.6%	5,778	4,655	3,517
2024	43.1%	38.5%	33.9%	79.0%	84.0%	89.2%	5,786	4,393	2,984
2025	42.9%	38.2%	33.5%	80.8%	85.7%	90.7%	5,512	4,102	2,673
2026	42.7%	38.0%	33.3%	82.7%	87.4%	92.2%	5,186	3,781	2,354
2027	42.5%	37.8%	33.0%	84.6%	89.1%	93.6%	4,804	3,418	2,008
2028	42.3%	37.6%	32.8%	86.6%	90.8%	95.0%	4,370	3,009	1,623
2029	42.1%	37.4%	32.6%	88.5%	92.5%	96.5%	3,881	2,551	1,196
2030	41.8%	37.2%	31.3%	90.5%	94.2%	97.9%	3,332	2,039	723
2031	41.7%	36.8%	31.1%	92.5%	96.0%	99.5%	2,719	1,469	199
2032	41.3%	36.3%	16.5%	94.6%	97.8%	101.0%	2,035	836	(363)
2033	16.2%	12.9%	11.8%	96.7%	99.6%	102.5%	1,276	139	(966)
2034	17.1%	11.7%	11.7%	98.9%	101.6%	103.5%	435	(624)	(1,402)
2035	12.2%	11.5%	11.5%	100.2%	102.6%	103.8%	(84)	(1,081)	(1,573)
2036	11.4%	11.3%	11.3%	100.6%	102.8%	104.0%	(254)	(1,174)	(1,684)
2037	11.3%	11.2%	11.2%	100.9%	102.9%	104.1%	(377)	(1,257)	(1,801)
2038	11.1%	11.1%	11.1%	100.9%	103.0%	104.3%	(418)	(1,345)	(1,927)

5647390v4/05794.001



Memorandum

DATE: November 16, 2020
TO: Members of the Board of Retirement
FROM: Steve Delaney, Chief Executive Officer
Suzanne Jenike, Assistant CEO External Operations
SUBJECT: **UPDATE ON STAFF'S PROGRESS IN RESPONSE TO THE ALAMEDA COUNTY DECISION IN *Alameda County Deputy Sheriff's Assoc. et al., v. Alameda County Employees' Retirement Assn., et al***

Staff will provide a verbal update on the progress we have made in response to the *Alameda* decision since the Board meeting of October 19, 2020.

Background/Discussion

The California Supreme Court issued an opinion on July 30, 2020 in what is known as the "*Alameda*" case (*Alameda County Deputy Sheriffs Association et al v. Alameda County Employees Retirement Association and Board of Retirement of ACERA* (S247095)).

The issues in the *Alameda* case date back to changes in the definition of pay items that must be excluded from Final Average Salary as provided in the Public Employees' Pension Reform Act (PEPRA) effective January 1, 2013. Specifically, the Supreme Court decision said that PEPRA amounted to a change in the law with respect to the pay items that may be included in the calculation of retirement benefits on and after January 1, 2013; and further, that retirement systems like OCERS have no authority or discretion to calculate pension benefits in a manner inconsistent with the CERL, as amended by PEPRA.

OCERS has long identified members' pay items as pensionable or non-pensionable, depending on how employers report them to OCERS through pay codes. OCERS' preliminary review indicates that only a few pay items may have been affected by PEPRA and are requiring further analysis. These pay items are generally denominated "on-call pay", "stand by pay", "canine pay" and any others that are for work performed outside of normal working hours.

In light of the decision in *Alameda*, all these questionable pay items need to be put through the now clarified PEPRA test that applies to work performed outside normal working hours. The PEPRA test is set forth below, with the questions that staff will use to determine whether the pay and services in question meet the PEPRA test.

PEPRA TEST: Compensation for services rendered outside of normal working hours is not "compensation earnable".

We will address the issue by answering the following questions:

- (i) are the hours worked required to be worked as part of the employee's regular duties;

(ii) are the hours worked ordinarily worked by **all** other members in the same grade/class/rate of pay as the employee; and

(iii) can the hours be voluntarily worked by the employee.

NOTE:

- Normal working hours must be identified in a Memorandum of Understanding (MOU), employment agreement, compensation resolution/ordinance or other official document of the employer.

On August 17, 2020 staff informed the Board of two administrative actions that were implemented immediately:

1. Employee and Employer contributions would no longer be applied to these pay items effective the first full pay period after August 31, 2020. For most employers pay period 20 which started on September 11, 2020 was the pay period in which the change was made.
2. OCERS Team would exclude these pay items from all new benefit set ups beginning on October 1, 2020.

It is critical to note that no action was taken to change benefit allowances that were in place prior to October 1, 2020.

Subsequent to August 17, 2020 OCERS staff has sent informational emails to all employers and major labor groups. We queried the pension administration system database and identified the specific members who would be impacted and mailed these members a letter indicating that we are in the process of evaluating the pay items. We have had meetings with Union Representatives and will continue these discussions while the review is being performed. And finally we are compiling information on the impact to benefit payments in the event that the items are determined to be excluded from compensation earnable. This information, along with Staff's initial determinations on the pensionable status of these pay items will be presented to the Board at a future meeting.

OTHER CERL SYSTEMS

OCERS staff have participated in a number of conference calls, as well as e-mail exchanges with other county systems to learn what actions they are presently taking. Not surprisingly, as with most issues involving the CERL, the impact varies from system to system. A number of systems have no changes to be made. Marin, Sonoma and Tulare in particular have indicated that they had not previously allowed any of the pay items now in question, so they have no actions required due to the ALAMEDA decision.

Some systems have indicated they are making changes now, reducing benefits. It is not clear yet what those systems will do as to retroactive corrections in benefit payments and whether there will be a charge to the member to repay overpaid benefits.

A number of the county systems are like OCERS, trying to better understand the practices of their employer and labor groups before making any changes to current benefit payments. One system reports they are obtaining clarifying documentation from their employers that would suggest certain pay items in question meet the PEPRA test and can continue to be included in Final Average Salary.

Another system interestingly has been applying the PEPRA test for some years to every member at retirement, and has also found certain scenarios where the pay items in question can be included. The OCERS staff is arranging for an upcoming conference call with the Contra Costa team to learn more about the specifics of those members they have found who meet the test standard.

Alameda is taking no specific action at this time as they have some special issues that will need to be resolved coming out of the case that carries their name.

We will continue to keep you informed of how others are dealing with this difficult adjustment for so many of our members.

Submitted by:



SD-Approved

Steve Delaney
Chief Executive Officer

Submitted by:



SJ-Approved

Suzanne Jenike
Assistant Chief Executive Officer, External
Operations



Memorandum

DATE: November 16, 2020
TO: Members of the Board of Retirement
FROM: Steve Delaney, Chief Executive Officer
SUBJECT: **COVID-19 UPDATE**

Presentation

The OCERS staff continues to do a great job meeting the COVID-19 challenge and ensuring that our members receive the services they expect as we fulfil this agency's mission. Rather than provide you with a written report of the agency status prior to the Monday, November 16th meeting of the OCERS Board of Retirement, I will instead provide a verbal update of plan status and challenges at that time. This recognizes the fact that issues impacted by COVID-19 seem to change daily.

Submitted by:



SD - Approved

Steve Delaney
Chief Executive Officer

*Orange County Employees Retirement System
Retirement Board Meeting
November 16, 2020
Application Notices*

Member Name	Agency/Employer	Retirement Date
Afshar, Anne	OC Community Resources	9/11/2020
Aquilar, Henry	OCWR	9/11/2020
Alferos, Priscilla	Assessor	9/11/2020
Armendariz, Yolanda	Child Support Services	9/11/2020
Attebery, Larry	OCTA	8/26/2020
Becker, Michael	Public Defender	9/11/2020
Bidwell, Raymond	OCTA	9/13/2020
Bowdish, Daniel	Sheriff's Dept	9/11/2020
Bowman, Gerlyn	Social Services Agency	8/14/2020
Bui, Chi	Social Services Agency	9/11/2020
Cabrera, Suzanne	Sheriff's Dept	9/15/2020
Cady, Pongsakdi	Sanitation District	8/28/2020
Camacho, Jane	Health Care Agency	9/11/2020
Cantor Backer, Joan	Health Care Agency	8/28/2020
Cary, Gregory James	Sheriff's Dept	7/1/2020
Cecena, Roxana	Child Support Services	9/2/2020
Chung-Marquez, Ka Po	Superior Court	9/11/2020
Cohen, Debra	Assessor	8/25/2020
Cortez Gomez, Janet	Social Services Agency	9/11/2020
Cruz, Evelyn	Social Services Agency	9/11/2020
Damian-Grelck, Rafaela	Child Support Services	9/11/2020
Dancer, William	OCTA	9/9/2020
Dang, Trang	Social Services Agency	8/14/2020
Davidson, Candice	Social Services Agency	9/11/2020
De Boer, Margarita	Social Services Agency	9/11/2020
Diaz, Mauricio	OC Public Works	9/19/2020
Dilts, Denise	Probation	9/11/2020
Do, Trang	Social Services Agency	9/11/2020
Donohue, Kim	Sheriff's Dept	9/14/2020
Dowling, Elayne	Sheriff's Dept	9/11/2020
Duran, Monica	Superior Court	9/11/2020
Evert, Charles	Social Services Agency	9/7/2020
Fiddler, Robin	County Counsel	9/11/2020
Franke, Rochelle	OC Community Resources	8/27/2020
Frutos, Steve	Social Services Agency	9/3/2020
Fuller, Donna	OC Community Resources	8/14/2020
Gallagher, Melissa	Social Services Agency	8/28/2020
Gayden, Eric	Assessor	9/11/2020
Gould, Leslie	Social Services Agency	9/11/2020
Granillo, Lillian	Sheriff's Dept	9/11/2020
Guardado, Adriana	Superior Court	8/18/2020
Harp, Gayle	Sheriff's Dept	9/11/2020
Herrmann, Martin	Sheriff's Dept	9/13/2020
Howard, Steven	Sanitation District	8/28/2020
Johnston, Paul	Social Services Agency	9/11/2020
Jones, Erma	OCTA	9/29/2020
Keith, Hilary	OC Community Resources	9/19/2020
Kenerson, Roger	Sanitation District	9/11/2020
Lee, Jerry	Sheriff's Dept	9/11/2020

Member Name	Agency/Employer	Retirement Date
Lenhoff, Phillip	Sheriff's Dept	9/11/2020
Lewis, Guillermina	Social Services Agency	9/11/2020
Lindsey, Patti	Superior Court	9/11/2020
Lopez, Mariaantoinette	County Executive Office (CEO)	9/23/2020
Ly, Yen	Social Services Agency	9/11/2020
Marsh, Stuart	Superior Court	9/14/2020
Mc Donald, Michelle	Sheriff's Dept	9/11/2020
Merritt, Donald	OCTA	8/25/2020
Mire, Donn	Sheriff's Dept	8/28/2020
Mohundro, Anh	Social Services Agency	9/11/2020
Molina, Emma	Social Services Agency	9/11/2020
Morales, David	Probation	9/11/2020
Morgan, Kerrie	OC Community Resources	9/11/2020
Muir, Cassandra	Child Support Services	9/11/2020
Munguia, Refugio	Sheriff's Dept	9/11/2020
Myers Fain, Harriet	Health Care Agency	8/10/2020
Nelson, Jason	Probation	9/11/2020
Ness, Martin	John Wayne Airport	9/3/2020
Oliman, Judith	Child Support Services	8/14/2020
Ortiz, Sonia	OC Public Works	9/11/2020
Pena-Sanchez, Lenora	Sheriff's Dept	9/11/2020
Perez, Elena	District Attorney	9/11/2020
Preciado, Gustavo	Social Services Agency	9/11/2020
Reza, Carolyn	Superior Court	9/11/2020
Robinson, Shawn	Social Services Agency	9/11/2020
Santana, Maria	Social Services Agency	9/11/2020
Schneider, Kimberly	Social Services Agency	9/11/2020
Schroeder, Michael	Sheriff's Dept	8/14/2020
Sebbo, Karyn	Social Services Agency	9/11/2020
Sisombath, Somphavanh	Social Services Agency	9/11/2020
Smith, Russell	John Wayne Airport	9/11/2020
Smyth, Cheryl	Social Services Agency	9/11/2020
Soules, David	Health Care Agency	9/1/2020
Stack, Robert	Assessor	8/14/2020
Stanley, Brian	Sheriff's Dept	8/28/2020
Suite, Rhonda	Health Care Agency	9/1/2020
Tang, Tuan	Health Care Agency	9/21/2020
Tarrant, John	Social Services Agency	9/11/2020
Thomas, Joyce	Sheriff's Dept	9/11/2020
Thomas, Marva	John Wayne Airport	8/28/2020
Thurber, Wendy	OC Public Works	9/11/2020
Tischler, Shelley	Social Services Agency	9/11/2020
Torley, Michael	Sheriff's Dept	9/11/2020
Tran, Peter	Social Services Agency	9/11/2020
Triana, Ubalдина	OC Public Works	9/11/2020
Vecchione, Shannon	Health Care Agency	8/21/2020
Vitko, Tadeo	Sanitation District	8/28/2020
Wallace, Michael	Sheriff's Dept	8/14/2020
Welton, Rosemarie	County Counsel	8/28/2020
Wu, Andrew	Probation	9/11/2020
Wuth, Roselle	OC Community Resources	9/11/2020
Zamarripa, Gloria	Health Care Agency	9/11/2020

*Orange County Employees Retirement
Retirement Board Meeting
November 16, 2020
Death Notices*

<i>Active Members</i>	<i>Agency/Employer</i>
Arias, Miguel	OC Vector Control District
Esparza, Mirabelle	Sheriff's Dept
Moroyoqui, Rodrigo	Social Services Agency
Vergara, Jose	Social Services Agency

<i>Retired Members</i>	<i>Agency/Employer</i>
Alvarado, Juanita	
Bowen, Bette	
Burns, Delores	
Carratelli, Jackie	
Chang, Bih Fang	
Collins, John	
Dalrymple, Marie	
Davey, Gloria	
Davies, Laurel	
Deiley, James	
Dierking, John	
Dillingham, Samuel	
Fink, Charles	
Johnson, William	
Legaspina, Ulrich	
Lyon, Christine	
Meina, Marsha	
Mendivil, Arthur	
Mendoza, Nieves	
Nelson, Nancy	
Nunn, Michial	
Paget, Ardith	
Petersen, Gregory	
Roberts, Alan	

<i>Surviving Spouses</i>	
Brockett, Douglas	
Brown, Erika	
Koch, Margaret	
Marsh, Charlene	
Martin, Catherine	
Mendiola, Concepcion	
Puckett, Dolores	
Spalenka, David	
Surges, Stephen	

Ureta, Thelma	
----------------------	--



Memorandum

DATE: November 16, 2020
TO: Members of the Board of Retirement
FROM: David Kim, Director of Internal Audit
SUBJECT: **UPDATED JANUARY 13, 2020 AUDIT COMMITTEE MINUTES**

Background/Discussion

The minutes to the January 13, 2020 Audit Committee meeting has been updated to further clarify the direction provided by the Audit Committee regarding changes to the Ethics, Compliance, and Fraud Hotline Policy (Action Item A-4). Specifically, the underlined wording below has been added:

After discussion by the Committee, staff was directed to bring this policy back to the Audit Committee at a future date with language clarifying the communication by the Internal Audit Director with the Audit Committee and the AC chair regarding the outcome of the investigations.

Submitted by:

DK - Approved

David Kim
Director of Internal Auditor

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

**AUDIT COMMITTEE MEETING
January 13, 2020
9:00 a.m.**

MINUTES

OPEN SESSION

The Chair called the meeting to order at 9:06am.

Attendance was as follows:

Committee Members: Frank Eley, Chair; Charles Packard, Vice Chair; Shari Freidenrich

Staff: David Kim, Director of Internal Audit; Steve Delaney, Chief Executive Officer; Gina Ratto, General Counsel; Brenda Shott, Assistant CEO, Internal Operations; Mark Adviento, Internal Auditor; Sonal Sharma, Recording Secretary; Anthony Beltran, Audio Visual Technician.

PUBLIC COMMENT

None.

CONSENT AGENDA

C-1 APPROVE AUDIT COMMITTEE MINUTES

Audit Committee Meeting Minutes November, 18, 2019

A **motion** was made by Packard, **seconded** by Freidenrich to approve the minutes.

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

A-2 REVIEW OF OCERS' AUDIT COMMITTEE CHARTER

Presentation by David Kim, Director of Internal Audit

Recommendation: Approve, and recommend that the Board approve, revisions to the Audit Committee Charter.

A **motion** was made by Freidenrich, **seconded** by Packard to approve, and recommend that the Board approve, revisions to the Audit Committee Charter.

A-3 REVIEW OF OCERS' INTERNAL AUDIT CHARTER

Presentation by David Kim, Director of Internal Audit

Audit Committee Meeting
January 13, 2020

Recommendation: Approve, and recommend that the Board approve, revisions to the Internal Audit Charter.

A **motion** was made by Freidenrich, **seconded** by Packard to approve, and recommend that the Board approve, revisions to the Internal Audit Charter.

A-4 REVIEW OF OCERS' ETHICS, COMPLIANCE, AND FRAUD HOTLINE POLICY

Presentation by David Kim, Director of Internal Audit

Recommendation: Approve, and recommend that the Board approve, revisions to the Ethics, Compliance, and Fraud Hotline Policy.

After discussion by the Committee, staff was directed to bring this policy back to the Audit Committee at a future date with language clarifying the communication by the Internal Audit Director with the Audit Committee and the Audit Committee Chair regarding the outcome of the investigations.

A-5 AUDIT OF BENEFIT AND LUMP SUM PAYMENT ACCOUNTING

Presentation by David Kim, Director of Internal Audit and Mark Adviento, Internal Auditor

Recommendation: Receive and file.

A **motion** was made by Packard, **seconded** by Freidenrich to receive and file.

A-6 INVESTMENT DIVISION CONSULTING ENGAGEMENT

Presentation by David Kim, Director of Internal Audit and Mark Adviento, Internal Auditor

Recommendation: Receive and file.

A **motion** was made by Packard, **seconded** by Freidenrich to receive and file.

A-7 PRIOR INTERNAL AUDIT MANAGEMENT ACTION PLAN VERIFICATION

Presentation by David Kim, Director of Internal Audit

Recommendation: Receive and file.

A **motion** was made by Packard, **seconded** by Freidenrich to receive and file.

A-8 CONSIDERATION OF 2020 RISK ASSESSMENT AND 2020 AUDIT PLAN

Presentation by David Kim, Director of Internal Audit and Mark Adviento, Internal Auditor

Recommendation: Approve the 2020 Risk Assessment and 2020 Audit Plan.

A **motion** was made by Packard, **seconded** by Freidenrich to approve the 2020 Risk Assessment and 2020 Audit Plan

INFORMATION ITEMS

Audit Committee Meeting
January 13, 2020

I-1 OPERATIONAL RISK MANAGEMENT ANNUAL REPORT
Written Report

I-2 2019 HOTLINE SUMMARY
Written Report

I-3 STATUS UPDATE OF 2019 AUDIT PLAN
Written Report

The Committee took a ten minute break.

The Committee recessed into Closed Session at 11:00am.

CLOSED SESSION

E-1. THREAT TO PUBLIC SERVICES OR FACILITIES (GOVERNMENT CODE SECTION 54957)

Adjourn into Closed Session pursuant to Government Code section 54957 to consult with Steve Delaney, CEO, Brenda Shott, Asst. CEO; Matthew Eakin, Director of Information Security; Jenny Sadoski, Director of Information Technology; Jon Gossard, Information Security Manager; and Gina M. Ratto, General Counsel

Recommendation: Take appropriate action.

E-2. PUBLIC EMPLOYEE PERFORMANCE EVALUATION (GOVERNMENT CODE §54957(b))
Title: Director of Internal Audit

Adjourn pursuant to Government Code section 54957(b) to continue to evaluate the performance of the Director of Internal Audit

Recommendation: Take appropriate action.

******* END OF CLOSED SESSION AGENDA *******

The Committee resumed into Open Session at 12:05pm.

The Chair reported no reportable action.

COMMITTEE MEMBER COMMENTS

None.

CHIEF EXECUTIVE OFFICER/STAFF COMMENTS

None.

COUNSEL COMMENTS

None.

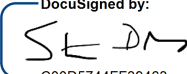
ADJOURNMENT

The Chair adjourned the meeting at 12:08pm.

DocuSign Envelope ID: 4D5ADA36-4B2E-48F7-B2FD-83F02C11EABA

Audit Committee Meeting
January 13, 2020

Submitted by:

DocuSigned by:

C00D5744FF39463...

Steve Delaney
Secretary to the Board

Approved by:

DocuSigned by:

9F34288D95E2472

Frank Eley
Chair

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

AUDIT COMMITTEE MEETING

June 4, 2020

9:00 a.m.

MINUTES

OPEN SESSION

The Chair called the meeting to order at 9:06am.

Attendance was as follows:

Present via Zoom Video conference pursuant to Executive Order N-29-20 issued by Governor Newsom on March 17, 2020:

Frank Eley, Chair; Shari Freidenrich, Vice Chair; Charles Packard;

Also Present via Zoom:

David Kim, Director of Internal Audit; Steve Delaney, Chief Executive Officer; Gina Ratto, General Counsel; Suzanne Jenike, Assistant CEO, External Operations; Brenda Shott, Assistant CEO, Internal Operations; Matt Eakin, Director of Information Security; Jenny Sadoski, Director of Information Technology; Jeff Lamberson, Member Services Director; Mark Adviento, Internal Auditor; Sonal Sharma, Recording Secretary; Anthony Beltran, Audio Visual Technician.

PUBLIC COMMENT

None.

C-1 APPROVE AUDIT COMMITTEE MINUTES

Audit Committee Meeting Minutes

April 20, 2020

MOTION was made by Packard, **seconded** by Freidenrich to approve the minutes.

The motion passed **unanimously**.

A-2 2019 FINANCIAL STATEMENT AUDIT

Presentation by Linda Hurley and Amy Chiang, Macias Gini & O'Connell

Recommendations:

1. Approve OCERS' audited financial statements for the year ended December 31, 2019;
2. Direct staff to finalize OCERS' 2019 Comprehensive Annual Financial Report (CAFR);

Audit Committee Meeting
June 4, 2020

3. Approve the Governmental Accounting Standards Board (GASB) Statement 67 Actuarial Valuation as of December 31, 2019; and
4. Receive and file Macias, Gini & O'Connell LLP's (MGO) "OCERS' Report to the Audit Committee for the Year Ended December 31, 2019" and its "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*."

MOTION by Packard, seconded by Freidenrich to approve, and recommend that the Board approve, the recommendations above.

The motion passed **unanimously**.

A-3 GASB 68 VALUATION AND AUDIT REPORT

Presentation by Brenda Shott, Assistant CEO of Internal Operations

Recommendations:

1. Approve OCERS' audited Schedule of Allocated Pension Amounts by Employer as of and for the Year Ended December 31, 2019; and
2. Approve the Governmental Accounting Standards Board (GASB) Statement 68 Actuarial Valuation as of December 31, 2019 for distribution to employers.

MOTION by Packard, seconded by Freidenrich to approve, and recommend that the Board approve, the recommendations above.

The motion passed **unanimously**.

INFORMATION ITEMS

I-1 AUDIT OF OCERS INFORMATION TECHNOLOGY GENERAL CONTROLS

Presentation by David Kim, Director of Internal Audit

I-2 AUDIT OF PENSIONABLE PAY ITEMS REVIEW

Presentation by David Kim, Director of Internal Audit and Mark Adviento, Internal Auditor

I-3 AUDIT OF ORANGE COUNTY SANITATION DISTRICT PAYROLL TRANSMITTALS

Presentation by David Kim, Director of Internal Audit and Mark Adviento, Internal Auditor

I-4 MANAGEMENT ACTION PLAN VERIFICATION

Written Report

I-5 STATUS UPDATE OF 2020 AUDIT PLAN

Written Report

COMMITTEE MEMBER COMMENTS

None.

CHIEF EXECUTIVE OFFICER/STAFF COMMENTS

DocuSign Envelope ID: 4D5ADA36-4B2E-48F7-B2FD-83F02C11EABA

Audit Committee Meeting
June 4, 2020

Mr. Kim gave an update on the Internal Audit review of controls impacted due to working remotely. He also reminded the Audit Committee to complete the MGO Performance Survey.

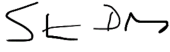
COUNSEL COMMENTS

None.

ADJOURNMENT

The Chair adjourned the meeting at 11:15 am.

Submitted by:

DocuSigned by:

C00D5744FF39463...

Steve Delaney
Secretary to the Board

Approved by:

DocuSigned by:

9E34288D95E2472

Frank Eley
Chair



Memorandum

DATE: November 16, 2020
TO: Members of the Board of Retirement
FROM: Steve Delaney, Chief Executive Officer
SUBJECT: **CEO FUTURE AGENDAS AND 2020 OCERS BOARD WORK PLAN**

Written Report

AGENDA TOPICS FOR THE OCERS BOARD OF RETIREMENT

DECEMBER

- Adopt Annual Work Plan for Calendar Year 2021
- REAOC Annual Update
- Alameda Case – Initial Staff Recommendation (Tentative Date)

JANUARY

- 2020 Year in Review: Communication Plan
- 2020 OCERS Innovations
- 2020 Disability Statistics
- Communication Policy Fact Sheet
- Form 700 Filing Requirements
- Alameda Case – OCERS Board Final Adoption (Tentative Date)
- Pension Obligation Bonds – An Overview by Segal
- OCERS Different Benefit Plans – An Overview (Tentative Date)

FEBRUARY

- 2021 STAR COLA posting
- Annual Cost of Living Adjustment
- Policy Compliance Report
- Overpaid And Underpaid Plan Benefits Report
- Report Outcome of Prior Year Business Plan

Submitted by:



SD - Approved

Steve Delaney
Chief Executive Officer

OCERS RETIREMENT BOARD - 2020 Work Plan

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep (Offsite)	Oct	Nov	Dec
System Oversight		STAR COLA Posting (I)	Approve 2020 STAR COLA (A)	SACRS Board of Directors Election (A)	Preliminary December 31, 2019 Valuation (I)	Mid-Year Review of 2020 Business Plan Progress (I)	Alt. Invest. Return and Assumption Sensitivity: 20-year Illustration (I)	Review 2nd Quarter Budget to Actuals Financial Report (I)	Strategic Planning Workshop (I)	Overview of 2021 Administrative Budget and Investment (Workshop) (I)	Review 3rd Quarter Budget to Actuals Financial Report (I)	
		Approve 2020 COLA (A)	Quarterly 2020-2022 Strategic Plan Review (A)			Approve December 31, 2019 Actuarial Valuation & Funded Status of OCERS (A)	Actuarial Review: Risk Assessment (I)	Receive OCERS by the Numbers (I)		Approve 2021-2023 Strategic Plan (A)	Approve 2021 Administrative (Operating) Budget (A)	
						Approve 2019 CAFR (A)	Approve Early Payment Rates for Fiscal Year 2019-20 (A)	Receive Evolution of the UAAL (I)		Approve 2021 Business Plan (A)	Annual CEO Performance Review and Compensation (A)	
						Quarterly 2020-2022 Strategic Plan Review (A)		Employer & Employee Pension Cost Comparison (I)				
								Approve Actuarial Experience Study 2017-2019 (A)			Adopt 2021 Board Meeting Calendar (A)	
Board Governance				Brown Act Training (I) - Future Date TBD					Annual Review of Succession Plan (I)			Adopt Annual Work Plan for 2021 (A)
				Conflict of Interest Training (I) - Future Date TBD								Vice-Chair Election (A)
Regulation / Policies	Communication Policy Fact Sheet (I)											
Compliance				Form 700 Due (A)		Receive Financial Audit (I)			State of OCERS (I)		Status of Board Education Hours for 2020 (I)	

(A) = Action (I) = Information



Memorandum

DATE: November 2, 2020
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 for an Accounting System (ERP) was released October 30th. We need to replace our current, unsupported system so this RFP is to solicit bids for this effort. The bid responses are due November 30th.

Submitted by:

Jim Doezie
Contracts, Risk and Performance Administrator



Memorandum

DATE: November 16, 2020
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:

Wayne Lindholm:

- A news article regarding the City of Placentia's departure from OCFA and the subsequent legislation that flowed from that action. At the October 19 meeting of the Board, Mr. Lindholm requested this be provided to the Board.

<https://www.ocregister.com/in-state-government-no-good-idea-goes-unpunished>

Attached:

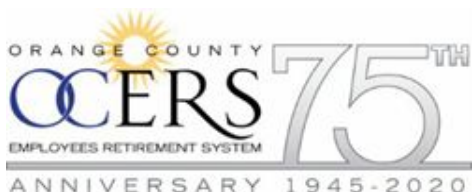
- OCERS Activities for August and September 2020

Submitted by:



SD - Approved

Steve Delaney
Chief Executive Officer



Monthly Staff Status August 2020

To the members of the OCERS Board of Retirement,

The following is my regular monthly summary of OCERS staff activity, starting with an overview of key customer service statistics as well as activity highlights followed by updates for the month of August 2020.

MEMBER SURVEY RESPONSE

“I came in to get a copy of my benefits for the Social Security Office. My request was handled promptly and I received exactly what I needed.”

February 2020

“OCERS was extremely helpful and very professional. The OCERS representative went above and beyond my expectations.”

March 2020

“I want to express my gratitude to OCERS for their efforts in helping me purchase service credit. OCERS team members were courteous, patient, thorough and responsive. They were outstanding!!!”

April 2020

“Thank you so much for your kindness on the telephone and your prompt response to my request. Everyone one of you at the Board, and in this case, especially you are amazing. “

May 2020

“My retirement appointment was one of the easiest meetings I have ever had.”

June 2020

“OCERS is a mom and pop retirement system that has legendary employees from top to bottom.”

July 2020

“Representative was very informative, helpful and patient.”

August 2020

MEMBER SERVICES TELEPHONE METRICS

Member Services Call History			
Month / Year	Incoming Calls Through Queue	Incoming Calls Direct to Extension	Total Calls (Queue + Direct)
August 2020	*	*	10916
August 2019	1331	2345	3685
August 2018	1567	2620	4187

*Currently configuring reports from new phone system Dialpad to determine calls through Queue versus Direct to Extension.

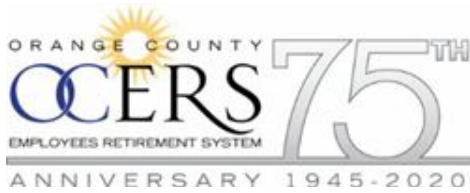
Customer Service Statistics

Member Approval: 100%

Un-Planned Recalculations: 0

Retirement Applications Received:

Aug – 2020	229
Jul – 2020	288
Jun – 2020	63
May – 2020	47
Apr – 2020	33
Mar – 2020	80
Feb – 2020	169
Jan – 2020	249
Dec – 2019	75
Nov – 2019	54
Oct – 2019	69
Sept – 2019	38
Aug – 2019	62
July – 2019	53
June – 2019	50
May – 2019	43
Apr – 2019	37
Mar – 2019	107
Feb – 2019	199
Jan – 2019	258
Dec – 2018	54
Nov – 2018	85
Oct – 2018	49



Monthly Staff Status

August 2020

ACTIVITIES

OCERS YEAR IN REVIEW ANNUAL OUTREACH

On August 5 Ms. Shott, Ms. Jenike and I met virtually with the Executive Team of the Association of County Law Enforcement Managers (ACLEM). It was our first meeting with the new ACLEM president, and gave us an opportunity to outline key issues he would need to be aware of in the coming year.

With the County Supervisors:

On August 7 a virtual meeting was held with Supervisor Steel's Executive Assistant.

On August 20 Chair Hilton, Vice Chair Dewane and I met in person with Supervisor Wagner and his office team. The Supervisor was very interested in challenges and opportunities at OCERS. Vice Chair Dewane shared his experience in seeing the general governance processes of the OCERS Board having greatly improved over recent years. As to challenges, I semi-tongue in cheek responded to the Supervisor asking me what kept me up at night that a cure for cancer with its subsequent impact on our actuarial assumptions was one of my greatest worries. I went on to explain more to the point that improving mortality was a challenge for all systems, and one we would likely be contending with for the foreseeable future.

On the morning of August 28 Chair Hilton, Vice Chair Dewane and I met in person with Supervisor Chaffee and his Executive Assistant. Appreciative of the information that was shared, the Supervisor complimented the hard work being performed by the OCERS Board of Retirement.

On the afternoon of August 28 Chair Hilton, Vice Chair Dewane and I met in person with Supervisor DO and his Executive Assistant. Supervisor Do is particularly knowledgeable of OCERS issues, having worked with us as an Executive Assistant prior to his election as a Supervisor. In discussing OCERS investment philosophy, and the Board's recent move to expand the portfolio's asset allocation into equities, the Supervisor stated that he is not necessarily a fan of OCERS trying to eke out more returns as much as he hopes the Board will stay focused on protecting against downturns.

ALAMEDA DECISION – CEO DISCUSSION

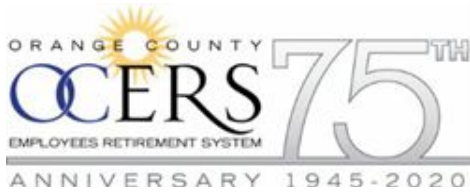
On August 6 I participated in a special conference all sponsored by SACRS, giving all CEOs an opportunity to discuss what their systems initial understanding of the recent Supreme Court case might mean for our members. Extremely valuable to learn what others in situations similar to ours are considering.

UPDATES

INVESTMENT DEPARTMENT

Dave Beeson reports on August activity:

As of July 31, 2020, the portfolio year-to-date is down 0.2% net of fees, while the one-year return is up 4.3%. The fund value now stands at \$17.5 billion. The OCERS Investment Team continues to work effectively remotely

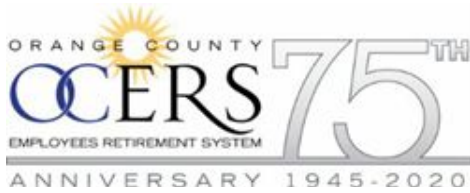


Monthly Staff Status August 2020

during the coronavirus pandemic. The August 26th Investment Committee meeting took place via video/teleconference on Zoom. The Investment Committee approved placing the Mondrian International Small Cap Equity Fund on watch list for a change in key personnel. Frances Cuthbert, Senior Portfolio Manager, has resigned from Mondrian. Mr. Dewane, Chair of the Investment Committee, announced that on July 29, 2020, the Investment Committee voted 7-1 to approve an investment of \$30 million in the DBL Partners TIAB 2020, L.P. Next, Molly Murphy, David Beeson, and Tarek Turaigi from the Investment Team presented the monthly manager selections and terminations report. OCERS committed \$75 million to Stonepeak Infrastructure Fund IV within the real assets space. The fund will invest in high quality infrastructure assets operating across the transportation & logistics, power & utilities, midstream energy, water, and communications sectors. OCERS issued a full redemption (approximately \$64.1 million) for the UBS AgriVest Farmland Fund effective September 30, 2020. OCERS also terminated the PIMCO Unconstrained Bond Fund (approximately \$191 million). Laura Wirick and Stephanie Sorg from Meketa then presented the Q2 2020 portfolio evaluation report. The portfolio earned 6.4% during the second quarter. For the trailing twelve months, the OCERS portfolio posted a 1.6% return (top 36% performance vs. peers). Next, Allan Emkin and Steve McCourt from Meketa discussed the Q2 2020 portfolio risk report. The Meketa team discussed the economic impact surrounding COVID and the uncertainty of the length of the pandemic. Finally, Shanta Chary and Emma Ji presented the 2019 Fee Report. The total manager fees paid for 2019 equaled \$179.7 million (101 bps). OCERS has been committed to fee transparency, providing an annual fee report since 2013.



As a reminder you will see this memo included with the BOARD COMMUNICATIONS document as part of the informational agenda for the November 16 meeting of the OCERS Board of Retirement.



Monthly Staff Status September 2020

To the members of the OCERS Board of Retirement,

The following is my regular monthly summary of OCERS staff activity, starting with an overview of key customer service statistics as well as activity highlights followed by updates for the month of September 2020.

MEMBER SURVEY RESPONSE

“I came in to get a copy of my benefits for the Social Security Office. My request was handled promptly and I received exactly what I needed.”

February 2020

“OCERS was extremely helpful and very professional. The OCERS representative went above and beyond my expectations.”

March 2020

“I want to express my gratitude to OCERS for their efforts in helping me purchase service credit. OCERS team members were courteous, patient, thorough and responsive. They were outstanding!!!”

April 2020

“Thank you so much for your kindness on the telephone and your prompt response to my request. Everyone one of you at the Board, and in this case, especially you are amazing. “

May 2020

“My retirement appointment was one of the easiest meetings I have ever had.”

June 2020

“OCERS is a mom and pop retirement system that has legendary employees from top to bottom.”

July 2020

“Representative was very informative, helpful and patient.”

August 2020

“Representative was the most professional, caring, efficient and helpful team member I have ever met. They went beyond my expectations.”

September 2020

MEMBER SERVICES TELEPHONE METRICS

Member Services Call History			
Month / Year	Incoming Calls Through Queue	Incoming Calls Direct to Extension	Total Calls (Queue + Direct)
September 2020	*	*	9668
September 2019	1174	2000	3174
September 2018	1247	2000	3247

*Currently configuring reports from new phone system Dialpad to determine calls through Queue versus Direct to Extension.

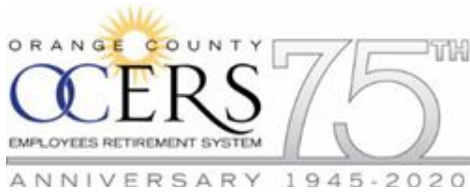
Customer Service Statistics

Member Approval: 100%

Un-Planned Recalculations: 0

Retirement Applications Received:

Sept – 2020	114
Aug – 2020	229
Jul – 2020	288
Jun – 2020	63
May – 2020	47
Apr – 2020	33
Mar – 2020	80
Feb – 2020	169
Jan – 2020	249
Dec – 2019	75
Nov – 2019	54
Oct – 2019	69
Sept – 2019	38
Aug – 2019	62
July – 2019	53
June – 2019	50
May – 2019	43
Apr – 2019	37
Mar – 2019	107
Feb – 2019	199
Jan – 2019	258
Dec – 2018	54
Nov – 2018	85



Monthly Staff Status

September 2020

ACTIVITIES

OCERS YEAR IN REVIEW ANNUAL OUTREAC

In our continuation of the annual outreach meeting, we gave special emphasis to the Alameda case and what it could mean for a large number of our retired members.

On September 28 Chair Hilton, Vice Chair Dewane and I met in person with Supervisor Bartlett and her Executive Assistant. Together with our standard materials, we also reviewed the recently released Employer Overview report, as the Supervisor has through the years expressed concerns over the Orange County Fire Authority's UAAL, and the possibility that it could be applied to the County of Orange were OCFA to ever fold up shop. We had a substantive conversation, and I in fact have since arranged with OCFA to provide an update regarding their UAAL pay down plan at an OCERS Board meeting in early 2021.

Ms. Jenike, Ms. Shott and I continued with virtual meetings with both labor and employer teams throughout the month:

September 2 – Orange County Sanitation District

September 2 – Orange County Superior Courts

September 15 – Orange County Fire Authority

September 16 – Transportation Corridor Authority

September 16 – Orange County Local Agency Formation Commission (LAFCO)

September 22 - Orange County Cemetery District

September 22 – Orange County Management Association (OCMA)

ALAMEDA CASE

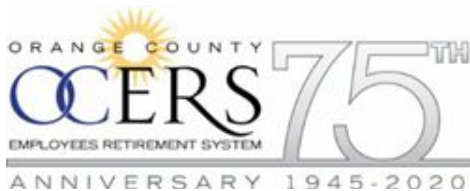
A follow up SACRS-sponsored virtual meeting dealing with the ALAMEDA case was held on September 8 by the CERL CEOs. It was interesting to learn how our twenty systems were beginning to diverge in our approaches, generally due to differences in how each system had dealt with the pay codes in question in the years leading up to the Supreme Court decision. In general, the OCERS approach is similar to those systems that share our fact set.

COVID-19 UPDATE MEETINGS

Two different virtual meetings were held by CEOs to discuss what their agencies are doing in response to the ongoing COVID-19 pandemic.

On September 18 I participated in a virtual meeting sponsored by the National Conference of Public Employees Retirement Systems (NCPERS). On September 24 I participated in a virtual meeting sponsored by CALAPRS.

In both roundtables, OCERS stood out as having ably handled the challenges being faced by all. Our staff's ability to handle phone calls from the first day we left the offices using their agency provided lap tops was fairly unique.



Monthly Staff Status

September 2020

UPDATES

INVESTMENT DEPARTMENT

David Beeson reports for September:

As of August 31, 2020, the portfolio year-to-date is up 2.4% net of fees, while the one-year return is up 7.4%. The fund value now stands at \$17.9 billion. The OCERS Investment Team continues to work effectively remotely during the coronavirus pandemic. The Board had its annual Strategic Planning Workshop in September via video/teleconference on Zoom. The Investments portion took place on September 10th. David Fann from Aksia TorreyCove and Molly Murphy presented an education session on co-investments. Co-investments offer LPs the potential for return enhancement through proper deal selection with typically low or no management fee and no carried interest, allowing LPs to average down overall program costs. One potential best fit model for OCERS would be to harvest private equity opportunities from high conviction existing managers within the OCERS portfolio. OCERS' Investment Team and Aksia TorreyCove are planning to have a follow-up presentation on co-investments at an upcoming Investment Committee meeting. Next, Reggie Tucker gave a presentation on negotiations and best practices on investment contract terms. Two of OCERS' external investment counsels participated in the discussion. Yuliya Oryol from Nossaman and Tom Hickey from Foley & Lardner discussed recent trends they are seeing during manager contract negotiations. Reggie presented 6-8 key contract terms to serve as the basis for OCERS' preferred terms and enhance contract negotiations. These terms include such items as: management fees, distribution waterfall, key person provisions, investment limitation, organizational expenses, co-investments, GP removal, and clawbacks.

HUMAN RESOURCES

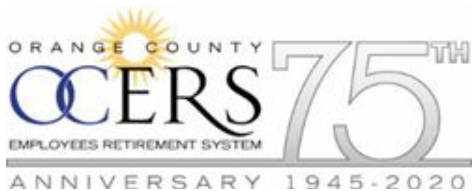
We recently began adding Ms. Hockless to the OCERS Board agenda for quarterly updates on personnel status. I have asked her to provide us with a report through September here:

In August, the Board of Retirement added three Extra-Help positions to the OCERS budgeted headcount. With the recent additions, the OCERS budgeted headcount increased from ninety-three (93) to ninety-six (96) positions.

Currently, OCERS has a total of six (6) vacant positions, with four (4) of those positions on hold due to the current health crisis.

1. Senior Manager - Operations Support Services – OCERS Direct **(HOLD)**
2. Staff Assistant - Human Resources – County Position **(HOLD)**
3. Office Technician - Member Services – County Position **(HOLD)**
4. Accountant/Auditor II - Finance – County Position **(HOLD)**
5. Retirement Benefits Program Supervisor – County Position (Next Level Leadership Program)
6. Extra-Help Retirement Program Specialist – County Position (Open)

In September, OCERS hired two retirees to assist the agency with the implementation of the County of Orange Voluntary Incentive Program (VIP). The retirees were hired as Extra-Help Retirement Program Specialist assigned



Monthly Staff Status September 2020

to the Member Services Department. The retirees are anticipated to assist the agency through the remainder of the year.

OCERS has 90 team members on the payroll. Year to Date a total of two (2) team members have separated from the agency. These two separations were due to a retirement and an employee accepting a promotional opportunity with the County of Orange. The year-to-date annual turnover rate is 2.22%. This number is calculated by dividing the number of team members separated by the number of active team members.



As a reminder you will see this memo included with the BOARD COMMUNICATIONS document as part of the informational agenda for the November 16 meeting of the OCERS Board of Retirement.



Memorandum

DATE: October 28, 2020
TO: Members of the Board of Retirement
FROM: Tracy Bowman, Director of Finance
SUBJECT: **THIRD QUARTER 2020 BUDGET TO ACTUALS REPORT**

Written Report

Highlights

Third Quarter Target: 75% Used /25% Remaining

	Actuals to Date	Annual Budget	Budget \$ Remaining	Budget % Remaining
Administrative Budget				
Personnel Costs	\$ 11,323,134	\$ 15,507,410	\$ 4,184,276	27.0%
Service and Supplies	6,612,923	11,077,380	4,464,457	40.3%
Capital Expenditures	186,359	600,000	413,641	68.9%
Grand Total	<u>\$ 18,122,416</u>	<u>\$ 27,184,790</u>	<u>\$ 9,062,374</u>	<u>33.3%</u>

Background/Discussion

The Board of Retirement approved OCERS’ Administrative Budget for Fiscal Year 2020 (FY20) on November 18, 2019, for \$27,184,790 to fund administrative expenses.

OCERS’ budgeting authority, regulated by California Government Code Sections 31580.2 and 31596.1, includes a provision that limits the OCERS’ budget for administrative expenses to twenty-one hundredths of one percent of the accrued actuarial liability of the retirement system. This provision (commonly referred to as the 21 basis point test) excludes investment related costs and expenditures for computer software, hardware and related technology consulting services. The approved FY20 administrative budget represents 9.04 basis points of the projected actuarial accrued liability.

The Chief Executive Officer, or the Assistant CEO, has the authority to transfer funds within the three broad categories of the budget: 1) Salaries and Benefits, 2) Services and Supplies, and 3) Capital Projects. Funds may not be transferred from one category to another without approval from the Board of Retirement.

Administrative Summary

For the nine months, ended September 30, 2020, year-to-date actual administrative expenses were \$18,122,416 or 66.7% of the \$27,184,790 administrative budget and below the 75% target set for the end of the third quarter budget by approximately \$2.3 million. A summary of all administrative expenses and explanations of significant variances are below:

**Summary of all Administrative Expenses
For the Quarter Ended September 30, 2020**

	Actuals to Date	Annual Budget	Balance Remaining	% of Budget Used	Prorated Budget*	Prorated Budget vs. Actuals (Over)/Under
Personnel Costs	\$ 11,323,134	\$ 15,507,410	\$ 4,184,276	73.0%	\$ 11,630,558	\$ 307,424
Services and Supplies						
Bldg. Prop. Mgmt./Maintenance	482,066	680,000	197,934	70.9%	510,000	27,934
Due Diligence	14,156	135,000	120,844	10.5%	101,250	87,094
Equipment Lease	29,476	48,500	19,024	60.8%	36,375	6,899
Equipment/Software Expenses	303,038	857,500	554,462	35.3%	643,125	340,087
Infrastructure Maintenance	537,131	835,100	297,969	64.3%	626,325	89,194
Legal Services	620,219	1,025,000	404,781	60.5%	768,750	148,531
Meetings & Mileage	15,909	79,350	63,441	20.0%	59,513	43,604
Membership/Periodicals	58,509	83,055	24,546	70.4%	62,291	3,782
Office Supplies	49,343	80,000	30,657	61.7%	60,000	10,657
Postage	112,545	167,000	54,455	67.4%	125,250	12,705
Printing	47,532	69,000	21,468	68.9%	51,750	4,218
Professional Services	4,043,953	6,199,320	2,155,367	65.2%	4,649,490	605,537
Telephone	179,219	205,000	25,781	87.4%	153,750	(25,469)
Training	119,827	613,555	493,728	19.5%	460,166	340,339
Services and Supplies	6,612,923	11,077,380	4,464,457	59.7%	8,308,035	1,695,112
Capital Expenditures**	186,359	600,000	413,641	31.1%	450,000	263,641
Administrative Expense Total	\$ 18,122,416	\$ 27,184,790	\$ 9,062,374	66.7%	\$ 20,388,593	\$ 2,266,177

*Prorated budget represents 75% (9 months/12 months) of the annual budget.

**Capital expenditures represent purchases of assets to be amortized in future periods.

Personnel Costs

Personnel Costs as of September 30, 2020 were approximately \$11.3 million or 73.0% of the annual budget for this category, under the prorated budget by \$307,424. These costs are slightly below budget due to several staff vacancies, which are offset by an increase in the annual leave liability. Annual leave expense and liability accounts are adjusted each quarter based on the annual leave balances of OCERS' employees and are trending higher than expected because of the continued impact of the COVID-19 global pandemic on work and travel restrictions. For the nine months ended September 30, 2020, the annual leave liability increased by approximately \$241,000. Personnel costs are expected to be within budget for the year.

Services and Supplies

Expenditures for services and supplies were approximately \$6.6 million or 59.7% of the annual budget for this category. The variance of \$1,695,112 between the pro-rated budget and year-to-date actuals in this category is primarily due to the following (note: under budget differences that are less than \$5,000 are deemed immaterial and are excluded from the discussion below):

- Building Property Mgmt./Maintenance costs utilized 70.9% of the annual budget and were lower than the prorated budget by \$27,934. Lower overall costs relate to lower utility and maintenance costs due to a decrease in employee occupancy of the headquarter building as team members continue to work from home under Governor Newsom's Stay at Home Order. In addition, utility and maintenance costs do not occur evenly and will fluctuate throughout the year. OCERS completed the transition to a new property manager in February 2020.

- Due Diligence costs are at 10.5% of the annual budget and lower than the prorated budget by \$87,094. This lower than anticipated cost is due to no in person meetings and travel occurring during the current global pandemic. Due diligence meetings are over Zoom and will continue for the foreseeable future. Due diligence costs are expected to remain under budget through the remainder of the year.
- Equipment/Software expense utilized 35.3% of the annual budget, and is lower than the prorated budget by \$340,087. The lower than expected expenditures is the result of several projects budgeted for the year which have not been implemented as of the end of the third quarter. Projects not yet implemented include a new accounting software. Procurement efforts for this project were paused when the Stay at Home orders were issued and the project is now scheduled to be implemented in 2021. The investment risk management system implementation is underway and is anticipated to be completed during the fourth quarter. Other IT related projects have been delayed as IT focuses on providing support to team members with equipment and other resources to use at home as they continue to work remotely; since the stay at home directive was implemented in March, additional unbudgeted costs of approximately \$71,000 have been incurred for miscellaneous hardware, software, and computer and printer supplies. Equipment/Software expenses are expected to remain under budget for the remainder of the year.
- Equipment Lease expense is 60.8% of the annual budget, lower than the prorated budget by \$6,899. This expense is less than budgeted due to the reduction in paper copies as team members continue to work remotely and have transitioned to using electronic copies.
- Infrastructure Maintenance costs are at 64.3% of the annual budget resulting in an unused prorated budget of \$89,194. Various infrastructure maintenance costs associated with software and hardware support services have not yet been incurred or are purchased on an as-needed basis.
- Legal Services are at 60.5% of the budget and are lower than the prorated budget by \$148,531. Legal services for investments, litigation and tax counsel are utilized on an as-needed basis. Investment legal services are below budget by approximately \$96,000. General board, tax counsel and other counsel services are under budget by approximately \$53,000 primarily due to less than expected litigation costs, offset by \$18,000 for research on pandemic related issues, such as the Coronavirus Aid, Relief and Economic Security (CARES) Act.
- Meetings & Mileage costs is at 20.0% of the annual budget and lower than the prorated budget by \$43,604. Since work from home has been in place, Board and Committee meetings have been held remotely resulting in the lower than budgeted costs for the meetings. Board and Committee meetings are not expected to resume in person for the foreseeable future and related costs are expected to remain under budget through the remainder of the year.
- Office Supplies are at 61.7% of the annual budget and lower than the prorated budget by \$10,607. Expenditures for office furniture are lower due to team members working remotely during the Stay at Home order, which is offset by unexpected expenditures, such as masks, sanitizer, moving costs and signage, related to the pandemic of approximately \$8,000.
- Postage is at 67.4% of the annual budget and lower than the prorated budget by \$12,705. Postage costs associated with an additional mailing related to COVID 19 correspondence and delivery of equipment to team members of \$7,445 were incurred. Postage usage fluctuates based on an as-needed basis and is lower than budgeted.
- Professional Services utilized 65.2% of the annual budget. Expenses are lower than the prorated budget by \$605,537. The variance is primarily due to postponement of utilizing consulting services

as OCERS focuses on maintaining current operations while team members continue to work from home. Postponed costs include a technical writer, governance and LEAN process consultants, Office 365 migration consulting, as well as costs used on an as-needed-basis, including internal audit consultants and services and CEO contingency

- Telephone expense is at 87.4% of the annual budget and over the prorated budget by \$25,469. During the first quarter, OCERS implemented a new Dialpad telephone system and incurred costs associated with both the old Mitel System and the new Dialpad system. Additionally, approximately \$13,000 of additional costs for cellular data and teleconference costs have been incurred as a result of team members working remotely. Some of these additional costs have been subsequently reduced by using Zoom and other services. Telephone costs will be closely monitored for the remainder of the year and the CEO or Assistant CEO has the authority to transfer budget dollars with the Services and Supplies category to cover any shortfall. No transfer is required at this time.
- Training expense is at 19.5% of the annual budget and lower than the prorated budget by \$340,339. Training costs are expected to remain significantly below the budget since all travel-related training and conferences were cancelled or postponed due to the COVID-19 pandemic. All current training and conferences are being done remotely and are typically less expensive than in-person training or conferences.

Capital Expenditures

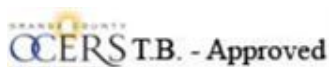
Capital Expenditures incurred as of the end of the quarter are \$186,359, 31.1% of the budget and lower than the prorated budget by \$263,641. A contract for implementing new firewalls was completed during the second quarter for approximately \$139,000, under budget by \$11,000. Board room upgrades which were budgeted for \$250,000 in 2020 were intentionally deferred at the direction of the Board because of work from home orders. Capital expenditures incurred for building security, safety and health upgrades include approximately \$47,000 for the installment of Plexiglas around office cubicles, and other acrylic dividers, as part of the plan to safely re-open OCERS headquarters building and gradually return team members back to the office. Other building upgrades were deferred due to work from home orders. Building security, safety and health upgrades will continue to take priority as part of the plan to ensure the health and safety of our team members.

Conclusion:

As of quarter-end, the Administrative budget is at 66.7% of the annual budget. As actual administrative expenses are under the annual budget, OCERS complies with the 21 basis point test.

As of September 30, 2020, approximately \$170,000 has been spent in response to the global pandemic and transition to a remote work environment, including costs for computer and home office equipment, teleconferencing, health supplies such as masks and sanitizers, safety upgrades, legal fees and printing and postage. These additional costs have been offset by savings in areas such as training and due diligence.

Submitted by:



OCERS T.B. - Approved

Tracy Bowman, Director of Finance



Memorandum

DATE: November 4, 2020
TO: Members of the Board of Retirement
FROM: Tracy Bowman, Director of Finance
SUBJECT: **THIRD QUARTER UNAUDITED FINANCIAL STATEMENTS FOR THE NINE MONTHS ENDED SEPTEMBER 30, 2020**

Written Report

Background/Discussion

The attached financial statements reflect the unaudited activity for the nine months ended September 30, 2020. These statements are unaudited and are not the official statements of OCERS. The following statements represent a review of the progress to date for the third quarter of 2020. The official financial statements of OCERS are included in the Comprehensive Annual Financial Report (CAFR) as of and for the year ended December 31, 2019, which is available on our website, www.ocers.org.

Summary

Statement of Fiduciary Net Position (Unaudited)

As of September 30, 2020, the net position restricted for pension, other postemployment benefits and OPEB 115 is \$17.3 billion, an increase of \$940.0 million, or 5.7%, from September 30, 2019 after the prior year restatement of the OPEB 115 Custodial Fund for \$15.5 million due to the implementation of GASB Statement No. 84, *Fiduciary Activities*. The change is the result of an increase in total assets of \$678.2 million and a decrease in total liabilities of \$261.7 million as described below:

The \$678.2 million, or 3.9%, increase in total assets can be attributed to a \$953.3 million increase in total investments at fair value offset by decreases of \$20.2 million in total cash and short-term investments, \$252.5 million in total receivables and \$2.3 million in capital assets.

Total investments at fair value increased by \$953.3 million, or 5.8%, from September 30, 2019 to September 30, 2020, which can be attributed to investment of proceeds received from contributions, net appreciation in fair value of investments, and earnings from interest and dividends. In March 2020, the World Health Organization declared the coronavirus disease, COVID-19, a global pandemic, resulting in the U.S. and many foreign countries requesting their citizens to shelter in place. Although the pandemic continued through the third quarter, many economies around the globe reopened following a broad global shutdown. As a result, the investment portfolio reported a year-to-date return of 1.71% for the quarter ending September 30, 2020 which is up compared to the -3.11% year-to-date loss reported in the second quarter of 2020, but is significantly lower than the 10.46% return for the third quarter ending September 30, 2019. Investors expect the global economic recovery as businesses reopen and signals from the Fed indicate they will continue to maintain low interest rates and loose monetary

policy. The positive market performance and the rebound of retail sales offered hope to many market participants, however, COVID-19 cases significantly increased in July, which further delayed the full reopening of economies. Global public equities, private equities, core fixed income and risk mitigation all reported positive year-to-date returns for the third quarter and increased in 2020 compared to the prior year. The new investment category, unique strategies, also reported a three-month return of 7.60%. These increases were offset by decreases in credit, real assets, and absolute return which all reported year-to-date losses for the third quarter in 2020.

The decrease of \$20.2 million in total cash and short-term investments was due to a decrease in lending activity in the securities lending program. The decrease of \$252.5 million in total receivables is primarily related to the timing of securities sales which decreased by \$253.0 million. The decrease in capital assets of \$2.3 million from the prior year represents depreciation expense, of which \$2.2 million is attributed to the Pension Administration System Solution (PASS) Project.

Total liabilities decreased \$261.7 million, or -22.8%, from September 30, 2019 to September 30, 2020, primarily due to a decrease of \$279.8 million in securities purchased due to the timing of these transactions at the end of the quarter, as well as a decrease in obligations under the securities lending program of \$34.0 million which is directly related to the decrease in securities lending collateral as previously discussed. Other liabilities also decreased by \$6.7 million due to the timing of investment manager fee accruals. These decreases were offset by increases in unearned contributions of \$51.0 million and retiree payroll payable of \$7.1 million. Unearned contributions increased due to increases in prepaid employer contributions received for the 2020-2021 prepayment program compared to the prior year's prepayment program. The increase in retiree payroll payable is due to the County of Orange's Voluntary Incentive Program, which added an additional 280 payees to the October 1st payroll.

Statement of Changes in Fiduciary Net Position (Unaudited)

Total additions to fiduciary net position decreased 56.0%, or \$1.3 billion, for the quarter from the previous year. Net investment income for the nine months ended September 30, 2020 is \$283.3 million versus \$1.6 billion for the nine months ended September 30, 2019, a decrease of \$1.3 billion. The majority of the decrease is due to the net appreciation/(depreciation) in fair value of investments with investment categories reporting significantly lower year-to-date returns in 2020 due to the coronavirus pandemic which continued through the third quarter in 2020. Some of the economies that were shut down earlier in the year reopened and slightly improved, but returns for the year are still significantly low compared to the third quarter in 2019 when all investment categories reported higher returns and no losses. Global public equities reported a year-to-date return of 2.86% for September 2020 versus a year-to-date return of 15.98% for September 2019. Private equity reported year-to-date returns of 6.33% versus 10.02% in September 2019. Dividends, interest and other investment income decreased by \$173.4 million or 58.6%, which can primarily be attributed to decreases in investment income for all investment categories.

Total contributions increased \$27.4 million compared to the prior year primarily due to Pension Fund employer contributions which increased by \$27.8 million in 2020 due to the increase in contribution rates and the number of active employees participating in the plan.

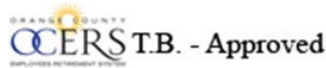
Total deductions from fiduciary net position increased 7.2%, or \$51.7 million, from the previous year. Participant benefits increased by \$53.5 million, which is expected due to the continued and anticipated growth in member pension benefit payments including the County of Orange’s Voluntary Incentive Program which added 280 new payees to the October 1st payroll, as previously discussed. Death benefits and member withdrawals and refunds had a net decrease of \$3.5 million compared to September 2019. Changes in these categories will fluctuate from year-to-year based on the occurrence of these events. Administrative expenses increased by \$1.7 million, 12%, over the prior year. The majority of this increase relates to increased personnel costs over the prior year.

Other Supporting Schedules

In addition to the basic financial statements for the nine months ended September 30, 2020, the following supporting schedules are provided for additional information pertaining to OCERS:

- Total Fund Reserves
- Pension Trust Fund Contributions
- Schedule of Investment Expenses
- Schedule of Administrative Expenses
- Administrative Expense Compared to Actuarial Accrued Liability (21 basis points test).

Submitted by:



Tracy Bowman
Director of Finance



ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM

Unaudited Financial Statements

For the Nine Months Ended September 30, 2020

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM

Unaudited Financial Statements
For the Nine Months Ended September 30, 2020

Table of Contents

Statement of Fiduciary Net Position (Unaudited).....	1
Statement of Changes in Fiduciary Net Position (Unaudited).....	2
Total Fund Reserves.....	3
Pension Trust Fund Contributions.....	4
Schedule of Investment Expenses	5
Schedule of Administrative Expenses.....	6
Administrative Expense Compared to Projected Actuarial Accrued Liability.....	7

Statement of Fiduciary Net Position (Unaudited)
As of September 30, 2020
(with summarized comparative amounts as of September 30, 2019)
(Dollars in Thousands)

	<u>Pension Trust Fund</u>	<u>Health Care Fund- County</u>	<u>Health Care Fund- OCFA</u>	<u>OPEB 115 Custodial Fund</u>	<u>Total Funds</u>	<u>Comparative Totals 2019</u>
ASSETS						
Cash and Short-Term Investments						
Cash and Cash Equivalents	\$ 450,395	\$ 9,743	\$ 1,037	\$ 678	\$ 461,853	\$ 448,052
Securities Lending Collateral	173,176	3,746	399	-	177,321	211,330
Total Cash and Short-Term Investments	<u>623,571</u>	<u>13,489</u>	<u>1,436</u>	<u>678</u>	<u>639,174</u>	<u>659,382</u>
Receivables						
Investment Income	15,520	336	36	-	15,892	16,943
Securities Sales	78,908	1,707	182	-	80,797	333,751
Contributions	18,182	-	-	-	18,182	17,009
Foreign Currency Forward Contracts	139	3	-	-	142	882
Other Receivables	4,718	102	11	-	4,831	3,800
Total Receivables	<u>117,467</u>	<u>2,148</u>	<u>229</u>	<u>-</u>	<u>119,844</u>	<u>372,385</u>
Investments at Fair Value						
Global Public Equity	7,170,204	156,489	16,529	11,340	7,354,562	6,240,107
Private Equity	1,913,838	41,769	4,412	-	1,960,019	1,699,759
Core Fixed Income	2,791,622	60,927	6,435	6,087	2,865,071	2,847,785
Credit	1,407,643	30,722	3,245	-	1,441,610	1,775,723
Real Assets	2,046,088	44,656	4,717	-	2,095,461	2,256,948
Risk Mitigation	1,687,221	36,823	3,889	-	1,727,933	1,672,714
Absolute Return	527	12	1	-	540	1,079
Unique Strategies	2,186	48	5	-	2,239	-
Total Investments at Fair Value	<u>17,019,329</u>	<u>371,446</u>	<u>39,233</u>	<u>17,427</u>	<u>17,447,435</u>	<u>16,494,115</u>
Capital Assets, Net	14,346	-	-	-	14,346	16,694
Total Assets	<u>17,774,713</u>	<u>387,083</u>	<u>40,898</u>	<u>18,105</u>	<u>18,220,799</u>	<u>17,542,576</u>
LIABILITIES						
Obligations Under Securities Lending Program	173,176	3,746	399	-	177,321	211,330
Securities Purchased	159,715	3,455	368	-	163,538	443,327
Unearned Contributions	437,929	-	-	-	437,929	386,934
Foreign Currency Forward Contracts	680	15	2	-	697	-
Retiree Payroll Payable	79,415	4,804	808	-	85,027	77,965
Other	18,798	407	43	-	19,248	25,900
Total Liabilities	<u>869,713</u>	<u>12,427</u>	<u>1,620</u>	<u>-</u>	<u>883,760</u>	<u>1,145,456</u>
Net Position Restricted for Pension, Other Postemployment Benefits and OPEB 115	<u>\$ 16,905,000</u>	<u>\$ 374,656</u>	<u>\$ 39,278</u>	<u>\$ 18,105</u>	<u>\$ 17,337,039</u>	<u>\$ 16,397,120</u>

Statement of Changes in Fiduciary Net Position (Unaudited)

For the Nine Months Ended September 30, 2020
 (with summarized comparative amounts for the Nine Months Ended September 30, 2019)
 (Dollars in Thousands)

	<u>Pension Trust Fund</u>	<u>Health Care Fund- County</u>	<u>Health Care Fund- OCFA</u>	<u>OPEB 115 Custodial Fund</u>	<u>Total Funds</u>	<u>Comparative Totals 2019</u>
ADDITIONS						
Contributions						
Employer	\$ 481,052	\$ 22,679	\$ 1,456	\$ -	\$ 505,187	\$ 481,983
Employee	210,458	-	-	-	210,458	206,255
Other Postemployment Contributions	-	-	-	452	452	447
Total Contributions	<u>691,510</u>	<u>22,679</u>	<u>1,456</u>	<u>452</u>	<u>716,097</u>	<u>688,685</u>
Investment Income						
Net Appreciation / (Depreciation) in Fair Value of Investments	232,953	8,239	450	(180)	241,462	1,367,938
Dividends, Interest, & Other Investment Income	118,902	2,572	274	863	122,611	296,031
Securities Lending Income						
Gross Earnings	1,543	33	4	-	1,580	6,536
Less: Borrower Rebates and Bank Charges	(832)	(18)	(2)	-	(852)	(5,579)
Net Securities Lending Income	<u>711</u>	<u>15</u>	<u>2</u>	<u>-</u>	<u>728</u>	<u>957</u>
Total Investment Income	<u>352,566</u>	<u>10,826</u>	<u>726</u>	<u>683</u>	<u>364,801</u>	<u>1,664,926</u>
Investment Fees and Expenses	(79,589)	(1,722)	(183)	(2)	(81,496)	(80,723)
Net Investment Income	<u>272,977</u>	<u>9,104</u>	<u>543</u>	<u>681</u>	<u>283,305</u>	<u>1,584,203</u>
Total Additions	<u>964,487</u>	<u>31,783</u>	<u>1,999</u>	<u>1,133</u>	<u>999,402</u>	<u>2,272,888</u>
DEDUCTIONS						
Participant Benefits	714,630	27,492	4,105	-	746,227	692,708
Death Benefits	600	-	-	-	600	484
Member Withdrawals and Refunds	7,017	-	-	-	7,017	10,709
Other Postemployment Benefits	-	-	-	1,033	1,033	986
Administrative Expenses	15,821	16	17	16	15,870	14,172
Total Deductions	<u>738,068</u>	<u>27,508</u>	<u>4,122</u>	<u>1,049</u>	<u>770,747</u>	<u>719,059</u>
Net Increase / (Decrease)	226,419	4,275	(2,123)	84	228,655	1,553,829
Net Position Restricted For Pension, Other Postemployment Benefits and OPEB 115, Beginning of Year	16,678,581	370,381	41,401	18,021	17,108,384	14,827,795
Restatement of Net Position	-	-	-	-	-	15,496
Net Position Restricted For Pension, Other Postemployment Benefits and OPEB 115, Beginning of Year, as Restated	<u>16,678,581</u>	<u>370,381</u>	<u>41,401</u>	<u>18,021</u>	<u>17,108,384</u>	<u>14,843,291</u>
Ending Net Position Restricted For Pension, Other Postemployment Benefits and OPEB 115	<u>\$ 16,905,000</u>	<u>\$ 374,656</u>	<u>\$ 39,278</u>	<u>\$ 18,105</u>	<u>\$ 17,337,039</u>	<u>\$ 16,397,120</u>

Total Plan Reserves
 For the Nine Months Ended September 30, 2020
 (with summarized comparative amounts for the Nine Months Ended September 30, 2019)
 (Dollars in Thousands)

	<u>2020</u>	<u>2019</u>
Pension Reserve	\$ 9,639,424	\$ 9,740,744
Employee Contribution Reserve	3,433,115	3,302,066
Employer Contribution Reserve	3,432,594	2,461,461
Annuity Reserve	2,053,113	1,783,341
Health Care Reserve	413,934	379,196
OPEB 115 Reserve	18,105	17,220
County Investment Account (POB Proceeds) Reserve	149,513	144,974
OCSD UAAL Deferred Reserve	12,088	-
Contra Account	<u>(1,814,847)</u>	<u>(1,431,882)</u>
Total Net Position Restricted for Pension, Other Postemployment Benefits and OPEB 115	<u>\$ 17,337,039</u>	<u>\$ 16,397,120</u>

Schedule of Contributions
 For the Nine Months Ended September 30, 2020
 (with summarized comparative amounts for the Nine Months Ended September 30, 2019)
 (Dollars in Thousands)

	2020		2019	
	Employee	Employer	Employee	Employer
Pension Trust Fund Contributions				
County of Orange	\$ 160,963	\$ 372,812	\$ 159,824	\$ 337,415
Orange County Fire Authority	20,837	62,625	18,340	54,624
Orange County Superior Court of California	12,058	25,682	12,658	22,854
Orange County Transportation Authority	7,779	21,404	7,187	19,375
Orange County Sanitation District	6,234	6,339	5,805	14,017
UCI Medical Center & Campus	-	2,264	-	2,053
Orange County Employees Retirement System	930	2,166	816	1,856
City of San Juan Capistrano	607	1,801	634	1,834
Transportation Corridor Agencies	585	670	558	13,849
Orange County Department of Education	-	230	-	194
Orange County Cemetery District	124	154	112	135
Orange County In-Home Supportive Services Public Authority	94	126	90	145
Orange County Local Agency Formation Commission	33	119	33	109
Orange County Children & Families Commission	91	112	80	92
Orange County Public Law Library	123	98	118	87
Orange County Mosquito & Vector Control District	-	-	-	878
Contributions Before Prepaid Discount	210,458	496,602	206,255	469,517
Prepaid Employer Contributions Discount	-	(15,550)	-	(16,296)
Total Pension Trust Fund Contributions	210,458	481,052	206,255	453,221
Health Care Fund - County Contributions	-	22,679	-	27,213
Health Care Fund - OCFA Contributions	-	1,456	-	1,549
OPEB 115 Custodial Fund Postemployment Contributions	-	452	-	447
Total Contributions	\$ 210,458	\$ 505,639	\$ 206,255	\$ 482,430

¹ Unfunded actuarial accrued liability payments (UAAL) were made in 2020 for \$6.2 million and 2019 for \$3.3 million for the Orange County Fire Authority.
² Unfunded actuarial accrued liability payments have been made in accordance with a separate 20-year level dollar payment schedule to include liabilities for employee benefits related to past service credit.
³ Unfunded actuarial accrued liability payments were made in 2019 for \$8.1 million for the Orange County Sanitation District.
⁴ Unfunded actuarial accrued liability payments were made in 2019 for \$12.8 million for the Transportation Corridor Agencies.
⁵ Unfunded actuarial accrued liability payments were made in 2019 for \$0.9 million for the Orange County Mosquito & Vector Control District.

Schedule of Investment Expenses
For the Nine Months Ended September 30, 2020
(with summarized comparative amounts for the Nine Months Ended September 30, 2019)
(Dollars in Thousands)

	<u>2020</u>	<u>2019</u>
Investment Management Fees*		
Global Public Equity		
U.S. Equity	\$ 2,588	\$ 2,136
International Equity	4,636	3,810
Emerging Markets Equity	<u>3,325</u>	<u>3,410</u>
Total Global Public Equity	<u>10,549</u>	<u>9,356</u>
Core Fixed Income		
U.S. Fixed Income	<u>2,011</u>	<u>1,881</u>
Total Core Fixed Income	<u>2,011</u>	<u>1,881</u>
Credit		
High Yield	-	1,305
Emerging Markets Debt	2,142	1,501
Direct Lending	-	2,175
Corporate Credit	1,227	-
Opportunistic Credit	2,875	-
Private Credit	2,268	-
Multi-Strategy	-	3,583
Non-U.S. Direct Lending	<u>-</u>	<u>1,861</u>
Total Credit	<u>8,512</u>	<u>10,425</u>
Real Assets		
Real Estate	8,679	10,690
Real Return		
Timber	419	584
Agriculture	942	921
Infrastructure	2,483	3,085
Energy	<u>4,832</u>	<u>7,244</u>
Total Real Return	<u>8,676</u>	<u>11,834</u>
Total Real Assets	<u>17,355</u>	<u>22,524</u>
Absolute Return		
Direct Hedge Fund	<u>5</u>	<u>96</u>
Total Absolute Return	<u>5</u>	<u>96</u>
Private Equity	17,634	13,442
Risk Mitigation	10,877	5,807
Short-Term Investments	<u>244</u>	<u>287</u>
Total Investment Management Fees	<u>67,187</u>	<u>63,818</u>
Other Fund Expenses¹	<u>10,291</u>	<u>13,051</u>
Other Investment Expenses (Expenses Not Subject to the Statutory Limit)		
Consulting/Research Fees	1,445	1,398
Investment Department Expenses	1,768	1,651
Legal Services	354	356
Custodian Services	435	435
Investment Service Providers	<u>14</u>	<u>14</u>
Total Other Investment Expenses	<u>4,016</u>	<u>3,854</u>
Security Lending Activity		
Security Lending Fees	174	225
Rebate Fees	<u>678</u>	<u>5,354</u>
Total Security Lending Activity	<u>852</u>	<u>5,579</u>
OPEB 115 Custodial Fund - Investment Fees and Expenses	<u>2</u>	<u>-</u>
Total Investment Expenses	<u>\$ 82,348</u>	<u>\$ 86,302</u>

* Does not include undisclosed fees deducted at source.

¹ These costs include, but are not limited to, foreign income tax and other indirect flow-through investment expenses such as organizational expenses in limited partnership structures.

Schedule of Administrative Expenses
 For the Nine Months Ended September 30, 2020
 (with summarized comparative amounts for the Nine Months Ended September 30, 2019)
 (Dollars in Thousands)

	<u>2020</u>	<u>2019</u>
Pension Trust Fund Administrative Expenses		
Expenses Subject to the Statutory Limit		
Personnel Services		
Employee Salaries and Benefits	\$ 9,678	\$ 8,743
Board Members' Allowance	<u>11</u>	<u>13</u>
Total Personnel Services	<u>9,689</u>	<u>8,756</u>
Office Operating Expenses		
Depreciation/Amortization	1,900	1,900
General Office and Administrative Expenses	1,108	1,089
Professional Services	1,304	1,385
Rent/Leased Real Property	<u>512</u>	<u>350</u>
Total Office Operating Expenses	<u>4,824</u>	<u>4,724</u>
Total Expenses Subject to the Statutory Limit	<u>14,513</u>	<u>13,480</u>
Expenses Not Subject to the Statutory Limit		
Actuarial Fees	288	221
Equipment/Software	195	85
Information Technology Professional Services	733	340
Information Security Professional Services	<u>92</u>	<u>-</u>
Total Expenses Not Subject to the Statutory Limit	<u>1,308</u>	<u>646</u>
Total Pension Fund Administrative Expenses	15,821	14,126
Health Care Fund - County Administrative Expenses	16	15
Health Care Fund - OCFA Administrative Expenses	17	16
OPEB 115 Custodial Fund - Administrative Expenses	<u>16</u>	<u>15</u>
Total Administrative Expenses	<u>\$ 15,870</u>	<u>\$ 14,172</u>

Administrative Expense Compared to Actuarial Accrued Liability

For the Nine Months Ended September 30, 2020

(Dollars in Thousands)

Administrative Expense Compared to Actuarial Accrued Liability	
Projected Actuarial Accrued Liability (AAL) as of December 31, 2020	\$ 22,980,997
Maximum Allowed For Administrative Expense (AAL * 0.21%)	48,260
Actual Administrative Expense ¹	<u>14,513</u>
Excess of Allowed Over Actual Expense	<u>33,747</u>
Actual Administrative Expense as a Percentage of Projected Actuarial Accrued Liability as of December 31, 2019	0.06%
Actual Administrative Expense as a Percentage of Projected Actuarial Accrued Liability as of December 31, 2018	0.06%
 ¹ Administrative Expense Reconciliation	
Administrative expense per Statement of Changes in Fiduciary Net Position	\$ 15,821
Less administrative expense not considered per CERL section 31596.1	<u>(1,308)</u>
Administrative Expense allowable under CERL section 31580.2	<u>\$ 14,513</u>

Orange County Employees Retirement System
September 9-10, 2020
2020 Strategic Planning Workshop Summary

Page 1

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

**2020 STRATEGIC PLANNING WORKSHOP
September 9-10, 2020**

The OCERS Board takes no actions at the annual Strategic Planning Workshop. Therefore, a summary of discussion topics is provided.

Wednesday, September 9, 2020

Attendance was as follows:

Present via Zoom video teleconference pursuant to Executive Order N-29-20 issued by Governor Newsom on March 17, 2020:

Roger Hilton, Chair; Shawn Dewane, Vice-Chair; Shari Freidenrich, Adele Tagaloa, Charles Packard, Chris Prevatt, Arthur Hidalgo, Frank Eley, Wayne Lindholm and Jeremy Vallone

WELCOME & INTRODUCTORY COMMENTS

Chair Hilton and Steve Delaney provided introductory comments and an overview of the day's schedule.

HEARING FROM OUR STAKEHOLDERS

Michelle Aguirre, Chief Financial Officer, County of Orange

Ms. Aguirre presented for the sixth year in a row the County's budget and the balancing strategy that the County implemented in order to stay afloat. She also discussed the challenges that the County faces with the current COVID-19 pandemic as well as measures taken to ensure the safety of staff and the public.

Charles Barfield, General Manager, OCEA

Mr. Barfield thanked the OCERS team for the intelligent and continued uninterrupted services provided to each member. He stated that OCEA members rely on OCERS to protect their assets and their retirement. He also discussed the challenges each person faces due to the COVID-19 pandemic and the importance of working diligently together in order to provide the best service

to each member. He also thanked OCERS staff for the continued communication and updates provided to them on a monthly basis.

Paul Bartlett, Executive Director, AOCDS

Mr. Bartlett acknowledged the Board faces tough questions as it deals with the recent Alameda Court decision and asked that they keep in mind how this will impact member lives. Mr. Bartlett also stated that he appreciates the staff and all the hard work involved in providing great customer service in the midst of the COVID-19 pandemic.

ANNUAL OCERS EMPLOYER REVIEW

Ms. Jenike and Mr. Delaney presented the annual OCERS Employer Review with a summary of key financial information based upon information provided by the 2019 audited financial statements and 2019 budget and forecast documents. Despite the COVID-19 pandemic they did not see any immediately pressing employer financial issue that would suggest the Board need take action.

SECOND LOOK AT AGE BASED RATES

Ms. Jenike and Mr. Delaney presented the Second Look At Age Based Rates and showed examples of member contribution rates, age based rates and single flat rates.

Segal Consulting gave the Board examples of how employee contributions rates might change with this policy change. The Board requested additional information at a subsequent meeting for further discussion.

PENSION ADMINISTRATION SYSTEM OUTLOOK

Ms. Jenike, Ms. Shott and Ms. Sadoski presented the Pension Administration System Outlook. They discussed the V3 program and all the updates that would be needed going forward. They also discussed the OCERS current system considerations and well as planning for future pension administration systems. A loose timeline was discussed and what that would look like in upcoming years. System risks were highlighted and discussed as well.

Thursday, September 10, 2020

Present via Zoom video teleconference pursuant to Executive Order N-29-20 issued by Governor Newsom on March 17, 2020:

Roger Hilton, Chair; Shawn Dewane, Vice Chair; Frank Eley; Shari Freidenrich; Arthur Hidalgo; Wayne Lindholm; Charles Packard; Chris Prevatt; Adele Tagalao; and Jeremy Vallone

WELCOME

Vice-Chairman Dewane and Ms. Murphy provided introductory comments and an overview of the day's schedule.

INTRODUCTION TO PRIVATE EQUITY CO-INVESTMENTS

Mr. David Fann with Aksia TorreyCove discussed the benefits of co-investments. A variety of co-investment models exist, ranging from active to passive. Co-investments can offer greater returns with an improved ability to manage exposure, better risk-adjusted returns, greater control over the pace of investment, total control over investment vintage year and potential return enhancement. OCERS is able to become a preferred investor by participating in co-investments. Mr. Fann also discussed the guardrails to be put in place to make co-investments a successful program. One of the key challenges to co-investments highlighted was the timeframe for decision making. General partners are usually very sensitive to information being disclosed and company financials. Ms. Murphy offered some context and scale to OCERS' investments relative to the co-investments discussion.

INVESTMENT CONTRACT TERMS – NEGOTIATIONS AND BEST PRACTICES

Mr. Reginald Tucker, OCERS; gave an overview of the objectives for enhancing the investment process before, during, and after contract negotiations. OCERS is working to align with best practices according to ILPA standards. Mr. Tucker also mentioned the desire to perform historical analysis of OCERS' fund contract terms and identify and track trends to identify both areas of success and for improvement.

Ms. Yuliya Oryol, Nossaman; discussed the oversubscription of funds and the corresponding reduced ability to negotiate the standards. Under those circumstances, the side letter process is utilized to protect the investor. Mr. Tucker reviewed the highest priority terms during fund negotiations. Ms. Oryol discussed the fiduciary duty of managers. Fiduciary duties can be expanded or restricted under Delaware law or common law. In a co-mingled fund the fiduciary is responsible to all parties. Standards of care and fiduciary duties are nuanced and should be handled with care. If pushed by LPs, the majority of managers are willing to change verbiage to make the investor comfortable and get the more friendly LP terms.

Mr. Thomas Hickey, Foley and Lardner; expanded on fiduciary duty and the three primary fund documents reviewed by outside counsel. Mr. Hickey highlighted the identification of more robust conflicts of interest disclosures and noted the example of related party transactions. Counsel is also reviewing reasonable fees in conjunction with the market. Mr. Hickey noted that when working with some of his largest LPs, terms related to fiduciary duties are negotiated upfront. During a discussion on MFNs, Mr. Hickey noted that the ability of other LPs to access these are often capped, but that Counsel reviews the terms that bigger investors negotiated that OCERS did not, so they know what to ask for the next time. Ms. Murphy added that OCERS'

Investment Team asks all external legal counsel if they have or are representing other institutional investors in each prospective fund that goes out to bid.

THE STATE OF OCERS

Mr. Delaney presented the sixth annual State of OCERS presentation and gave an overview of active and retired membership. Ms. Murphy gave an overview of Investments and items that OCERS is currently working on. Mr. Delaney also discussed the COVID pandemic as well as current staffing. Mr. Delaney also discussed the challenges in 2021 and beyond. He talked about COVID-19, Alameda, early retirement rush, employer's solvency as well as cyber security. Mr. Delaney touched on OCERS opportunities and discussed the year 2033 being a key cost savings year as the bulk of OCERS liability will be paid off. He stated that OCERS is doing great overall. In conclusion, Mr. Delaney stated he found the current "state of OCERS" to be sound.

2021-2023 STRATEGIC PLAN

Mr. Delaney discussed the Strategic Plan and focused on the last page, "Looking Ahead 5-10 Years." He briefly touched upon the Investment best practices as the fund approaches \$35 billion. The document he highlighted also discussed the following topics: End of V3 useful life, Investigate implementation of artificial intelligence driven, Investigate OCERS management/oversight of member medical coverage upon retirement, Multi-Factor Authentication for Member and Employer Accounts. He concluded his discussion with OCERS looking into the future with the possible use of artificial intelligence to detect fraudulent activity and transactions.

2021 BUSINESS PLAN

Ms. Shott presented the 2021 Business Plan. Business Plan Initiatives are items to be worked on in the upcoming year to support moving forward the three year Strategic Plan. The Strategic Goals of Fund Sustainability, Excellent Service and Support, Risk Management, Talent Management and Effective Governance all have Business Plan initiatives for 2021. The Executive Management team then presented each of business initiatives being proposed. The initiatives that have costs associated with them were highlighted and estimates provided. After some discussion, the Board was agreeable to moving the 2021 Business Plan forward to be approved at the October Board of Retirement meeting and incorporating the associated costs in the proposed budget to be presented to the Board in November for approval.



Memorandum

DATE: October 22, 2020
TO: Members of the Board of Retirement
FROM: Tracy Bowman, Director of Finance
SUBJECT: PUBLIC PENSION COORDINATING COUNCIL (PPCC) STANDARDS AWARD FOR FUNDING AND ADMINISTRATION

Written Report

Background/Discussion

The Public Pension Coordinating Council (PPCC) is a coalition of three associations that represent public pension funds who cover the vast majority of public employees in the United States. The associations are the National Association of State Retirement Administrators (NASRA), the National Conference of Public Employee Retirement Systems (NCPERS) and the National Council on Teacher Retirement (NCTR).

The Public Pension Standards are intended to reflect minimum expectations for public retirement system management and administration, as well as serve as a benchmark by which all defined benefit public plans should be measured. The Standards are separated into the Administrative Standards and Funding Standard. A retirement system may qualify and receive a Recognition Certificate for either the Administrative or Funding Standard. A system that qualifies for both certificates will be awarded the PPCC Standards Award.

To qualify for the Recognition Award for Administration, the retirement system is assessed on the following administrative standards:

- Comprehensive Benefit Program
- Audit
- Actuarial Valuation
- Investments
- Communications

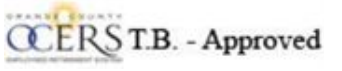
To qualify for the Recognition Award for Funding, the retirement system must meet the Funding Adequacy Standard by demonstrating that actual contribution rates are at a level equal or greater than 100% of the actuarially determined contribution (ADC).

PPCC has deemed OCERS to be proficient in both categories and has awarded OCERS with the Public Pension Standards Award for Funding and Administration in recognition of meeting professional standards for plan funding and administration as set forth in the Public Pension Standards as of December 31, 2019.

Attachment

Public Pension Standards Award for Funding and Administration 2020

Submitted by:



Tracy Bowman
Director of Finance



Public Pension Coordinating Council

***Public Pension Standards Award
For Funding and Administration
2020***

Presented to

Orange County Employees Retirement System

In recognition of meeting professional standards for
plan funding and administration as
set forth in the Public Pension Standards.

Presented by the Public Pension Coordinating Council, a confederation of

National Association of State Retirement Administrators (NASRA)
National Conference on Public Employee Retirement Systems (NCPERS)
National Council on Teacher Retirement (NCTR)

A handwritten signature in cursive script that reads "Alan H. Winkle".

Alan H. Winkle
Program Administrator



Memorandum

DATE: November 2, 2020
TO: Members of the Board of Retirement
FROM: Jim Doezie, Contracts, Risk and Performance Administrator
SUBJECT: STATE STREET PERFORMANCE REVIEW

Written Report

Background/Discussion

1. Performance Review Guidelines

According to the Procurement & Contracting Policy (Section 11.D., page 5), contracted service providers need to have a performance review conducted every three years.

“The performance of every contracted provider will be reviewed at last every three years.”

2. Contracts with Named Service Providers

The performance of Named Services Providers (as defined in the Procurement & Contracting Policy (Section V.A., page 8) will be solicited from and reported to the Board of Retirement (Section V.C.2, page 9).

“Performance reviews of Named Service Providers will include opinions solicited from Board of Retirement or designated sub-committee members, and/or selected staff members. The results of the review will be summarized and reported to the Board of Retirement.”

3. Review of the investment fund custodian and securities lending manager – State Street

Pursuant to the above referenced policies, a performance survey was conducted for State Street during August, 2020. The notes below summarize the results:

- There was a 92% response rate for this survey by OCERS Team Members.
- State Street personnel were rated as being highly knowledgeable.
- In some cases, direct customer support appears to be lacking. This is mitigated by two factors:
 - A Service Level Agreement (“SLA”) was put into place in October, 2018. This SLA provides credits back to OCERS should the State Street performance fall below specified thresholds
 - The State Street data processing error rate is low and within acceptable industry standards
- The overall performance rating for the majority of those surveyed resulted in a “C” grade.

4. Performance Review Action Item(s)

- The contract with State Street expires June 30, 2023. There are no additional action items required at this time beyond normal performance monitoring



Memorandum

Submitted by:
Jim Doezie
Contracts, Risk and Performance Administrator