

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

**AUDIT COMMITTEE MEETING
June 2, 2022
9:30 A.M.**

Members of the Committee

Frank Eley, Chair
Shari Freidenrich, Vice Chair
Richard Oates
Charles Packard

Pursuant to Assembly Bill 361, signed into law on September 16, 2021 as urgency legislation; Governor Newsom’s Proclamation of a State of Emergency on March 4, 2020, which Proclamation is still in effect; and Board of Retirement Resolution 2022-05, this meeting will be conducted by video/teleconference, in compliance with Government Code section 54953 as amended by Assembly Bill 361. In addition, members of the Board and the public are welcome to participate in the meeting via Zoom from the OCERS Boardroom located at 2223 E. Wellington Ave., Santa Ana, CA. However, none of the other locations from which the Board members participate by teleconference will be open to the public.

Members of the public who wish to observe and/or participate in the meeting may do so (1) from the OCERS Boardroom or (2) via the Zoom app or telephone from any location. 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. Members of the public who participate in the meeting from the OCERS Boardroom and who wish to provide comment during the meeting may do so from the podium located in the OCERS Boardroom.

OCERS Zoom Video/Teleconference information	
<p>Join Using Zoom App (Video & Audio)</p> <p>https://ocers.zoom.us/j/82183806910</p> <p>Meeting ID: 821 8380 6910 Password: 192696</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> <ul style="list-style-type: none"> +1 669 900 6833 US (San Jose) +1 253 215 8782 US (Tacoma) +1 346 248 7799 US (Houston) +1 929 436 2866 US (New York) +1 301 715 8592 US (Germantown) +1 312 626 6799 US (Chicago) <p>Meeting ID: 821 8380 6910 Password: 192696</p>
<p>A Zoom Meeting Participant Guide is available on OCERS website Board & Committee meetings page</p>	

AGENDA

This agenda contains a brief general description of each item to be considered. The Committee may take action on any item included in the agenda; however, except as otherwise provided by law, no action shall be taken on any item not appearing on the agenda. The Committee 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 COMMENT

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 Committee; 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 Committee, 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

C-1 APPROVE AUDIT COMMITTEE MEETING MINUTES

Audit Committee Meeting Minutes

March 30, 2022

ACTION ITEMS

NOTE: Public comment on matters listed in this agenda will be taken at the time the item is addressed, prior to the Committee’s discussion of the item. **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 2021 FINANCIAL STATEMENT AUDIT

Introduction by Brenda Shott, Assistant CEO of Finance and Internal Operations, and Tracy Bowman, Director of Finance, OCERS

Presentation by Kory Hoggan and Aaron Hamilton, Moss Adams

Recommendations:

1. Approve OCERS’ audited financial statements for the year ended December 31, 2021;
2. Direct staff to finalize OCERS’ 2021 Annual Comprehensive Financial Report (Annual Report);
3. Approve the Governmental Accounting Standards Board (GASB) Statement 67 Actuarial Valuation as of December 31, 2021; and
4. Receive and file Moss Adams LLP’s “OCERS’ Report to the Audit Committee for the Year Ended December 31, 2021” and their “Independent Auditor’s Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with Government Auditing Standards.”

A-3 GASB 68 VALUATION AND AUDIT REPORT

Presentation by Brenda Shott, Assistant CEO of Finance and Internal Operations

Recommendations:

1. Approve OCERS’ audited Schedule of Allocated Pension Amounts by Employer as of and for the Year Ended December 31, 2021; and
2. Approve the Governmental Accounting Standards Board (GASB) Statement 68 Actuarial Valuation as of December 31, 2021 for distribution to Employers.

A-4 ACTUARIAL AUDITOR INTERVIEWS

Introduction by David Kim, Director of Internal Audit

Presentations by Buck Global, LLC; and Cheiron, Inc.

Recommendation: Staff recommends (1) selecting one of the two finalists chosen to make an oral presentation at the June 2, 2022 Audit Committee meeting to serve as OCERS actuarial auditor based on the firm’s presentation, responsiveness to the Audit Committee’s questions, and the written proposal submitted; and (2) after conducting such interviews, that the Audit Committee recommend to the Board of Retirement to award a contract for actuarial auditor services to the selected finalist, subject to satisfactory negotiation of terms.

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.

******* END OF CLOSED SESSION AGENDA *******

INFORMATION ITEMS

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

Presentations

I-1 ALAMEDA DECISION IMPLEMENTATION PROJECT UPDATE

Presentation by Suzanne Jenike, Assistant CEO of External Operations

WRITTEN REPORTS

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

R-1 MANAGEMENT ACTION PLAN VERIFICATION

Written Report

R-2 STATUS UPDATE OF 2022 AUDIT PLAN

Written Report

COMMITTEE MEMBER COMMENTS

CHIEF EXECUTIVE OFFICER/STAFF COMMENTS

COUNSEL COMMENTS

ADJOURNMENT

NOTICE OF NEXT MEETINGS

DISABILITY COMMITTEE MEETING

June 20, 2022

8:30 A.M.

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM

2223 E. WELLINGTON AVENUE, SUITE 100

SANTA ANA, CA 92701

REGULAR BOARD MEETING

June 20, 2022

9:30 A.M.

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM

2223 E. WELLINGTON AVENUE, SUITE 100

SANTA ANA, CA 92701

AVAILABILITY OF AGENDA MATERIALS - Documents and other materials that are non-exempt public records distributed to all or a majority of the members of the OCERS Board or Committee of the Board in connection with a matter subject to discussion or consideration at an open meeting of the Board or Committee of the Board are available at the OCERS' website: <https://www.ocers.org/board-committee-meetings>. If such materials are distributed to members of the Board or Committee of the Board less than 72 hours prior to the meeting, they will be made available on the OCERS' website at the same time as they are distributed to the Board or Committee members. Non-exempt materials distributed during an open meeting of the Board or Committee of the Board will be made available on the OCERS' website as soon as practicable and will be available promptly upon request.

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.

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

**AUDIT COMMITTEE MEETING
March 30, 2022
9:30 a.m.**

MINUTES

OPEN SESSION

The Chair called the meeting to order at 9:30 a.m.

Recording Secretary administered the Roll Call attendance.

Attendance was as follows:

Present via Zoom Video conference pursuant to Government Code § 54953, as amended by AB 361:

Frank Eley, Chair; Shari Freidenrich, Vice Chair; Charles Packard; Richard Oates

Also Present via Zoom: David Kim, Director of Internal Audit; Steve Delaney, Chief Executive Officer; Gina Ratto, General Counsel; Brenda Shott, Assistant CEO, Internal Operations; Suzanne Jenike, Assistant CEO, External Operations; Molly A. Murphy, CFA, Chief Investment Officer; Jeff Lamberson, Director of Member Services; Jenny Sadoski, Director of Information Technology; Mark Adviento, Internal Auditor; Brittany Cleberg, Investment Staff Specialist; Marielle Horst, Recording Secretary; Anthony Beltran, Audio Visual Technician

Guests via Zoom: Kory Hoggan and Aaron Hamilton, Moss Adams

PUBLIC COMMENT

None.

CONSENT AGENDA

MOTION by Oates, **seconded** by Packard, to approve the following Consent Agenda items, excluding C-2 which was pulled by Ms. Freidenrich:

C-1 APPROVE AUDIT COMMITTEE MEETING MINUTES

Audit Committee Meeting Minutes

January 27, 2022

C-2 REQUEST FOR PROPOSAL – ACTUARIAL AUDITOR

Recommendation: Staff requests the Audit Committee approve the distribution of a Request for Proposal to initiate a search for the actuarial auditor.

Audit Committee Meeting
March 30, 2022

The motion passed unanimously.

ACTION AGENDA

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

C-2 REQUEST FOR PROPOSAL – ACTUARIAL AUDITOR

Recommendation: Staff requests the Audit Committee approve the distribution of a Request for Proposal to initiate a search for the actuarial auditor.

Ms. Freidenrich pulled item C-2.

Discussion: Madam Treasurer Freidenrich asked questions and brought up many suggestions for possible inclusion or modifications of similar future contracts. The contract before the Board remained unchanged.

MOTION by Freidenrich, **seconded** by Packard to adopt staff’s recommendation.

The motion passed unanimously.

A-2 2020 FEE REPORT AUDIT

Presentation by Mark Adviento, Internal Auditor

Recommendation: Receive and file

After discussion by the Committee, **MOTION** by Freidenrich, **seconded** by Packard to adopt staff’s recommendation.

The motion passed unanimously.

A-3 THE COUNTY OF ORANGE SOCIAL SERVICES AGENCY EMPLOYER AUDIT

Presentation by David Kim, Director of Internal Audit

Recommendation: Receive and file

MOTION by Freidenrich, **seconded** by Packard to adopt staff’s recommendation.

The motion passed unanimously.

A-4 CONTINUOUS AUDIT OF FINAL AVERAGE SALARY CALCULATIONS (Q1 2022)

Presentation by David Kim, Director of Internal Audit

Recommendation: Receive and file

Mr. Kim presented the Internal Audit’s findings on the Final Average Salary Calculations, noting two exceptions of the 50 samples taken from Q1 2022 (4% error rate). Mr. Lamberson presented how

Audit Committee Meeting
March 30, 2022

the errors were of a unique nature this quarter. One was due to the way salary was formatted in excel by CalPERS. Mr. Packard noted that data received from other entities should always be verified and validated and directed Internal Audit to confirm performance of these controls by OCERS during audits. Ms. Jenike responded that all data is verified regardless of the source and that this particular error was an extremely unique nuance in excel that was introduced by CalPERS for the first time. Ms. Jenike confirmed that her team has followed up with CalPERS so they are aware of their error and OCERS has checked all prior spreadsheets to ensure that there has not been a similar error in any other member calculation. Chair Eley noted that both errors were unusual, and the updated process OCERS team is following has prevented the errors we have seen previously.

MOTION by Oates, **seconded** by Packard to adopt staff’s recommendation.

The motion passed **unanimously**.

After the motion was received and filed, the Committee returned to continue discussion of residual risk. Mr. Delaney discussed residual risk, putting forward \$10 as a threshold for consideration, below which would still be corrected, however, in the future, be reported on an annual basis. Audit Committee members stated their support of a more streamlined approach for reporting errors below a threshold yet to be finalized, but prefer that all errors continue to be reported to the Audit Committee on a quarterly basis. Mr. Delaney noted the intent of staff to make a presentation to the Audit Committee at the October Audit Committee meeting on residual risk for further discussion. The Continuous FAS reporting will continue in its current format for Q2 2022 and Q3 2022.

A-5 ETHICS COMPLIANCE AND FRAUD HOTLINE UPDATE

Presentation by David Kim, Director of Internal Audit

Recommendation: Receive and file

MOTION by Packard, **SECONDED** by Oates to adopt staff’s recommendation.

The motion passed **unanimously**.

INFORMATION ITEM

I-1 2021 FINANCIAL STATEMENT AUDIT – ENTRANCE CONFERENCE

Presentation by Kory Hoggan and Aaron Hamilton, Moss Adams

Representatives of the Moss Adams team presented an outline of the Management and Auditor responsibilities, including a 2021 prosed timeline.

WRITTEN REPORTS

R-1 OPERATIONAL RISK MANAGEMENT ANNUAL REPORT

Written Report

R-2 MANAGEMENT ACTION PLAN VERIFICATION REPORT

Written Report

R-3 STATUS UPDATE OF 2022 AUDIT PLAN

Written Report

Audit Committee Meeting
March 30, 2022

COMMITTEE MEMBER COMMENTS

Mr. Oates thanked the staff for doing a great job on the Alameda project.

Mr. Eley thanked the Audit team for their hard work in preparing the audit and Management for working with the Audit team.

STAFF COMMENTS

Ms. Jenike noted staff is making positive progress on the Alameda implementation project. Management has projected the benefit recalculations to start after the July 1, 2022 payroll. Ms. Jenike informed the Committee of the efforts staff has made to inform beneficiaries of the possibility of benefit recalculations. Letters will continue to be sent to beneficiaries notifying them of possible changes to their benefits at the end of this project.

CHIEF EXECUTIVE OFFICER

Mr. Delaney commented an unnamed CEO would like to discuss the Alameda project, as they are swamped too.

COUNSEL COMMENTS

None

ADJOURNMENT

The Chair adjourned the meeting at 11:16 a.m.

Submitted by:

Approved by:

Steve Delaney
Secretary to the Board

Frank Eley
Chair



Memorandum

DATE: June 2, 2022

TO: Audit Committee Members

FROM: Brenda Shott, Assistant CEO, Finance and Internal Operations; Tracy Bowman, Director of Finance

SUBJECT: 2021 AUDITED FINANCIAL STATEMENTS

Recommendation

Recommend to the Board of Retirement the following:

1. Approve OCERS' audited financial statements for the year ended December 31, 2021
2. Direct staff to finalize OCERS' 2021 Annual Comprehensive Financial Report (Annual Report)
3. Approve the Governmental Accounting Standards Board (GASB) Statement 67 Actuarial Valuation as of December 31, 2021
4. Receive and file Moss Adams LLP's (Moss Adams) "OCERS' Report to the Audit Committee for the Year Ended December 31, 2021" and their "Independent Auditor's Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards*."

Background/Discussion

The attached draft of OCERS' 2021 Annual Report, including the audited financial statements and related notes for the year ended December 31, 2021, is in substantial final form and includes a draft of the unmodified (clean) audit opinion from Moss Adams, OCERS' independent auditors. Moss Adams will issue the signed audit opinion after presenting the draft financial statements to the Audit Committee. The audited financial statements and related notes are included in the Financial Section of OCERS' 2021 Annual Report.

The attached Governmental Accounting Standards Board (GASB) Statement 67 Actuarial Valuation as of December 31, 2021 is used for reporting purposes and is separate and distinct from the funding actuarial valuation. This valuation contains necessary information and schedules that have been incorporated into OCERS' 2021 Annual Report in compliance with GASB Statement No. 67, *Financial Reporting for Pension Plans*.

As part of the normal course of an annual financial statement audit, Moss Adams has issued a draft of their "Report to the Audit Committee" that includes the required communications of the independent auditors, comments and recommendations based on their 2021 audit of OCERS. Moss Adams has also issued a draft "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."

Moss Adams will be present at the Audit Committee Meeting on June 2, 2022. They will provide the Committee with a verbal report on their audit. A draft of the 2021 Annual Report in substantially final form will be presented to the Board at its regularly scheduled Board meeting on June 20, 2022. The final signed audit reports and the Annual Report will be distributed to the Board once finalized.



Memorandum

California’s Government Code Section 7504 requires all state and local retirement agencies, including OCERS, to submit annual financial information to the State Controller within six months of the end of the fiscal year end. The State Controller’s Office (SCO) has an automated system to allow retirement systems to provide the prescribed report containing specific financial and plan information to the SCO (this report is referred to as the State Controller’s Report). In addition to the State Controller’s Report, OCERS is also required to submit the annual audited financial statements and the most current funding actuarial valuation. Once the Board approves the financial statements for the year ended December 31, 2021, staff will file a timely submission of the State Controller’s Report and submit OCERS’ 2021 Annual Report and the Actuarial Valuation (for funding purposes) as of December 31, 2020 by the deadline of June 30, 2022.

Submitted by:

A handwritten signature in black ink, appearing to read "Tracy Bowman", is written over a horizontal line.

Tracy Bowman
Director of Finance

Approved by:

A handwritten signature in black ink, appearing to read "Brenda M Shott", is written over a horizontal line.

Brenda Shott
Asst. CEO, Finance & Internal Operations

2011



2021 Audited Financial Statements

Presented on June 2, 2022

by

Brenda Shott and Tracy Bowman



Recommendation

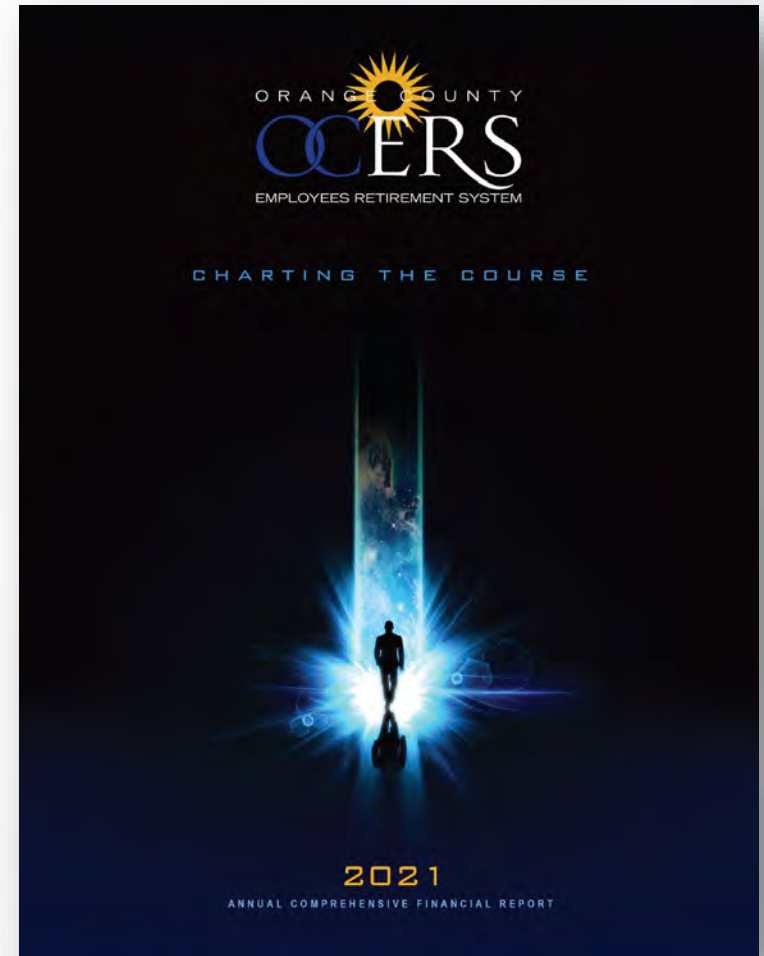
Recommend to the Board of Retirement the following:

1. Approve OCERS' audited financial statements for the year ended December 31, 2021
2. Direct staff to finalize OCERS' 2021 Annual Comprehensive Financial Report (Annual Report)
3. Approve the Governmental Accounting Standards Board (GASB) Statement 67 Actuarial Valuation as of December 31, 2021
4. Receive and file Moss Adams LLP's (Moss Adams) "OCERS' Report to the Audit Committee for the Year Ended December 31, 2021" and their "Independent Auditor's Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with Government Auditing Standards"



2021 Annual Report

- **Audit of the Annual Report was performed by first year auditors, Moss Adams, and completed 100% remotely**
- Preliminary unaudited financial statements provided to the Board in March
 - No material changes reflected in final audited version included in the Annual Report
- Theme: Charting the Course
- Adopted GASB 98 *The Annual Comprehensive Financial Report*





GASB 98 The Annual Comprehensive Financial Report

- Statement proposed in response to GFOA's End the Acronym Policy in July 2021
 - The policy change was the result of concerns raised by stakeholders that the acronym for Comprehensive Annual Financial Report, when pronounced aloud, sounds like a deeply derogatory term often used in other parts of the world
 - GASB issued Statement 98 in October 2021, effective for fiscal years ending December 15, 2021, to establish the term **Annual Comprehensive Financial Report** and its acronym **ACFR** to replace instances of Comprehensive Annual Financial Report and its acronym in generally accepted accounting principles for state and local governments
 - OCERS is using either **full name**, "**ACFR**" or "**Annual Report**"



Financial Highlights – MD&A

- In 2021, net position totaled nearly **\$22.5 billion**, an **increase of \$3.2 billion** or 16.7% from the prior year
 - Net investment income of \$3.3 billion or 16.6% vs. \$2.2 billion, or 11.4% in the prior year
 - Employee and employer contributions for pension and health care added \$1.0 billion
- Increases offset by member pension benefit payments which **surpassed \$1.0 billion** for the first time, an increase of 7.2% or \$69.4 million from the prior year

Table 2 : Changes in Fiduciary Net Position
For the Years Ended December 31, 2021 and 2020
(Dollars in Thousands)

	12/31/2021	12/31/2020	Increase / (Decrease)	Percentage Change
Additions				
Employer Pension Contributions	\$ 698,791	\$ 659,807	\$ 38,984	5.9%
Employer Health Care Contributions	57,822	43,535	14,287	32.8%
Employee Pension Contributions	271,334	279,384	(8,050)	-2.9%
Employer OPEB Contributions	605	613	(8)	-1.3%
Net Investment Income	3,298,237	2,220,401	1,077,836	48.5%
Total Additions	4,326,789	3,203,740	1,123,049	35.1%
Deductions				
Participant Benefits - Pension	1,030,234	960,846	69,388	7.2%
Participant Benefits - Health Care	43,261	42,323	938	2.2%
Death Benefits	1,055	932	123	13.2%
Member Withdrawals and Refunds	14,449	11,547	2,902	25.1%
Employer OPEB Payments	1,419	1,383	36	2.6%
Administrative Expenses - Pension	21,473	20,428	1,045	5.1%
Administrative Expenses - Health Care and Employer	70	66	4	6.1%
Total Deductions	1,111,961	1,037,525	74,436	7.2%
Increase in Net Position Restricted for Pension, Other Postemployment Benefits and Employer	3,214,828	2,166,215	1,048,613	48.4%
Net Position Restricted for Pension, Other Postemployment Benefits and Employer				
Beginning of the Year	19,274,599	17,108,384		
End of the Year	\$ 22,489,427	\$ 19,274,599		



Financial Highlights – MD&A (continued)

Table 3: Membership Data
 As of December 31, 2021 and 2020

	12/31/2021	12/31/2020	Increase/ (Decrease)	Percentage Change
Active Members	22,011	21,559	452	2.1%
Retired Members	19,826	19,419	407	2.1%
Deferred Members	7,238	6,818	420	6.2%
Total Membership	49,075	47,796	1,279	2.7%

- Increases in member pension benefit payments can be attributed to an increase in the number of retirees receiving a benefit
 - Number of retirees increased by 2.1% or 407, for a total of 19,826 payees as of December 31, 2021
 - 2021 reflected full year of retirement payments for 500 retirees who accepted County of Orange’s voluntary separation and retirement incentive program in Fall of 2020
 - The average benefit paid to retired members and beneficiaries during 2021 was \$51,964 vs. \$49,480 in 2020, an increase of 2.8%



Financial Highlights – MD&A (continued)

- Annual Report includes information from the December 31, 2020 funding valuation, which is the most currently available information at the time the Annual Report is completed
 - Funding status based on actuarial value of assets (which smooths market gains and losses over five years) was 76.5% versus 80.7% if market gains and losses were recognized immediately
 - In comparison, in the December 31, 2021 funding valuation to be presented at the June Board meeting, the funding status based on actuarial value of assets was 81.2% versus 90.5% if market gains and losses were recognized immediately



- GASB 67 Valuation is prepared by Segal for ***reporting purposes only***
 - Information is incorporated into the Notes (Note 8) and Required Supplementary Information sections of the Annual Report
 - Total Pension Liability (TPL) is based on rolling forward the TPL from the 2020 valuation to the December 31, 2021 measurement date
- 2021 Net Pension Liability (NPL) decreased from \$4.2 billion to \$2.1 billion, primarily due to higher-than-expected returns
 - 2021 NPL is amount used in GASB 68 proportionate share calculation



Conclusion

Questions?

**Please refer to the Financial Reports on the
OCERS' website**

(<https://www.ocers.org/financial-reports>)

**to view the final version of the audited
financial statements included in the Annual
Comprehensive Financial Report for the
Fiscal Year Ended December 31, 2021.**

Orange County Employees Retirement System (OCERS)

Governmental Accounting Standards Board Statement 67 (GASB 67) Actuarial Valuation

As of December 31, 2021



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.

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Segal



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May 10, 2022

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

Dear Board Members:

We are pleased to submit this Governmental Accounting Standards Board (GASB) Statement 67 Actuarial Valuation as of December 31, 2021. It contains various information that will need to be disclosed in order to comply with GASB Statement 67.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist Orange County Employees Retirement System (OCERS) in preparing items related to the pension plan in their financial report. The census and financial information on which our calculations were based were prepared by OCERS. That assistance is gratefully acknowledged.

The measurements shown in this actuarial valuation may not be applicable for other purposes. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and changes in plan provisions or applicable law.

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

We look forward to reviewing this report with you and to answering any questions.

Sincerely,

Segal

A handwritten signature in black ink, appearing to read "Paul Angelo", written over a horizontal line.

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

A handwritten signature in black ink, appearing to read "Andy Yeung", written over a horizontal line.

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

JY/jl

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Section 1: Actuarial Valuation Summary

Purpose and basis

This report has been prepared by Segal to present certain disclosure information required by Governmental Accounting Standards Board (GASB) Statement 67 as of December 31, 2021. This valuation is based on:

- The benefit provisions of OCERS, as administered by the Board of Retirement;
- The characteristics of covered active members, inactive vested members, and retired members and beneficiaries as of December 31, 2020, provided by OCERS;
- The assets of the Plan as of December 31, 2021, provided by OCERS;
- Economic assumptions regarding future salary increases and investment earnings adopted by the Board of Retirement for the December 31, 2021 valuation; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc. adopted by the Board of Retirement for the December 31, 2021 valuation.

General observations on GASB 67 actuarial valuation

1. It is important to note that Governmental Accounting Standards Board (GASB) rules only define pension liability and expense for financial reporting purposes, and do not apply to contribution amounts for pension funding purposes. Employers and plans should develop and adopt funding policies under current practices.
2. When measuring pension liability, GASB uses the same actuarial cost method (Entry Age method) and the same type of discount rate (expected return on assets) as OCERS uses for funding. This means that the Total Pension Liability (TPL) measure for financial reporting shown in this report is generally determined on the same basis as OCERS' Actuarial Accrued Liability (AAL) measure for funding. We note that the same is generally true for the Normal Cost component of the annual plan cost for funding and financial reporting.
3. The Net Pension Liability (NPL) is equal to the difference between the TPL and the Plan's Fiduciary Net Position. The Plan's Fiduciary Net Position is equal to the market value of assets and therefore, the NPL measure is very similar to an Unfunded Actuarial Accrued Liability (UAAL) on a market value basis.

Section 1: Actuarial Valuation Summary

Highlights of the valuation

1. For this report, the reporting dates for the Plan are December 31, 2021 and 2020. The NPLs measured as of December 31, 2021 and 2020 have been determined by rolling forward the TPLs as of December 31, 2020 and 2019, respectively. The Plan's Fiduciary Net Positions were valued as of the measurement dates. In addition, any changes in actuarial assumptions or plan provisions that occurred between the valuation date and the measurement date have been reflected.
2. The NPL decreased from \$4,213.2 million as of December 31, 2020 to \$2,050.2 million as of December 31, 2021 primarily as a result a 17.19%¹ return on the market value of assets during 2021 that was higher than the assumed return of 7.00% by approximately \$1,909.8 million. Changes in these values during the last two calendar years ending December 31, 2021 and December 31, 2020 can be found in *Section 2, Schedule of changes in Net Pension Liability* on page 17.
3. The discount rate used to determine the TPL and NPL as of both December 31, 2021 and 2020 was 7.00% following the same assumption used by the System in the pension funding valuations as of the December 31, 2020 and December 31, 2019. The detailed calculation of the discount rate of 7.00% used in the calculation of the TPL and NPL as of December 31, 2021 can be found in *Section 3, Appendix A*. Various other information that is required to be disclosed can be found throughout *Section 2*.
4. The Plan's Fiduciary Net Position of \$18,797,203,000 as of December 31, 2020 is equal to the final market value of assets in the Pension Trust Fund as of December 31, 2020. This differs from the \$18,494,462,000 market value of assets used in our December 31, 2020 funding valuation because (1) our funding valuation was based on the preliminary market value of assets provided in the unaudited financial statements and (2) the market value of assets in the funding valuation excludes \$160,378,000 in the County Investment Account and \$13,433,000 in O.C. Sanitation District UAAL Deferred Account.

The Plan's Fiduciary Net Position of \$21,922,182,000 as of December 31, 2021 is equal to the final market value of assets in the Pension Trust Fund as of December 31, 2021. This differs from the \$21,738,794,000 market value of assets used in our December 31, 2021 funding valuation because the market value of assets in the funding valuation excludes \$167,745,000 in the County Investment Account and \$15,643,000 in O.C. Sanitation District UAAL Deferred Account.

5. On July 30, 2020, the California Supreme Court issued a decision in the case of Alameda County Deputy Sheriffs' Association et al. v. Alameda County Employees' Retirement Association (ACERA) and Board of Retirement of ACERA. That decision has important implications for OCERS and its members. In particular, the decision requires pension systems like OCERS to exclude certain pay items from a legacy member's compensation earnable. It should be noted that neither the December 31, 2021 assets

¹ As documented in the funding valuation report, return on market value was calculated using a modified dollar-weighted approach based on pension plan assets net of accounting liabilities. Actual investment return on net pension plan assets (based on final asset amount as of December 31, 2020 was \$3,144,418,000 during 2021 after including both the administrative expenses and discount for prepaid contributions while excluding the gains credited to County Investment Account and O.C. Sanitation District UAAL Deferred Account. Without these adjustments, the actual investment return was \$3,192,461,000.

Section 1: Actuarial Valuation Summary

provided by OCERS nor the December 31, 2021 liabilities we calculated by rolling forward the results using the membership data provided by OCERS as of December 31, 2020 reflect the financial impact of the California Supreme Court decision.

6. It is important to note that this actuarial valuation is based on plan assets as of December 31, 2021. Due to the COVID-19 pandemic, market conditions have changed significantly since the onset of the Public Health Emergency. The plan's funded 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. Moreover, this actuarial valuation does not include any possible short-term or long-term impacts on mortality of the covered population that may emerge after December 31, 2021. While it is impossible to determine how the pandemic will affect market conditions and other demographic experience of the plan in future valuations, Segal is available to prepare projections of potential outcomes upon request.

Section 1: Actuarial Valuation Summary

Summary of key valuation results

Measurement Date		December 31, 2021	December 31, 2020
Disclosure elements for calendar year ending December 31:	• Service cost ¹	\$510,863,197	\$512,255,298
	• Total Pension Liability	23,972,419,722	23,010,449,650
	• Plan's Fiduciary Net Position	21,922,182,000	18,797,203,000
	• Net Pension Liability	2,050,237,722	4,213,246,650
Schedule of contributions for calendar year ending December 31:	• Actuarially determined contributions	\$684,142,000	\$638,215,000
	• Actual contributions ²	698,791,000	659,807,000
	• Contribution deficiency / (excess) ³	(14,649,000)	(21,592,000)
Demographic data for calendar year ending December 31:	• Number of retired members and beneficiaries	19,826	19,419
	• Number of inactive vested members	7,238	6,818
	• Number of active members	22,011	21,559
Key assumptions as of December 31:	• Investment rate of return	7.00%	7.00%
	• Inflation rate	2.50%	2.50%
	• Projected salary increases ⁴	General: 4.00% to 11.00% and Safety: 4.60% to 15.00%	General: 4.00% to 11.00% and Safety: 4.60% to 15.00%
	• Cost of living adjustments	2.75% of retirement income	2.75% of retirement income

¹ The Service Cost is based on the previous year's valuation, meaning the December 31, 2021 and December 31, 2020 measurement date values are based on the valuations as of December 31, 2020 and December 31, 2019, respectively. The 2021 service cost has been calculated using the assumptions shown in the December 31, 2020 column and the 2020 service cost has been calculated using the assumptions in the December 31, 2019 valuation. The key assumptions as of December 31, 2019 are as follows:

Key assumptions as of December 31, 2019:

Investment rate of return	7.00%
Inflation rate	2.75%
Projected salary increases*	General: 4.25% to 12.25% and Safety: 4.75% to 17.25%

* Includes inflation at 2.75% plus real across-the-board salary increases of 0.50% plus merit and promotion increases.

² Reduced by discount for prepaid contributions and transfer from County Investment Account, if any.

³ Includes additional contributions made by employers toward the reduction of their UAAL. Details are shown in *Section 2, Schedule of Contributions* on page 18.

⁴ Includes inflation at 2.50%, plus real across-the-board salary increases of 0.50% plus merit and promotion increases.

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. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan description in this report (as well as the plan summary included in our funding valuation report) to confirm that Segal has correctly interpreted the plan benefits.
Participant data	An actuarial valuation for a plan is based on data provided to the actuary by OCERS. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
Assets	This valuation is based on the market value of assets as of the measurement date, as provided by OCERS.
Actuarial assumptions	In preparing an actuarial valuation, Segal projects the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This projection requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of each participant for each year. In addition, the benefits projected to be paid for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments. The forecasted benefits are then discounted to a present value, typically based on an estimate of the rate of return that will be achieved on the plan's assets or, if there are no assets, a rate of return based on a yield or index rate of 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher (or equivalent quality on another rating scale). 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.
Models	Segal valuation results are based on proprietary actuarial modeling software. The actuarial valuation models generate a comprehensive set of liability and cost calculations that are presented to meet regulatory, legislative and client requirements. Our Actuarial Technology and Systems unit, comprised of both actuaries and programmers, is responsible for the initial development and maintenance of these models. The models have a modular structure that allows for a high degree of accuracy, flexibility and user control. The client team programs the assumptions and the plan provisions, validates the models, and reviews test lives and results, under the supervision of the responsible actuary.

Section 1: Actuarial Valuation Summary

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

The valuation is prepared at the request of the Board to assist OCERS in preparing items related to the pension plan in their financial reports. Segal is not responsible for the use or misuse of its report, particularly by any other party.

An actuarial valuation is a measurement of the plan's assets and liabilities at a specific date. Accordingly, except where otherwise noted, Segal did not perform an analysis of the potential range of future financial measures. The actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.

If OCERS is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.

Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. The Board should look to their other advisors for expertise in these areas.

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

Section 2: GASB 67 Information

General information about the pension plan

Plan Description

Plan administration. The Orange County Employees Retirement System (OCERS) was established by the County of Orange in 1945. OCERS is administered by the Board of Retirement and governed by the County Employees' Retirement Law of 1937 (California Government Code Section 31450 et. seq.). OCERS is a cost-sharing multiple employer public employee retirement system whose main function is to provide service retirement, disability, death and survivor benefits to the Safety and General members employed by the County of Orange. OCERS also provides retirement benefits to the employee members of the Orange County Courts, the Orange County Retirement System, two cities and thirteen special districts.

The management of OCERS is vested with the Orange County Board of Retirement. The Board consists of nine members and one alternate. The County Treasurer is a member of the Board of Retirement by law. Four members are appointed by the Board of Supervisors, one of whom may be a County Supervisor. Two members are elected by the General membership; one member and one alternate are elected by the Safety membership, one member is elected by the retired members of the System. All members of the Board of Retirement serve terms of three years except for the County Treasurer whose term runs concurrent with the County Treasurer term.

Plan membership. At December 31, 2021, pension plan membership consisted of the following:

Retired members or beneficiaries currently receiving benefits	19,826
Inactive vested members entitled to but not yet receiving benefits	7,238
Active members	<u>22,011</u>
Total	49,075

Note: Data as of December 31, 2021 is not used in the measurement of the TPL as of December 31, 2021.

Section 2: GASB 67 Information

Benefits provided. OCERS provides service retirement, disability, death and survivor benefits to eligible employees. All regular full-time employees of the County of Orange or contracting agencies who work a minimum of 20 hours per week become members of OCERS effective on the first day of employment in an eligible position. There are separate retirement plans for General and Safety member employees. Safety membership is extended to those involved in active law enforcement, fire suppression, and certain probation officers. Any new Safety member who becomes a member on or after January 1, 2013 is designated PEPRA Safety and is subject to the provisions of California Public Employees' Pension Reform Act of 2013 (PEPRA), California Government Code 7522 et seq. All other employees are classified as General members. New General members employed on or after January 1, 2013 are designated as PEPRA General subject to the provisions of California Government Code 7522 et. seq.

General members hired prior to January 1, 2013, including all members of Plan T and Plan W hired on or after January 1, 2013, are eligible to retire once they attain the age of 50 and have acquired ten or more years of retirement service credit. A member with thirty years of service is eligible to retire regardless of age. General members who are first hired on or after January 1, 2013, excluding members of Plan T and Plan W, are eligible to retire once they have attained the age of 52, and have acquired five years of retirement service credit.

Safety members hired prior to January 1, 2013, are eligible to retire once they attain the age of 50 and have acquired ten or more years of retirement service credit. A member with twenty years of service is eligible to retire regardless of age. Safety members who are first hired on or after January 1, 2013, are eligible to retire once they have attained the age of 50, and have acquired five years of retirement service credit.

All General and Safety members can also retire at the age of 70 regardless of service.

The retirement benefit the member will receive is based upon age at retirement, final average compensation, years of retirement service credit and retirement plan and tier.

General member benefits are calculated pursuant to the provisions of Sections 31676.01, 31676.1, 31676.12, 31676.16, 31676.18 or 31676.19. For Section 31676.01, the monthly allowance is equal to 1/90th of final compensation times years of accrued retirement service credit times age factor from that Section. For Section 31676.1, the monthly allowance is equal to 1/60th of final compensation times years of accrued retirement service credit times age factor from that Section. For Sections 31676.12, 31676.16, 31676.18 or 31676.19, the monthly allowance is equal to 1/50th of final compensation times years of accrued retirement service credit times age factor from the corresponding Section. General member benefits for those who are first hired on or after January 1, 2013, excluding members of Plan T and Plan W, are calculated pursuant to the provision of California Government Code Section 7522.20(a). The monthly allowance is equal to the final compensation multiplied by years of accrued retirement credit multiplied by the age factor from Section 7522.20(a).

Safety member benefits are calculated pursuant to the provisions of California Government Code Sections 31664.1 and 31664.2. The monthly allowance is equal to 3% of final compensation times years of accrued retirement service credit times age factor from the corresponding Section. Safety member benefits for those who are first hired on or after January 1, 2013, are calculated pursuant to the provision of California Government Code Section 7522.25(d). The monthly allowance is equal to the final compensation multiplied by years of accrued retirement credit multiplied by the age factor from Section 7522.25(d).

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For members with membership dates before January 1, 2013, including all members of Plan T and Plan W hired on or after January 1, 2013, the maximum monthly retirement allowance is 100% of final compensation. There is no maximum for members with membership dates on or after January 1, 2013, excluding members of Plan T and Plan W.

Final average compensation consists of the highest 12 consecutive months for a General Tier 1 or Safety Tier 1 member and the highest 36 consecutive months for a General Tier 2, General PEPRA, Safety Tier 2 or Safety PEPRA member.

The member may elect an unmodified retirement allowance, or choose an optional retirement allowance. The unmodified retirement allowance provides the highest monthly benefit and a 60% continuance to an eligible surviving spouse or domestic partner. An eligible surviving spouse or domestic partner is one married to or registered with the member one year prior to the effective retirement date. Certain surviving spouses or domestic partners may also be eligible if marriage or domestic partnership was at least two years prior to the date of death and the surviving spouse or domestic partner has attained age 55. There are four optional retirement allowances the member may choose. Each of the optional retirement allowances requires a reduction in the unmodified retirement allowance in order to allow the member the ability to provide certain benefits to a surviving spouse, domestic partner, or named beneficiary having an insurable interest in the life of the member.

OCERS provides an annual cost-of-living adjustment (COLA) benefit to all retirees. The COLA, based upon the ratio of the past two annual Consumer Price Indices for All Urban Consumers for the Los Angeles-Long Beach-Anaheim Area, is capped at 3.0%.

The County of Orange and contracting agencies contribute to the retirement plan based upon actuarially determined contribution rates adopted by the Board of Retirement. Employer contribution rates are adopted annually based upon recommendations received from OCERS' actuary after the completion of the annual actuarial valuation. The average employer contribution rate for the first six months of calendar year 2021 or the second half of fiscal year 2020-2021 (based on the December 31, 2018 valuation) was 40.02%¹ of compensation. The average employer contribution rate for the last six months of calendar year 2021 or the first half of fiscal year 2021-2022 (based on the December 31, 2019 valuation) was 41.49%¹ of compensation.

All members are required to make contributions to OCERS regardless of the retirement plan or tier in which they are included. The average member contribution rate for the first six months of calendar year 2021 or the second half of fiscal year 2020-2021 (based on the December 31, 2018 valuation) was 12.47%² of compensation. The average member contribution rate for the last six months of calendar year 2021 or the first half of fiscal year 2021-2022 (based on the December 31, 2019 valuation) was 12.31%¹ of compensation.

¹ These employer contribution rates may be higher or lower than the composite rate for 2021 as shown on page 18 of this report because these rates have not been adjusted to reflect any pick-ups or reverse pick-ups. These employer contribution rates also do not reflect the shift in payroll to the lower cost plans from the valuation date to the date of rate implementation.

² It should be noted that these member contribution rates provided above have not been adjusted to reflect any pick-ups or reverse pick-ups.

Section 2: GASB 67 Information

Net Pension Liability

Measurement Date	December 31, 2021	December 31, 2020
Components of the Net Pension Liability		
Total Pension Liability	\$23,972,419,722	\$23,010,449,650
Plan's Fiduciary Net Position	(21,922,182,000)	(18,797,203,000)
Net Pension Liability	\$2,050,237,722	\$4,213,246,650
Plan's Fiduciary Net Position as a percentage of the Total Pension Liability	91.45%	81.69%

The Net Pension Liability (NPL) was measured as of December 31, 2021 and 2020. The Plan's Fiduciary Net Position (plan assets) was valued as of the measurement date while the Total Pension Liability (TPL) was determined based upon rolling forward the TPL from actuarial valuations as of December 31, 2020 and 2019, respectively.

Plan provisions. The plan provisions used in the measurement of the NPL as of December 31, 2021 and 2020 are the same as those used in the OCERS actuarial valuations as of December 31, 2021 and 2020, respectively.

Actuarial assumptions. The TPL as of December 31, 2021 was determined by the actuarial valuation as of December 31, 2020. The actuarial assumptions used were based on the results of an experience study for the period from January 1, 2017 through December 31, 2019 and they are the same assumptions used in the December 31, 2021 funding valuation for OCERS. The TPL as of December 31, 2020 was remeasured by (1) revaluing the TPL as of December 31, 2019 (before the roll forward) to include the new actuarial assumptions adopted by the Retirement Board from the experience study, and (2) using this revalued TPL in rolling forward the results from December 31, 2019 to December 31, 2020. In particular, the following actuarial assumptions were applied to all periods included in the measurement:

Inflation:	2.50%
Salary increases:	General: 4.00% to 11.00% and Safety: 4.60% to 15.00%, vary by service, including inflation
Consumer Price Index (CPI) and Cost of Living Adjustments (COLA):	CPI increases of 2.75% per year Retiree COLA increases of 2.75% per year. For members that have COLA banks, we assume they receive 3.00% COLA increases until their COLA banks are exhausted and 2.75% thereafter
Investment rate of return:	7.00%, net of pension plan investment expense, including inflation
Other assumptions:	See analysis of actuarial experience during the period January 1, 2017 through December 31, 2019

Section 2: GASB 67 Information

Determination of discount rate and investment rates of return

The long-term expected rate of return on pension plan investments¹ was determined in 2020 using a building-block method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage, adding expected inflation and subtracting expected investment expenses and a risk margin. The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before investment expenses are shown in the following table. This information was used in the derivation of the long-term expected investment rate of return assumption for the December 31, 2021 and 2020 actuarial valuations. This information will change every three years based on the actuarial experience study.

Asset Class	Target Allocation	Long-Term Expected Arithmetic Real Rate of Return
Large Cap Equity	23.10%	5.43%
Small Cap Equity	1.90%	6.21%
International Developed Equity	13.00%	6.67%
Emerging Markets Equity	9.00%	8.58%
Core Bonds	9.00%	1.10%
High Yield Bonds	1.50%	2.91%
TIPS	2.00%	0.65%
Emerging Market Debt	2.00%	3.25%
Corporate Credit	1.00%	0.53%
Long Duration Fixed Income	2.50%	1.44%
Real Estate	3.01%	4.42%
Private Equity	13.00%	9.41%
Value Added Real Estate	3.01%	7.42%
Opportunistic Real Estate	0.98%	10.18%
Energy	2.00%	9.68%
Infrastructure (Core Private)	1.50%	5.08%
Infrastructure (Non-Core Private)	1.50%	8.92%
CTA - Trend Following	2.50%	2.38%
Global Macro	2.50%	2.13%
Private Credit	2.50%	5.47%
Alternative Risk Premia	2.50%	2.50%
Total	100.00%	5.67%

¹ Note that the investment return assumption for funding purposes is developed net of both investment and administrative expenses; however, the same investment return assumption is used for financial reporting purposes, where it is considered gross of administrative expenses.

Section 2: GASB 67 Information

Discount rate. The discount rate used to measure the TPL was 7.00% as of December 31, 2021 and 2020. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the actuarially determined contribution rates. For this purpose, only employer contributions that are intended to fund benefits for current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs for future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments for current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the TPL as of both December 31, 2021 and 2020.

Section 2: GASB 67 Information

Discount rate sensitivity

Sensitivity of the Net Pension Liability to changes in the discount rate. The following presents the NPL as of December 31, 2021, calculated using the discount rate of 7.00%, as well as what the NPL would be if it were calculated using a discount rate that is 1-percentage-point lower (6.00%) or 1-percentage-point higher (8.00%) than the current rate:

	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
Net Pension Liability as of December 31, 2021	\$5,404,950,801	\$2,050,237,722	\$(684,164,145)

Section 2: GASB 67 Information

Schedule of changes in Net Pension Liability – Last two calendar years

Measurement Date	December 31, 2021	December 31, 2020
Total Pension Liability		
• Service cost	\$510,863,197	\$512,255,298
• Interest	1,609,891,069	1,535,953,426
• Change of benefit terms	0	0
• Differences between expected and actual experience	(113,046,194)	162,335,537
• Changes of assumptions	0	18,966,926
• Benefit payments, including refunds of member contributions	(1,045,738,000)	(973,325,000)
• Transfer of members among Rate Groups	0	0
• Other	0	0
Net change in Total Pension Liability	\$961,970,072	\$1,256,186,187
Total Pension Liability – beginning	23,010,449,650	21,754,263,463
Total Pension Liability – ending	\$23,972,419,722	\$23,010,449,650
Plan's Fiduciary Net Position		
• Contributions – employer ¹	\$698,791,000	\$659,807,000
• Contributions – member	271,334,000	279,384,000
• Net investment income	3,222,065,000	2,173,184,000
• Benefit payments, including refunds of member contributions	(1,045,738,000)	(973,325,000)
• Transfer of members among Rate Groups	0	0
• Administrative expense	(21,473,000)	(20,428,000)
• Other	0	0
Net change in Plan's Fiduciary Net Position	\$3,124,979,000	\$2,118,622,000
Plan's Fiduciary Net Position – beginning	\$18,797,203,000	\$16,678,581,000
Plan's Fiduciary Net Position – ending	\$21,922,182,000	\$18,797,203,000
Net Pension Liability – ending	\$2,050,237,722	\$4,213,246,650
Plan's Fiduciary Net Position as a percentage of the Total Pension Liability	91.45%	81.69%
Covered payroll²	\$1,870,387,000	\$1,909,268,000
Plan Net Pension Liability as percentage of covered payroll	109.62%	220.67%

¹ Reduced by discount for prepaid contributions and transfer from County Investment Account, if any.

² Covered payroll represents payroll on which contributions to the pension plan are based.

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Schedule of contributions – Last ten calendar years

Year Ended December 31	Actuarially Determined Contributions ^{1,2}	Contributions in Relation to the Actuarially Determined Contributions ^{1,2}	Contribution Deficiency / (Excess)	Covered Payroll ³	Contributions as a Percentage of Covered Payroll ^{1,2}
2012	\$406,521,000	\$406,521,000	\$0	\$1,497,475,000	27.15%
2013	426,020,000	427,095,000 ⁴	(1,075,000)	1,494,745,000	28.57%
2014	476,320,000	625,520,000 ⁵	(149,200,000)	1,513,206,000	41.34%
2015	502,886,000	571,298,000 ⁶	(68,412,000)	1,521,036,000	37.56%
2016	521,447,000	567,196,000 ⁷	(45,749,000)	1,602,675,000	35.40%
2017	536,726,000 ⁸	572,104,000 ^{8,9}	(35,378,000)	1,678,322,000	34.09%
2018	556,728,000 ¹⁰	580,905,000 ^{10,11}	(24,177,000)	1,718,798,000	33.80%
2019	583,057,000	653,793,000 ¹²	(70,736,000)	1,783,054,000	36.67%
2020	638,215,000	659,807,000 ¹³	(21,592,000)	1,909,268,000	34.56%
2021	684,142,000 ¹⁴	698,791,000 ¹⁵	(14,649,000)	1,870,387,000	37.36%

¹ Reduced by transfers from County Investment Account (funded by pension obligation proceeds held by OCERS). Those transfers are as follows:

Calendar Year Ended December 31	Transfers from County Investment Account	Calendar Year Ended December 31	Transfers from County Investment Account
2012	\$5,500,000	2017	\$0
2013	5,000,000	2018	0
2014	5,000,000	2019	0
2015	0	2020	5,000,000
2016	0	2021	15,077,000

² Reduced by discount for prepaid contributions.

³ Covered payroll represents payroll on which contributions to the pension plan are based.

⁴ Includes additional contributions of \$1,075,000 made by O.C. Fire Authority towards the reduction of their UAAL.

⁵ Includes additional contributions of \$1,663,000 made by O.C. Cemetery District, \$22,537,000 made by O.C. Fire Authority and \$125,000,000 made by O.C. Sanitation District towards the reduction of their UAAL.

⁶ Includes additional contributions of \$18,412,000 made by O.C. Fire Authority and \$50,000,000 made by O.C. Sanitation District towards the reduction of their UAAL.

⁷ Includes additional contributions of \$5,133,000 made by O.C. Fire Authority, \$1,500,000 made by Law Library and \$5,587,000 made by O.C. Sanitation District towards the reduction of their UAAL as well as \$33,529,000 made by O.C. Sanitation District to their UAAL Deferred Account.

⁸ \$24,042,000 transfer from O.C. Sanitation District Deferred UAAL Account required to offset UAAL increase for the assumption changes has been excluded from both these amounts.

⁹ Includes additional contributions of \$32,096,000 made by O.C. Fire Authority, \$1,538,000 made by Law Library and \$1,744,000 made by O.C. Children and Families Commission towards the reduction of their UAAL.

¹⁰ \$14,589,000 transfer from O.C. Sanitation District Deferred UAAL Account required to offset UAAL increase for the actuarial losses as of December 31, 2018 has been excluded from both these amounts.

¹¹ Includes additional contributions of \$23,437,000 made by O.C. Fire Authority and \$740,000 made by Cypress Recreation and Parks District towards the reduction of their UAAL.

¹² Includes additional contributions of \$19,043,000 made by O.C. Fire Authority, \$878,000 made by O.C. Vector Control, \$12,815,000 Transportation Corridor and \$8,116,000 made by O.C. Sanitation District towards the reduction of their UAAL as well as \$29,884,000 made by O.C. Sanitation District to their UAAL Deferred Account.

¹³ Includes additional contributions of \$21,592,000 made by O.C. Fire Authority towards the reduction of their UAAL.

¹⁴ Includes a contribution of \$6,500,000 made by City of San Juan Capistrano related to transferring its Water Department employees to a separate special district, which resulted in a triggering event under the Board's Declining Employer Payroll policy.

¹⁵ Includes additional contributions of \$14,649,000 made by O.C. Fire Authority towards the reduction of their UAAL.

Notes to Schedule:**Methods and assumptions used to establish “actuarially determined contribution” rates:**

Valuation date:	Actuarially determined contribution rates for the first six months of calendar year 2021 or the second half of fiscal year 2020-2021 are calculated based on the December 31, 2018 valuation. Actuarially determined contribution rates for the last six months of calendar year 2021 or the first half of fiscal year 2021-2022 are calculated based on the December 31, 2019 valuation.
Actuarial cost method:	Entry Age Actuarial Cost Method
Amortization method:	Level percent of payroll for total unfunded actuarial accrued liability
Remaining amortization period:	Effective December 31, 2013, the outstanding balance of the UAAL from the December 31, 2012 valuation was combined and re-amortized over a declining 20-year period. Any changes in UAAL due to actuarial gains or losses or due to changes in assumptions or methods will be amortized over separate 20-year periods. Any changes in UAAL due to plan amendments will be amortized over separate 15-year periods and any change in UAAL due to early retirement incentive programs will be amortized over a separate period of up to 5 years.
Asset valuation method:	The Actuarial Value of Assets is determined by recognizing any difference between the actual and the expected market return over a five-year period. The Valuation Value of Assets is the Actuarial Value of Assets reduced by the value of the non-valuation reserves.

Section 2: GASB 67 Information

Actuarial assumptions:		
Valuation Date:	December 31, 2019 Valuation	December 31, 2018 Valuation
Investment rate of return:	7.00%, net of pension plan investment expense, including inflation	7.00%, net of pension plan investment expense, including inflation
Inflation rate:	2.75%	2.75%
Real across-the-board salary increase:	0.50%	0.50%
Projected salary increases:	General: 4.25% to 12.25% and Safety: 4.75% to 17.25%, vary by service, including inflation	General: 4.25% to 12.25% and Safety: 4.75% to 17.25%, vary by service, including inflation
Consumer Price Index (CPI) and Cost of Living Adjustments (COLA):	CPI increases of 2.75% per year Retiree COLA increases of 2.75% per year. For members that have COLA banks, we assume they receive 3.00% COLA increases until their COLA banks are exhausted and 2.75% thereafter	CPI increases of 2.75% per year Retiree COLA increases of 2.75% per year. For members that have COLA banks, we assume they receive 3.00% COLA increases until their COLA banks are exhausted and 2.75% thereafter
Other assumptions:	Same as those used in the December 31, 2019 funding actuarial valuation	Same as those used in the December 31, 2018 funding actuarial valuation

Section 3: Appendices

Appendix A: Projection of Pension Plan's Fiduciary Net Position for use in the Calculation of Discount Rate as of December 31, 2021 (\$ in millions)

Year Beginning January 1	Projected Beginning Plan's Fiduciary Net Position (a)	Projected Total Contributions * (b)	Projected Benefit Payments (c)	Projected Administrative Expenses (d)	Projected Investment Earnings (e)	Projected Ending Plan's Fiduciary Net Position (f) = (a) + (b) - (c) - (d) + (e)
2021	\$18,797	\$970	\$1,046	\$21	\$3,222	\$21,922
2022	21,922	955	1,135	25	1,527	23,244
2023	23,244	915	1,200	27	1,616	24,549
2024	24,549	852	1,267	28	1,703	25,809
2025	25,809	803	1,335	29	1,787	27,035
2026	27,035	765	1,405	31	1,869	28,233
2027	28,233	763	1,478	32	1,951	29,437
2028	29,437	705	1,553	34	2,030	30,584
2029	30,584	398	1,631	35	2,097	31,413
2030	31,413	385	1,709	36	2,152	32,205
2046	37,243	171	2,840	43	2,514	37,045
2047	37,045	161	2,877	42	2,498	36,785
2048	36,785	152	2,910	42	2,479	36,463
2049	36,463	143	2,938	42	2,455	36,081
2050	36,081	135	2,960	41	2,427	35,641
2095	26,133	42	179	30	1,824	27,789
2096	27,789	43	145	32	1,941	29,596
2097	29,596	43	116	34	2,068	31,557
2098	31,557	45	91	36	2,206	33,681
2099	33,681	46	71	38	2,355	35,973
2134	357,632	409 **	0	409	25,034	382,666
2134 Discounted Value:	183 ***					

* Of all the projected total contributions, only the first year's (i.e., 2021) contribution has been reduced by discount for prepaid contributions and transfers from County Investment Account, if any.

** Mainly attributable to employer contributions to fund each year's annual administrative expenses.

*** \$357,632 million when discounted with interest at the rate of 7.00% per annum has a value of \$183 million as of December 31, 2021. Of this amount, about \$167 million is the balance available in the County Investment Account and \$16 million is the O.C. Sanitation District UAAL Deferred Account as of December 31, 2021.

Note: We have not utilized the balance in the County Investment Account to reduce the projected total contributions in column (b) even though those amounts have been used to reduce the NPL for the County as of December 31, 2021.

Section 3: Appendices

Notes:

- (1) Amounts may not total exactly due to rounding.
- (2) Amounts shown in the year beginning January 1, 2021 row are actual amounts, based on the final audited financial statements provided by OCERS.
- (3) Certain years have been omitted from the table.
- (4) Column (a): Except for the "discounted value" shown for 2134, all of the projected beginning Plan's Fiduciary Net Position amounts shown have not been adjusted for the time value of money.
- (5) Column (b): Projected total contributions include member and employer normal cost rates applied to closed group projected payroll (based on covered active members as of December 31, 2020), plus employer contributions to the Unfunded Actuarial Accrued Liability. Contributions are assumed to occur halfway through the year, on average.
- (6) Column (c): Projected benefit payments have been determined in accordance with paragraph 39 of GASB Statement No. 67, and are based on the closed group of active, inactive vested, retired members, and beneficiaries as of December 31, 2020. The projected benefit payments reflect the cost of living increase assumptions used in the December 31, 2021 valuation report.
- (7) Column (d): Projected administrative expenses are calculated as approximately 0.11% of the projected beginning Plan's Fiduciary Net Position amount. The 0.11% portion was based on the actual calendar year 2021 administrative expenses (unaudited) as a percentage of the actual beginning Plan's Fiduciary Net Position as of January 1, 2021. Administrative expenses are assumed to occur halfway through the year, on average.
- (8) Column (e): Projected investment earnings are based on the assumed investment rate of return of 7.00% per annum.
- (9) As illustrated in this Appendix, the Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments for current Plan members. In other words, there is no projected "cross-over date" when projected benefits are not covered by projected assets. Therefore, the long-term expected rate of return on Plan investments of 7.00% per annum was applied to all periods of projected benefit payments to determine the total pension liability as of December 31, 2021 shown earlier in this report, pursuant to paragraph 44 of GASB Statement No. 67.
- (10) This projection is based on a model developed by our Actuarial Technology and Systems unit, comprised of both actuaries and programmers. The model allows the client team, under the supervision of the responsible actuary, control over the entry of future expected contribution income, benefit payments and administrative expenses. The projection of fiduciary net position and the discounting of benefits is part of the model.

Section 3: Appendices

Appendix B: Definition of Terms

Definitions of certain terms as they are used in Statement 67. The terms may have different meanings in other contexts.

Actuarial Present Value of Projected Benefit Payments:	Projected benefit payments discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment.
Actuarial Valuation:	The determination, as of a point in time (the actuarial valuation date), of the service cost, Total Pension Liability, and related actuarial present value of projected benefit payments for pensions performed in conformity with Actuarial Standards of Practice unless otherwise specified by the GASB.
Actuarial Valuation Date:	The date as of which an actuarial valuation is performed.
Actuarially Determined Contribution:	A target or recommended contribution to a defined benefit pension plan for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.
Ad Hoc Cost-of-Living Adjustments (Ad Hoc COLAs):	Cost-of-living adjustments that require a decision to grant by the authority responsible for making such decisions.
Ad Hoc Postemployment Benefit Changes:	Postemployment benefit changes that require a decision to grant by the authority responsible for making such decisions.
Automatic Cost-of-Living Adjustments (Automatic COLAs):	Cost-of-living adjustments that occur without a requirement for a decision to grant by a responsible authority, including those for which the amounts are determined by reference to a specified experience factor (such as the earnings experience of the pension plan) or to another variable (such as an increase in the consumer price index).
Automatic Postemployment Benefit Changes:	Postemployment benefit changes that occur without a requirement for a decision to grant by a responsible authority, including those for which the amounts are determined by reference to a specified experience factor (such as the earnings experience of the pension plan) or to another variable (such as an increase in the consumer price index).
Cost-of-Living Adjustments:	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (Cost-Sharing Pension Plan):	A multiple-employer defined benefit pension plan in which the pension obligations to the employees of more than one employer are pooled and pension plan assets can be used to pay the benefits of the employees of any employer that provides pensions through the pension plan.
Covered Payroll:	Payroll on which contributions to a pension plan are based.
Defined Benefit Pension Plans:	Pension plans that are used to provide defined benefit pensions.

Section 3: Appendices

Defined Benefit Pensions:	Pensions for which the income or other benefits that the employee will receive at or after separation from employment are defined by the benefit terms. The pensions may be stated as a specified dollar amount or as an amount that is calculated based on one or more factors such as age, years of service, and compensation. (A pension that does not meet the criteria of a defined contribution pension is classified as a defined benefit pension for purposes of Statement 67.)
Defined Contribution Pension Plans:	Pension plans that are used to provide defined contribution pensions.
Defined Contribution Pensions:	Pensions having terms that (1) provide an individual account for each employee; (2) define the contributions that an employer is required to make (or the credits that it is required to provide) to an active employee's account for periods in which that employee renders service; and (3) provide that the pensions an employee will receive will depend only on the contributions (or credits) to the employee's account, actual earnings on investments of those contributions (or credits), and the effects of forfeitures of contributions (or credits) made for other employees, as well as pension plan administrative costs, that are allocated to the employee's account.
Discount Rate:	<p>The single rate of return that, when applied to all projected benefit payments, results in an actuarial present value of projected benefit payments equal to the total of the following:</p> <ol style="list-style-type: none"> 1. The actuarial present value of benefit payments projected to be made in future periods in which (a) the amount of the pension Plan's Fiduciary Net Position is projected (under the requirements of Statement 67) to be greater than the benefit payments that are projected to be made in that period and (b) pension plan assets up to that point are expected to be invested using a strategy to achieve the long-term expected rate of return, calculated using the long-term expected rate of return on pension plan investments. 2. The actuarial present value of projected benefit payments not included in (1), calculated using the municipal bond rate.
Entry Age Actuarial Cost Method:	A method under which the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit age(s). The portion of this actuarial present value allocated to a valuation year is called the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is called the actuarial accrued liability.
Inactive Employees:	Terminated individuals that have accumulated benefits but are not yet receiving them, and retirees or their beneficiaries currently receiving benefits.
Multiple-Employer Defined Benefit Pension Plan:	A defined benefit pension plan that is used to provide pensions to the employees of more than one employer.
Net Pension Liability (NPL):	The liability of employers and nonemployer contributing entities to employees for benefits provided through a defined benefit pension plan.

Section 3: Appendices

Other Postemployment Benefits:	All postemployment benefits other than retirement income (such as death benefits, life insurance, disability, and long-term care) that are provided separately from a pension plan, as well as postemployment healthcare benefits, regardless of the manner in which they are provided. Other postemployment benefits do not include termination benefits.
Pension Plans:	Arrangements through which pensions are determined, assets dedicated for pensions are accumulated and managed and benefits are paid as they come due.
Pensions:	Retirement income and, if provided through a pension plan, postemployment benefits other than retirement income (such as death benefits, life insurance, and disability benefits). Pensions do not include postemployment healthcare benefits and termination benefits.
Plan Members:	Individuals that are covered under the terms of a pension plan. Plan members generally include (1) employees in active service (active plan members) and (2) terminated employees who have accumulated benefits but are not yet receiving them and retirees or their beneficiaries currently receiving benefits (inactive plan members).
Postemployment	The period after employment.
Postemployment Benefit Changes:	Adjustments to the pension of an inactive employee.
Postemployment Healthcare Benefits:	Medical, dental, vision, and other health-related benefits paid subsequent to the termination of employment.
Projected Benefit Payments:	All benefits estimated to be payable through the pension plan to current active and inactive employees as a result of their past service and their expected future service.
Public Employee Retirement System:	A special-purpose government that administers one or more pension plans; also may administer other types of employee benefit plans, including postemployment healthcare plans and deferred compensation plans.
Real Rate of Return:	The rate of return on an investment after adjustment to eliminate inflation.
Service Costs:	The portions of the actuarial present value of projected benefit payments that are attributed to valuation years.
Single-Employer Defined Benefit Pension Plan (Single-Employer Pension Plan):	A defined benefit pension plan that is used to provide pensions to employees of only one employer.
Termination Benefits:	Inducements offered by employers to active employees to hasten the termination of services, or payments made in consequence of the early termination of services. Termination benefits include early-retirement incentives, severance benefits, and other termination-related benefits.
Total Pension Liability (TPL):	The portion of the actuarial present value of projected benefit payments that is attributed to past periods of employee service in conformity with the requirements of Statement 67.

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Orange County Employees Retirement System

2021 AUDIT RESULTS

Report to Audit Committee
June 2, 2022





Issued Reports

We issued the following reports for the year ended December 31, 2021:

- Audit report on the annual comprehensive financial report
- Report on internal control over financial reporting in accordance with *government auditing standards*
- Audit report on the schedule of allocated pension amounts by employer

Unmodified opinions

Financial statements and schedule of allocated pension amounts are presented fairly in accordance with accounting principles generally accepted in the United States of America

No material weaknesses or significant deficiencies noted.



Financial Highlights

(in thousands)	2021	2020	2019
Total pension liability (a)	\$ 23,972,420	\$ 23,010,450	\$ 21,754,263
Plan fiduciary net position			
Employer contributions	\$ 698,791	\$ 659,807	\$ 653,793
Member contributions	271,334	279,384	279,373
Net investment income	3,222,065	2,173,184	2,183,808
Benefit payments	(1,045,738)	(973,325)	(900,902)
Administrative expense	(21,473)	(20,428)	(19,171)
Net change in plan fiduciary net position	3,124,979	2,118,622	2,196,901
Plan fiduciary net position			
Beginning of year	18,797,203	16,678,581	14,481,680
End of year (b)	\$ 21,922,182	\$ 18,797,203	\$ 16,678,581
Net pension liability (a) - (b)	\$ 2,050,238	\$ 4,213,247	\$ 5,075,682
Funded status (b) / (a)	91.4%	81.7%	76.7%



Financial Highlights (continued)

(in thousands)	County Health Care Fund	OCFA Health Care Fund	OCTA Custodial Fund
Plan fiduciary net position			
Employer contributions	\$ 41,049	\$ 16,773	\$ 605
Net investment income	66,709	6,748	2,715
Benefit payments	(37,262)	(5,999)	(1,419)
Administrative expense	(23)	(24)	(23)
Net change in plan fiduciary net position	70,473	17,498	1,878
Plan fiduciary net position			
Beginning of year	415,859	41,958	19,579
End of year	\$ 486,332	\$ 59,456	\$ 21,457



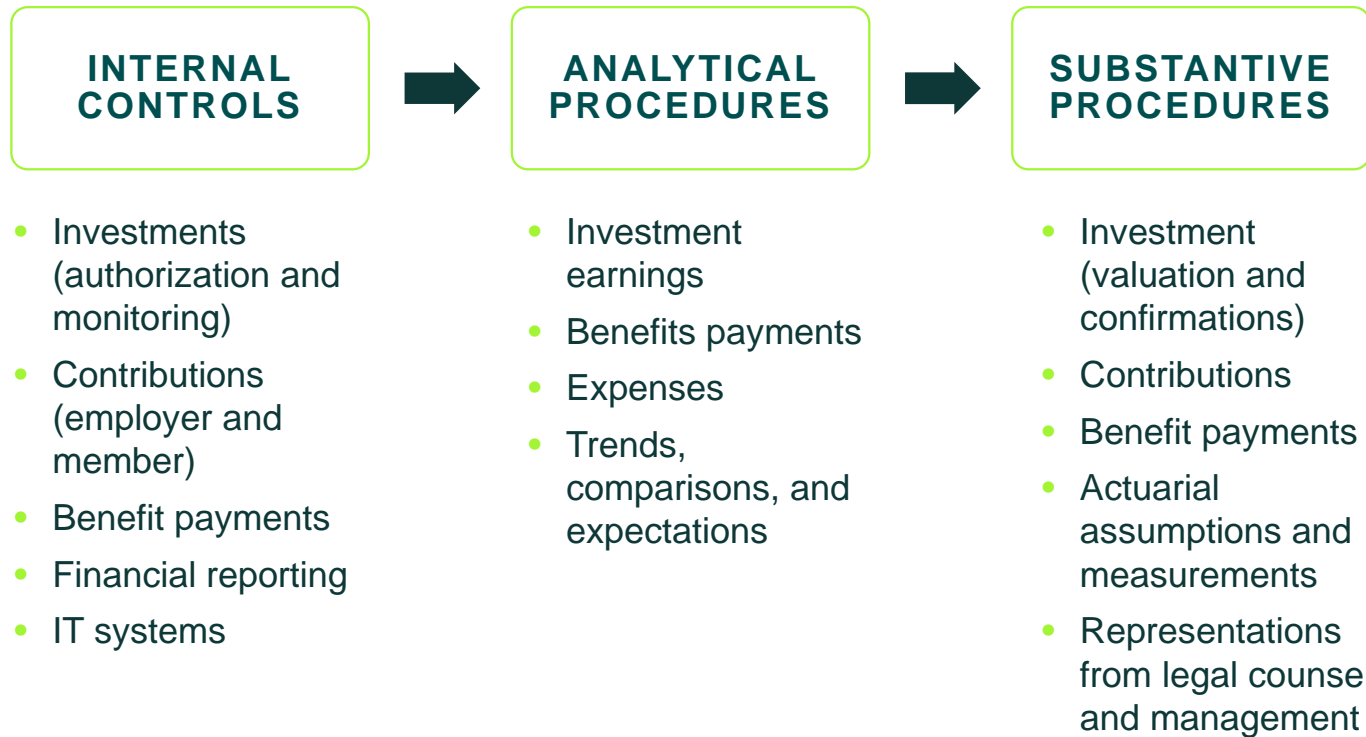
Summary of Audit Process

- Our audit was generally performed in accordance with our initial plan. When the results of a planned audit procedure did not provide sufficient evidence or our original plan was based on an incorrect understanding of a transaction, process, or accounting policy of the entity, we made the necessary adjustments to our audit plan to incorporate the procedures necessary to support our opinion on the financial statements.
- We have completed our testing of all significant account balances and classes of transactions.
- We will issue our independent auditor's reports and communicate required internal control related matters based on the results of our procedures.





Areas of Audit Emphasis



Audit Emphasis – Alternative Investments

Alternative Investments

- Investments for which a readily determinable fair value does not exist
- Includes global public equity, private equity, real assets, and other institutional holdings
- Elevated risks for existence, valuation, and liquidity

Audit Approach

- Virtual conference with alternative investment manager and CIO
- Reviewed due diligence procedures and controls
- Reviewed financial close and reporting controls
- Directly confirmed balances totaling \$14.5 billion of \$19 billion in global public equity private equity, real assets, and other institutional holdings based on risk assessment
- Performed other substantive procedures on remaining \$5.5 billion balances



Required Communications

- Significant accounting policies are summarized in Note 2 to financial statements
- Financial statement disclosures are consistent, clear, and understandable
- Written and oral representations to be received from management
- No audit adjustments (other than fair value adjustments to investments provided by management during audit)
- No uncorrected misstatements noted
- No disagreements with management
- Adopted GASB No. 98 *The Annual Comprehensive Financial Report*



Required Communications (continued)

- Consultation with other independent auditors (none of which we are aware)
- No difficulties encountered during the audit
- Illegal acts (none noted)
- Ability to continue as a going concern (no disclosure necessary)
- Consideration of fraud in a financial statement audit
 - Procedures performed included journal entry testing and interviews of personnel
- Moss Adams is independent with respect to OCERS and its participating employers





- Audit performed within the scope, and timeline discussed during our entrance meeting and audit planning
- Regular communication with management throughout audit by video conferencing and secure transfers of information contributed to a smooth remote audit
- ‘Tone at the Top’ remains strong, and attitude from management and staff was helpful and open in response to audit requests



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Report of Independent Auditors 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*

The Board of Retirement
Orange County Employees Retirement System

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the accompanying total funds column in the statement of fiduciary net position of Orange County Employees Retirement System (the System) as of December 31, 2021, and the related total funds column in the statement of changes in fiduciary net position for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated June 2, 2022.

Report on Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the System's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the System's internal control. Accordingly, we do not express an opinion on the effectiveness of the System's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that were not identified.

Report on Compliance and Other Matters

As part of obtaining reasonable assurance about whether the System’s financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity’s internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity’s internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Irvine, California
June 2, 2022

Draft



Memorandum

DATE: June 2, 2022

TO: Audit Committee Members

FROM: Brenda Shott, Assistant CEO, Finance and Internal Operations; Tracy Bowman, Director of Finance

SUBJECT: GASB 68 VALUATION AND AUDIT REPORT

Recommendation

Recommend to the Board of Retirement the following:

1. Approve OCERS' audited Schedule of Allocated Pension Amounts by Employer as of and for the Year Ended December 31, 2021.
2. Approve the Governmental Accounting Standards Board (GASB) Statement 68 Actuarial Valuation as of December 31, 2021 for distribution to employers.

Background/Discussion

GASB Statement No. 68, *Accounting and Financial Reporting for Pensions – an Amendment of GASB Statement No. 27*, requires employers to record their proportionate share of the total pension liability less the plan's fiduciary net position (i.e., net pension liability) on the face of their financial statements. A proportionate share of the total pension expense and collective deferred inflows of resources and deferred outflows of resources of the pension trust fund at OCERS is shown on the face of each employer's financial statements.

Net Pension Liability vs. Unfunded Actuarial Accrued Liability

The Governmental Accounting Standards Board (GASB) Statement 68 Actuarial Valuation Based on December 31, 2021 Measurement Date for Employer Reporting as of June 30, 2022 is used for financial reporting purposes and was prepared by Segal Consulting (Attachment 1). This report is *separate and distinct from the funding actuarial valuation*. The net pension liability (NPL) shown in Exhibit 2 of the GASB 68 valuation as of December 31, 2021 is \$2.1 billion compared to the unfunded actuarial accrued liability (UAAL) of \$4.5 billion in the funding actuarial valuation as of December 31, 2021. The differences between the NPL and the UAAL are a direct result of the different liability and asset values used in measuring these amounts as detailed in the attached letter from Segal Consulting which includes a reconciliation of the Plan's December 31, 2021 NPL and UAAL (Attachment 2). The primary differences can be attributed to NPL being calculated using the Plan's current market value of assets, including the proceeds available in the County Investment Account and the Orange County Sanitation District UAAL Deferred Account; the UAAL is calculated by adjusting the market value of assets for asset smoothing per OCERS Actuarial Funding Policy and excludes the County Investment Account reserves and the Orange County Sanitation District UAAL Deferred Account. Differences are also created by timing differences of when actuarial gains and losses are recognized in the liability calculation for financial reporting purposes compared to funding valuation purposes.



Memorandum

Schedule of Allocated Pension Amounts by Employer

The Schedule of Allocated Pension Amounts by Employer as of and for the Year Ended December 31, 2021 and related notes were audited by OCERS' independent auditor, Moss Adams LLP (Moss Adams) (Attachment 3). The proportionate share allocation is based on rate groups. All rate groups, with the exception of rate groups 1 and 2, have only one active employer, so all of the NPL for those rate groups is allocated to that employer. For rate groups 1 and 2, the NPL is allocated based on the actual employer contributions within the rate group and excludes employers with inactive membership. If an employer participates in several rate groups, the employer's total proportionate share of the NPL is the sum of its allocated NPL from each rate group.

The audit report and GASB 68 valuation, once approved by the Audit Committee and Board of Retirement, will be made available to participating employers with the following disclaimer:

To complete its financial statements, each participating employer will need to record its own proportionate share of collective pension amounts for all benefits provided through OCERS' cost-sharing multiple-employer defined benefit pension plan. OCERS has provided a schedule of pension amounts by employer, prepared by independent actuary Segal Consulting, in accordance with the methodology set forth in GASB 68, based on data maintained and provided by OCERS. This schedule has been audited by independent auditor, Moss Adams. Please note that OCERS is not responsible for employers' compliance with the requirements of GASB 68. Employers are solely responsible for accurately presenting their financial statements within the requirements of GASB 68.

Submitted by:

Tracy Bowman
Director of Finance

Approved by:

Brenda Shott
Asst. CEO, Finance & Internal Operations

2011



GASB 68 Valuation and Audit Report

Presented on June 2, 2022

by

Brenda Shott and Tracy Bowman



Recommendation

- Recommend to the Board of Retirement the following:
 1. Approve OCERS' audited Schedule of Allocated Pension Amounts by Employer as of and for the Year Ended December 31, 2021
 2. Approve the Governmental Accounting Standards Board (GASB) Statement 68 Actuarial Valuation as of December 31, 2021 for distribution to employers



Overview

- This information is needed by Employers for their annual financial reporting.
- **Reports are prepared for GASB reporting purposes only - there are no actionable decisions to be made on content.**
- This item is brought before you because the Audit Committee Charter requires approval of all audit reports.



Audit Report on GASB 68 Schedules

- Using the NPL calculated for GASB 67, Segal prepares the Schedule of Allocated Pension Amounts by Employer (included in Appendix B of the full GASB 68 valuation - Section 3)
- Moss Adams audits this schedule which includes amounts and information required for GASB 68 reporting for each employer
- Moss Adams has issued a “clean opinion” on the 2021 schedule and related notes which will allow our Employers’ auditors to rely on Moss Adam’s work, avoiding multiple audits of OCERS’ information.





Conclusion

Questions?

Orange County Employees Retirement System (OCERS)

Governmental Accounting Standards Board Statement 68 (GASB 68) Actuarial Valuation

Actuarial Valuation Based on December 31, 2021
Measurement Date for Employer Reporting
as of June 30, 2022



This report has been prepared at the request of the Board of Retirement to assist the sponsors of the Fund in preparing their financial report for their liabilities associated with the OCERS pension plan. 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.

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Segal



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T 415.263.8200

May 27, 2022

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

Dear Board Members:

We are pleased to submit this Governmental Accounting Standards Board (GASB) Statement 68 Actuarial Valuation based on December 31, 2021 measurement date for employer reporting as of June 30, 2022. It contains various information that will need to be disclosed in order for employers to comply with GASB Statement 68.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist the sponsors of the Orange County Employees Retirement System (OCERS) in preparing their financial report for their liabilities associated with the OCERS pension plan. The census and financial information on which our calculations were based were prepared by OCERS. That assistance is gratefully acknowledged.

The measurements shown in this actuarial valuation may not be applicable for other purposes. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and changes in plan provisions or applicable law.

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

We look forward to reviewing this report with you and to answering any questions.

Sincerely,

Segal

Handwritten signature of Paul Angelo in black ink.

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

Handwritten signature of Andy Yeung in black ink.

Andy Yeung, ASA, MAAA, FCA, EA
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JY/jl

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Section 1: Actuarial Valuation Summary

Purpose and basis

This report has been prepared by Segal to present certain disclosure information required by Governmental Accounting Standards Board (GASB) Statement 68 for employer reporting as of June 30, 2022. The results used in preparing this GASB 68 report are comparable to those used in preparing the GASB Statement 67 report for the plan based on a reporting date and a measurement date as of December 31, 2021. This valuation is based on:

- The benefit provisions of OCERS, as administered by the Board of Retirement;
- The characteristics of covered active members, inactive vested members, and retired members and beneficiaries as of December 31, 2020, provided by OCERS;
- The assets of the Plan as of December 31, 2021, provided by OCERS;
- Economic assumptions regarding future salary increases and investment earnings adopted by the Board of Retirement for the December 31, 2021 valuation; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc. adopted by the Board of Retirement for the December 31, 2021 valuation.

General observations on GASB 68 actuarial valuation

1. It is important to note that Governmental Accounting Standards Board (GASB) rules only define pension liability and expense for financial reporting purposes, and do not apply to contribution amounts for pension funding purposes. Employers and plans should develop and adopt funding policies under current practices.
2. When measuring pension liability, GASB uses the same actuarial cost method (Entry Age method) and the same type of discount rate (expected return on assets) as OCERS uses for funding. This means that the Total Pension Liability (TPL) measure for financial reporting shown in this report is generally determined on the same basis as OCERS' Actuarial Accrued Liability (AAL) measure for funding. We note that the same is generally true for the Normal Cost component of the annual plan cost for funding and financial reporting.
3. The Net Pension Liability (NPL) is equal to the difference between the TPL and the Plan's Fiduciary Net Position. The Plan's Fiduciary Net Position is equal to the market value of assets and therefore, the NPL measure is very similar to an Unfunded Actuarial Accrued Liability (UAAL) on a market value basis.

Section 1: Actuarial Valuation Summary

Highlights of the valuation

1. For this report, the reporting dates for the employers are June 30, 2022 and 2021. The NPLs measured as of December 31, 2021 and 2020 have been determined by rolling forward the TPLs as of December 31, 2020 and 2019, respectively. The Plan's Fiduciary Net Positions were valued as of the measurement dates. In addition, any changes in actuarial assumptions or plan provisions that occurred between the valuation date and the measurement date have been reflected.
2. The NPL decreased from \$4,213.2 million as of December 31, 2020 to \$2,050.2 million as of December 31, 2021 primarily as a result a 17.19%¹ return on the market value of assets during 2021 that was higher than the assumed return of 7.00% by approximately \$1,909.8 million. Changes in these values during the last two calendar years ending December 31, 2021 and December 31, 2020 can be found in *Section 2, Schedule of changes in Net Pension Liability* on page 17.
3. There was a decrease in the total employer pension expense from \$255.9 million calculated last year to a pension income of \$(121.2) million calculated this year. The primary cause of the decrease was due to an investment gain of \$1.9 billion with \$382.0 million being recognized in this year's expense.
4. The discount rate used to determine the TPL and NPL as of both December 31, 2021 and 2020 was 7.00% following the same assumption used by the System in the pension funding valuations as of the December 31, 2020 and December 31, 2019. The detailed calculation of the discount rate of 7.00% used in the calculation of the TPL and NPL as of December 31, 2021 can be found in *Section 3, Appendix A*. Various other information that is required to be disclosed can be found throughout *Section 2*.
5. The Plan's Fiduciary Net Position of \$18,797,203,000 as of December 31, 2020 is equal to the final market value of assets in the Pension Trust Fund as of December 31, 2020. This differs from the \$18,494,462,000 market value of assets used in our December 31, 2020 funding valuation because (1) our funding valuation was based on the preliminary market value of assets provided in the unaudited financial statements and (2) the market value of assets in the funding valuation excludes \$160,378,000 in the County Investment Account and \$13,433,000 in O.C. Sanitation District UAAL Deferred Account.

The Plan's Fiduciary Net Position of \$21,922,182,000 as of December 31, 2021 is equal to the final market value of assets in the Pension Trust Fund as of December 31, 2021. This differs from the \$21,738,794,000 market value of assets used in our December 31, 2021 funding valuation because the market value of assets in the funding valuation excludes \$167,745,000 in the County Investment Account and \$15,643,000 in O.C. Sanitation District UAAL Deferred Account.

6. In Appendix B, we show the Schedule of Pension Amounts by Employer. The expanded information shown in Appendix B has been used to prepare the Schedules that show the Pension Expense as well as the Deferred Outflows of Resources and Deferred Inflows of Resources.

¹ As documented in the funding valuation report, return on market value was calculated using a modified dollar-weighted approach based on pension plan assets net of accounting liabilities. Actual investment return on net pension plan assets (based on final asset amount as of December 31, 2020) was \$3,144,418,000 during 2021 after including both the administrative expenses and discount for prepaid contributions while excluding the gains credited to County Investment Account and O.C. Sanitation District UAAL Deferred Account. Without these adjustments, the actual investment return was \$3,192,461,000.

Section 1: Actuarial Valuation Summary

7. Results shown in this report exclude any employer contributions made after the measurement date of December 31, 2021. Employers should consult with their auditors to determine the deferred outflow that should be created for these contributions.
8. All Rate Groups except Rate Groups #1 and #2 only have one active employer, so all of the NPL for those Rate Groups is allocated to that employer.

For Rate Groups #1¹ and #2, the NPL is allocated based on the actual employer contributions within the Rate Group. The steps we used are as follows:

- Calculate ratio of employer's contributions to the total contributions for the Rate Group.
- Multiply this ratio by the NPL for the Rate Group to determine the employer's proportionate share of the NPL for the Rate Group.

If the employer is in several Rate Groups, the employer's total allocated NPL is the sum of its allocated NPL from each Rate Group. Proportionate share of total plan NPL is then the ratio of the employer's total allocated NPL to the total NPL of all employers. The NPL allocation can be found in *Section 2, Determination of Proportionate Share*.

9. On July 30, 2020, the California Supreme Court issued a decision in the case of Alameda County Deputy Sheriffs' Association et al. v. Alameda County Employees' Retirement Association (ACERA) and Board of Retirement of ACERA. That decision has important implications for OCERS and its members. In particular, the decision requires pension systems like OCERS to exclude certain pay items from a legacy member's compensation earnable. It should be noted that neither the December 31, 2021 assets provided by OCERS nor the December 31, 2021 liabilities we calculated by rolling forward the results using the membership data provided by OCERS as of December 31, 2020 reflect the financial impact of the California Supreme Court decision.
10. It is important to note that this actuarial valuation is based on plan assets as of December 31, 2021. Due to the COVID-19 pandemic, market conditions have changed significantly since the onset of the Public Health Emergency. The plan's funded 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. Moreover, this actuarial valuation does not include any possible short-term or long-term impacts on mortality of the covered population that may emerge after December 31, 2021. While it is impossible to determine how the pandemic will affect market conditions and other demographic experience of the plan in future valuations, Segal is available to prepare projections of potential outcomes upon request.

¹ The NPL for Rate Group #1 was adjusted by the NPLs for the O.C. Vector Control District, Cypress Recreation and Parks, Department of Education and U.C.I. prior to allocating the net NPL to the other employers in Rate Group #1 as the NPLs for these four employers were calculated separately.

Section 1: Actuarial Valuation Summary

Summary of key valuation results

Reporting Date for Employer under GASB 68 ¹		June 30, 2022	June 30, 2021
Measurement Date for Employer under GASB 68		December 31, 2021	December 31, 2020
Disclosure elements for calendar year ending December 31:	• Service cost ²	\$510,863,197	\$512,255,298
	• Total Pension Liability	23,972,419,722	23,010,449,650
	• Plan's Fiduciary Net Position	21,922,182,000	18,797,203,000
	• Net Pension Liability	2,050,237,722	4,213,246,650
	• Pension expense	(121,126,855)	255,861,827
Schedule of contributions for calendar year ending December 31:	• Actuarially determined contributions ³	\$684,142,000	\$638,215,000
	• Actual contributions ³	698,791,000	659,807,000
	• Contribution deficiency / (excess) ⁴	(14,649,000)	(21,592,000)
Demographic data for calendar year ending December 31:	• Number of retired members and beneficiaries	19,826	19,419
	• Number of inactive vested members	7,238	6,818
	• Number of active members	22,011	21,559
Key assumptions as of December 31:	• Investment rate of return	7.00%	7.00%
	• Inflation rate	2.50%	2.50%
	• Projected salary increases ⁵	General: 4.00% to 11.00% and Safety: 4.60% to 15.00%	General: 4.00% to 11.00% and Safety: 4.60% to 15.00%
	• Cost of living adjustments	2.75% of retirement income	2.75% of retirement income

¹ The reporting date and measurement date for the plan are December 31, 2021 and December 31, 2020.

² The Service Cost is based on the previous year's valuation, meaning the December 31, 2021 and December 31, 2020 measurement date values are based on the valuations as of December 31, 2020 and December 31, 2019, respectively. The 2021 service cost has been calculated using the assumptions shown in the December 31, 2020 column and the 2020 service cost has been calculated using the assumptions in the December 31, 2019 valuation. The key assumptions as of December 31, 2019 are as follows:

Key assumptions as of December 31, 2019:

Investment rate of return	7.00%
Inflation rate	2.75%
Projected salary increases*	General: 4.25% to 12.25% and Safety: 4.75% to 17.25%
Cost of living adjustments	2.75% of retirement income

* Includes inflation at 2.75% plus real across-the-board salary increases of 0.50% plus merit and promotion increases.

³ Reduced by discount for prepaid contributions and transfer from County Investment Account, if any.

⁴ Includes additional contributions made by employers toward the reduction of their UAAL. Details are shown in *Section 2, Schedule of Contributions* on page 18.

⁵ Includes inflation at 2.50% and 2.75% respectively, plus real across-the-board salary increases of 0.50% plus merit and promotion increases.

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. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan description in this report (as well as the plan summary included in our funding valuation report) to confirm that Segal has correctly interpreted the plan benefits.
Participant Data	An actuarial valuation for a plan is based on data provided to the actuary by OCERS. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
Assets	This valuation is based on the market value of assets as of the measurement date, as provided by OCERS.
Actuarial Assumptions	In preparing an actuarial valuation, Segal projects the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This projection requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of each participant for each year. In addition, the benefits projected to be paid for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments. The forecasted benefits are then discounted to a present value, typically based on an estimate of the rate of return that will be achieved on the plan's assets or, if there are no assets, a rate of return based on a yield or index rate of 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher (or equivalent quality on another rating scale). 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.
Models	Segal valuation results are based on proprietary actuarial modeling software. The actuarial valuation models generate a comprehensive set of liability and cost calculations that are presented to meet regulatory, legislative and client requirements. Our Actuarial Technology and Systems unit, comprised of both actuaries and programmers, is responsible for the initial development and maintenance of these models. The models have a modular structure that allows for a high degree of accuracy, flexibility and user control. The client team programs the assumptions and the plan provisions, validates the models, and reviews test lives and results, under the supervision of the responsible actuary.

Section 1: Actuarial Valuation Summary

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

The valuation is prepared at the request of the Board to assist the sponsors of the Fund in preparing items related to the pension plan in their financial reports. Segal is not responsible for the use or misuse of its report, particularly by any other party.

An actuarial valuation is a measurement of the plan's assets and liabilities at a specific date. Accordingly, except where otherwise noted, Segal did not perform an analysis of the potential range of future financial measures. The actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.

If OCERS is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.

Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. The Board should look to their other advisors for expertise in these areas.

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

Section 2: GASB 68 Information

General information about the pension plan

Plan Description

Plan administration. The Orange County Employees Retirement System (OCERS) was established by the County of Orange in 1945. OCERS is administered by the Board of Retirement and governed by the County Employees' Retirement Law of 1937 (California Government Code Section 31450 et. seq.). OCERS is a cost-sharing multiple employer public employee retirement system whose main function is to provide service retirement, disability, death and survivor benefits to the Safety and General members employed by the County of Orange. OCERS also provides retirement benefits to the employee members of the Orange County Courts, the Orange County Retirement System, two cities and thirteen special districts.

The management of OCERS is vested with the Orange County Board of Retirement. The Board consists of nine members and one alternate. The County Treasurer is a member of the Board of Retirement by law. Four members are appointed by the Board of Supervisors, one of whom may be a County Supervisor. Two members are elected by the General membership; one member and one alternate are elected by the Safety membership, one member is elected by the retired members of the System. All members of the Board of Retirement serve terms of three years except for the County Treasurer whose term runs concurrent with the County Treasurer term.

Plan membership. At December 31, 2021, pension plan membership consisted of the following:

Retired members or beneficiaries currently receiving benefits	19,826
Inactive vested members entitled to but not yet receiving benefits	7,238
Active members	22,011
Total	49,075

Note: Data as of December 31, 2021 is not used in the measurement of the TPL as of December 31, 2021.

Section 2: GASB 68 Information

Benefits provided. OCERS provides service retirement, disability, death and survivor benefits to eligible employees. All regular full-time employees of the County of Orange or contracting agencies who work a minimum of 20 hours per week become members of OCERS effective on the first day of employment in an eligible position. There are separate retirement plans for General and Safety member employees. Safety membership is extended to those involved in active law enforcement, fire suppression, and certain probation officers. Any new Safety member who becomes a member on or after January 1, 2013 is designated PEPRA Safety and is subject to the provisions of California Public Employees' Pension Reform Act of 2013 (PEPRA), California Government Code 7522 et seq. All other employees are classified as General members. New General members employed on or after January 1, 2013 are designated as PEPRA General subject to the provisions of California Government Code 7522 et. seq.

General members hired prior to January 1, 2013, including all members of Plan T and Plan W hired on or after January 1, 2013, are eligible to retire once they attain the age of 50 and have acquired ten or more years of retirement service credit. A member with thirty years of service is eligible to retire regardless of age. General members who are first hired on or after January 1, 2013, excluding members of Plan T and Plan W, are eligible to retire once they have attained the age of 52, and have acquired five years of retirement service credit.

Safety members hired prior to January 1, 2013, are eligible to retire once they attain the age of 50 and have acquired ten or more years of retirement service credit. A member with twenty years of service is eligible to retire regardless of age. Safety members who are first hired on or after January 1, 2013, are eligible to retire once they have attained the age of 50, and have acquired five years of retirement service credit.

All General and Safety members can also retire at the age of 70 regardless of service.

The retirement benefit the member will receive is based upon age at retirement, final average compensation, years of retirement service credit and retirement plan and tier.

General member benefits are calculated pursuant to the provisions of Sections 31676.01, 31676.1, 31676.12, 31676.16, 31676.18 or 31676.19. For Section 31676.01, the monthly allowance is equal to 1/90th of final compensation times years of accrued retirement service credit times age factor from that Section. For Section 31676.1, the monthly allowance is equal to 1/60th of final compensation times years of accrued retirement service credit times age factor from that Section. For Sections 31676.12, 31676.16, 31676.18 or 31676.19, the monthly allowance is equal to 1/50th of final compensation times years of accrued retirement service credit times age factor from the corresponding Section. General member benefits for those who are first hired on or after January 1, 2013, excluding members of Plan T and Plan W, are calculated pursuant to the provision of California Government Code Section 7522.20(a). The monthly allowance is equal to the final compensation multiplied by years of accrued retirement credit multiplied by the age factor from Section 7522.20(a).

Safety member benefits are calculated pursuant to the provisions of California Government Code Sections 31664.1 and 31664.2. The monthly allowance is equal to 3% of final compensation times years of accrued retirement service credit times age factor from the corresponding Section. Safety member benefits for those who are first hired on or after January 1, 2013, are calculated pursuant to the provision of California Government Code Section 7522.25(d). The monthly allowance is equal to the final compensation multiplied by years of accrued retirement credit multiplied by the age factor from Section 7522.25(d).

Section 2: GASB 68 Information

For members with membership dates before January 1, 2013, including all members of Plan T and Plan W hired on or after January 1, 2013, the maximum monthly retirement allowance is 100% of final compensation. There is no maximum for members with membership dates on or after January 1, 2013, excluding members of Plan T and Plan W.

Final average compensation consists of the highest 12 consecutive months for a General Tier 1 or Safety Tier 1 member and the highest 36 consecutive months for a General Tier 2, General PEPRA, Safety Tier 2 or Safety PEPRA member.

The member may elect an unmodified retirement allowance, or choose an optional retirement allowance. The unmodified retirement allowance provides the highest monthly benefit and a 60% continuance to an eligible surviving spouse or domestic partner. An eligible surviving spouse or domestic partner is one married to or registered with the member one year prior to the effective retirement date. Certain surviving spouses or domestic partners may also be eligible if marriage or domestic partnership was at least two years prior to the date of death and the surviving spouse or domestic partner has attained age 55. There are four optional retirement allowances the member may choose. Each of the optional retirement allowances requires a reduction in the unmodified retirement allowance in order to allow the member the ability to provide certain benefits to a surviving spouse, domestic partner, or named beneficiary having an insurable interest in the life of the member.

OCERS provides an annual cost-of-living adjustment (COLA) benefit to all retirees. The COLA, based upon the ratio of the past two annual Consumer Price Indices for All Urban Consumers for the Los Angeles-Long Beach-Anaheim Area, is capped at 3.0%.

The County of Orange and contracting agencies contribute to the retirement plan based upon actuarially determined contribution rates adopted by the Board of Retirement. Employer contribution rates are adopted annually based upon recommendations received from OCERS' actuary after the completion of the annual actuarial valuation. The average employer contribution rate for the first six months of calendar year 2021 or the second half of fiscal year 2020-2021 (based on the December 31, 2018 valuation) was 40.02%¹ of compensation. The average employer contribution rate for the last six months of calendar year 2021 or the first half of fiscal year 2021-2022 (based on the December 31, 2019 valuation) was 41.49%¹ of compensation.

All members are required to make contributions to OCERS regardless of the retirement plan or tier in which they are included. The average member contribution rate for the first six months of calendar year 2021 or the second half of fiscal year 2020-2021 (based on the December 31, 2018 valuation) was 12.47%² of compensation. The average member contribution rate for the last six months of calendar year 2021 or the first half of fiscal year 2021-2022 (based on the December 31, 2019 valuation) was 12.31%² of compensation.

¹ These employer contribution rates may be higher or lower than the composite rate for 2021 as shown on page 18 of this report because those rates have not been adjusted to reflect any pick-ups or reverse pick-ups. These employer contribution rates also do not reflect the shift in payroll to the lower cost plans from the valuation date to the date of rate implementation.

² It should be noted that these member contribution rates provided above have not been adjusted to reflect any pick-ups or reverse pick-ups.

Section 2: GASB 68 Information

Net Pension Liability

Reporting Date for Employer under GASB 68	June 30, 2022	June 30, 2021
Measurement Date for Employer under GASB 68	December 31, 2021	December 31, 2020
Components of the Net Pension Liability		
Total Pension Liability	\$23,972,419,722	\$23,010,449,650
Plan's Fiduciary Net Position	(21,922,182,000)	(18,797,203,000)
Net Pension Liability	\$2,050,237,722	\$4,213,246,650
Plan's Fiduciary Net Position as a percentage of the Total Pension Liability	91.45%	81.69%

The Net Pension Liability (NPL) was measured as of December 31, 2021 and 2020. The Plan's Fiduciary Net Position (plan assets) was valued as of the measurement date while the Total Pension Liability (TPL) was determined based upon rolling forward the TPL from actuarial valuations as of December 31, 2020 and 2019, respectively.

Plan provisions. The plan provisions used in the measurement of the NPL as of December 31, 2021 and 2020 are the same as those used in the OCERS actuarial valuations as of December 31, 2021 and 2020, respectively.

Actuarial assumptions. The TPL as of December 31, 2021 was determined by the actuarial valuation as of December 31, 2020. The actuarial assumptions used were based on the results of an experience study for the period from January 1, 2017 through December 31, 2019 and they are the same assumptions used in the December 31, 2021 funding valuation for OCERS. The TPL as of December 31, 2020 was remeasured by (1) revaluing the TPL as of December 31, 2019 (before the roll forward) to include the new actuarial assumptions adopted by the Retirement Board from the experience study, and (2) using this revalued TPL in rolling forward the results from December 31, 2019 to December 31, 2020. In particular, the following actuarial assumptions were applied to all periods included in the measurement:

Inflation:	2.50%
Salary increases:	General: 4.00% to 11.00% and Safety: 4.60% to 15.00%, vary by service, including inflation
Consumer Price Index (CPI) and Cost of Living Adjustments (COLA):	CPI increases of 2.75% per year Retiree COLA increases of 2.75% per year. For members that have COLA banks, we assume they receive 3.00% COLA increases until their COLA banks are exhausted and 2.75% thereafter
Investment rate of return:	7.00%, net of pension plan investment expense, including inflation
Other assumptions:	See analysis of actuarial experience during the period January 1, 2017 through December 31, 2019

Section 2: GASB 68 Information

Determination of discount rate and investment rates of return

The long-term expected rate of return on pension plan investments¹ was determined in 2020 using a building-block method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage, adding expected inflation and subtracting expected investment expenses and a risk margin. The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before investment expenses are shown in the following table. This information was used in the derivation of the long-term expected investment rate of return assumption for the December 31, 2021 and 2020 actuarial valuations. This information will change every three years based on the actuarial experience study.

Asset Class	Target Allocation	Long-Term Expected Arithmetic Real Rate of Return
Large Cap Equity	23.10%	5.43%
Small Cap Equity	1.90%	6.21%
International Developed Equity	13.00%	6.67%
Emerging Markets Equity	9.00%	8.58%
Core Bonds	9.00%	1.10%
High Yield Bonds	1.50%	2.91%
TIPS	2.00%	0.65%
Emerging Market Debt	2.00%	3.25%
Corporate Credit	1.00%	0.53%
Long Duration Fixed Income	2.50%	1.44%
Real Estate	3.01%	4.42%
Private Equity	13.00%	9.41%
Value Added Real Estate	3.01%	7.42%
Opportunistic Real Estate	0.98%	10.18%
Energy	2.00%	9.68%
Infrastructure (Core Private)	1.50%	5.08%
Infrastructure (Non-Core Private)	1.50%	8.92%
CTA - Trend Following	2.50%	2.38%
Global Macro	2.50%	2.13%
Private Credit	2.50%	5.47%
Alternative Risk Premia	2.50%	2.50%
Total	100.00%	5.67%

¹ Note that the investment return assumption for funding purposes is developed net of both investment and administrative expenses; however, the same investment return assumption is used for financial reporting purposes, where it is considered gross of administrative expenses.

Section 2: GASB 68 Information

Discount rate. The discount rate used to measure the TPL was 7.00% as of December 31, 2021 and 2020. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the actuarially determined contribution rates. For this purpose, only employer contributions that are intended to fund benefits for current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs for future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments for current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the TPL as of both December 31, 2021 and 2020.

Section 2: GASB 68 Information

Discount rate sensitivity

Sensitivity of the Net Pension Liability to changes in the discount rate. The following presents the NPL as of December 31, 2021, calculated using the discount rate of 7.00%, as well as what the NPL would be if it were calculated using a discount rate that is 1-percentage-point lower (6.00%) or 1-percentage-point higher (8.00%) than the current rate:

	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
Orange County	\$4,557,494,069	\$2,047,576,018	\$1,760,341
O.C. Cemetery District	490,470	(1,394,665)	(2,931,225)
O.C. Law Library	(959,318)	(2,629,777)	(3,991,356)
O.C. Vector Control District	(1,748,834)	(5,501,623)	(8,560,493)
O.C. Retirement System	32,609,183	16,375,725	3,143,953
O.C. Fire Authority	224,840,110	(104,907,413)	(373,682,184)
Cypress Recreation and Parks	1,261,728	(103,379)	(1,216,068)
Department of Education	3,115,770	1,523,058	224,850
Transportation Corridor Agency	(2,932,775)	(10,881,786)	(17,360,966)
City of San Juan Capistrano	23,382,592	11,742,303	2,254,389
O.C. Sanitation District	(63,706,305)	(178,731,247)	(272,487,228)
O.C. Transportation Authority	225,812,938	73,424,051	(50,787,006)
U.C.I.	31,035,396	17,134,332	5,803,677
O.C. Children and Families Comm.	73,242	(811,951)	(1,533,465)
Local Agency Formation Comm.	1,817,658	912,794	175,246
Rancho Santa Margarita	78	(6,231)	(11,373)
O.C. Superior Court	371,879,035	186,750,735	35,854,025
O.C. IHSS Public Authority	485,764	(233,222)	(819,262)
Total for all Employers	\$5,404,950,801	\$2,050,237,722	\$(684,164,145)

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Schedule of changes in Net Pension Liability — Last two calendar years

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
Total Pension Liability		
• Service cost	\$510,863,197	\$512,255,298
• Interest	1,609,891,069	1,535,953,426
• Change of benefit terms	0	0
• Differences between expected and actual experience	(113,046,194)	162,335,537
• Changes of assumptions	0	18,966,926
• Benefit payments, including refunds of member contributions	(1,045,738,000)	(973,325,000)
• Transfer of members among Rate Groups	0	0
• Other	0	0
Net change in Total Pension Liability	\$961,970,072	\$1,256,186,187
Total Pension Liability – beginning	23,010,449,650	21,754,263,463
Total Pension Liability – ending	\$23,972,419,722	\$23,010,449,650
Plan’s Fiduciary Net Position		
• Contributions – employer ¹	\$698,791,000	\$659,807,000
• Contributions – member	271,334,000	279,384,000
• Net investment income	3,222,065,000	2,173,184,000
• Benefit payments, including refunds of member contributions	(1,045,738,000)	(973,325,000)
• Transfer of members among Rate Groups	0	0
• Administrative expense	(21,473,000)	(20,428,000)
• Other	0	0
Net change in Plan’s Fiduciary Net Position	\$3,124,979,000	\$2,118,622,000
Plan’s Fiduciary Net Position – beginning	\$18,797,203,000	\$16,678,581,000
Plan’s Fiduciary Net Position – ending	\$21,922,182,000	\$18,797,203,000
Net Pension Liability – ending	\$2,050,237,722	\$4,213,246,650
Plan’s Fiduciary Net Position as a percentage of the Total Pension Liability	91.45%	81.69%
Covered payroll²	\$1,870,387,000	\$1,909,268,000
Plan Net Pension Liability as percentage of covered payroll	109.62%	220.67%

¹ Reduced by discount for prepaid contributions and transfer from County Investment Account, if any.

² Covered payroll represents payroll on which contributions to the pension plan are based.

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Schedule of contributions – Last ten calendar years

Year Ended December 31	Actuarially Determined Contributions ^{1,2}	Contributions in Relation to the Actuarially Determined Contributions ^{1,2}	Contribution Deficiency / (Excess)	Covered Payroll ³	Contributions as a Percentage of Covered Payroll ^{1,2}
2012	\$406,521,000	\$406,521,000	\$0	\$1,497,475,000	27.15%
2013	426,020,000	427,095,000 ⁴	(1,075,000)	1,494,745,000	28.57%
2014	476,320,000	625,520,000 ⁵	(149,200,000)	1,513,206,000	41.34%
2015	502,886,000	571,298,000 ⁶	(68,412,000)	1,521,036,000	37.56%
2016	521,447,000	567,196,000 ⁷	(45,749,000)	1,602,675,000	35.40%
2017	536,726,000 ⁸	572,104,000 ^{8,9}	(35,378,000)	1,678,322,000	34.09%
2018	556,728,000 ¹⁰	580,905,000 ^{10,11}	(24,177,000)	1,718,798,000	33.80%
2019	583,057,000	653,793,000 ¹²	(70,736,000)	1,783,054,000	36.67%
2020	638,215,000	659,807,000 ¹³	(21,592,000)	1,909,268,000	34.56%
2021	684,142,000 ¹⁴	698,791,000 ¹⁵	(14,649,000)	1,870,387,000	37.36%

¹ Reduced by transfers from County Investment Account (funded by pension obligation proceeds held by OCERS). Those transfers are as follows:

Calendar Year Ended December 31	Transfers from County Investment Account	Calendar Year Ended December 31	Transfers from County Investment Account
2012	\$5,500,000	2017	\$0
2013	5,000,000	2018	0
2014	5,000,000	2019	0
2015	0	2020	5,000,000
2016	0	2021	15,077,000

² Reduced by discount for prepaid contributions.

³ Covered payroll represents payroll on which contributions to the pension plan are based.

⁴ Includes additional contributions of \$1,075,000 made by O.C. Fire Authority towards the reduction of their UAAL.

⁵ Includes additional contributions of \$1,663,000 made by O.C. Cemetery District, \$22,537,000 made by O.C. Fire Authority and \$125,000,000 made by O.C. Sanitation District towards the reduction of their UAAL.

⁶ Includes additional contributions of \$18,412,000 made by O.C. Fire Authority and \$50,000,000 made by O.C. Sanitation District towards the reduction of their UAAL.

⁷ Includes additional contributions of \$5,133,000 made by O.C. Fire Authority, \$1,500,000 made by Law Library and \$5,587,000 made by O.C. Sanitation District towards the reduction of their UAAL as well as \$33,529,000 made by O.C. Sanitation District to their UAAL Deferred Account.

⁸ \$24,042,000 transfer from O.C. Sanitation District Deferred UAAL Account required to offset UAAL increase for the assumption changes has been excluded from both these amounts.

⁹ Includes additional contributions of \$32,096,000 made by O.C. Fire Authority, \$1,538,000 made by Law Library and \$1,744,000 made by O.C. Children and Families Commission towards the reduction of their UAAL.

¹⁰ \$14,589,000 transfer from O.C. Sanitation District Deferred UAAL Account required to offset UAAL increase for the actuarial losses as of December 31, 2018 has been excluded from both these amounts.

¹¹ Includes additional contributions of \$23,437,000 made by O.C. Fire Authority and \$740,000 made by Cypress Recreation and Parks District towards the reduction of their UAAL.

¹² Includes additional contributions of \$19,043,000 made by O.C. Fire Authority, \$878,000 made by O.C. Vector Control, \$12,815,000 Transportation Corridor and \$8,116,000 made by O.C. Sanitation District towards the reduction of their UAAL as well as \$29,884,000 made by O.C. Sanitation District to their UAAL Deferred Account.

¹³ Includes additional contributions of \$21,592,000 made by O.C. Fire Authority towards the reduction of their UAAL.

¹⁴ Includes a contribution of \$6,500,000 made by City of San Juan Capistrano related to transferring its Water Department employees to a separate special district, which resulted in a triggering event under the Board's Declining Employer Payroll policy.

¹⁵ Includes additional contributions of \$14,649,000 made by O.C. Fire Authority towards the reduction of their UAAL.

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Notes to Schedule:

Methods and assumptions used to establish “actuarially determined contribution” rates:

Valuation date:	Actuarially determined contribution rates for the first six months of calendar year 2021 or the second half of fiscal year 2020-2021 are calculated based on the December 31, 2018 valuation. Actuarially determined contribution rates for the last six months of calendar year 2021 or the first half of fiscal year 2021-2022 are calculated based on the December 31, 2019 valuation.
Actuarial cost method:	Entry Age Actuarial Cost Method
Amortization method:	Level percent of payroll for total unfunded actuarial accrued liability
Remaining amortization period:	Effective December 31, 2013, the outstanding balance of the UAAL from the December 31, 2012 valuation was combined and re-amortized over a declining 20-year period. Any changes in UAAL due to actuarial gains or losses or due to changes in assumptions or methods will be amortized over separate 20-year periods. Any changes in UAAL due to plan amendments will be amortized over separate 15-year periods and any change in UAAL due to early retirement incentive programs will be amortized over a separate period of up to 5 years.
Asset valuation method:	The Actuarial Value of Assets is determined by recognizing any difference between the actual and the expected market return over a five-year period. The Valuation Value of Assets is the Actuarial Value of Assets reduced by the value of the non-valuation reserves.

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Actuarial assumptions:		
Valuation Date:	December 31, 2019 Valuation	December 31, 2018 Valuation
Investment rate of return:	7.00%, net of pension plan investment expense, including inflation	7.00%, net of pension plan investment expense, including inflation
Inflation rate:	2.75%	2.75%
Real across-the-board salary increase:	0.50%	0.50%
Projected salary increases:	General: 4.25% to 12.25% and Safety: 4.75% to 17.25%, vary by service, including inflation	General: 4.25% to 12.25% and Safety: 4.75% to 17.25%, vary by service, including inflation
Consumer Price Index (CPI) and Cost of Living Adjustments (COLA):	CPI increases of 2.75% per year Retiree COLA increases of 2.75% per year. For members that have COLA banks, we assume they receive 3.00% COLA increases until their COLA banks are exhausted and 2.75% thereafter	CPI increases of 2.75% per year Retiree COLA increases of 2.75% per year. For members that have COLA banks, we assume they receive 3.00% COLA increases until their COLA banks are exhausted and 2.75% thereafter
Other assumptions:	Same as those used in the December 31, 2019 funding actuarial valuation	Same as those used in the December 31, 2018 funding actuarial valuation

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Determination of proportionate share

Actual Contributions (Excluding Employer Paid Member Contributions and Employee Paid Reverse Pick-up Contributions, and not Reduced for Discount due to Prepaid Contributions) by Employer and Rate Group

January 1, 2020 to December 31, 2020

	Rate Group #1	Rate Group #1 Percentage	Rate Group #2	Rate Group #2 Percentage	Rate Group #3	Rate Group #3 Percentage
Orange County	\$12,491,000	98.696%	\$303,401,000	88.268%	\$0	0.000%
O.C. Cemetery District	0	0.000%	0	0.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	0	0.000%
O.C. Vector Control District	0	0.000%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	2,899,000	0.843%	0	0.000%
O.C. Fire Authority	0	0.000%	0	0.000%	0	0.000%
Cypress Recreation and Parks	0	0.000%	0	0.000%	0	0.000%
Department of Education	0	0.000%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	0	0.000%
City of San Juan Capistrano	0	0.000%	2,337,000	0.680%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	8,481,000	100.000%
O.C. Transportation Authority	0	0.000%	0	0.000%	0	0.000%
U.C.I.	0	0.000%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	132,000	0.038%	0	0.000%
Local Agency Formation Comm.	0	0.000%	145,000	0.042%	0	0.000%
Rancho Santa Margarita	0	0.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	34,813,000	10.128%	0	0.000%
O.C. IHSS Public Authority	<u>165,000</u>	<u>1.304%</u>	<u>0</u>	<u>0.000%</u>	<u>0</u>	<u>0.000%</u>
Total for all Employers	\$12,656,000	100.000%	\$343,727,000	100.000%	\$8,481,000	100.000%

Note: Results may not total due to rounding.

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Actual Contributions (Excluding Employer Paid Member Contributions and Employee Paid Reverse Pick-up Contributions, and not Reduced for Discount due to Prepaid Contributions) by Employer and Rate Group

January 1, 2020 to December 31, 2020

	Rate Group #4	Rate Group #4 Percentage	Rate Group #5	Rate Group #5 Percentage	Rate Group #9	Rate Group #9 Percentage
Orange County	\$0	0.000%	\$0	0.000%	\$0	0.000%
O.C. Cemetery District	0	0.000%	0	0.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	0	0.000%
O.C. Vector Control District	0	0.000%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	0	0.000%	0	0.000%
O.C. Fire Authority	0	0.000%	0	0.000%	0	0.000%
Cypress Recreation and Parks	0	0.000%	0	0.000%	0	0.000%
Department of Education	0	0.000%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	865,000	100.000%
City of San Juan Capistrano	0	0.000%	0	0.000%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	0	0.000%
O.C. Transportation Authority	0	0.000%	28,893,000	100.000%	0	0.000%
U.C.I.	0	0.000%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	0	0.000%	0	0.000%
Local Agency Formation Comm.	0	0.000%	0	0.000%	0	0.000%
Rancho Santa Margarita	0	100.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	0	0.000%	0	0.000%
O.C. IHSS Public Authority	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	\$0	100.000%	\$28,893,000	100.000%	\$865,000	100.000%

Note: Results may not total due to rounding.

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Actual Contributions (Excluding Employer Paid Member Contributions and Employee Paid Reverse Pick-up Contributions, and not Reduced for Discount due to Prepaid Contributions) by Employer and Rate Group

January 1, 2020 to December 31, 2020

	Rate Group #10	Rate Group #10 Percentage	Rate Group #11	Rate Group #11 Percentage	Rate Group #12	Rate Group #12 Percentage
Orange County	\$0	0.000%	\$0	0.000%	\$0	0.000%
O.C. Cemetery District	0	0.000%	207,000	100.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	135,000	100.000%
O.C. Vector Control District	0	0.000%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	0	0.000%	0	0.000%
O.C. Fire Authority	9,130,000	100.000%	0	0.000%	0	0.000%
Cypress Recreation and Parks	0	0.000%	0	0.000%	0	0.000%
Department of Education	0	0.000%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	0	0.000%
City of San Juan Capistrano	0	0.000%	0	0.000%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	0	0.000%
O.C. Transportation Authority	0	0.000%	0	0.000%	0	0.000%
U.C.I.	0	0.000%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	0	0.000%	0	0.000%
Local Agency Formation Comm.	0	0.000%	0	0.000%	0	0.000%
Rancho Santa Margarita	0	0.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	0	0.000%	0	0.000%
O.C. IHSS Public Authority	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	\$9,130,000	100.000%	\$207,000	100.000%	\$135,000	100.000%

Note: Results may not total due to rounding.

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Actual Contributions (Excluding Employer Paid Member Contributions and Employee Paid Reverse Pick-up Contributions, and not Reduced for Discount due to Prepaid Contributions) by Employer and Rate Group

January 1, 2020 to December 31, 2020

	Rate Group #6	Rate Group #6 Percentage	Rate Group #7	Rate Group #7 Percentage	Rate Group #8	Rate Group #8 Percentage
Orange County	\$31,178,000	100.000%	\$160,831,000	100.000%	\$0	0.000%
O.C. Cemetery District	0	0.000%	0	0.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	0	0.000%
O.C. Vector Control District	0	0.000%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	0	0.000%	0	0.000%
O.C. Fire Authority	0	0.000%	0	0.000%	68,457,000	100.000%
Cypress Recreation and Parks	0	0.000%	0	0.000%	0	0.000%
Department of Education	0	0.000%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	0	0.000%
City of San Juan Capistrano	0	0.000%	0	0.000%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	0	0.000%
O.C. Transportation Authority	0	0.000%	0	0.000%	0	0.000%
U.C.I.	0	0.000%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	0	0.000%	0	0.000%
Local Agency Formation Comm.	0	0.000%	0	0.000%	0	0.000%
Rancho Santa Margarita	0	0.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	0	0.000%	0	0.000%
O.C. IHSS Public Authority	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	\$31,178,000	100.000%	\$160,831,000	100.000%	\$68,457,000	100.000%

Note: Results may not total due to rounding.

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Actual Contributions (Excluding Employer Paid Member Contributions and Employee Paid Reverse Pick-up Contributions, and not Reduced for Discount due to Prepaid Contributions) by Employer and Rate Group

January 1, 2020 to December 31, 2020

	Total Contributions ¹	Total Percentage
Orange County	\$507,901,000	76.427%
O.C. Cemetery District	207,000	0.031%
O.C. Law Library	135,000	0.020%
O.C. Vector Control District	0	0.000%
O.C. Retirement System	2,899,000	0.436%
O.C. Fire Authority	77,587,000	11.675%
Cypress Recreation and Parks	0	0.000%
Department of Education	0	0.000%
Transportation Corridor Agency	865,000	0.130%
City of San Juan Capistrano	2,337,000	0.352%
O.C. Sanitation District	8,481,000	1.276%
O.C. Transportation Authority	28,893,000	4.348%
U.C.I.	0	0.000%
O.C. Children and Families Comm.	132,000	0.020%
Local Agency Formation Comm.	145,000	0.022%
Rancho Santa Margarita	0	0.000%
O.C. Superior Court	34,813,000	5.239%
O.C. IHSS Public Authority	<u>165,000</u>	<u>0.025%</u>
Total for all Employers	\$664,560,000	100.000%

Note: Results may not total due to rounding.

¹ Excludes combined additional contributions of \$21,592,000 made by O.C. Fire Authority towards the reduction of their UAALs, combined contributions of \$3,354,000 made by Department of Education and U.C.I. and combined employer pick-up contributions of \$32,000.

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Allocation of December 31, 2020 Net Pension Liability

	Rate Group #1	Rate Group #1 Percentage	Rate Group #2	Rate Group #2 Percentage	Rate Group #3	Rate Group #3 Percentage
Orange County	\$19,115,737	41.627%	\$2,515,885,249	87.929%	\$0	0.000%
O.C. Cemetery District	0	0.000%	0	0.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	0	0.000%
O.C. Vector Control District ²	(1,681,965)	(3.663%)	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	24,954,057	0.872%	0	0.000%
O.C. Fire Authority	0	0.000%	0	0.000%	0	0.000%
Cypress Recreation and Parks ²	185,117	0.403%	0	0.000%	0	0.000%
Department of Education ²	2,661,390	5.795%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	0	0.000%
City of San Juan Capistrano	0	0.000%	20,116,465	0.703%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	(68,643,380)	100.000%
O.C. Transportation Authority	0	0.000%	0	0.000%	0	0.000%
U.C.I. ²	25,337,145	55.174%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	(612,417)	(0.021%)	0	0.000%
Local Agency Formation Comm.	0	0.000%	1,248,133	0.044%	0	0.000%
Rancho Santa Margarita	0	0.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	299,663,880	10.473%	0	0.000%
O.C. IHSS Public Authority	304,738	0.664%	0	0.000%	0	0.000%
Total for all Employers	\$45,922,162	100.000%	\$2,861,255,367	100.000%	\$(68,643,380)	100.000%

Note: Results may not total due to rounding.

² In determining the NPLs for the O.C. Vector Control District, Cypress Recreation and Parks, Department of Education and U.C.I., we first start by rolling forward the VVAs of these employers as of December 31, 2019 to December 31, 2020 for the actual contributions, benefit payments and return on their VVAs during 2020. Those VVAs are then marked to the Plan's Fiduciary Net Position as of December 31, 2020. The TPLs for these employers are obtained from internal valuation results (first by revaluing the TPL as of December 31, 2019 to include the actuarial assumptions adopted by the Board for use in the pension funding valuation as of December 31, 2020 and then rolling forward those results from December 31, 2019 to December 31, 2020).

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Allocation of December 31, 2020 Net Pension Liability

	Rate Group #4	Rate Group #4 Percentage	Rate Group #5	Rate Group #5 Percentage	Rate Group #9	Rate Group #9 Percentage
Orange County	\$0	0.000%	\$0	0.000%	\$0	0.000%
O.C. Cemetery District	0	0.000%	0	0.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	0	0.000%
O.C. Vector Control District	0	0.000%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	0	0.000%	0	0.000%
O.C. Fire Authority	0	0.000%	0	0.000%	0	0.000%
Cypress Recreation and Parks	0	0.000%	0	0.000%	0	0.000%
Department of Education	0	0.000%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	(3,881,366)	100.000%
City of San Juan Capistrano	0	0.000%	0	0.000%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	0	0.000%
O.C. Transportation Authority	0	0.000%	186,024,390	100.000%	0	0.000%
U.C.I.	0	0.000%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	0	0.000%	0	0.000%
Local Agency Formation Comm.	0	0.000%	0	0.000%	0	0.000%
Rancho Santa Margarita	(2,733)	100.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	0	0.000%	0	0.000%
O.C. IHSS Public Authority	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	\$(2,733)	100.000%	\$186,024,390	100.000%	\$(3,881,366)	100.000%

Note: Results may not total due to rounding.

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Allocation of December 31, 2020 Net Pension Liability

	Rate Group #10	Rate Group #10 Percentage	Rate Group #11	Rate Group #11 Percentage	Rate Group #12	Rate Group #12 Percentage
Orange County	\$0	0.000%	\$0	0.000%	\$0	0.000%
O.C. Cemetery District	0	0.000%	(145,195)	100.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	(949,226)	100.000%
O.C. Vector Control District	0	0.000%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	0	0.000%	0	0.000%
O.C. Fire Authority	19,602,561	100.000%	0	0.000%	0	0.000%
Cypress Recreation and Parks	0	0.000%	0	0.000%	0	0.000%
Department of Education	0	0.000%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	0	0.000%
City of San Juan Capistrano	0	0.000%	0	0.000%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	0	0.000%
O.C. Transportation Authority	0	0.000%	0	0.000%	0	0.000%
U.C.I.	0	0.000%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	0	0.000%	0	0.000%
Local Agency Formation Comm.	0	0.000%	0	0.000%	0	0.000%
Rancho Santa Margarita	0	0.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	0	0.000%	0	0.000%
O.C. IHSS Public Authority	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	\$19,602,561	100.000%	\$(145,195)	100.000%	\$(949,226)	100.000%

Note: Results may not total due to rounding.

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Allocation of December 31, 2020 Net Pension Liability

	Rate Group #6	Rate Group #6 Percentage	Rate Group #7	Rate Group #7 Percentage	Rate Group #8	Rate Group #8 Percentage
Orange County	\$156,749,960	100.000%	\$855,795,033	100.000%	\$0	0.000%
O.C. Cemetery District	0	0.000%	0	0.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	0	0.000%
O.C. Vector Control District	0	0.000%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	0	0.000%	0	0.000%
O.C. Fire Authority	0	0.000%	0	0.000%	161,519,077	100.000%
Cypress Recreation and Parks	0	0.000%	0	0.000%	0	0.000%
Department of Education	0	0.000%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	0	0.000%
City of San Juan Capistrano	0	0.000%	0	0.000%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	0	0.000%
O.C. Transportation Authority	0	0.000%	0	0.000%	0	0.000%
U.C.I.	0	0.000%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	0	0.000%	0	0.000%
Local Agency Formation Comm.	0	0.000%	0	0.000%	0	0.000%
Rancho Santa Margarita	0	0.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	0	0.000%	0	0.000%
O.C. IHSS Public Authority	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	\$156,749,960	100.000%	\$855,795,033	100.000%	\$161,519,077	100.000%

Note: Results may not total due to rounding.

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Allocation of December 31, 2020 Net Pension Liability

	Total NPL	Total Percentage
Orange County	\$3,547,545,979	84.200%
O.C. Cemetery District	(145,195)	(0.003%)
O.C. Law Library	(949,226)	(0.023%)
O.C. Vector Control District ²	(1,681,965)	(0.040%)
O.C. Retirement System	24,954,057	0.592%
O.C. Fire Authority	181,121,638	4.299%
Cypress Recreation and Parks ²	185,117	0.004%
Department of Education ²	2,661,390	0.063%
Transportation Corridor Agency	(3,881,366)	(0.092%)
City of San Juan Capistrano	20,116,465	0.477%
O.C. Sanitation District	(68,643,380)	(1.629%)
O.C. Transportation Authority	186,024,390	4.415%
U.C.I. ²	25,337,145	0.601%
O.C. Children and Families Comm.	(612,417)	(0.015%)
Local Agency Formation Comm.	1,248,133	0.030%
Rancho Santa Margarita	(2,733)	0.000%
O.C. Superior Court	299,663,880	7.112%
O.C. IHSS Public Authority	<u>304,738</u>	<u>0.007%</u>
Total for all Employers	\$4,213,246,650	100.000%

Note: Results may not total due to rounding.

² In determining the NPLs for the O.C. Vector Control District, Cypress Recreation and Parks, Department of Education and U.C.I., we first start by rolling forward the VVAs of these employers as of December 31, 2019 to December 31, 2020 for the actual contributions, benefit payments and return on their VVAs during 2020. Those VVAs are then marked to the Plan's Fiduciary Net Position as of December 31, 2020. The TPLs for these employers are obtained from internal valuation results (first by revaluing the TPL as of December 31, 2019 to include the actuarial assumptions adopted by the Board for use in the pension funding valuation as of December 31, 2020 and then rolling forward those results from December 31, 2019 to December 31, 2020).

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Notes regarding determination of proportionate share as of December 31, 2020 measurement date

1. Based on the January 1, 2020 through December 31, 2020 employer contributions as provided by OCERS. These contributions have been adjusted to include transfers made from the County Investment Account and to exclude employer paid member contributions and they have not been reduced for discount due to prepaid contributions.
- 2a. The Net Pension Liability (NPL) for each Rate Group is the Total Pension Liability (TPL) minus the Plan's Fiduciary Net Position (plan assets). The TPL for each Rate Group is obtained from internal valuation results. The Plan's Fiduciary Net Position for each Rate Group is estimated by adjusting the Valuation Value of Assets (VVA) for each membership class by the ratio of the total OCERS Plan's Fiduciary Net Position (excluding the balance of the County Investment Account and the O.C. Sanitation District UAAL Deferred Account) to total OCERS VVA. As previously directed by OCERS, the County Investment Account is then allocated among the four County Rate Groups using the proportions of County POB contributions applied during 2020. These amounts are provided in item 3. The O.C. Sanitation District UAAL Deferred Account is allocated entirely to Rate Group #3 and the balance of that account has increased from \$12,057,000 to \$13,433,000 at the end of the year. The balance of the O.C. Sanitation District UAAL Deferred Account was used to reduce the NPL for the O.C. Sanitation District as of the measurement date.
- b. Each of General Rate Groups #3, #4, #5, #9, #10, #11 and #12 and Safety Rate Groups #6, #7 and #8 have only one active employer, so all of the NPL for that Rate Group is allocated to the corresponding employer.
- c. For General Rate Groups #1 and #2, the NPL is allocated based on the actual employer contributions within the General Rate Group.
 - The NPL for Rate Group #1 was adjusted by the NPLs for the O.C. Vector Control District, Cypress Recreation and Parks, Department of Education and U.C.I. prior to allocating the net NPL to the other employers in Rate Group #1 as the NPLs for these four employers were calculated separately.
 - Calculate ratio of employer's contributions to the total contributions for the Rate Group. For this purpose, the employer contributions exclude the following amounts:

(i) Rate Group #1 (Department of Education):	\$286,000
(ii) Rate Group #1 (U.C.I.):	\$3,068,000
 - Multiply this ratio (unrounded) by the NPL for the Rate Group to determine the employer's proportionate share of the NPL for the Rate Group.
 - The UAAL contributions referenced in (i) and (ii) above are adjusted with interest to December 31, 2020 and are used to reduce the NPL for the two employers as of December 31, 2020.

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3. The percentages of contributions by employer are not exactly equal to the percentages we use to allocate the NPL by employer because the NPL for the County has been reduced to reflect the portion of the County Investment Account that has been allocated among the four County Rate Groups. The amounts of the County Investment Account that have been allocated to those Rate Groups are as follows:

Rate Group #1: \$3,953,868

Rate Group #2: 95,734,572

Rate Group #6: 9,868,945

Rate Group #7: 50,820,615

Total: \$160,378,000

In addition, the NPL for Rate Group #2 was allocated prior to applying the adjusted balance of the \$1,744,454 in additional UAAL contributions made by O.C. Children and Families Commission on November 15, 2017. That balance is equal to \$1,782,458 as of December 31, 2019 and is equal to \$1,748,649 as of December 31, 2020 when adjusted with interest for the entire year and UAAL contribution offset starting from January 1, 2020 to December 31, 2020. We would continue to maintain the outstanding balance of the additional UAAL contributions for use in determining the NPL for this employer.

4. If the employer is in several Rate Groups, the employer's total allocated NPL is the sum of its allocated NPL from each Rate Group. Proportionate share of total plan NPL is then the ratio of the employer's total allocated NPL to the total NPL of all employers.

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Actual Contributions (Excluding Employer Paid Member Contributions and Employee Paid Reverse Pick-up Contributions, and not Reduced for Discount due to Prepaid Contributions) by Employer and Rate Group

January 1, 2021 to December 31, 2021

	Rate Group #1	Rate Group #1 Percentage	Rate Group #2	Rate Group #2 Percentage	Rate Group #3	Rate Group #3 Percentage
Orange County	\$13,347,000	98.713%	\$336,991,000	88.527%	\$0	0.000%
O.C. Cemetery District	0	0.000%	0	0.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	0	0.000%
O.C. Vector Control District	0	0.000%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	3,301,000	0.867%	0	0.000%
O.C. Fire Authority	0	0.000%	0	0.000%	0	0.000%
Cypress Recreation and Parks	0	0.000%	0	0.000%	0	0.000%
Department of Education	0	0.000%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	0	0.000%
City of San Juan Capistrano	0	0.000%	2,367,000	0.622%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	8,607,000	100.000%
O.C. Transportation Authority	0	0.000%	0	0.000%	0	0.000%
U.C.I.	0	0.000%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	180,000	0.047%	0	0.000%
Local Agency Formation Comm.	0	0.000%	184,000	0.048%	0	0.000%
Rancho Santa Margarita	0	0.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	37,645,000	9.889%	0	0.000%
O.C. IHSS Public Authority	<u>174,000</u>	<u>1.287%</u>	<u>0</u>	<u>0.000%</u>	<u>0</u>	<u>0.000%</u>
Total for all Employers	\$13,521,000	100.000%	\$380,668,000	100.000%	\$8,607,000	100.000%

Note: Results may not total due to rounding.

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Actual Contributions (Excluding Employer Paid Member Contributions and Employee Paid Reverse Pick-up Contributions, and not Reduced for Discount due to Prepaid Contributions) by Employer and Rate Group

January 1, 2021 to December 31, 2021

	Rate Group #4	Rate Group #4 Percentage	Rate Group #5	Rate Group #5 Percentage	Rate Group #9	Rate Group #9 Percentage
Orange County	\$0	0.000%	\$0	0.000%	\$0	0.000%
O.C. Cemetery District	0	0.000%	0	0.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	0	0.000%
O.C. Vector Control District	0	0.000%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	0	0.000%	0	0.000%
O.C. Fire Authority	0	0.000%	0	0.000%	0	0.000%
Cypress Recreation and Parks	0	0.000%	0	0.000%	0	0.000%
Department of Education	0	0.000%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	867,000	100.000%
City of San Juan Capistrano	0	0.000%	0	0.000%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	0	0.000%
O.C. Transportation Authority	0	0.000%	30,263,000	100.000%	0	0.000%
U.C.I.	0	0.000%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	0	0.000%	0	0.000%
Local Agency Formation Comm.	0	0.000%	0	0.000%	0	0.000%
Rancho Santa Margarita	0	100.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	0	0.000%	0	0.000%
O.C. IHSS Public Authority	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	\$0	100.000%	\$30,263,000	100.000%	\$867,000	100.000%

Note: Results may not total due to rounding.

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Actual Contributions (Excluding Employer Paid Member Contributions and Employee Paid Reverse Pick-up Contributions, and not Reduced for Discount due to Prepaid Contributions) by Employer and Rate Group

January 1, 2021 to December 31, 2021

	Rate Group #10	Rate Group #10 Percentage	Rate Group #11	Rate Group #11 Percentage	Rate Group #12	Rate Group #12 Percentage
Orange County	\$0	0.000%	\$0	0.000%	\$0	0.000%
O.C. Cemetery District	0	0.000%	243,000	100.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	134,000	100.000%
O.C. Vector Control District	0	0.000%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	0	0.000%	0	0.000%
O.C. Fire Authority	8,990,000	100.000%	0	0.000%	0	0.000%
Cypress Recreation and Parks	0	0.000%	0	0.000%	0	0.000%
Department of Education	0	0.000%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	0	0.000%
City of San Juan Capistrano	0	0.000%	0	0.000%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	0	0.000%
O.C. Transportation Authority	0	0.000%	0	0.000%	0	0.000%
U.C.I.	0	0.000%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	0	0.000%	0	0.000%
Local Agency Formation Comm.	0	0.000%	0	0.000%	0	0.000%
Rancho Santa Margarita	0	0.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	0	0.000%	0	0.000%
O.C. IHSS Public Authority	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	\$8,990,000	100.000%	\$243,000	100.000%	\$134,000	100.000%

Note: Results may not total due to rounding.

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Actual Contributions (Excluding Employer Paid Member Contributions and Employee Paid Reverse Pick-up Contributions, and not Reduced for Discount due to Prepaid Contributions) by Employer and Rate Group

January 1, 2021 to December 31, 2021

	Rate Group #6	Rate Group #6 Percentage	Rate Group #7	Rate Group #7 Percentage	Rate Group #8	Rate Group #8 Percentage
Orange County	\$32,123,000	100.000%	\$171,101,000	100.000%	\$0	0.000%
O.C. Cemetery District	0	0.000%	0	0.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	0	0.000%
O.C. Vector Control District	0	0.000%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	0	0.000%	0	0.000%
O.C. Fire Authority	0	0.000%	0	0.000%	74,105,000	100.000%
Cypress Recreation and Parks	0	0.000%	0	0.000%	0	0.000%
Department of Education	0	0.000%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	0	0.000%
City of San Juan Capistrano	0	0.000%	0	0.000%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	0	0.000%
O.C. Transportation Authority	0	0.000%	0	0.000%	0	0.000%
U.C.I.	0	0.000%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	0	0.000%	0	0.000%
Local Agency Formation Comm.	0	0.000%	0	0.000%	0	0.000%
Rancho Santa Margarita	0	0.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	0	0.000%	0	0.000%
O.C. IHSS Public Authority	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	\$32,123,000	100.000%	\$171,101,000	100.000%	\$74,105,000	100.000%

Note: Results may not total due to rounding.

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Actual Contributions (Excluding Employer Paid Member Contributions and Employee Paid Reverse Pick-up Contributions, and not Reduced for Discount due to Prepaid Contributions) by Employer and Rate Group

January 1, 2021 to December 31, 2021

	Total Contributions ³	Total Percentage
Orange County	\$553,562,000	76.817%
O.C. Cemetery District	243,000	0.034%
O.C. Law Library	134,000	0.019%
O.C. Vector Control District	0	0.000%
O.C. Retirement System	3,301,000	0.458%
O.C. Fire Authority	83,095,000	11.531%
Cypress Recreation and Parks	0	0.000%
Department of Education	0	0.000%
Transportation Corridor Agency	867,000	0.120%
City of San Juan Capistrano	2,367,000	0.328%
O.C. Sanitation District	8,607,000	1.194%
O.C. Transportation Authority	30,263,000	4.200%
U.C.I.	0	0.000%
O.C. Children and Families Comm.	180,000	0.025%
Local Agency Formation Comm.	184,000	0.026%
Rancho Santa Margarita	0	0.000%
O.C. Superior Court	37,645,000	5.224%
O.C. IHSS Public Authority	174,000	0.024%
Total for all Employers	\$720,622,000	100.000%

Note: Results may not total due to rounding.

³ Excludes combined additional contributions of \$14,649,000 made by O.C. Fire Authority towards the reduction of their UAALs, contributions of \$6,500,000 made by City of San Juan Capistrano, combined contributions of \$3,622,000 made by Department of Education and U.C.I., and combined employer pick-up contributions of \$32,000 made by O.C. Children and Families Commission and Local Agency Formation Commission and reverse pick-up contributions of \$(38,000) made by O.C. Fire Authority.

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Allocation of December 31, 2021 Net Pension Liability

	Rate Group #1	Rate Group #1 Percentage	Rate Group #2	Rate Group #2 Percentage	Rate Group #3	Rate Group #3 Percentage
Orange County	\$(21,936,844)	240.597%	\$1,569,726,151	87.955%	\$0	0.000%
O.C. Cemetery District	0	0.000%	0	0.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	0	0.000%
O.C. Vector Control District ⁴	(5,501,623)	60.340%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	16,375,725	0.918%	0	0.000%
O.C. Fire Authority	0	0.000%	0	0.000%	0	0.000%
Cypress Recreation and Parks ⁴	(103,379)	1.134%	0	0.000%	0	0.000%
Department of Education ⁴	1,523,058	(16.704%)	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	0	0.000%
City of San Juan Capistrano	0	0.000%	11,742,303	0.658%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	(178,731,247)	100.000%
O.C. Transportation Authority	0	0.000%	0	0.000%	0	0.000%
U.C.I. ⁴	17,134,332	(187.924%)	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	(811,951)	(0.045%)	0	0.000%
Local Agency Formation Comm.	0	0.000%	912,794	0.051%	0	0.000%
Rancho Santa Margarita	0	0.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	186,750,735	10.464%	0	0.000%
O.C. IHSS Public Authority	(233,222)	2.558%	0	0.000%	0	0.000%
Total for all Employers	\$(9,117,678)	100.000%	\$1,784,695,757	100.000%	\$(178,731,247)	100.000%

Note: Results may not total due to rounding.

⁴ In determining the NPLs for the O.C. Vector Control District, Cypress Recreation and Parks, Department of Education and U.C.I., we first start by rolling forward the VVAs of these employers as of December 31, 2020 to December 31, 2021 for the actual contributions, benefit payments and return on their VVAs during 2021. Those VVAs are then marked to the Plan's Fiduciary Net Position as of December 31, 2021. The TPLs for these employers are obtained from internal valuation results (by rolling forward their TPLs from December 31, 2020).

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Allocation of December 31, 2021 Net Pension Liability

	Rate Group #4	Rate Group #4 Percentage	Rate Group #5	Rate Group #5 Percentage	Rate Group #9	Rate Group #9 Percentage
Orange County	\$0	0.000%	\$0	0.000%	\$0	0.000%
O.C. Cemetery District	0	0.000%	0	0.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	0	0.000%
O.C. Vector Control District	0	0.000%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	0	0.000%	0	0.000%
O.C. Fire Authority	0	0.000%	0	0.000%	0	0.000%
Cypress Recreation and Parks	0	0.000%	0	0.000%	0	0.000%
Department of Education	0	0.000%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	(10,881,786)	100.000%
City of San Juan Capistrano	0	0.000%	0	0.000%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	0	0.000%
O.C. Transportation Authority	0	0.000%	73,424,051	100.000%	0	0.000%
U.C.I.	0	0.000%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	0	0.000%	0	0.000%
Local Agency Formation Comm.	0	0.000%	0	0.000%	0	0.000%
Rancho Santa Margarita	(6,231)	100.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	0	0.000%	0	0.000%
O.C. IHSS Public Authority	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	\$(6,231)	100.000%	\$73,424,051	100.000%	\$(10,881,786)	100.000%

Note: Results may not total due to rounding.

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Allocation of December 31, 2021 Net Pension Liability

	Rate Group #10	Rate Group #10 Percentage	Rate Group #11	Rate Group #11 Percentage	Rate Group #12	Rate Group #12 Percentage
Orange County	\$0	0.000%	\$0	0.000%	\$0	0.000%
O.C. Cemetery District	0	0.000%	(1,394,665)	100.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	(2,629,777)	100.000%
O.C. Vector Control District	0	0.000%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	0	0.000%	0	0.000%
O.C. Fire Authority	(12,928,328)	100.000%	0	0.000%	0	0.000%
Cypress Recreation and Parks	0	0.000%	0	0.000%	0	0.000%
Department of Education	0	0.000%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	0	0.000%
City of San Juan Capistrano	0	0.000%	0	0.000%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	0	0.000%
O.C. Transportation Authority	0	0.000%	0	0.000%	0	0.000%
U.C.I.	0	0.000%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	0	0.000%	0	0.000%
Local Agency Formation Comm.	0	0.000%	0	0.000%	0	0.000%
Rancho Santa Margarita	0	0.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	0	0.000%	0	0.000%
O.C. IHSS Public Authority	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	\$(12,928,328)	100.000%	\$(1,394,665)	100.000%	\$(2,629,777)	100.000%

Note: Results may not total due to rounding.

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Allocation of December 31, 2021 Net Pension Liability

	Rate Group #6	Rate Group #6 Percentage	Rate Group #7	Rate Group #7 Percentage	Rate Group #8	Rate Group #8 Percentage
Orange County	\$63,879,695	100.000%	\$435,907,016	100.000%	\$0	0.000%
O.C. Cemetery District	0	0.000%	0	0.000%	0	0.000%
O.C. Law Library	0	0.000%	0	0.000%	0	0.000%
O.C. Vector Control District	0	0.000%	0	0.000%	0	0.000%
O.C. Retirement System	0	0.000%	0	0.000%	0	0.000%
O.C. Fire Authority	0	0.000%	0	0.000%	(91,979,085)	100.000%
Cypress Recreation and Parks	0	0.000%	0	0.000%	0	0.000%
Department of Education	0	0.000%	0	0.000%	0	0.000%
Transportation Corridor Agency	0	0.000%	0	0.000%	0	0.000%
City of San Juan Capistrano	0	0.000%	0	0.000%	0	0.000%
O.C. Sanitation District	0	0.000%	0	0.000%	0	0.000%
O.C. Transportation Authority	0	0.000%	0	0.000%	0	0.000%
U.C.I.	0	0.000%	0	0.000%	0	0.000%
O.C. Children and Families Comm.	0	0.000%	0	0.000%	0	0.000%
Local Agency Formation Comm.	0	0.000%	0	0.000%	0	0.000%
Rancho Santa Margarita	0	0.000%	0	0.000%	0	0.000%
O.C. Superior Court	0	0.000%	0	0.000%	0	0.000%
O.C. IHSS Public Authority	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	\$63,879,695	100.000%	\$435,907,016	100.000%	\$(91,979,085)	100.000%

Note: Results may not total due to rounding.

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Allocation of December 31, 2021 Net Pension Liability

	Total NPL	Total Percentage
Orange County	\$2,047,576,018	99.870%
O.C. Cemetery District	(1,394,665)	(0.068%)
O.C. Law Library	(2,629,777)	(0.128%)
O.C. Vector Control District ⁴	(5,501,623)	(0.268%)
O.C. Retirement System	16,375,725	0.799%
O.C. Fire Authority	(104,907,413)	(5.117%)
Cypress Recreation and Parks ⁴	(103,379)	(0.005%)
Department of Education ⁴	1,523,058	0.074%
Transportation Corridor Agency	(10,881,786)	(0.531%)
City of San Juan Capistrano	11,742,303	0.573%
O.C. Sanitation District	(178,731,247)	(8.718%)
O.C. Transportation Authority	73,424,051	3.581%
U.C.I. ⁴	17,134,332	0.836%
O.C. Children and Families Comm.	(811,951)	(0.040%)
Local Agency Formation Comm.	912,794	0.044%
Rancho Santa Margarita	(6,231)	0.000%
O.C. Superior Court	186,750,735	9.109%
O.C. IHSS Public Authority	<u>(233,222)</u>	<u>(0.011%)</u>
Total for all Employers	\$2,050,237,722	100.000%

Note: Results may not total due to rounding.

⁴ In determining the NPLs for the O.C. Vector Control District, Cypress Recreation and Parks, Department of Education and U.C.I., we first start by rolling forward the VVAs of these employers as of December 31, 2020 to December 31, 2021 for the actual contributions, benefit payments and return on their VVAs during 2021. Those VVAs are then marked to the Plan's Fiduciary Net Position as of December 31, 2021. The TPLs for these employers are obtained from internal valuation results (by rolling forward their TPLs from December 31, 2020).

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Notes regarding determination of proportionate share as of December 31, 2021 measurement date

1. Based on the January 1, 2021 through December 31, 2021 employer contributions as provided by OCERS. These contributions have been adjusted to include transfers made from the County Investment Account and to exclude employer paid member contributions and they have not been reduced for discount due to prepaid contributions.
- 2a. The Net Pension Liability (NPL) for each Rate Group is the Total Pension Liability (TPL) minus the Plan's Fiduciary Net Position (plan assets). The TPL for each Rate Group is obtained from internal valuation results. The Plan's Fiduciary Net Position for each Rate Group is estimated by adjusting the Valuation Value of Assets (VVA) for each membership class by the ratio of the total OCERS Plan's Fiduciary Net Position (excluding the balance of the County Investment Account and the O.C. Sanitation District UAAL Deferred Account) to total OCERS VVA. As previously directed by OCERS, the County Investment Account is then allocated among the four County Rate Groups using the proportions of County POB contributions applied during 2021. These amounts are provided in item 3. The O.C. Sanitation District UAAL Deferred Account is allocated entirely to Rate Group #3 and the balance of that account has increased by from \$13,433,000 to \$15,643,000 at the end of the year. The balance of the O.C. Sanitation District UAAL Deferred Account was used to reduce the NPL for the O.C. Sanitation District as of the measurement date.
 - b. Each of General Rate Groups #3, #4, #5, #9, #10, #11 and #12 and Safety Rate Groups #6, #7 and #8 have only one active employer, so all of the NPL for that Rate Group is allocated to the corresponding employer.
 - c. For General Rate Groups #1 and #2, the NPL is allocated based on the actual employer contributions within the General Rate Group.
 - The NPL for Rate Group #1 was adjusted by the NPLs for the O.C. Vector Control District, Cypress Recreation and Parks, Department of Education and U.C.I. prior to allocating the net NPL to the other employers in Rate Group #1 as the NPLs for these four employers were calculated separately.
 - Calculate ratio of employer's contributions to the total contributions for the Rate Group. For this purpose, the employer contributions exclude the following amounts:

(i) Rate Group #1 (Department of Education):	\$345,566
(ii) Rate Group #1 (U.C.I.):	\$3,276,341
(iii) Rate Group #2 (City of San Juan Capistrano):	\$6,500,000

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- Multiply this ratio (unrounded) by the NPL for the Rate Group to determine the employer's proportionate share of the NPL for the Rate Group.
 - The UAAL contributions referenced in (i), (ii) and (iii) above are adjusted with interest to December 31, 2021 and are used to reduce the NPL for the three employers as of December 31, 2021.
3. The percentages of contributions by employer are not exactly equal to the percentages we use to allocate the NPL by employer because the NPL for the County has been reduced to reflect the portion of the County Investment Account that has been allocated among the four County Rate Groups. The amounts of the County Investment Account that have been allocated to those Rate Groups are as follows:

Rate Group #1: \$4,047,073

Rate Group #2: 102,031,509

Rate Group #6: 9,756,386

Rate Group #7: 51,910,032

Total: \$167,745,000

In addition, the NPL for Rate Group #2 was allocated prior to applying the adjusted balance of the \$1,744,454 in additional UAAL contributions made by O.C. Children and Families Commission on November 15, 2017. That balance is equal to \$1,748,649 as of December 31, 2020 as shown on Exhibit A1 and is equal to \$1,704,902 as of December 31, 2021 when adjusted with interest for the entire year and UAAL contribution offset starting from January 1, 2021 to December 31, 2021. We would continue to maintain the outstanding balance of the additional UAAL contributions for use in determining the NPL for this employer.

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4. If the employer is in several Rate Groups, the employer's total allocated NPL is the sum of its allocated NPL from each Rate Group. Proportionate share of total plan NPL is then the ratio of the employer's total allocated NPL to the total NPL of all employers.

For the active employers, the following items are allocated based on the corresponding proportionate share within each Rate Group:

- a. Net Pension Liability
- b. Service cost
- c. Interest on the Total Pension Liability
- d. Current-period benefit changes
- e. Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability
- f. Expensed portion of current-period changes of assumptions or other inputs
- g. Member contributions
- h. Projected earnings on plan investments
- i. Expensed portion of current-period differences between actual and projected earnings on plan investments
- j. Administrative expense
- k. Recognition of beginning of year deferred outflows of resources as pension expense
- l. Recognition of beginning of year deferred inflows of resources as pension expense

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Pension expense

Total for All Employers

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Components of Pension Expense	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
• Service cost	\$510,863,197	\$512,255,298
• Interest on the Total Pension Liability	1,609,891,069	1,535,953,426
• Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
• Current-period benefit changes	0	0
• Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(20,742,423)	27,940,714
• Expensed portion of current-period changes of assumptions or other inputs	0	3,264,531
• Member contributions ¹	(271,328,000)	(279,416,000)
• Projected earnings on plan investments	(1,312,304,499)	(1,165,140,244)
• Expensed portion of current-period differences between actual and projected earnings on plan investments	(381,952,100)	(201,608,751)
• Administrative expense	21,473,000	20,428,000
• Other	0	0
• Recognition of beginning of year deferred outflows of resources as pension expense	488,032,428	428,190,705
• Recognition of beginning of year deferred inflows of resources as pension expense	(765,059,527)	(626,005,852)
• Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
Pension Expense	\$(121,126,855)	\$255,861,827

¹ Member contributions include employer paid member contributions, if any.

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Pension expense (continued)

Orange County

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
Components of Pension Expense		
• Service cost	\$368,412,111	\$371,346,735
• Interest on the Total Pension Liability	1,196,305,667	1,139,902,216
• Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	(1,005,218)	2,220,532
• Current-period benefit changes	0	0
• Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(6,124,010)	18,249,861
• Expensed portion of current-period changes of assumptions or other inputs	0	7,156,061
• Member contributions ¹	(203,086,033)	(210,961,842)
• Projected earnings on plan investments	(946,656,208)	(840,642,533)
• Expensed portion of current-period differences between actual and projected earnings on plan investments	(276,095,527)	(145,873,766)
• Administrative expense	15,957,997	15,077,479
• Other	0	0
• Recognition of beginning of year deferred outflows of resources as pension expense	355,055,739	310,426,008
• Recognition of beginning of year deferred inflows of resources as pension expense	(548,457,241)	(452,374,213)
• Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	<u>7,137,914</u>	<u>5,628,662</u>
Pension Expense	\$(38,554,809)	\$220,155,200

¹ Member contributions include employer paid member contributions, if any.

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Pension expense (continued)

O.C. Cemetery District

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
Components of Pension Expense		
• Service cost	\$392,495	\$355,759
• Interest on the Total Pension Liability	890,649	820,243
• Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
• Current-period benefit changes	0	0
• Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	7,939	94,716
• Expensed portion of current-period changes of assumptions or other inputs	0	29,012
• Member contributions ¹	(182,000)	(168,000)
• Projected earnings on plan investments	(887,439)	(785,319)
• Expensed portion of current-period differences between actual and projected earnings on plan investments	(257,112)	(133,716)
• Administrative expense	9,119	7,961
• Other	0	0
• Recognition of beginning of year deferred outflows of resources as pension expense	415,637	297,806
• Recognition of beginning of year deferred inflows of resources as pension expense	(571,006)	(478,922)
• Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
Pension Expense	\$(181,718)	\$39,540

¹ Member contributions include employer paid member contributions, if any.

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Pension expense (continued)

O.C. Law Library

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
Components of Pension Expense		
• Service cost	\$316,123	\$311,289
• Interest on the Total Pension Liability	825,504	777,650
• Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
• Current-period benefit changes	0	0
• Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(77,705)	(53,515)
• Expensed portion of current-period changes of assumptions or other inputs	0	14,948
• Member contributions ¹	(159,000)	(164,000)
• Projected earnings on plan investments	(879,609)	(792,873)
• Expensed portion of current-period differences between actual and projected earnings on plan investments	(247,881)	(132,015)
• Administrative expense	6,330	6,373
• Other	0	0
• Recognition of beginning of year deferred outflows of resources as pension expense	288,618	273,670
• Recognition of beginning of year deferred inflows of resources as pension expense	(578,969)	(525,707)
• Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	(25,423)	(414,500)
Pension Expense	\$(532,012)	\$(698,680)

¹ Member contributions include employer paid member contributions, if any.

Section 2: GASB 68 Information

Pension expense (continued)

O.C. Vector Control District

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Components of Pension Expense	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
• Service cost	\$0	\$0
• Interest on the Total Pension Liability	1,884,831	1,873,171
• Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
• Current-period benefit changes	0	0
• Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(191,783)	57,350
• Expensed portion of current-period changes of assumptions or other inputs	0	19,465
• Member contributions ¹	0	0
• Projected earnings on plan investments	(2,002,568)	(1,893,631)
• Expensed portion of current-period differences between actual and projected earnings on plan investments	(531,341)	(296,460)
• Administrative expense	0	0
• Other	0	0
• Recognition of beginning of year deferred outflows of resources as pension expense	776,282	699,624
• Recognition of beginning of year deferred inflows of resources as pension expense	(1,345,037)	(1,521,054)
• Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
Pension Expense	\$(1,409,616)	\$(1,061,535)

¹ Member contributions include employer paid member contributions, if any.

Section 2: GASB 68 Information

Pension expense (continued)

O.C. Retirement System

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
Components of Pension Expense		
• Service cost	\$2,333,020	\$2,248,238
• Interest on the Total Pension Liability	8,220,440	7,376,867
• Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	262,105	96,804
• Current-period benefit changes	0	0
• Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(24,527)	111,162
• Expensed portion of current-period changes of assumptions or other inputs	0	282,596
• Member contributions ¹	(1,435,758)	(1,466,419)
• Projected earnings on plan investments	(6,380,412)	(5,410,502)
• Expensed portion of current-period differences between actual and projected earnings on plan investments	(1,854,275)	(925,785)
• Administrative expense	105,166	94,104
• Other	0	0
• Recognition of beginning of year deferred outflows of resources as pension expense	2,480,087	1,963,543
• Recognition of beginning of year deferred inflows of resources as pension expense	(3,564,625)	(2,964,238)
• Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	833,197	1,010,362
Pension Expense	\$974,418	\$2,416,732

¹ Member contributions include employer paid member contributions, if any.

Section 2: GASB 68 Information

Pension expense (continued)

O.C. Fire Authority

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
Components of Pension Expense		
• Service cost	\$68,123,987	\$65,552,468
• Interest on the Total Pension Liability	159,120,659	154,018,603
• Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
• Current-period benefit changes	0	0
• Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(5,411,470)	4,854,232
• Expensed portion of current-period changes of assumptions or other inputs	0	(10,312,352)
• Member contributions ¹	(29,587,000)	(28,291,000)
• Projected earnings on plan investments	(146,025,928)	(126,504,684)
• Expensed portion of current-period differences between actual and projected earnings on plan investments	(43,070,769)	(22,320,190)
• Administrative expense	2,770,589	2,735,425
• Other	0	0
• Recognition of beginning of year deferred outflows of resources as pension expense	48,263,968	44,055,157
• Recognition of beginning of year deferred inflows of resources as pension expense	(90,743,047)	(66,197,374)
• Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
Pension Expense	\$(36,559,011)	\$17,590,285

¹ Member contributions include employer paid member contributions, if any.

Section 2: GASB 68 Information

Pension expense (continued)

Cypress Recreation and Parks

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
Components of Pension Expense		
• Service cost	\$0	\$0
• Interest on the Total Pension Liability	314,510	316,509
• Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
• Current-period benefit changes	0	0
• Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	17,217	22,924
• Expensed portion of current-period changes of assumptions or other inputs	0	(2,566)
• Member contributions ¹	0	0
• Projected earnings on plan investments	(301,552)	(288,817)
• Expensed portion of current-period differences between actual and projected earnings on plan investments	(79,058)	(44,653)
• Administrative expense	0	0
• Other	0	0
• Recognition of beginning of year deferred outflows of resources as pension expense	851,586	828,662
• Recognition of beginning of year deferred inflows of resources as pension expense	(908,645)	(861,427)
• Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
Pension Expense	\$(105,942)	\$(29,368)

¹ Member contributions include employer paid member contributions, if any.

Section 2: GASB 68 Information

Pension expense (continued)

Department of Education

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
Components of Pension Expense		
• Service cost	\$0	\$0
• Interest on the Total Pension Liability	796,200	833,351
• Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
• Current-period benefit changes	0	0
• Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(30,989)	36,028
• Expensed portion of current-period changes of assumptions or other inputs	0	(21,159)
• Member contributions ¹	0	0
• Projected earnings on plan investments	(622,689)	(611,476)
• Expensed portion of current-period differences between actual and projected earnings on plan investments	(161,007)	(93,270)
• Administrative expense	7,649	6,223
• Other	0	0
• Recognition of beginning of year deferred outflows of resources as pension expense	353,749	348,521
• Recognition of beginning of year deferred inflows of resources as pension expense	(599,011)	(585,617)
• Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
Pension Expense	\$(256,098)	\$(87,399)

¹ Member contributions include employer paid member contributions, if any.

Section 2: GASB 68 Information

Pension expense (continued)

Transportation Corridor Agency

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Components of Pension Expense	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
• Service cost	\$1,515,843	\$1,680,188
• Interest on the Total Pension Liability	3,850,950	3,628,098
• Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
• Current-period benefit changes	0	0
• Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(176,742)	96,200
• Expensed portion of current-period changes of assumptions or other inputs	0	36,170
• Member contributions ¹	(750,000)	(748,000)
• Projected earnings on plan investments	(4,070,373)	(3,648,043)
• Expensed portion of current-period differences between actual and projected earnings on plan investments	(1,159,083)	(603,159)
• Administrative expense	34,817	34,279
• Other	0	0
• Recognition of beginning of year deferred outflows of resources as pension expense	1,191,648	1,069,955
• Recognition of beginning of year deferred inflows of resources as pension expense	(2,049,721)	(1,589,325)
• Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
Pension Expense	\$(1,612,661)	\$(43,637)

¹ Member contributions include employer paid member contributions, if any.

Section 2: GASB 68 Information

Pension expense (continued)

City of San Juan Capistrano

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
Components of Pension Expense		
• Service cost	\$1,672,904	\$1,812,394
• Interest on the Total Pension Liability	5,894,511	5,946,788
• Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	906,666	(781,253)
• Current-period benefit changes	0	0
• Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(17,587)	89,612
• Expensed portion of current-period changes of assumptions or other inputs	0	227,812
• Member contributions ¹	(1,029,518)	(1,182,139)
• Projected earnings on plan investments	(4,575,109)	(4,361,622)
• Expensed portion of current-period differences between actual and projected earnings on plan investments	(1,329,618)	(746,312)
• Administrative expense	75,410	75,861
• Other	0	0
• Recognition of beginning of year deferred outflows of resources as pension expense	1,778,360	1,582,891
• Recognition of beginning of year deferred inflows of resources as pension expense	(2,556,034)	(2,389,591)
• Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	(1,021,704)	(518,208)
Pension Expense	\$(201,719)	\$(243,767)

¹ Member contributions include employer paid member contributions, if any.

Section 2: GASB 68 Information

Pension expense (continued)

O.C. Sanitation District

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Components of Pension Expense	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
• Service cost	\$17,065,799	\$17,388,689
• Interest on the Total Pension Liability	56,429,458	53,187,470
• Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
• Current-period benefit changes	0	0
• Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(4,042,052)	2,527,848
• Expensed portion of current-period changes of assumptions or other inputs	0	2,035,121
• Member contributions ¹	(8,398,000)	(8,329,000)
• Projected earnings on plan investments	(60,607,002)	(54,967,224)
• Expensed portion of current-period differences between actual and projected earnings on plan investments	(16,948,741)	(9,041,738)
• Administrative expense	366,765	358,146
• Other	0	0
• Recognition of beginning of year deferred outflows of resources as pension expense	23,879,317	19,316,348
• Recognition of beginning of year deferred inflows of resources as pension expense	(31,238,883)	(25,653,746)
• Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	25,423	414,500
Pension Expense	\$(23,467,916)	\$(2,763,586)

¹ Member contributions include employer paid member contributions, if any.

Section 2: GASB 68 Information

Pension expense (continued)

O.C. Transportation Authority

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Components of Pension Expense	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
• Service cost	\$24,234,150	\$24,228,350
• Interest on the Total Pension Liability	74,438,122	70,938,807
• Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
• Current-period benefit changes	0	0
• Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(4,399,492)	361,484
• Expensed portion of current-period changes of assumptions or other inputs	0	589,638
• Member contributions ¹	(10,212,000)	(10,329,000)
• Projected earnings on plan investments	(61,051,970)	(54,696,206)
• Expensed portion of current-period differences between actual and projected earnings on plan investments	(17,637,562)	(9,421,035)
• Administrative expense	861,399	826,046
• Other	0	0
• Recognition of beginning of year deferred outflows of resources as pension expense	21,789,253	21,034,188
• Recognition of beginning of year deferred inflows of resources as pension expense	(37,546,561)	(31,437,967)
• Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
Pension Expense	\$(9,524,661)	\$12,094,305

¹ Member contributions include employer paid member contributions, if any.

Section 2: GASB 68 Information

Pension expense (continued)

U.C.I

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Components of Pension Expense	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
• Service cost	\$0	\$0
• Interest on the Total Pension Liability	6,837,427	7,153,449
• Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
• Current-period benefit changes	0	0
• Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	11,990	179,363
• Expensed portion of current-period changes of assumptions or other inputs	0	(189,697)
• Member contributions ¹	0	0
• Projected earnings on plan investments	(5,175,045)	(5,069,213)
• Expensed portion of current-period differences between actual and projected earnings on plan investments	(1,345,344)	(779,876)
• Administrative expense	72,519	66,734
• Other	0	0
• Recognition of beginning of year deferred outflows of resources as pension expense	2,515,625	2,523,897
• Recognition of beginning of year deferred inflows of resources as pension expense	(4,042,164)	(3,532,556)
• Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
Pension Expense	\$(1,124,992)	\$352,101

¹ Member contributions include employer paid member contributions, if any.

Section 2: GASB 68 Information

Pension expense (continued)

O.C. Children and Families Comm.

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
Components of Pension Expense		
• Service cost	\$(115,678)	\$(55,177)
• Interest on the Total Pension Liability	(407,591)	(181,041)
• Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	(79,977)	29,890
• Current-period benefit changes	0	0
• Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	1,216	(2,728)
• Expensed portion of current-period changes of assumptions or other inputs	0	(6,935)
• Member contributions ¹	71,189	35,989
• Projected earnings on plan investments	316,357	132,783
• Expensed portion of current-period differences between actual and projected earnings on plan investments	91,940	22,720
• Administrative expense	(5,214)	(2,309)
• Other	0	0
• Recognition of beginning of year deferred outflows of resources as pension expense	(122,969)	(48,189)
• Recognition of beginning of year deferred inflows of resources as pension expense	176,743	72,748
• Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	(393,190)	(495,651)
Pension Expense	\$(467,174)	\$(497,900)

¹ Member contributions include employer paid member contributions, if any.

Section 2: GASB 68 Information

Pension expense (continued)

Local Agency Formation Comm.

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
Components of Pension Expense		
• Service cost	\$130,044	\$112,450
• Interest on the Total Pension Liability	458,213	368,970
• Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	41,869	(23,468)
• Current-period benefit changes	0	0
• Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(1,367)	5,560
• Expensed portion of current-period changes of assumptions or other inputs	0	14,135
• Member contributions ¹	(80,030)	(73,346)
• Projected earnings on plan investments	(355,648)	(270,618)
• Expensed portion of current-period differences between actual and projected earnings on plan investments	(103,359)	(46,305)
• Administrative expense	5,862	4,707
• Other	0	0
• Recognition of beginning of year deferred outflows of resources as pension expense	138,242	98,211
• Recognition of beginning of year deferred inflows of resources as pension expense	(198,695)	(148,263)
• Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	42,793	29,626
Pension Expense	\$77,924	\$71,659

¹ Member contributions include employer paid member contributions, if any.

Section 2: GASB 68 Information

Pension expense (continued)

Rancho Santa Margarita

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
Components of Pension Expense		
• Service cost	\$0	\$0
• Interest on the Total Pension Liability	3,091	3,220
• Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
• Current-period benefit changes	0	0
• Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(30)	134
• Expensed portion of current-period changes of assumptions or other inputs	0	(184)
• Member contributions ¹	0	0
• Projected earnings on plan investments	(3,282)	(3,320)
• Expensed portion of current-period differences between actual and projected earnings on plan investments	(629)	(26)
• Administrative expense	0	0
• Other	0	0
• Recognition of beginning of year deferred outflows of resources as pension expense	1,144	2,337
• Recognition of beginning of year deferred inflows of resources as pension expense	(3,992)	(4,101)
• Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	<u>0</u>	<u>0</u>
Pension Expense	\$(3,698)	\$(1,940)

¹ Member contributions include employer paid member contributions, if any.

Section 2: GASB 68 Information

Pension expense (continued)

O.C. Superior Court

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Components of Pension Expense	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
• Service cost	\$26,606,035	\$26,998,252
• Interest on the Total Pension Liability	93,746,882	88,586,015
• Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	(83,753)	(1,537,061)
• Current-period benefit changes	0	0
• Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(279,706)	1,334,903
• Expensed portion of current-period changes of assumptions or other inputs	0	3,393,587
• Member contributions ¹	(16,373,559)	(17,609,678)
• Projected earnings on plan investments	(72,762,986)	(64,972,680)
• Expensed portion of current-period differences between actual and projected earnings on plan investments	(21,146,370)	(11,117,400)
• Administrative expense	1,199,330	1,130,057
• Other	0	0
• Recognition of beginning of year deferred outflows of resources as pension expense	28,283,207	23,579,451
• Recognition of beginning of year deferred inflows of resources as pension expense	(40,651,408)	(35,596,413)
• Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	(6,614,138)	(5,693,830)
Pension Expense	\$(8,076,466)	\$8,495,203

¹ Member contributions include employer paid member contributions, if any.

Section 2: GASB 68 Information

Pension expense (continued)

O.C. IHSS Public Authority

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
Components of Pension Expense		
• Service cost	\$176,364	\$275,663
• Interest on the Total Pension Liability	281,546	403,040
• Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	(41,692)	(5,444)
• Current-period benefit changes	0	0
• Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(3,325)	(24,420)
• Expensed portion of current-period changes of assumptions or other inputs	0	(1,121)
• Member contributions ¹	(106,291)	(129,565)
• Projected earnings on plan investments	(263,036)	(354,266)
• Expensed portion of current-period differences between actual and projected earnings on plan investments	(76,364)	(55,765)
• Administrative expense	5,262	6,914
• Other	0	0
• Recognition of beginning of year deferred outflows of resources as pension expense	92,935	138,625
• Recognition of beginning of year deferred inflows of resources as pension expense	(181,231)	(218,086)
• Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	15,128	39,039
Pension Expense	\$(100,704)	\$74,614

¹ Member contributions include employer paid member contributions, if any.

Section 2: GASB 68 Information

Deferred outflows of resources and deferred inflows of resources

Total for all Employers

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
Deferred Outflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$25,034,306	\$29,842,680
• Changes of assumptions or other inputs	274,433,364	447,613,509
• Difference between projected and actual earnings on pension plan investments	272,055,737	544,111,478
• Difference between expected and actual experience in the Total Pension Liability	<u>143,247,717</u>	<u>185,878,956</u>
• Total Deferred Outflows of Resources	\$714,771,124	\$1,207,446,623
Deferred Inflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$25,034,306	\$29,842,680
• Changes of assumptions or other inputs	122,982,345	155,261,175
• Difference between projected and actual earnings on pension plan investments	2,600,993,035	1,710,902,886
• Difference between expected and actual experience in the Total Pension Liability	<u>166,626,218</u>	<u>169,219,589</u>
• Total Deferred Inflows of Resources	\$2,915,635,904	\$2,065,226,330
Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:		
Reporting Date for Employer under GASB 68 Year Ended June 30:		
2022	N/A	\$(277,027,099)
2023	\$(424,553,023)	(21,858,500)
2024	(820,039,748)	(417,345,225)
2025	(569,519,644)	(166,825,121)
2026	(377,418,286)	25,276,238
2027	(9,334,079)	0
2028	0	0
Thereafter	0	0

¹ Calculated in accordance with Paragraphs 54 and 55 of GASB 68.

Section 2: GASB 68 Information

Deferred outflows of resources and deferred inflows of resources (continued)

Orange County

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
Deferred Outflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$14,269,881	\$22,213,247
• Changes of assumptions or other inputs	215,922,612	350,580,446
• Difference between projected and actual earnings on pension plan investments	196,375,395	392,622,732
• Difference between expected and actual experience in the Total Pension Liability	<u>82,799,096</u>	<u>106,688,286</u>
• Total Deferred Outflows of Resources	\$509,366,984	\$872,104,711
Deferred Inflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$7,448,014	\$3,780,248
• Changes of assumptions or other inputs	81,289,468	102,623,510
• Difference between projected and actual earnings on pension plan investments	1,881,060,106	1,237,325,625
• Difference between expected and actual experience in the Total Pension Liability	<u>78,100,654</u>	<u>116,822,611</u>
• Total Deferred Inflows of Resources	\$2,047,898,242	\$1,460,551,994
Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:		
Reporting Date for Employer under GASB 68 Year Ended June 30:		
2022	N/A	\$(187,706,942)
2023	\$(285,121,140)	8,279,692
2024	(584,593,278)	(336,443,054)
2025	(404,763,847)	(112,476,870)
2026	(260,844,849)	39,568,470
2027	(3,208,144)	0
2028	0	0
Thereafter	0	0

¹ Calculated in accordance with Paragraphs 54 and 55 of GASB 68.

Section 2: GASB 68 Information

Deferred outflows of resources and deferred inflows of resources (continued)

O.C. Cemetery District

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
Deferred Outflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$0	\$0
• Changes of assumptions or other inputs	192,556	302,773
• Difference between projected and actual earnings on pension plan investments	185,535	371,071
• Difference between expected and actual experience in the Total Pension Liability	<u>443,549</u>	<u>528,105</u>
• Total Deferred Outflows of Resources	\$821,640	\$1,201,949
Deferred Inflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$0	\$0
• Changes of assumptions or other inputs	0	0
• Difference between projected and actual earnings on pension plan investments	1,739,646	1,132,625
• Difference between expected and actual experience in the Total Pension Liability	<u>273,583</u>	<u>423,161</u>
• Total Deferred Inflows of Resources	\$2,013,229	\$1,555,786
Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:		
Reporting Date for Employer under GASB 68 Year Ended June 30:		
2022	N/A	\$(155,369)
2023	\$(240,913)	8,260
2024	(474,476)	(225,303)
2025	(330,818)	(81,645)
2026	(148,954)	100,220
2027	3,572	0
2028	0	0
Thereafter	0	0

¹ Calculated in accordance with Paragraphs 54 and 55 of GASB 68.

Section 2: GASB 68 Information

Deferred outflows of resources and deferred inflows of resources (continued)

O.C. Law Library

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
Deferred Outflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$0	\$0
• Changes of assumptions or other inputs	129,020	215,323
• Difference between projected and actual earnings on pension plan investments	193,385	386,769
• Difference between expected and actual experience in the Total Pension Liability	<u>25,545</u>	<u>34,476</u>
• Total Deferred Outflows of Resources	\$347,950	\$636,568
Deferred Inflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$0	\$25,423
• Changes of assumptions or other inputs	0	0
• Difference between projected and actual earnings on pension plan investments	1,705,162	1,139,777
• Difference between expected and actual experience in the Total Pension Liability	<u>674,335</u>	<u>481,376</u>
• Total Deferred Inflows of Resources	\$2,379,497	\$1,646,576
Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:		
Reporting Date for Employer under GASB 68 Year Ended June 30:		
2022	N/A	\$(315,774)
2023	\$(451,837)	(126,251)
2024	(699,430)	(373,844)
2025	(488,484)	(162,898)
2026	(356,829)	(31,241)
2027	(34,967)	0
2028	0	0
Thereafter	0	0

¹ Calculated in accordance with Paragraphs 54 and 55 of GASB 68.

Section 2: GASB 68 Information

Deferred outflows of resources and deferred inflows of resources (continued)

O.C. Vector Control District

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
Deferred Outflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$0	\$0
• Changes of assumptions or other inputs	220,263	384,382
• Difference between projected and actual earnings on pension plan investments	497,305	994,611
• Difference between expected and actual experience in the Total Pension Liability	<u>274,103</u>	<u>388,960</u>
• Total Deferred Outflows of Resources	\$991,671	\$1,767,953
Deferred Inflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$0	\$0
• Changes of assumptions or other inputs	0	0
• Difference between projected and actual earnings on pension plan investments	3,805,364	2,740,586
• Difference between expected and actual experience in the Total Pension Liability	<u>1,409,750</u>	<u>840,768</u>
• Total Deferred Inflows of Resources	\$5,215,114	\$3,581,354
Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:		
Reporting Date for Employer under GASB 68 Year Ended June 30:		
2022	N/A	\$(568,755)
2023	\$(900,848)	(177,724)
2024	(1,578,178)	(855,054)
2025	(997,211)	(274,087)
2026	(660,905)	62,219
2027	(86,301)	0
2028	0	0
Thereafter	0	0

¹ Calculated in accordance with Paragraphs 54 and 55 of GASB 68.

Section 2: GASB 68 Information

Deferred outflows of resources and deferred inflows of resources (continued)

O.C. Retirement System

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
Deferred Outflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$3,532,956	\$3,305,581
• Changes of assumptions or other inputs	1,858,168	2,731,424
• Difference between projected and actual earnings on pension plan investments	1,347,606	2,561,775
• Difference between expected and actual experience in the Total Pension Liability	<u>445,588</u>	<u>534,689</u>
• Total Deferred Outflows of Resources	\$7,184,318	\$9,133,469
Deferred Inflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$0	\$105,794
• Changes of assumptions or other inputs	0	0
• Difference between projected and actual earnings on pension plan investments	12,636,493	7,932,122
• Difference between expected and actual experience in the Total Pension Liability	<u>349,290</u>	<u>645,269</u>
• Total Deferred Inflows of Resources	\$12,985,783	\$8,683,185
Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:		
Reporting Date for Employer under GASB 68 Year Ended June 30:		
2022	N/A	\$27,575
2023	\$(469,447)	246,502
2024	(2,533,128)	1,558,040
2025	(1,703,070)	(371,122)
2026	(1,202,729)	(1,010,711)
2027	106,909	0
2028	0	0
Thereafter	0	0

¹ Calculated in accordance with Paragraphs 54 and 55 of GASB 68.

Section 2: GASB 68 Information

Deferred outflows of resources and deferred inflows of resources (continued)

O.C. Fire Authority

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020	
Deferred Outflows of Resources			
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$0	\$0	
• Changes of assumptions or other inputs	11,055,459	20,847,354	
• Difference between projected and actual earnings on pension plan investments	28,451,703	56,903,410	
• Difference between expected and actual experience in the Total Pension Liability	<u>32,626,893</u>	<u>42,647,259</u>	
• Total Deferred Outflows of Resources	\$72,134,055	\$120,398,023	
Deferred Inflows of Resources			
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$0	\$0	
• Changes of assumptions or other inputs	40,876,171	51,604,825	
• Difference between projected and actual earnings on pension plan investments	288,925,170	184,283,215	
• Difference between expected and actual experience in the Total Pension Liability	<u>33,859,388</u>	<u>22,151,617</u>	
• Total Deferred Inflows of Resources	\$363,660,729	\$258,039,657	
Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:			
Reporting Date for Employer under GASB 68 Year Ended June 30:			
	2022	N/A	\$(42,479,079)
	2023	\$(65,324,773)	(16,842,534)
	2024	(98,828,874)	(50,346,635)
	2025	(72,034,545)	(23,552,306)
	2026	(52,903,320)	(4,421,080)
	2027	(2,435,162)	0
	2028	0	0
	Thereafter	0	0

¹ Calculated in accordance with Paragraphs 54 and 55 of GASB 68.

Section 2: GASB 68 Information

Deferred outflows of resources and deferred inflows of resources (continued)

Cypress Recreation and Parks

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
Deferred Outflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$0	\$0
• Changes of assumptions or other inputs	23,600	46,968
• Difference between projected and actual earnings on pension plan investments	70,662	141,322
• Difference between expected and actual experience in the Total Pension Liability	<u>947,260</u>	<u>1,628,200</u>
• Total Deferred Outflows of Resources	\$1,041,522	\$1,816,490
Deferred Inflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$0	\$0
• Changes of assumptions or other inputs	9,779	12,345
• Difference between projected and actual earnings on pension plan investments	572,127	1,161,975
• Difference between expected and actual experience in the Total Pension Liability	<u>0</u>	<u>0</u>
• Total Deferred Inflows of Resources	\$581,906	\$1,174,320
Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:		
Reporting Date for Employer under GASB 68 Year Ended June 30:		
2022	N/A	\$(57,059)
2023	\$681,559	743,400
2024	(116,015)	(54,174)
2025	(68,323)	(6,482)
2026	(45,355)	16,485
2027	7,750	0
2028	0	0
Thereafter	0	0

¹ Calculated in accordance with Paragraphs 54 and 55 of GASB 68.

Section 2: GASB 68 Information

Deferred outflows of resources and deferred inflows of resources (continued)

Department of Education

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
Deferred Outflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$0	\$0
• Changes of assumptions or other inputs	59,655	118,721
• Difference between projected and actual earnings on pension plan investments	180,006	360,014
• Difference between expected and actual experience in the Total Pension Liability	<u>329,790</u>	<u>444,465</u>
• Total Deferred Outflows of Resources	\$569,451	\$923,200
Deferred Inflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$0	\$0
• Changes of assumptions or other inputs	80,616	101,775
• Difference between projected and actual earnings on pension plan investments	1,193,127	917,172
• Difference between expected and actual experience in the Total Pension Liability	<u>345,414</u>	<u>417,291</u>
• Total Deferred Inflows of Resources	\$1,619,157	\$1,436,238
Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:		
Reporting Date for Employer under GASB 68 Year Ended June 30:		
2022	N/A	\$(245,262)
2023	\$(292,777)	(100,781)
2024	(330,934)	(138,938)
2025	(232,096)	(40,100)
2026	(179,952)	12,043
2027	(13,947)	0
2028	0	0
Thereafter	0	0

¹ Calculated in accordance with Paragraphs 54 and 55 of GASB 68.

Section 2: GASB 68 Information

Deferred outflows of resources and deferred inflows of resources (continued)

Transportation Corridor Agency

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020	
Deferred Outflows of Resources			
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$0	\$0	
• Changes of assumptions or other inputs	433,224	761,881	
• Difference between projected and actual earnings on pension plan investments	624,027	1,248,052	
• Difference between expected and actual experience in the Total Pension Liability	<u>685,795</u>	<u>924,761</u>	
• Total Deferred Outflows of Resources	\$1,743,046	\$2,934,694	
Deferred Inflows of Resources			
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$0	\$0	
• Changes of assumptions or other inputs	0	0	
• Difference between projected and actual earnings on pension plan investments	7,812,023	4,929,682	
• Difference between expected and actual experience in the Total Pension Liability	<u>1,113,190</u>	<u>622,420</u>	
• Total Deferred Inflows of Resources	\$8,925,213	\$5,552,102	
Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:			
Reporting Date for Employer under GASB 68 Year Ended June 30:			
	2022	N/A	\$(858,073)
	2023	\$(1,757,304)	(421,479)
	2024	(2,406,120)	(1,070,295)
	2025	(1,710,606)	(374,781)
	2026	(1,228,605)	107,220
	2027	(79,532)	0
	2028	0	0
	Thereafter	0	0

¹ Calculated in accordance with Paragraphs 54 and 55 of GASB 68.

Section 2: GASB 68 Information

Deferred outflows of resources and deferred inflows of resources (continued)

City of San Juan Capistrano

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020	
Deferred Outflows of Resources			
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$4,316,186	\$560,255	
• Changes of assumptions or other inputs	1,332,409	2,201,910	
• Difference between projected and actual earnings on pension plan investments	966,308	2,065,149	
• Difference between expected and actual experience in the Total Pension Liability	<u>319,511</u>	<u>431,035</u>	
• Total Deferred Outflows of Resources	\$6,934,414	\$5,258,349	
Deferred Inflows of Resources			
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$3,587,902	\$4,888,341	
• Changes of assumptions or other inputs	0	0	
• Difference between projected and actual earnings on pension plan investments	9,061,066	6,394,402	
• Difference between expected and actual experience in the Total Pension Liability	<u>250,461</u>	<u>520,178</u>	
• Total Deferred Inflows of Resources	\$12,899,429	\$11,802,921	
Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:			
Reporting Date for Employer under GASB 68 Year Ended June 30:			
	2022	N/A	\$(1,477,829)
	2023	\$(1,004,097)	(718,794)
	2024	(2,727,988)	771,469
	2025	(1,800,276)	(1,345,609)
	2026	(832,741)	(3,773,809)
	2027	400,087	0
	2028	0	0
	Thereafter	0	0

¹ Calculated in accordance with Paragraphs 54 and 55 of GASB 68.

Section 2: GASB 68 Information

Deferred outflows of resources and deferred inflows of resources (continued)

O.C. Sanitation District

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
Deferred Outflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$0	\$25,423
• Changes of assumptions or other inputs	11,884,767	18,009,943
• Difference between projected and actual earnings on pension plan investments	13,140,560	26,281,119
• Difference between expected and actual experience in the Total Pension Liability	<u>15,066,130</u>	<u>19,679,712</u>
• Total Deferred Outflows of Resources	\$40,091,457	\$63,996,197
Deferred Inflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$0	\$0
• Changes of assumptions or other inputs	0	0
• Difference between projected and actual earnings on pension plan investments	116,780,014	78,515,498
• Difference between expected and actual experience in the Total Pension Liability	<u>18,908,781</u>	<u>2,630,086</u>
• Total Deferred Inflows of Resources	\$135,688,795	\$81,145,584
Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:		
Reporting Date for Employer under GASB 68 Year Ended June 30:		
2022	N/A	\$(7,334,143)
2023	\$(17,995,653)	2,995,140
2024	(34,332,197)	(13,341,404)
2025	(24,155,775)	(3,164,982)
2026	(17,294,791)	3,696,002
2027	(1,818,922)	0
2028	0	0
Thereafter	0	0

¹ Calculated in accordance with Paragraphs 54 and 55 of GASB 68.

Section 2: GASB 68 Information

Deferred outflows of resources and deferred inflows of resources (continued)

O.C. Transportation Authority

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
Deferred Outflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$0	\$0
• Changes of assumptions or other inputs	9,602,044	17,474,376
• Difference between projected and actual earnings on pension plan investments	13,108,759	26,217,519
• Difference between expected and actual experience in the Total Pension Liability	<u>2,618,961</u>	<u>3,427,122</u>
• Total Deferred Outflows of Resources	\$25,329,764	\$47,119,017
Deferred Inflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$0	\$0
• Changes of assumptions or other inputs	0	0
• Difference between projected and actual earnings on pension plan investments	121,050,493	80,855,942
• Difference between expected and actual experience in the Total Pension Liability	<u>26,420,471</u>	<u>14,033,597</u>
• Total Deferred Inflows of Resources	\$147,470,964	\$94,889,539
Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:		
Reporting Date for Employer under GASB 68 Year Ended June 30:		
2022	N/A	\$(15,757,308)
2023	\$(25,744,929)	(3,707,875)
2024	(43,016,272)	(20,979,218)
2025	(30,133,587)	(8,096,533)
2026	(21,266,640)	770,412
2027	(1,979,772)	0
2028	0	0
Thereafter	0	0

¹ Calculated in accordance with Paragraphs 54 and 55 of GASB 68.

Section 2: GASB 68 Information

Deferred outflows of resources and deferred inflows of resources (continued)

U.C.I.

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
Deferred Outflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$0	\$0
• Changes of assumptions or other inputs	478,219	951,705
• Difference between projected and actual earnings on pension plan investments	1,483,018	2,966,035
• Difference between expected and actual experience in the Total Pension Liability	<u>1,580,070</u>	<u>2,085,835</u>
• Total Deferred Outflows of Resources	\$3,541,307	\$6,003,575
Deferred Inflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$0	\$0
• Changes of assumptions or other inputs	722,747	912,444
• Difference between projected and actual earnings on pension plan investments	9,948,282	7,628,033
• Difference between expected and actual experience in the Total Pension Liability	<u>799,253</u>	<u>1,590,593</u>
• Total Deferred Inflows of Resources	\$11,470,282	\$10,131,070
Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:		
Reporting Date for Employer under GASB 68 Year Ended June 30:		
2022	N/A	\$(1,526,539)
2023	\$(1,738,640)	(405,286)
2024	(2,917,425)	(1,584,071)
2025	(1,936,581)	(603,227)
2026	(1,341,726)	(8,372)
2027	5,397	0
2028	0	0
Thereafter	0	0

¹ Calculated in accordance with Paragraphs 54 and 55 of GASB 68.

Section 2: GASB 68 Information

Deferred outflows of resources and deferred inflows of resources (continued)

O.C. Children and Families Comm.

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
Deferred Outflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$113,879	\$143,769
• Changes of assumptions or other inputs	(92,133)	(67,034)
• Difference between projected and actual earnings on pension plan investments	(66,818)	(62,871)
• Difference between expected and actual experience in the Total Pension Liability	<u>(22,093)</u>	<u>(13,122)</u>
• Total Deferred Outflows of Resources	\$(67,165)	\$742
Deferred Inflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$1,089,285	\$1,156,467
• Changes of assumptions or other inputs	0	0
• Difference between projected and actual earnings on pension plan investments	(626,550)	(194,668)
• Difference between expected and actual experience in the Total Pension Liability	<u>(17,319)</u>	<u>(15,836)</u>
• Total Deferred Inflows of Resources	\$445,416	\$945,963
Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:		
Reporting Date for Employer under GASB 68 Year Ended June 30:		
2022	N/A	\$(471,966)
2023	\$(292,722)	(411,273)
2024	(113,560)	(342,312)
2025	(91,606)	(217,925)
2026	20,750	498,255
2027	(35,443)	0
2028	0	0
Thereafter	0	0

¹ Calculated in accordance with Paragraphs 54 and 55 of GASB 68.

Section 2: GASB 68 Information

Deferred outflows of resources and deferred inflows of resources (continued)

Local Agency Formation Comm.

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
Deferred Outflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$267,727	\$159,107
• Changes of assumptions or other inputs	103,576	136,618
• Difference between projected and actual earnings on pension plan investments	75,116	128,133
• Difference between expected and actual experience in the Total Pension Liability	<u>24,837</u>	<u>26,744</u>
• Total Deferred Outflows of Resources	\$471,256	\$450,602
Deferred Inflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$98,003	\$132,905
• Changes of assumptions or other inputs	0	0
• Difference between projected and actual earnings on pension plan investments	704,367	396,743
• Difference between expected and actual experience in the Total Pension Liability	<u>19,470</u>	<u>32,275</u>
• Total Deferred Inflows of Resources	\$821,840	\$561,923
Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:		
Reporting Date for Employer under GASB 68 Year Ended June 30:		
2022	N/A	\$(24,951)
2023	\$(53,089)	39,056
2024	(157,612)	61,377
2025	(94,942)	(35,256)
2026	(63,163)	(151,547)
2027	18,222	0
2028	0	0
Thereafter	0	0

¹ Calculated in accordance with Paragraphs 54 and 55 of GASB 68.

Section 2: GASB 68 Information

Deferred outflows of resources and deferred inflows of resources (continued)

Rancho Santa Margarita

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
Deferred Outflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$0	\$0
• Changes of assumptions or other inputs	162	321
• Difference between projected and actual earnings on pension plan investments	588	1,174
• Difference between expected and actual experience in the Total Pension Liability	<u>1,145</u>	<u>1,544</u>
• Total Deferred Outflows of Resources	\$1,895	\$3,039
Deferred Inflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$0	\$0
• Changes of assumptions or other inputs	702	886
• Difference between projected and actual earnings on pension plan investments	4,364	3,756
• Difference between expected and actual experience in the Total Pension Liability	<u>1,430</u>	<u>3,198</u>
• Total Deferred Inflows of Resources	\$6,496	\$7,840
Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:		
Reporting Date for Employer under GASB 68 Year Ended June 30:		
2022	N/A	\$(2,848)
2023	\$(1,894)	(1,235)
2024	(1,377)	(718)
2025	(619)	40
2026	(700)	(40)
2027	(11)	0
2028	0	0
Thereafter	0	0

¹ Calculated in accordance with Paragraphs 54 and 55 of GASB 68.

Section 2: GASB 68 Information

Deferred outflows of resources and deferred inflows of resources (continued)

O.C. Superior Court

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
Deferred Outflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$2,513,172	\$3,391,904
• Changes of assumptions or other inputs	21,190,769	32,800,644
• Difference between projected and actual earnings on pension plan investments	15,368,255	30,763,392
• Difference between expected and actual experience in the Total Pension Liability	<u>5,081,537</u>	<u>6,420,885</u>
• Total Deferred Outflows of Resources	\$44,153,733	\$73,376,825
Deferred Inflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$12,600,403	\$19,720,574
• Changes of assumptions or other inputs	0	0
• Difference between projected and actual earnings on pension plan investments	144,108,081	95,253,873
• Difference between expected and actual experience in the Total Pension Liability	<u>3,983,349</u>	<u>7,748,797</u>
• Total Deferred Inflows of Resources	\$160,691,833	\$122,723,244
Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:		
Reporting Date for Employer under GASB 68 Year Ended June 30:		
2022	N/A	\$(18,032,264)
2023	\$(23,684,551)	(11,227,431)
2024	(44,973,100)	5,992,846
2025	(28,788,778)	(15,933,378)
2026	(18,928,116)	(10,146,192)
2027	(163,555)	0
2028	0	0
Thereafter	0	0

¹ Calculated in accordance with Paragraphs 54 and 55 of GASB 68.

Section 2: GASB 68 Information

Deferred outflows of resources and deferred inflows of resources (continued)

O.C. IHSS Public Authority

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
Deferred Outflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$20,505	\$43,394
• Changes of assumptions or other inputs	38,994	115,754
• Difference between projected and actual earnings on pension plan investments	54,327	162,072
• Difference between expected and actual experience in the Total Pension Liability	0	0
• Total Deferred Outflows of Resources	\$113,826	\$321,220
Deferred Inflows of Resources		
• Changes in proportion and differences between employer's contributions and proportionate share of contributions ¹	\$210,699	\$32,928
• Changes of assumptions or other inputs	2,862	5,390
• Difference between projected and actual earnings on pension plan investments	513,700	486,528
• Difference between expected and actual experience in the Total Pension Liability	134,718	272,188
• Total Deferred Inflows of Resources	\$861,979	\$797,034
Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:		
Reporting Date for Employer under GASB 68 Year Ended June 30:		
2022	N/A	\$(40,513)
2023	\$(159,968)	(29,887)
2024	(239,784)	26,063
2025	(188,480)	(87,960)
2026	(139,661)	(12,096)
2027	(20,260)	0
2028	0	0
Thereafter	0	0

¹ Calculated in accordance with Paragraphs 54 and 55 of GASB 68.

Section 2: GASB 68 Information

Deferred outflows of resources and deferred inflows of resources (continued)

There are changes in each employer's proportionate share of the total NPL during the measurement period ended December 31, 2021. The net effect of the change on the employer's proportionate share of the collective NPL and collective deferred outflows of resources and deferred inflows of resources for the current period (i.e., 2021) is recognized over the average of the expected remaining service lives of all employees that are provided with pensions through OCERS which is 5.45 years determined as of December 31, 2020 (the beginning of the measurement period ended December 31, 2021). This is described in Paragraph 33a. of GASB 68.

In addition, the difference between the actual employer contributions and the proportionate share of the employer contributions during the measurement period ended December 31, 2021 is recognized over the same period.

The net effects of the change on the employer's proportionate share of the collective NPL and collective deferred outflows of resources and deferred inflows of resources for prior periods are continued to be recognized based on the expected remaining service lives of all employees calculated as of those prior measurement dates.

The average of the expected service lives of all employees is determined by:

- Calculating each active employees' expected remaining service life as the present value of \$1 per year of future service at zero percent interest.
- Setting the remaining service life to zero for each nonactive or retired member.
- Dividing the sum of the above amounts by the total number of active employee, nonactive and retired members.

Section 2: GASB 68 Information

Schedule of proportionate share of the Net Pension Liability

Total for All Employers

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll ¹	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	100.000%	\$5,291,126,088	\$1,494,745,333	353.98%	67.16%
2015	100.000%	5,082,480,673	1,513,206,357	335.87%	69.42%
2016	100.000%	5,716,604,741	1,521,035,820	375.84%	67.10%
2017	100.000%	5,191,216,603	1,602,675,426	323.91%	71.16%
2018	100.000%	4,952,099,401	1,678,322,080	295.06%	74.93%
2019	100.000%	6,197,202,089	1,718,798,287	360.55%	70.03%
2020	100.000%	5,075,682,463	1,783,054,087	284.66%	76.67%
2021	100.000%	4,213,246,650	1,909,268,347	220.67%	81.69%
2022	100.000%	2,050,237,722	1,870,386,937	109.62%	91.45%

¹ Covered payroll represents payroll on which contributions to the pension plan are based.

Section 2: GASB 68 Information

Schedule of proportionate share of the Net Pension Liability (continued)

Orange County

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll ¹	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	74.198%	\$3,925,918,613	\$1,086,993,804	361.17%	66.88%
2015	76.680%	3,897,232,634	1,107,550,873	351.88%	68.16%
2016	76.813%	4,391,070,880	1,117,547,827	392.92%	65.66%
2017	77.898%	4,043,855,643	1,199,272,843	337.19%	69.56%
2018	80.445%	3,983,695,231	1,246,487,036	319.59%	72.85%
2019	79.367%	4,918,576,912	1,271,800,976	386.74%	68.06%
2020	81.254%	4,124,212,240	1,312,799,835	314.15%	74.47%
2021	84.200%	3,547,545,979	1,403,384,933	252.78%	79.31%
2022	99.870%	2,047,576,018	1,374,766,971	148.94%	88.59%

¹ Covered payroll represents payroll on which contributions to the pension plan are based.

Section 2: GASB 68 Information

Schedule of proportionate share of the Net Pension Liability (continued)

O.C. Cemetery District

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll ¹	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	0.034%	\$1,820,018	\$1,183,960	153.72%	76.02%
2015	(0.002%)	(95,350)	1,202,916	(7.93%)	101.24%
2016	0.009%	533,906	1,247,006	42.82%	93.62%
2017	0.004%	222,409	1,288,388	17.26%	97.47%
2018	(0.004%)	(173,677)	1,419,045	(12.24%)	101.78%
2019	0.016%	962,119	1,518,808	63.35%	91.02%
2020	(0.004%)	(228,119)	1,595,506	(14.30%)	102.07%
2021	(0.003%)	(145,195)	1,730,433	(8.39%)	101.16%
2022	(0.068%)	(1,394,665)	1,787,176	(78.04%)	110.35%

¹ Covered payroll represents payroll on which contributions to the pension plan are based.

Section 2: GASB 68 Information

Schedule of proportionate share of the Net Pension Liability (continued)

O.C. Law Library

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll ¹	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	0.063%	\$3,314,766	\$1,191,662	278.16%	63.14%
2015	0.063%	3,221,570	1,193,852	269.85%	66.76%
2016	0.061%	3,472,003	1,153,022	301.12%	62.38%
2017	0.034%	1,770,282	1,106,587	159.98%	80.96%
2018	(0.001%)	(36,317)	1,095,599	(3.31%)	100.35%
2019	0.009%	573,252	1,075,119	53.32%	94.64%
2020	(0.001%)	(74,515)	1,057,915	(7.04%)	100.66%
2021	(0.023%)	(949,226)	1,109,082	(85.59%)	108.09%
2022	(0.128%)	(2,629,777)	1,059,907	(248.11%)	122.03%

¹ Covered payroll represents payroll on which contributions to the pension plan are based.

Section 2: GASB 68 Information

Schedule of proportionate share of the Net Pension Liability (continued)

O.C. Vector Control District

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll ¹	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	0.047%	\$2,464,723	\$0	N/A	91.24%
2015	0.057%	2,900,367	0	N/A	89.85%
2016	0.034%	1,941,891	0	N/A	92.66%
2017	0.032%	1,669,793	0	N/A	93.78%
2018	0.024%	1,166,920	0	N/A	95.89%
2019	0.040%	2,492,695	0	N/A	90.92%
2020	(0.012%)	(625,500)	0	N/A	102.29%
2021	(0.040%)	(1,681,965)	0	N/A	106.03%
2022	(0.268%)	(5,501,623)	0	N/A	120.52%

¹ Covered payroll represents payroll on which contributions to the pension plan are based.

Section 2: GASB 68 Information

Schedule of proportionate share of the Net Pension Liability (continued)

O.C. Retirement System

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll ¹	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	0.402%	\$21,259,813	\$5,368,550	396.01%	64.40%
2015	0.406%	20,656,114	5,655,725	365.22%	67.15%
2016	0.433%	24,747,342	6,063,327	408.15%	64.73%
2017	0.422%	21,886,393	6,190,905	353.52%	68.69%
2018	0.433%	21,427,080	6,486,488	330.33%	71.95%
2019	0.465%	28,844,760	7,501,588	384.52%	67.06%
2020	0.528%	26,824,264	8,491,615	315.89%	73.18%
2021	0.592%	24,954,057	9,414,503	265.06%	76.95%
2022	0.799%	16,375,725	9,518,018	172.05%	85.88%

¹ Covered payroll represents payroll on which contributions to the pension plan are based.

Section 2: GASB 68 Information

Schedule of proportionate share of the Net Pension Liability (continued)

O.C. Fire Authority

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll ¹	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	8.366%	\$442,651,348	\$129,689,221	341.32%	69.66%
2015	9.188%	466,968,323	129,187,729	361.46%	70.35%
2016	9.056%	517,669,806	129,452,647	399.89%	68.90%
2017	9.043%	469,430,660	124,514,004	377.01%	73.11%
2018	7.485%	370,674,668	148,890,685	248.96%	80.44%
2019	7.531%	466,731,526	155,479,486	300.19%	76.63%
2020	6.982%	354,395,457	164,583,742	215.33%	83.51%
2021	4.299%	181,121,638	190,254,989	95.20%	91.96%
2022	(5.117%)	(104,907,413)	189,061,641	(55.49%)	104.45%

¹ Covered payroll represents payroll on which contributions to the pension plan are based.

Section 2: GASB 68 Information

Schedule of proportionate share of the Net Pension Liability (continued)

Cypress Recreation and Parks

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll ¹	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	0.000%	\$0	\$0	N/A	N/A
2015	0.000%	0	0	N/A	N/A
2016	0.000%	0	0	N/A	N/A
2017	0.000%	0	0	N/A	N/A
2018	0.015%	718,340	0	N/A	83.78%
2019	0.007%	408,781	0	N/A	90.81%
2020	0.005%	262,415	0	N/A	94.23%
2021	0.004%	185,117	0	N/A	96.03%
2022	(0.005%)	(103,379)	0	N/A	102.18%

¹ Covered payroll represents payroll on which contributions to the pension plan are based.

Section 2: GASB 68 Information

Schedule of proportionate share of the Net Pension Liability (continued)

Department of Education

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll ¹	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	0.051%	\$2,691,224	\$62,538	4303.34%	81.08%
2015	0.072%	3,637,615	0	N/A	75.31%
2016	0.075%	4,306,689	0	N/A	69.50%
2017	0.085%	4,415,517	0	N/A	68.18%
2018	0.051%	2,530,324	0	N/A	80.00%
2019	0.057%	3,517,372	0	N/A	71.79%
2020	0.061%	3,099,339	0	N/A	74.84%
2021	0.063%	2,661,390	0	N/A	77.81%
2022	0.074%	1,523,058	0	N/A	86.62%

¹ Covered payroll represents payroll on which contributions to the pension plan are based.

Section 2: GASB 68 Information

Schedule of proportionate share of the Net Pension Liability (continued)

Transportation Corridor Agency

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll ¹	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	0.215%	\$11,359,334	\$6,054,822	187.61%	66.44%
2015	0.210%	10,682,807	6,118,067	174.61%	69.62%
2016	0.222%	12,713,136	6,088,331	208.81%	66.45%
2017	0.239%	12,423,364	6,431,272	193.17%	69.93%
2018	0.207%	10,242,769	6,775,031	151.18%	76.84%
2019	0.214%	13,253,632	6,609,886	200.51%	71.83%
2020	(0.035%)	(1,753,164)	6,809,655	(25.75%)	103.35%
2021	(0.092%)	(3,881,366)	7,257,523	(53.48%)	107.11%
2022	(0.531%)	(10,881,786)	6,686,314	(162.75%)	119.16%

¹ Covered payroll represents payroll on which contributions to the pension plan are based.

Section 2: GASB 68 Information

Schedule of proportionate share of the Net Pension Liability (continued)

City of San Juan Capistrano

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll ¹	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	0.535%	\$28,312,625	\$6,324,207	447.69%	64.40%
2015	0.548%	27,866,378	6,863,345	406.02%	67.15%
2016	0.512%	29,249,120	6,464,876	452.43%	64.73%
2017	0.483%	25,089,009	6,636,488	378.05%	68.69%
2018	0.528%	26,138,852	7,227,226	361.67%	71.95%
2019	0.519%	32,142,058	7,253,654	443.12%	67.06%
2020	0.516%	26,191,970	7,294,439	359.07%	73.18%
2021	0.477%	20,116,465	6,701,987	300.16%	76.95%
2022	0.573%	11,742,303	6,112,331	192.11%	85.88%

¹ Covered payroll represents payroll on which contributions to the pension plan are based.

Section 2: GASB 68 Information

Schedule of proportionate share of the Net Pension Liability (continued)

O.C. Sanitation District

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll ¹	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	3.832%	\$202,747,516	\$58,954,754	343.90%	63.14%
2015	1.130%	57,418,760	58,641,163	97.92%	89.61%
2016	0.742%	42,439,759	59,789,927	70.98%	92.74%
2017	(0.200%)	(10,384,510)	60,000,017	(17.31%)	101.70%
2018	(0.799%)	(39,571,102)	62,341,796	(63.47%)	105.96%
2019	0.468%	29,029,145	66,475,479	43.67%	95.86%
2020	(0.974%)	(49,446,617)	71,395,906	(69.26%)	106.64%
2021	(1.629%)	(68,643,380)	73,290,519	(93.66%)	108.50%
2022	(8.718%)	(178,731,247)	73,539,248	(243.04%)	121.74%

¹ Covered payroll represents payroll on which contributions to the pension plan are based.

Section 2: GASB 68 Information

Schedule of proportionate share of the Net Pension Liability (continued)

O.C. Transportation Authority

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll ¹	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	4.112%	\$217,568,793	\$92,199,745	235.98%	71.77%
2015	4.006%	203,591,950	95,061,437	214.17%	74.00%
2016	4.377%	250,192,983	93,109,984	268.71%	69.82%
2017	4.436%	230,260,478	94,507,309	243.64%	73.17%
2018	4.283%	212,117,162	94,528,116	224.40%	77.15%
2019	4.353%	269,788,642	97,229,545	277.48%	71.97%
2020	4.419%	224,284,548	101,980,885	219.93%	77.80%
2021	4.415%	186,024,390	102,499,571	181.49%	82.52%
2022	3.581%	73,424,051	97,538,254	75.28%	93.26%

¹ Covered payroll represents payroll on which contributions to the pension plan are based.

Section 2: GASB 68 Information

Schedule of proportionate share of the Net Pension Liability (continued)

U.C.I.

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll ¹	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	0.609%	\$32,214,491	\$643,375	5007.11%	74.44%
2015	0.523%	26,578,391	574,780	4624.10%	77.81%
2016	0.633%	36,184,065	285,025	12695.05%	69.50%
2017	0.696%	36,113,699	43,707	82626.81%	68.96%
2018	0.558%	27,644,960	14,874	185860.97%	75.13%
2019	0.562%	34,808,679	0	N/A	67.93%
2020	0.595%	30,213,739	0	N/A	71.62%
2021	0.601%	25,337,145	0	N/A	75.38%
2022	0.836%	17,134,332	0	N/A	82.75%

¹ Covered payroll represents payroll on which contributions to the pension plan are based.

Section 2: GASB 68 Information

Schedule of proportionate share of the Net Pension Liability (continued)

O.C. Children and Families Comm.

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll ¹	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	0.087%	\$4,590,845	\$1,116,074	411.34%	64.40%
2015	0.078%	3,957,425	1,043,030	379.42%	67.15%
2016	0.071%	4,066,523	1,042,786	389.97%	64.73%
2017	0.061%	3,158,290	925,031	341.43%	68.69%
2018	0.019%	962,204	849,266	113.30%	90.09%
2019	0.010%	630,610	966,061	65.28%	91.49%
2020	(0.013%)	(646,472)	1,061,044	(60.93%)	115.26%
2021	(0.015%)	(612,417)	1,167,468	(52.46%)	112.42%
2022	(0.040%)	(811,951)	1,304,766	(62.23%)	112.84%

¹ Covered payroll represents payroll on which contributions to the pension plan are based.

Section 2: GASB 68 Information

Schedule of proportionate share of the Net Pension Liability (continued)

Local Agency Formation Comm.

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll ¹	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	0.022%	\$1,187,537	\$273,719	433.85%	64.40%
2015	0.026%	1,303,484	334,804	389.33%	67.15%
2016	0.020%	1,156,534	287,698	402.00%	64.73%
2017	0.026%	1,340,888	374,792	357.77%	68.69%
2018	0.026%	1,268,133	394,760	321.24%	71.95%
2019	0.026%	1,582,703	419,538	377.25%	67.06%
2020	0.029%	1,489,642	475,099	313.54%	73.18%
2021	0.030%	1,248,133	463,507	269.28%	76.95%
2022	0.044%	912,794	511,264	178.54%	85.88%

¹ Covered payroll represents payroll on which contributions to the pension plan are based.

Section 2: GASB 68 Information

Schedule of proportionate share of the Net Pension Liability (continued)

Rancho Santa Margarita

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll ¹	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	(0.000%)	\$(4,181)	\$0	N/A	108.66%
2015	0.000%	1,729	0	N/A	96.78%
2016	0.000%	6,660	0	N/A	88.06%
2017	0.000%	9,332	0	N/A	82.95%
2018	(0.000%)	(2,320)	0	N/A	104.91%
2019	0.000%	1,284	0	N/A	97.28%
2020	(0.000%)	(2,214)	0	N/A	104.69%
2021	(0.000%)	(2,733)	0	N/A	105.92%
2022	(0.000%)	(6,231)	0	N/A	113.82%

¹ Covered payroll represents payroll on which contributions to the pension plan are based.

Section 2: GASB 68 Information

Schedule of proportionate share of the Net Pension Liability (continued)

O.C. Superior Court

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll ¹	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	7.415%	\$392,321,750	\$103,987,082	377.28%	64.40%
2015	7.002%	355,886,410	99,034,265	359.36%	67.15%
2016	6.926%	395,957,480	97,656,241	405.46%	64.73%
2017	6.726%	349,173,850	100,413,439	347.74%	68.69%
2018	6.716%	332,589,831	100,683,255	330.33%	71.95%
2019	6.338%	392,760,910	101,374,099	387.44%	67.06%
2020	6.635%	336,766,149	104,356,239	322.71%	73.18%
2021	7.112%	299,663,880	110,862,286	270.30%	76.95%
2022	9.109%	186,750,735	107,375,606	173.92%	85.88%

¹ Covered payroll represents payroll on which contributions to the pension plan are based.

Section 2: GASB 68 Information

Schedule of proportionate share of the Net Pension Liability (continued)

O.C. IHSS Public Authority

Reporting Date for Employer under GASB 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered payroll ¹	Proportionate share of the Net Pension Liability as a percentage of its covered payroll	Plan's Fiduciary Net Position as a percentage of the Total Pension Liability
2014	0.013%	\$706,873	\$701,820	100.72%	73.15%
2015	0.013%	672,066	744,371	90.29%	75.26%
2016	0.016%	895,964	847,123	105.77%	73.52%
2017	0.015%	781,506	970,644	80.51%	79.30%
2018	0.014%	706,343	1,128,903	62.57%	84.20%
2019	0.018%	1,097,009	1,094,048	100.27%	77.97%
2020	0.014%	719,301	1,152,206	62.43%	86.11%
2021	0.007%	304,738	1,131,545	26.93%	93.94%
2022	(0.011%)	(233,222)	1,125,442	(20.72%)	104.54%

¹ Covered payroll represents payroll on which contributions to the pension plan are based.

Section 2: GASB 68 Information

Schedule of reconciliation of Net Pension Liability

Total for All Employers

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Reconciliation of Net Pension Liability	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
• Beginning Net Pension Liability	\$4,213,246,650	\$5,075,682,463
• Pension Expense	(121,126,855)	255,861,827
• Employer Contributions	(698,797,000)	(659,775,000)
• New Net Deferred Inflows/Outflows	(1,620,112,172)	(656,337,787)
• Change in Allocation of Prior Deferred Inflows/Outflows	0	0
• New Net Deferred Flows Due to Change in Proportion ¹	0	0
• Recognition of Prior Deferred Inflows/Outflows	277,027,099	197,815,147
• Recognition of Prior Deferred Flows Due to Change in Proportion ¹	<u>0</u>	<u>0</u>
Ending Net Pension Liability	\$2,050,237,722	\$4,213,246,650

¹ Includes differences between employer contributions and proportionate share of contributions.

Section 2: GASB 68 Information

Schedule of reconciliation of Net Pension Liability (continued)

Orange County

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Reconciliation of Net Pension Liability	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
• Beginning Net Pension Liability	\$3,547,545,979	\$4,124,212,240
• Pension Expense	(38,554,809)	220,155,200
• Employer Contributions	(511,331,176)	(481,633,016)
• New Net Deferred Inflows/Outflows	(1,131,633,956)	(461,292,587)
• Change in Allocation of Prior Deferred Inflows/Outflows	(240,390)	(896,165)
• New Net Deferred Flows Due to Change in Proportion ¹	(4,473,218)	10,680,764
• Recognition of Prior Deferred Inflows/Outflows	193,401,502	141,948,205
• Recognition of Prior Deferred Flows Due to Change in Proportion ¹	<u>(7,137,914)</u>	<u>(5,628,662)</u>
Ending Net Pension Liability	\$2,047,576,018	\$3,547,545,979

¹ Includes differences between employer contributions and proportionate share of contributions.

Section 2: GASB 68 Information

Schedule of reconciliation of Net Pension Liability (continued)

O.C. Cemetery District

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Reconciliation of Net Pension Liability	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
• Beginning Net Pension Liability	\$(145,195)	\$(228,119)
• Pension Expense	(181,718)	39,540
• Employer Contributions	(230,000)	(198,000)
• New Net Deferred Inflows/Outflows	(993,121)	60,268
• Change in Allocation of Prior Deferred Inflows/Outflows	0	0
• New Net Deferred Flows Due to Change in Proportion ¹	0	0
• Recognition of Prior Deferred Inflows/Outflows	155,369	181,116
• Recognition of Prior Deferred Flows Due to Change in Proportion ¹	<u>0</u>	<u>0</u>
Ending Net Pension Liability	\$(1,394,665)	\$(145,195)

¹ Includes differences between employer contributions and proportionate share of contributions.

Section 2: GASB 68 Information

Schedule of reconciliation of Net Pension Liability (continued)

O.C. Law Library

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Reconciliation of Net Pension Liability	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
• Beginning Net Pension Liability	\$(949,226)	\$(74,515)
• Pension Expense	(532,012)	(698,680)
• Employer Contributions	(127,000)	(129,000)
• New Net Deferred Inflows/Outflows	(1,337,313)	(713,568)
• Change in Allocation of Prior Deferred Inflows/Outflows	0	0
• New Net Deferred Flows Due to Change in Proportion ¹	0	0
• Recognition of Prior Deferred Inflows/Outflows	290,351	252,037
• Recognition of Prior Deferred Flows Due to Change in Proportion ¹	<u>25,423</u>	<u>414,500</u>
Ending Net Pension Liability	\$(2,629,777)	\$(949,226)

¹ Includes differences between employer contributions and proportionate share of contributions.

Section 2: GASB 68 Information

Schedule of reconciliation of Net Pension Liability (continued)

O.C. Vector Control District

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Reconciliation of Net Pension Liability	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
• Beginning Net Pension Liability	\$(1,681,965)	\$(625,500)
• Pension Expense	(1,409,616)	(1,061,535)
• Employer Contributions	0	0
• New Net Deferred Inflows/Outflows	(2,978,797)	(816,360)
• Change in Allocation of Prior Deferred Inflows/Outflows	0	0
• New Net Deferred Flows Due to Change in Proportion ¹	0	0
• Recognition of Prior Deferred Inflows/Outflows	568,755	821,430
• Recognition of Prior Deferred Flows Due to Change in Proportion ¹	<u>0</u>	<u>0</u>
Ending Net Pension Liability	\$(5,501,623)	\$(1,681,965)

¹ Includes differences between employer contributions and proportionate share of contributions.

Section 2: GASB 68 Information

Schedule of reconciliation of Net Pension Liability (continued)

O.C. Retirement System

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Reconciliation of Net Pension Liability	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
• Beginning Net Pension Liability	\$24,954,057	\$26,824,264
• Pension Expense	974,418	2,416,732
• Employer Contributions	(3,301,000)	(2,899,000)
• New Net Deferred Inflows/Outflows	(7,526,242)	(1,809,163)
• Change in Allocation of Prior Deferred Inflows/Outflows	(143,215)	(34,735)
• New Net Deferred Flows Due to Change in Proportion ¹	1,166,366	465,626
• Recognition of Prior Deferred Inflows/Outflows	1,084,538	1,000,695
• Recognition of Prior Deferred Flows Due to Change in Proportion ¹	<u>(833,197)</u>	<u>(1,010,362)</u>
Ending Net Pension Liability	\$16,375,725	\$24,954,057

¹ Includes differences between employer contributions and proportionate share of contributions.

Section 2: GASB 68 Information

Schedule of reconciliation of Net Pension Liability (continued)

O.C. Fire Authority

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Reconciliation of Net Pension Liability	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
• Beginning Net Pension Liability	\$181,121,638	\$354,395,457
• Pension Expense	(36,559,011)	17,590,285
• Employer Contributions	(95,585,000)	(97,472,000)
• New Net Deferred Inflows/Outflows	(196,364,119)	(115,534,321)
• Change in Allocation of Prior Deferred Inflows/Outflows	0	0
• New Net Deferred Flows Due to Change in Proportion ¹	0	0
• Recognition of Prior Deferred Inflows/Outflows	42,479,079	22,142,217
• Recognition of Prior Deferred Flows Due to Change in Proportion ¹	<u>0</u>	<u>0</u>
Ending Net Pension Liability	\$(104,907,413)	\$181,121,638

¹ Includes differences between employer contributions and proportionate share of contributions.

Section 2: GASB 68 Information

Schedule of reconciliation of Net Pension Liability (continued)

Cypress Recreation and Parks

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Reconciliation of Net Pension Liability	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
• Beginning Net Pension Liability	\$185,117	\$262,415
• Pension Expense	(105,942)	(29,368)
• Employer Contributions	0	0
• New Net Deferred Inflows/Outflows	(239,613)	(80,695)
• Change in Allocation of Prior Deferred Inflows/Outflows	0	0
• New Net Deferred Flows Due to Change in Proportion ¹	0	0
• Recognition of Prior Deferred Inflows/Outflows	57,059	32,765
• Recognition of Prior Deferred Flows Due to Change in Proportion ¹	<u>0</u>	<u>0</u>
Ending Net Pension Liability	\$(103,379)	\$185,117

¹ Includes differences between employer contributions and proportionate share of contributions.

Section 2: GASB 68 Information

Schedule of reconciliation of Net Pension Liability (continued)

Department of Education

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Reconciliation of Net Pension Liability	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
• Beginning Net Pension Liability	\$2,661,390	\$3,099,339
• Pension Expense	(256,098)	(87,399)
• Employer Contributions	(345,566)	(286,085)
• New Net Deferred Inflows/Outflows	(781,930)	(301,561)
• Change in Allocation of Prior Deferred Inflows/Outflows	0	0
• New Net Deferred Flows Due to Change in Proportion ¹	0	0
• Recognition of Prior Deferred Inflows/Outflows	245,262	237,096
• Recognition of Prior Deferred Flows Due to Change in Proportion ¹	<u>0</u>	<u>0</u>
Ending Net Pension Liability	\$1,523,058	\$2,661,390

¹ Includes differences between employer contributions and proportionate share of contributions.

Section 2: GASB 68 Information

Schedule of reconciliation of Net Pension Liability (continued)

Transportation Corridor Agency

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Reconciliation of Net Pension Liability	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
• Beginning Net Pension Liability	\$(3,881,366)	\$(1,753,164)
• Pension Expense	(1,612,661)	(43,637)
• Employer Contributions	(823,000)	(828,000)
• New Net Deferred Inflows/Outflows	(5,422,832)	(1,775,935)
• Change in Allocation of Prior Deferred Inflows/Outflows	0	0
• New Net Deferred Flows Due to Change in Proportion ¹	0	0
• Recognition of Prior Deferred Inflows/Outflows	858,073	519,370
• Recognition of Prior Deferred Flows Due to Change in Proportion ¹	<u>0</u>	<u>0</u>
Ending Net Pension Liability	\$(10,881,786)	\$(3,881,366)

¹ Includes differences between employer contributions and proportionate share of contributions.

Section 2: GASB 68 Information

Schedule of reconciliation of Net Pension Liability (continued)

City of San Juan Capistrano

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Reconciliation of Net Pension Liability	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
• Beginning Net Pension Liability	\$20,116,465	\$26,191,970
• Pension Expense	(201,719)	(243,767)
• Employer Contributions	(8,752,000)	(2,237,000)
• New Net Deferred Inflows/Outflows	(5,396,733)	(1,458,439)
• Change in Allocation of Prior Deferred Inflows/Outflows	142,246	296,620
• New Net Deferred Flows Due to Change in Proportion ¹	4,034,666	(3,757,827)
• Recognition of Prior Deferred Inflows/Outflows	777,674	806,700
• Recognition of Prior Deferred Flows Due to Change in Proportion ¹	<u>1,021,704</u>	<u>518,208</u>
Ending Net Pension Liability	\$11,742,303	\$20,116,465

¹ Includes differences between employer contributions and proportionate share of contributions.

Section 2: GASB 68 Information

Schedule of reconciliation of Net Pension Liability (continued)

O.C. Sanitation District

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Reconciliation of Net Pension Liability	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
• Beginning Net Pension Liability	\$(68,643,380)	\$(49,446,617)
• Pension Expense	(23,467,916)	(2,763,586)
• Employer Contributions	(8,172,000)	(8,137,000)
• New Net Deferred Inflows/Outflows	(85,782,094)	(14,219,075)
• Change in Allocation of Prior Deferred Inflows/Outflows	0	0
• New Net Deferred Flows Due to Change in Proportion ¹	0	0
• Recognition of Prior Deferred Inflows/Outflows	7,359,566	6,337,398
• Recognition of Prior Deferred Flows Due to Change in Proportion ¹	<u>(25,423)</u>	<u>(414,500)</u>
Ending Net Pension Liability	\$(178,731,247)	\$(68,643,380)

¹ Includes differences between employer contributions and proportionate share of contributions.

Section 2: GASB 68 Information

Schedule of reconciliation of Net Pension Liability (continued)

O.C. Transportation Authority

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Reconciliation of Net Pension Liability	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
• Beginning Net Pension Liability	\$186,024,390	\$224,284,548
• Pension Expense	(9,524,661)	12,094,305
• Employer Contributions	(28,705,000)	(27,649,000)
• New Net Deferred Inflows/Outflows	(90,127,986)	(33,109,242)
• Change in Allocation of Prior Deferred Inflows/Outflows	0	0
• New Net Deferred Flows Due to Change in Proportion ¹	0	0
• Recognition of Prior Deferred Inflows/Outflows	15,757,308	10,403,779
• Recognition of Prior Deferred Flows Due to Change in Proportion ¹	<u>0</u>	<u>0</u>
Ending Net Pension Liability	\$73,424,051	\$186,024,390

¹ Includes differences between employer contributions and proportionate share of contributions.

Section 2: GASB 68 Information

Schedule of reconciliation of Net Pension Liability (continued)

U.C.I.

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Reconciliation of Net Pension Liability	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
• Beginning Net Pension Liability	\$25,337,145	\$30,213,739
• Pension Expense	(1,124,992)	352,101
• Employer Contributions	(3,276,341)	(3,068,144)
• New Net Deferred Inflows/Outflows	(5,328,019)	(3,169,210)
• Change in Allocation of Prior Deferred Inflows/Outflows	0	0
• New Net Deferred Flows Due to Change in Proportion ¹	0	0
• Recognition of Prior Deferred Inflows/Outflows	1,526,539	1,008,659
• Recognition of Prior Deferred Flows Due to Change in Proportion ¹	<u>0</u>	<u>0</u>
Ending Net Pension Liability	\$17,134,332	\$25,337,145

¹ Includes differences between employer contributions and proportionate share of contributions.

Section 2: GASB 68 Information

Schedule of reconciliation of Net Pension Liability (continued)

O.C. Children and Families Comm.

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Reconciliation of Net Pension Liability	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
• Beginning Net Pension Liability	\$(612,417)	\$(646,472)
• Pension Expense	(467,174)	(497,900)
• Employer Contributions	(165,000)	(129,000)
• New Net Deferred Inflows/Outflows	373,171	44,400
• Change in Allocation of Prior Deferred Inflows/Outflows	75,951	1,694
• New Net Deferred Flows Due to Change in Proportion ¹	(355,898)	143,769
• Recognition of Prior Deferred Inflows/Outflows	(53,774)	(24,559)
• Recognition of Prior Deferred Flows Due to Change in Proportion ¹	<u>393,190</u>	<u>495,651</u>
Ending Net Pension Liability	\$(811,951)	\$(612,417)

¹ Includes differences between employer contributions and proportionate share of contributions.

Section 2: GASB 68 Information

Schedule of reconciliation of Net Pension Liability (continued)

Local Agency Formation Comm.

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Reconciliation of Net Pension Liability	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
• Beginning Net Pension Liability	\$1,248,133	\$1,489,642
• Pension Expense	77,924	71,659
• Employer Contributions	(174,000)	(139,000)
• New Net Deferred Inflows/Outflows	(419,518)	(90,489)
• Change in Allocation of Prior Deferred Inflows/Outflows	(23,720)	8,778
• New Net Deferred Flows Due to Change in Proportion ¹	186,315	(112,883)
• Recognition of Prior Deferred Inflows/Outflows	60,453	50,052
• Recognition of Prior Deferred Flows Due to Change in Proportion ¹	<u>(42,793)</u>	<u>(29,626)</u>
Ending Net Pension Liability	\$912,794	\$1,248,133

¹ Includes differences between employer contributions and proportionate share of contributions.

Section 2: GASB 68 Information

Schedule of reconciliation of Net Pension Liability (continued)

Rancho Santa Margarita

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Reconciliation of Net Pension Liability	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
• Beginning Net Pension Liability	\$(2,733)	\$(2,214)
• Pension Expense	(3,698)	(1,940)
• Employer Contributions	0	0
• New Net Deferred Inflows/Outflows	(2,648)	(343)
• Change in Allocation of Prior Deferred Inflows/Outflows	0	0
• New Net Deferred Flows Due to Change in Proportion ¹	0	0
• Recognition of Prior Deferred Inflows/Outflows	2,848	1,764
• Recognition of Prior Deferred Flows Due to Change in Proportion ¹	<u>0</u>	<u>0</u>
Ending Net Pension Liability	\$(6,231)	\$(2,733)

¹ Includes differences between employer contributions and proportionate share of contributions.

Section 2: GASB 68 Information

Schedule of reconciliation of Net Pension Liability (continued)

O.C. Superior Court

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Reconciliation of Net Pension Liability	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
• Beginning Net Pension Liability	\$299,663,880	\$336,766,149
• Pension Expense	(8,076,466)	8,495,203
• Employer Contributions	(37,645,000)	(34,813,000)
• New Net Deferred Inflows/Outflows	(85,830,170)	(21,725,558)
• Change in Allocation of Prior Deferred Inflows/Outflows	28,851	623,556
• New Net Deferred Flows Due to Change in Proportion ¹	(372,699)	(7,393,262)
• Recognition of Prior Deferred Inflows/Outflows	12,368,201	12,016,962
• Recognition of Prior Deferred Flows Due to Change in Proportion ¹	<u>6,614,138</u>	<u>5,693,830</u>
Ending Net Pension Liability	\$186,750,735	\$299,663,880

¹ Includes differences between employer contributions and proportionate share of contributions.

Section 2: GASB 68 Information

Schedule of reconciliation of Net Pension Liability (continued)

O.C. IHSS Public Authority

Reporting Date for Employer under GASB 68 Measurement Date for Employer under GASB 68 Reconciliation of Net Pension Liability	June 30, 2022 December 31, 2021	June 30, 2021 December 31, 2020
• Beginning Net Pension Liability	\$304,738	\$719,301
• Pension Expense	(100,704)	74,614
• Employer Contributions	(164,917)	(157,755)
• New Net Deferred Inflows/Outflows	(320,252)	(345,909)
• Change in Allocation of Prior Deferred Inflows/Outflows	160,277	252
• New Net Deferred Flows Due to Change in Proportion ¹	(185,532)	(26,187)
• Recognition of Prior Deferred Inflows/Outflows	88,296	79,461
• Recognition of Prior Deferred Flows Due to Change in Proportion ¹	<u>(15,128)</u>	<u>(39,039)</u>
Ending Net Pension Liability	\$(233,222)	\$304,738

¹ Includes differences between employer contributions and proportionate share of contributions.

Section 2: GASB 68 Information

Schedule of recognition of changes in total Net Pension Liability

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Differences between Expected and Actual Experience on Total Pension Liability

Reporting Date for Employer Under GASB 68 Year Ended June 30	Differences between Expected and Actual Experience	Recognition Period (Years)	Reporting Date for Employer under GASB 68 Year Ended June 30:							
			2021	2022	2023	2024	2025	2026	2027	Thereafter
2015 ¹	\$(327,402,088)	6.18	\$(9,535,984)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2016 ¹	(205,462,673)	6.06	(33,904,732)	(2,034,281)	0	0	0	0	0	0
2017 ¹	(323,565,741)	5.94	(54,472,347)	(51,204,006)	0	0	0	0	0	0
2018 ¹	(66,963,603)	6.01	(11,142,029)	(11,142,029)	(11,142,029)	(111,429)	0	0	0	0
2019 ¹	(118,124,401)	5.91	(19,987,206)	(19,987,206)	(19,987,206)	(18,188,371)	0	0	0	0
2020 ¹	24,382,911	5.86	4,160,905	4,160,905	4,160,905	4,160,905	3,578,386	0	0	0
2021	162,335,537	5.81	27,940,714	27,940,714	27,940,714	27,940,714	27,940,714	22,631,967	0	0
2022	(113,046,194)	5.45	N/A	<u>(20,742,423)</u>	<u>(20,742,423)</u>	<u>(20,742,423)</u>	<u>(20,742,423)</u>	<u>(20,742,423)</u>	<u>(9,334,079)</u>	<u>0</u>
Net increase (decrease) in pension expense			\$(96,940,679)	\$(73,008,326)	\$(19,770,039)	\$(6,940,604)	\$10,776,677	\$1,889,544	\$(9,334,079)	\$0

As described in the Schedule of Deferred Outflows of Resources and Deferred Inflows of Resources, for the current period, the average of the expected remaining service lives of all employees that are provided with pensions through OCERS (active and inactive employees) determined as of December 31, 2020 (the beginning of the measurement period ending December 31, 2021) is 5.45 years.

¹ The amortization amounts prior to June 30, 2021 have been omitted from this exhibit. Those amounts can be found in prior years' GASB 68 reports.

Section 2: GASB 68 Information

Schedule of recognition of changes in total Net Pension Liability (continued)

Increase (Decrease) in Pension Expense Arising from the Recognition
of the Effects of Assumption Changes

Reporting Date for Employer Under GASB 68 Year Ended June 30	Effects of Assumption Changes	Recognition Period (Years)	Reporting Date for Employer under GASB 68 Year Ended June 30:							
			2021	2022	2023	2024	2025	2026	2027	Thereafter
2015 ¹	\$(127,729,220)	6.18	\$(3,720,266)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2016 ¹	0	6.06	0	0	0	0	0	0	0	0
2017 ¹	0	5.94	0	0	0	0	0	0	0	0
2018 ¹	827,197,075	6.01	137,636,784	137,636,784	137,636,784	1,376,371	0	0	0	0
2019 ¹	0	5.91	0	0	0	0	0	0	0	0
2020 ¹	0	5.86	0	0	0	0	0	0	0	0
2021	18,966,926	5.81	3,264,531	3,264,531	3,264,531	3,264,531	3,264,531	2,644,271	0	0
2022	0	5.45	N/A	0	0	0	0	0	0	0
Net increase (decrease) in pension expense			\$137,181,049	\$140,901,315	\$140,901,315	\$4,640,902	\$3,264,531	\$2,644,271	\$0	\$0

As described in the Schedule of Deferred Outflows of Resources and Deferred Inflows of Resources, for the current period, the average of the expected remaining service lives of all employees that are provided with pensions through OCERS (active and inactive employees) determined as of December 31, 2020 (the beginning of the measurement period ending December 31, 2021) is 5.45 years.

¹ The amortization amounts prior to June 30, 2021 have been omitted from this exhibit. Those amounts can be found in prior years' GASB 68 reports.

Section 2: GASB 68 Information

Schedule of recognition of changes in total Net Pension Liability (continued)

Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Projected and Actual Earnings on Pension Plan Investments

Reporting Date for Employer Under GASB 68 Year Ended June 30	Differences Between Projected and Actual Earnings	Recognition Period (Years)	Reporting Date for Employer under GASB 68 Year Ended June 30:							
			2021	2022	2023	2024	2025	2026	2027	Thereafter
2015 ¹	\$290,045,074	5.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2016 ¹	851,007,781	5.00	0	0	0	0	0	0	0	0
2017 ¹	(213,982,570)	5.00	(42,796,514)	0	0	0	0	0	0	0
2018 ¹	(1,009,651,572)	5.00	(201,930,314)	(201,930,316)	0	0	0	0	0	0
2019 ¹	1,360,278,701	5.00	272,055,741	272,055,741	272,055,737	0	0	0	0	0
2020 ¹	(1,170,895,935)	5.00	(234,179,185)	(234,179,185)	(234,179,185)	(234,179,195)	0	0	0	0
2021	(1,008,043,756)	5.00	(201,608,751)	(201,608,751)	(201,608,751)	(201,608,751)	(201,608,752)	0	0	0
2022	(1,909,760,501)	5.00	N/A	(381,952,100)	(381,952,100)	(381,952,100)	(381,952,100)	(381,952,101)	0	0
Net increase (decrease) in pension expense			\$(408,459,023)	\$(747,614,611)	\$(545,684,299)	\$(817,740,046)	\$(583,560,852)	\$(381,952,101)	\$0	\$0

The differences between projected and actual earnings on pension plan investments are recognized over a five-year period per Paragraph 33b. of GASB 68.

¹ The amortization amounts prior to June 30, 2021 have been omitted from this exhibit. Those amounts can be found in prior years' GASB 68 reports.

Section 2: GASB 68 Information

Schedule of recognition of changes in total Net Pension Liability (continued)

Total Increase (Decrease) in Pension Expense

Reporting Date for Employer Under GASB 68 Year Ended June 30	Total Differences	Reporting Date for Employer under GASB 68 Year Ended June 30:							
		2021	2022	2023	2024	2025	2026	2027	Thereafter
2015 ¹	\$(165,086,234)	\$(13,256,250)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2016 ¹	\$645,545,108	(33,904,732)	(2,034,281)	0	0	0	0	0	0
2017 ¹	(537,548,311)	(97,268,861)	(51,204,006)	0	0	0	0	0	0
2018 ¹	(249,418,100)	(75,435,559)	(75,435,561)	126,494,755	1,264,942	0	0	0	0
2019 ¹	1,242,154,300	252,068,535	252,068,535	252,068,531	(18,188,371)	0	0	0	0
2020 ¹	(1,146,513,024)	(230,018,280)	(230,018,280)	(230,018,280)	(230,018,290)	3,578,386	0	0	0
2021	(826,741,293)	(170,403,506)	(170,403,506)	(170,403,506)	(170,403,506)	(170,403,507)	25,276,238	0	0
2022	(2,022,806,695)	N/A	<u>(402,694,523)</u>	<u>(402,694,523)</u>	<u>(402,694,523)</u>	<u>(402,694,523)</u>	<u>(402,694,524)</u>	<u>(9,334,079)</u>	<u>0</u>
Net increase (decrease) in pension expense		\$(368,218,653)	\$(679,721,622)	\$(424,553,023)	\$(820,039,748)	\$(569,519,644)	\$(377,418,286)	\$(9,334,079)	\$0

¹ The amortization amounts prior to June 30, 2021 have been omitted from this exhibit. Those amounts can be found in prior years' GASB 68 reports.

Section 2: GASB 68 Information

Allocation of changes in total Net Pension Liability

In addition to the amounts shown in the Schedule of Recognition of Changes in Total Net Pension Liability, there are changes in each employer's proportionate share of the total Net Pension Liability (NPL) during the measurement period ending on December 31, 2021. The net effect of the change in the employer's proportionate share of the collective NPL and collective deferred outflows of resources and deferred inflows of resources is also recognized over the average of the expected remaining service lives of all employees shown above. The difference between the actual employer contributions and the proportionate share of the employer contributions during the measurement period ending on December 31, 2021 is recognized over the same periods. These amounts are shown on the following table, with the corresponding amounts for the measurement periods ending on December 31 beginning in 2015 shown on the following pages. While these amounts are different for each employer, they sum to zero over the entire OCERS.

Section 2: GASB 68 Information

Allocation of changes in total Net Pension Liability (continued)

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of the Change in Proportion and Change in Employer Contributions for the Year Ended December 31, 2021

	Total Change to be Recognized	Recognition Period (Years)	2022	2023	2024	2025	2026	2027	Thereafter
Orange County	\$(5,478,436)	5.45	\$(1,005,218)	\$(1,005,218)	\$(1,005,218)	\$(1,005,218)	\$(1,005,218)	\$(452,346)	\$0
O.C. Cemetery District	0	5.45	0	0	0	0	0	0	0
O.C. Law Library	0	5.45	0	0	0	0	0	0	0
O.C. Vector Control District	0	5.45	0	0	0	0	0	0	0
O.C. Retirement System	1,428,471	5.45	262,105	262,105	262,105	262,105	262,105	117,946	0
O.C. Fire Authority	0	5.45	0	0	0	0	0	0	0
Cypress Recreation and Parks	0	5.45	0	0	0	0	0	0	0
Department of Education	0	5.45	0	0	0	0	0	0	0
Transportation Corridor Agency	0	5.45	0	0	0	0	0	0	0
City of San Juan Capistrano	4,941,332	5.45	906,666	906,666	906,666	906,666	906,666	408,002	0
O.C. Sanitation District	0	5.45	0	0	0	0	0	0	0
O.C. Transportation Authority	0	5.45	0	0	0	0	0	0	0
U.C.I.	0	5.45	0	0	0	0	0	0	0
O.C. Children and Families Comm.	(435,875)	5.45	(79,977)	(79,977)	(79,977)	(79,977)	(79,977)	(35,990)	0
Local Agency Formation Comm.	228,184	5.45	41,869	41,869	41,869	41,869	41,869	18,839	0
Rancho Santa Margarita	0	5.45	0	0	0	0	0	0	0
O.C. Superior Court	(456,452)	5.45	(83,753)	(83,753)	(83,753)	(83,753)	(83,753)	(37,687)	0
O.C. IHSS Public Authority	<u>(227,224)</u>	5.45	<u>(41,692)</u>	<u>(41,692)</u>	<u>(41,692)</u>	<u>(41,692)</u>	<u>(41,692)</u>	<u>(18,764)</u>	<u>0</u>
Total for all Employers	\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0

Section 2: GASB 68 Information

Allocation of changes in total Net Pension Liability (continued)

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of the Change in Proportion and Change in Employer Contributions for the Year Ended December 31, 2020

	Total Change to be Recognized	Recognition Period (Years)	2021	2022	2023	2024	2025	2026	Thereafter
Orange County	\$12,901,296	5.81	\$2,220,532	\$2,220,532	\$2,220,532	\$2,220,532	\$2,220,532	\$1,798,636	\$0
O.C. Cemetery District	0	5.81	0	0	0	0	0	0	0
O.C. Law Library	0	5.81	0	0	0	0	0	0	0
O.C. Vector Control District	0	5.81	0	0	0	0	0	0	0
O.C. Retirement System	562,430	5.81	96,804	96,804	96,804	96,804	96,804	78,410	0
O.C. Fire Authority	0	5.81	0	0	0	0	0	0	0
Cypress Recreation and Parks	0	5.81	0	0	0	0	0	0	0
Department of Education	0	5.81	0	0	0	0	0	0	0
Transportation Corridor Agency	0	5.81	0	0	0	0	0	0	0
City of San Juan Capistrano	(4,539,080)	5.81	(781,253)	(781,253)	(781,253)	(781,253)	(781,253)	(632,815)	0
O.C. Sanitation District	0	5.81	0	0	0	0	0	0	0
O.C. Transportation Authority	0	5.81	0	0	0	0	0	0	0
U.C.I.	0	5.81	0	0	0	0	0	0	0
O.C. Children and Families Comm.	173,659	5.81	29,890	29,890	29,890	29,890	29,890	24,209	0
Local Agency Formation Comm.	(136,351)	5.81	(23,468)	(23,468)	(23,468)	(23,468)	(23,468)	(19,011)	0
Rancho Santa Margarita	0	5.81	0	0	0	0	0	0	0
O.C. Superior Court	(8,930,323)	5.81	(1,537,061)	(1,537,061)	(1,537,061)	(1,537,061)	(1,537,061)	(1,245,018)	0
O.C. IHSS Public Authority	<u>(31,631)</u>	5.81	<u>(5,444)</u>	<u>(5,444)</u>	<u>(5,444)</u>	<u>(5,444)</u>	<u>(5,444)</u>	<u>(4,411)</u>	<u>0</u>
Total for all Employers	\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0

Section 2: GASB 68 Information

Allocation of changes in total Net Pension Liability (continued)

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of the Change in Proportion and Change in Employer Contributions for the Year Ended December 31, 2019

	Total Change to be Recognized	Recognition Period (Years)	2020	2021	2022	2023	2024	2025	Thereafter
Orange County	\$(5,692,697)	5.86	\$(971,449)	\$(971,449)	\$(971,449)	\$(971,449)	\$(971,449)	\$(835,452)	\$0
O.C. Cemetery District	0	5.86	0	0	0	0	0	0	0
O.C. Law Library	0	5.86	0	0	0	0	0	0	0
O.C. Vector Control District	0	5.86	0	0	0	0	0	0	0
O.C. Retirement System	2,634,131	5.86	449,510	449,510	449,510	449,510	449,510	386,581	0
O.C. Fire Authority	0	5.86	0	0	0	0	0	0	0
Cypress Recreation and Parks	0	5.86	0	0	0	0	0	0	0
Department of Education	0	5.86	0	0	0	0	0	0	0
Transportation Corridor Agency	0	5.86	0	0	0	0	0	0	0
City of San Juan Capistrano	(1,157,951)	5.86	(197,603)	(197,603)	(197,603)	(197,603)	(197,603)	(169,936)	0
O.C. Sanitation District	0	5.86	0	0	0	0	0	0	0
O.C. Transportation Authority	0	5.86	0	0	0	0	0	0	0
U.C.I.	0	5.86	0	0	0	0	0	0	0
O.C. Children and Families Comm.	(1,110,175)	5.86	(189,450)	(189,450)	(189,450)	(189,450)	(189,450)	(162,925)	0
Local Agency Formation Comm.	157,671	5.86	26,906	26,906	26,906	26,906	26,906	23,141	0
Rancho Santa Margarita	0	5.86	0	0	0	0	0	0	0
O.C. Superior Court	5,149,368	5.86	878,732	878,732	878,732	878,732	878,732	755,708	0
O.C. IHSS Public Authority	<u>19,653</u>	5.86	<u>3,354</u>	<u>3,354</u>	<u>3,354</u>	<u>3,354</u>	<u>3,354</u>	<u>2,883</u>	<u>0</u>
Total for all Employers	\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0

Section 2: GASB 68 Information

Allocation of changes in total Net Pension Liability (continued)

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of the Change in Proportion and Change in Employer Contributions for the Year Ended December 31, 2018

	Total Change to be Recognized	Recognition Period (Years)	2019	2020	2021	2022	2023	2024	Thereafter
Orange County	\$13,152,991	5.91	\$2,225,549	\$2,225,549	\$2,225,549	\$2,225,549	\$2,225,549	\$2,025,246	\$0
O.C. Cemetery District	0	5.91	0	0	0	0	0	0	0
O.C. Law Library	0	5.91	0	0	0	0	0	0	0
O.C. Vector Control District	0	5.91	0	0	0	0	0	0	0
O.C. Retirement System	2,177,730	5.91	368,482	368,482	368,482	368,482	368,482	335,320	0
O.C. Fire Authority	0	5.91	0	0	0	0	0	0	0
Cypress Recreation and Parks	0	5.91	0	0	0	0	0	0	0
Department of Education	0	5.91	0	0	0	0	0	0	0
Transportation Corridor Agency	0	5.91	0	0	0	0	0	0	0
City of San Juan Capistrano	(142,910)	5.91	(24,181)	(24,181)	(24,181)	(24,181)	(24,181)	(22,005)	0
O.C. Sanitation District	0	5.91	0	0	0	0	0	0	0
O.C. Transportation Authority	0	5.91	0	0	0	0	0	0	0
U.C.I.	0	5.91	0	0	0	0	0	0	0
O.C. Children and Families Comm.	(361,087)	5.91	(61,098)	(61,098)	(61,098)	(61,098)	(61,098)	(55,597)	0
Local Agency Formation Comm.	13,795	5.91	2,334	2,334	2,334	2,334	2,334	2,125	0
Rancho Santa Margarita	0	5.91	0	0	0	0	0	0	0
O.C. Superior Court	(14,826,827)	5.91	(2,508,769)	(2,508,769)	(2,508,769)	(2,508,769)	(2,508,769)	(2,282,982)	0
O.C. IHSS Public Authority	<u>(13,692)</u>	5.91	<u>(2,317)</u>	<u>(2,317)</u>	<u>(2,317)</u>	<u>(2,317)</u>	<u>(2,317)</u>	<u>(2,107)</u>	0
Total for all Employers	\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0

Section 2: GASB 68 Information

Allocation of changes in total Net Pension Liability (continued)

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of the Change in Proportion and Change in Employer Contributions for the Year Ended December 31, 2017

	Total Change to be Recognized	Recognition Period (Years)	2018	2019	2020	2021	2022	2023	Thereafter
Orange County	\$8,107,013	6.01	\$1,348,921	\$1,348,921	\$1,348,921	\$1,348,921	\$1,348,921	\$1,348,921	\$13,487
O.C. Cemetery District	0	6.01	0	0	0	0	0	0	0
O.C. Law Library	0	6.01	0	0	0	0	0	0	0
O.C. Vector Control District	0	6.01	0	0	0	0	0	0	0
O.C. Retirement System	49,770	6.01	8,281	8,281	8,281	8,281	8,281	8,281	84
O.C. Fire Authority	0	6.01	0	0	0	0	0	0	0
Cypress Recreation and Parks	0	6.01	0	0	0	0	0	0	0
Department of Education	0	6.01	0	0	0	0	0	0	0
Transportation Corridor Agency	0	6.01	0	0	0	0	0	0	0
City of San Juan Capistrano	1,675,195	6.01	278,735	278,735	278,735	278,735	278,735	278,735	2,785
O.C. Sanitation District	0	6.01	0	0	0	0	0	0	0
O.C. Transportation Authority	0	6.01	0	0	0	0	0	0	0
U.C.I.	0	6.01	0	0	0	0	0	0	0
O.C. Children and Families Comm.	(445,507)	6.01	(74,128)	(74,128)	(74,128)	(74,128)	(74,128)	(74,128)	(739)
Local Agency Formation Comm.	(51,088)	6.01	(8,500)	(8,500)	(8,500)	(8,500)	(8,500)	(8,500)	(88)
Rancho Santa Margarita	0	6.01	0	0	0	0	0	0	0
O.C. Superior Court	(9,400,312)	6.01	(1,564,112)	(1,564,112)	(1,564,112)	(1,564,112)	(1,564,112)	(1,564,112)	(15,640)
O.C. IHSS Public Authority	<u>64,929</u>	6.01	<u>10,803</u>	<u>10,803</u>	<u>10,803</u>	<u>10,803</u>	<u>10,803</u>	<u>10,803</u>	<u>111</u>
Total for all Employers	\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0

Section 2: GASB 68 Information

Allocation of changes in total Net Pension Liability (continued)

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of the Change in Proportion and Change in Employer Contributions for the Year Ended December 31, 2016

	Total Change to be Recognized	Recognition Period (Years)	2017	2018	2019	2020	2021	2022	Thereafter
Orange County	\$14,453,662	5.94	\$2,433,278	\$2,433,278	\$2,433,278	\$2,433,278	\$2,433,278	\$2,287,272	\$0
O.C. Cemetery District	0	5.94	0	0	0	0	0	0	0
O.C. Law Library	0	5.94	0	0	0	0	0	0	0
O.C. Vector Control District	0	5.94	0	0	0	0	0	0	0
O.C. Retirement System	(668,539)	5.94	(112,549)	(112,549)	(112,549)	(112,549)	(112,549)	(105,794)	0
O.C. Fire Authority	0	5.94	0	0	0	0	0	0	0
Department of Education	0	5.94	0	0	0	0	0	0	0
Transportation Corridor Agency	0	5.94	0	0	0	0	0	0	0
City of San Juan Capistrano	(1,754,991)	5.94	(295,453)	(295,453)	(295,453)	(295,453)	(295,453)	(277,726)	0
O.C. Sanitation District	0	5.94	0	0	0	0	0	0	0
O.C. Transportation Authority	0	5.94	0	0	0	0	0	0	0
U.C.I.	0	5.94	0	0	0	0	0	0	0
O.C. Children and Families Comm.	(598,916)	5.94	(100,828)	(100,828)	(100,828)	(100,828)	(100,828)	(94,776)	0
Local Agency Formation Comm.	306,180	5.94	51,545	51,545	51,545	51,545	51,545	48,455	0
Rancho Santa Margarita	0	5.94	0	0	0	0	0	0	0
O.C. Superior Court	(11,785,507)	5.94	(1,984,092)	(1,984,092)	(1,984,092)	(1,984,092)	(1,984,092)	(1,865,047)	0
O.C. IHSS Public Authority	<u>48,111</u>	5.94	<u>8,099</u>	<u>8,099</u>	<u>8,099</u>	<u>8,099</u>	<u>8,099</u>	<u>7,616</u>	<u>0</u>
Total for all Employers	\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0

Section 2: GASB 68 Information

Allocation of changes in total Net Pension Liability (continued)

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of the Change in Proportion and Change in Employer Contributions for the Year Ended December 31, 2015

	Total Change to be Recognized	Recognition Period (Years)	2016	2017	2018	2019	2020	2021	Thereafter
Orange County	\$2,736,401	6.06	\$451,552	\$451,552	\$451,552	\$451,552	\$451,552	\$451,552	\$27,089
O.C. Cemetery District	0	6.06	0	0	0	0	0	0	0
O.C. Law Library	(2,567,707)	6.06	(423,714)	(423,714)	(423,714)	(423,714)	(423,714)	(423,714)	(25,423)
O.C. Vector Control District	0	6.06	0	0	0	0	0	0	0
O.C. Retirement System	1,607,456	6.06	265,257	265,257	265,257	265,257	265,257	265,257	15,914
O.C. Fire Authority	0	6.06	0	0	0	0	0	0	0
Department of Education	0	6.06	0	0	0	0	0	0	0
Transportation Corridor Agency	0	6.06	0	0	0	0	0	0	0
City of San Juan Capistrano	(1,987,430)	6.06	(327,959)	(327,959)	(327,959)	(327,959)	(327,959)	(327,959)	(19,676)
O.C. Sanitation District	2,567,707	6.06	423,714	423,714	423,714	423,714	423,714	423,714	25,423
O.C. Transportation Authority	0	6.06	0	0	0	0	0	0	0
U.C.I.	0	6.06	0	0	0	0	0	0	0
O.C. Children and Families Comm.	(366,436)	6.06	(60,468)	(60,468)	(60,468)	(60,468)	(60,468)	(60,468)	(3,628)
Local Agency Formation Comm.	(296,484)	6.06	(48,925)	(48,925)	(48,925)	(48,925)	(48,925)	(48,925)	(2,934)
Rancho Santa Margarita	0	6.06	0	0	0	0	0	0	0
O.C. Superior Court	(1,805,959)	6.06	(298,013)	(298,013)	(298,013)	(298,013)	(298,013)	(298,013)	(17,881)
O.C. IHSS Public Authority	<u>112,452</u>	6.06	<u>18,556</u>	<u>18,556</u>	<u>18,556</u>	<u>18,556</u>	<u>18,556</u>	<u>18,556</u>	<u>1,116</u>
Total for all Employers	\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0

Section 3: Actuarial Assumptions and Methods and Appendices

Actuarial assumptions and methods

For December 31, 2021 Measurement Date and Employer Reporting as of June 30, 2022

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, 2017 through December 31, 2019 Actuarial Experience Study dated August 6, 2020 and PowerPoint presentation dated August 17, 2020. 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 investment expenses.
Member Contribution Crediting Rate:	5.00%, compounded semi-annually.
Consumer Price Index:	CPI increases of 2.75% per year. Retiree COLA increases of 2.75% per year. For members that have COLA banks, we assume they receive 3.00% COLA increases until their COLA banks are exhausted and 2.75% thereafter. The actual COLA granted by OCERS on April 1, 2021 has been reflected for non-active members in the December 31, 2021 valuation.
Payroll Growth:	Inflation of 2.50% per year plus “across the board” real salary increases of 0.50% per year.
Increase in Section 7522.10 Compensation Limit:	Increase of 2.50% per year from the valuation date.

Section 3: Actuarial Assumptions and Methods and Appendices

Salary Increases:

- The annual rate of compensation increase includes: inflation at 2.50%, 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	8.00	12.00
1 - 2	7.25	10.00
2 - 3	6.25	8.50
3 - 4	5.25	7.50
4 - 5	4.25	6.50
5 - 6	3.50	5.50
6 - 7	2.75	5.00
7 - 8	2.50	4.00
8 - 9	1.70	3.00
9 - 10	1.70	2.50
10 - 11	1.60	1.85
11 - 12	1.60	1.85
12 - 13	1.50	1.85
13 - 14	1.50	1.85
14 - 15	1.25	1.85
15 - 16	1.25	1.60
16 - 17	1.00	1.60
17 - 18	1.00	1.60
18 - 19	1.00	1.60
19 - 20	1.00	1.60
20 & Over	1.00	1.60

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 3: Actuarial Assumptions and Methods and Appendices

Demographic Assumptions:

Post-Retirement Mortality Rates:

Healthy

- **General Members:** Pub-2010 General Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females) with rates increased by 5%, projected generationally with the two-dimensional mortality improvement scale MP-2019
- **Safety Members:** Pub-2010 Safety Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females), projected generationally with the two-dimensional mortality improvement scale MP-2019

Disabled

- **General Members:** Pub-2010 Non-Safety Disabled Retiree Amount-Weighted Mortality Table (separate tables for males and females) with rates decreased by 5%, projected generationally with the two-dimensional mortality improvement scale MP-2019
- **Safety Members:** Pub-2010 Safety Disabled Retiree Amount-Weighted Mortality Table (separate tables for males and females), projected generationally with the two-dimensional mortality improvement scale MP-2019

All Beneficiaries

- Pub-2010 General Contingent Survivor Amount-Weighted Above-Median Mortality Table (separate tables for males and females) with rates increased by 5%, projected generationally with the two-dimensional mortality improvement scale MP-2019

The Pub-2010 mortality tables and adjustments as shown above reflect the mortality experience as of the measurement date. The generational projection is a provision for future mortality improvement.

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Pre-Retirement Mortality Rates:

- **General Members:** Pub-2010 General Employee Amount-Weighted Above-Median Mortality Table (separate tables for males and females), projected generationally with the two-dimensional mortality improvement scale MP-2019
- **Safety Members:** Pub-2010 Safety Employee Amount-Weighted Above-Median Mortality Table (separate tables for males and females), projected generationally with the two-dimensional mortality improvement scale MP-2019

Age	Rate (%) ¹			
	General		Safety	
	Male	Female	Male	Female
25	0.02	0.01	0.03	0.02
30	0.03	0.01	0.04	0.02
35	0.04	0.02	0.04	0.03
40	0.06	0.03	0.05	0.04
45	0.09	0.05	0.07	0.06
50	0.13	0.08	0.10	0.08
55	0.19	0.11	0.15	0.11
60	0.28	0.17	0.23	0.14
65	0.41	0.27	0.35	0.20
70	0.61	0.44	0.66	0.39

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 (2010) are not reflected in the above mortality rates.

Mortality Rates for Member Contributions:

- **General Members:** Pub-2010 General Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females) with rates increased by 5%, projected 30 years (from 2010) with the two-dimensional mortality improvement scale MP 2019, weighted 40% male and 60% female
- **Safety Members:** Pub-2010 Safety Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females), projected 30 years (from 2010) with the two-dimensional mortality improvement scale MP-2019, weighted 80% male and 20% female

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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	0.07	0.08
35	0.03	0.20	0.19	0.10
40	0.08	0.39	0.31	0.13
45	0.14	0.48	0.44	0.21
50	0.20	0.53	1.10	0.28
55	0.27	0.70	2.70	0.42
60	0.33	1.22	5.00	0.20

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

80% of General OCTA disabilities are assumed to be service connected disabilities. The other 20% 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 3: Actuarial Assumptions and Methods and Appendices

Termination:

Years of Service	Rate (%)			
	General All Other	General OCTA	Safety Law & Fire	Safety Probation
Less than 1	11.00	17.00	4.25	14.00
1 – 2	7.25	11.50	2.75	13.00
2 – 3	6.50	9.00	2.25	11.00
3 – 4	5.50	8.50	1.75	5.00
4 – 5	5.00	8.00	1.50	4.00
5 – 6	4.50	7.00	1.25	3.25
6 – 7	4.00	4.25	1.00	2.75
7 – 8	3.50	4.00	0.95	2.75
8 – 9	3.25	3.25	0.90	2.50
9 – 10	3.00	3.00	0.85	1.75
10 – 11	2.50	2.75	0.80	1.50
11 – 12	2.00	2.50	0.75	1.50
12 – 13	2.00	2.50	0.70	1.25
13 – 14	2.00	2.25	0.65	1.00
14 – 15	1.50	2.25	0.60	0.75
15 – 16	1.40	2.25	0.55	0.75
16 – 17	1.30	2.00	0.50	0.75
17 – 18	1.20	1.80	0.45	0.75
18 – 19	1.10	1.60	0.40	0.50
19 – 20	1.00	1.40	0.30	0.25
20 & Over	0.75	1.20	0.15	0.15

Election for Withdrawal of Contributions (%)

Years of Service	Rate (%)			
	General All Other	General OCTA	Safety Law & Fire	Safety Probation
Less than 5	30.00	40.00	20.00	25.00
5 – 9	25.00	30.00	20.00	25.00
10 – 14	25.00	25.00	10.00	25.00
15 & Over	17.50	15.00	10.00	15.00

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Retirement Rates:	Rate (%) ¹			
	General Enhanced		General Non-Enhanced ²	
	Less than 30 Years of Service	Greater than 30 Years of Service	Less than 30 Years of Service	Greater than 30 Years of Service
Age				
49	0.00	30.00	0.00	25.00
50	2.00	4.00	3.00	3.00
51	2.00	4.00	3.00	3.00
52	2.50	5.00	2.00	2.00
53	2.50	5.00	3.50	3.50
54	7.00	14.00	2.75	2.75
55	12.00	30.00	3.25	3.25
56	9.00	19.00	3.50	3.50
57	9.00	18.00	5.00	5.00
58	9.00	18.00	5.50	5.50
59	10.00	20.00	6.50	6.50
60	11.00	20.00	9.00	13.50
61	11.00	20.00	9.00	13.50
62	13.00	20.00	9.00	18.00
63	13.00	22.00	9.50	19.00
64	16.00	24.00	10.00	20.00
65	24.00	28.00	22.00	26.40
66	24.00	30.00	25.00	30.00
67	24.00	30.00	25.00	30.00
68	22.00	27.50	30.00	27.50
69	22.00	27.50	30.00	27.50
70	25.00	27.50	20.00	27.50
71	25.00	27.50	20.00	27.50
72	25.00	27.50	20.00	27.50
73	20.00	27.50	20.00	27.50
74	20.00	27.50	20.00	27.50
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).

Section 3: Actuarial Assumptions and Methods and Appendices

Retirement Rates (continued):

Age	Rate (%) ¹					
	Safety Law (31664.1)		Safety Fire (31664.1)		Safety Probation (31664.1)	
	Less than 30 Years of Service	Greater than 30 Years of Service	Less than 30 Years of Service	Greater than 30 Years of Service	Less than 30 Years of Service	Greater than 30 Years of Service
45	1.00	16.00	2.00	10.00	3.00	5.00
46	1.00	16.00	2.00	10.00	3.00	5.00
47	1.00	16.00	2.00	10.00	3.00	5.00
48	1.00	16.00	2.00	10.00	3.00	5.00
49	11.00	16.00	2.00	10.00	3.00	5.00
50	16.00	16.00	4.00	10.00	9.00	12.00
51	16.00	16.00	4.00	10.00	7.00	10.00
52	17.00	16.00	4.00	10.00	5.00	9.00
53	19.00	30.00	9.00	20.00	7.00	9.00
54	24.00	30.00	12.00	25.00	7.00	12.00
55	24.00	30.00	12.00	25.00	12.00	30.00
56	22.00	30.00	12.00	25.00	18.00	30.00
57	22.00	30.00	18.00	25.00	25.00	30.00
58	22.00	40.00	18.00	30.00	25.00	30.00
59	22.00	40.00	18.00	30.00	18.00	30.00
60	30.00	40.00	18.00	30.00	20.00	40.00
61	30.00	40.00	18.00	30.00	20.00	40.00
62	30.00	40.00	18.00	35.00	20.00	40.00
63	30.00	40.00	18.00	35.00	20.00	40.00
64	30.00	40.00	18.00	35.00	20.00	40.00
65	100.00	100.00	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.

Section 3: Actuarial Assumptions and Methods and Appendices

Retirement Rates (continued):

Age	Rate (%) ¹		
	General SJC (31676.12)	Safety Law (31664.2)	Safety Probation (31664.1)
50	4.00	11.50	8.00
51	4.00	12.00	9.00
52	4.00	12.70	10.00
53	4.00	17.90	12.00
54	4.00	18.80	14.00
55	4.00	35.00	23.00
56	5.00	25.00	22.00
57	6.00	25.00	25.00
58	7.00	25.00	25.00
59	9.00	30.00	35.00
60	10.00	40.00	40.00
61	12.00	40.00	40.00
62	13.00	40.00	40.00
63	13.00	40.00	40.00
64	19.00	40.00	40.00
65	20.00	100.00	100.00
66	25.00	100.00	100.00
67	25.00	100.00	100.00
68	25.00	100.00	100.00
69	25.00	100.00	100.00
70	45.00	100.00	100.00
71	45.00	100.00	100.00
72	45.00	100.00	100.00
73	45.00	100.00	100.00
74	45.00	100.00	100.00
75	100.00	100.00	100.00

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

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Retirement Rates (continued):	Rate (%) ¹				
	Age	CalPEPRA 2.5% @ 67 General Formula	CalPEPRA 2.7% @ 57 Safety Formula Probation	CalPEPRA 2.7% @ 57 Safety Formula Law	CalPEPRA 2.7% @ 57 Safety Formula Fire
	50	0.00	3.00	11.00	6.00
	51	0.00	3.00	11.50	6.50
	52	6.00	3.50	12.00	8.00
	53	2.00	3.50	16.00	10.00
	54	2.00	6.00	17.00	11.50
	55	2.50	12.00	29.00	20.00
	56	3.50	12.00	19.00	19.00
	57	5.50	15.00	19.00	21.00
	58	7.50	25.00	23.00	24.00
	59	7.50	25.00	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	20.00	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.

Section 3: Actuarial Assumptions and Methods and Appendices

Retirement Age and Benefit for Deferred Vested Members:	<p>General Retirement Age: 59 Safety Retirement Age: 54</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 20% of future Safety deferred vested members are assumed to continue to work for a reciprocal employer. For reciprocals, 4.00% and 4.60% 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 2 years older than the member.</p>

Section 3: Actuarial Assumptions and Methods and Appendices

Cashout 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%	2.90%
Safety Probation Non-CalPEPRA	3.80%	3.40%
Safety Law Non-CalPEPRA	N/A	6.90%
Safety Fire Non-CalPEPRA	N/A	1.50%
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 the lesser of years of employment or years of benefit service. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are based on costs allocated as a level percentage of compensation. The normal cost rate is calculated assuming their Entry Age is the date they entered service with OCERS.

Please note that for Probation members who have prior benefit service in another General OCERS plan, the normal cost rate for the current plan is calculated assuming their Entry Age is the date they entered service with their current plan.

Expected Remaining Service Lives:

The average of the expected service lives of all employees is determined by:

- Calculating each active employee's expected remaining service life as the present value of \$1 per year of future service at zero percent interest.
- Setting the remaining service life to zero for each nonactive or retired member.
- Dividing the sum of the above amounts by the total number of active employee, nonactive and retired members.

Changed Actuarial Assumptions and Methods:

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

Section 3: Actuarial Assumptions and Methods and Appendices

Appendix A: Projection of Pension Plan's Fiduciary Net Position for use in the Calculation of Discount Rate as of December 31, 2021 (\$ in millions)

Year Beginning January 1	Projected Beginning Plan's Fiduciary Net Position (a)	Projected Total Contributions * (b)	Projected Benefit Payments (c)	Projected Administrative Expenses (d)	Projected Investment Earnings (e)	Projected Ending Plan's Fiduciary Net Position (f) = (a) + (b) - (c) - (d) + (e)
2021	\$18,797	\$970	\$1,046	\$21	\$3,222	\$21,922
2022	21,922	955	1,135	25	1,527	23,244
2023	23,244	915	1,200	27	1,616	24,549
2024	24,549	852	1,267	28	1,703	25,809
2025	25,809	803	1,335	29	1,787	27,035
2026	27,035	765	1,405	31	1,869	28,233
2027	28,233	763	1,478	32	1,951	29,437
2028	29,437	705	1,553	34	2,030	30,584
2029	30,584	398	1,631	35	2,097	31,413
2030	31,413	385	1,709	36	2,152	32,205
2046	37,243	171	2,840	43	2,514	37,045
2047	37,045	161	2,877	42	2,498	36,785
2048	36,785	152	2,910	42	2,479	36,463
2049	36,463	143	2,938	42	2,455	36,081
2050	36,081	135	2,960	41	2,427	35,641
2095	26,133	42	179	30	1,824	27,789
2096	27,789	43	145	32	1,941	29,596
2097	29,596	43	116	34	2,068	31,557
2098	31,557	45	91	36	2,206	33,681
2099	33,681	46	71	38	2,355	35,973
2134	357,632	409 **	0	409	25,034	382,666
2134 Discounted Value:	183 ***					

* Of all the projected total contributions, only the first year's (i.e., 2021) contribution has been reduced by discount for prepaid contributions and transfers from County Investment Account, if any.

** Mainly attributable to employer contributions to fund each year's annual administrative expenses.

*** \$357,632 million when discounted with interest at the rate of 7.00% per annum has a value of \$183 million as of December 31, 2021. Of this amount, about \$167 million is the balance available in the County Investment Account and \$16 million is the O.C. Sanitation District UAAL Deferred Account as of December 31, 2021.

Note: We have not utilized the balance in the County Investment Account to reduce the projected total contributions in column (b) even though those amounts have been used to reduce the NPL for the County as of December 31, 2021.

Section 3: Actuarial Assumptions and Methods and Appendices

Notes:

- (1) Amounts may not total exactly due to rounding.
- (2) Amounts shown in the year beginning January 1, 2021 row are actual amounts, based on the final audited financial statements provided by OCERS.
- (3) Certain years have been omitted from the table.
- (4) Column (a): Except for the "discounted value" shown for 2134, all of the projected beginning Plan's Fiduciary Net Position amounts shown have not been adjusted for the time value of money.
- (5) Column (b): Projected total contributions include member and employer normal cost rates applied to closed group projected payroll (based on covered active members as of December 31, 2020), plus employer contributions to the Unfunded Actuarial Accrued Liability. Contributions are assumed to occur halfway through the year, on average.
- (6) Column (c): Projected benefit payments have been determined in accordance with paragraph 39 of GASB Statement No. 67, and are based on the closed group of active, inactive vested, retired members, and beneficiaries as of December 31, 2020. The projected benefit payments reflect the cost of living increase assumptions used in the December 31, 2021 valuation report.
- (7) Column (d): Projected administrative expenses are calculated as approximately 0.11% of the projected beginning Plan's Fiduciary Net Position amount. The 0.11% portion was based on the actual calendar year 2021 administrative expenses (unaudited) as a percentage of the actual beginning Plan's Fiduciary Net Position as of January 1, 2021. Administrative expenses are assumed to occur halfway through the year, on average.
- (8) Column (e): Projected investment earnings are based on the assumed investment rate of return of 7.00% per annum.
- (9) As illustrated in this Appendix, the Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments for current Plan members. In other words, there is no projected "cross-over date" when projected benefits are not covered by projected assets. Therefore, the long-term expected rate of return on Plan investments of 7.00% per annum was applied to all periods of projected benefit payments to determine the total pension liability as of December 31, 2021 shown earlier in this report, pursuant to paragraph 44 of GASB Statement No. 67.
- (10) This projection is based on a model developed by our Actuarial Technology and Systems unit, comprised of both actuaries and programmers. The model allows the client team, under the supervision of the responsible actuary, control over the entry of future expected contribution income, benefit payments and administrative expenses. The projection of fiduciary net position and the discounting of benefits is part of the model.

Section 3: Actuarial Assumptions and Methods and Appendices

Appendix B: Schedule of Pension Amounts by Employer as of December 31, 2021

Deferred Outflows of Resources	Orange County	O.C. Cemetery District	O.C. Law Library	O.C. Vector Control District	O.C. Retirement System
• Differences Between Expected and Actual Experience	\$82,799,096	\$443,549	\$25,545	\$274,103	\$445,588
• Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	196,375,395	185,535	193,385	497,305	1,347,606
• Changes of Assumptions	215,922,612	192,556	129,020	220,263	1,858,168
• Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	<u>14,269,881</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>3,532,956</u>
• Total Deferred Outflows of Resources	\$509,366,984	\$821,640	\$347,950	\$991,671	\$7,184,318
Deferred Inflows of Resources					
• Differences Between Expected and Actual Experience	\$78,100,654	\$273,583	\$674,335	\$1,409,750	\$349,290
• Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	1,881,060,106	1,739,646	1,705,162	3,805,364	12,636,493
• Changes of Assumptions	81,289,468	0	0	0	0
• Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	<u>7,448,014</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
• Total Deferred Inflows of Resources	\$2,047,898,242	\$2,013,229	\$2,379,497	\$5,215,114	\$12,985,783
Net Pension Liability as of December 31, 2020	\$3,547,545,979	\$(145,195)	\$(949,226)	\$(1,681,965)	\$24,954,057
Net Pension Liability as of December 31, 2021	\$2,047,576,018	\$(1,394,665)	\$(2,629,777)	\$(5,501,623)	\$16,375,725
Pension Expense Excluding That Attributable to Employer-Paid Member Contributions					
• Proportionate Share of Allocable Plan Pension Expense	\$(44,687,505)	\$(181,718)	\$(506,589)	\$(1,409,616)	\$(120,884)
• Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	<u>6,132,696</u>	<u>0</u>	<u>(25,423)</u>	<u>0</u>	<u>1,095,302</u>
• Total Employer Pension Expense Excluding That Attributable to Employer-Paid Member Contributions	\$(38,554,809)	\$(181,718)	\$(532,012)	\$(1,409,616)	\$974,418

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	O.C. Fire Authority	Cypress Recreation and Parks	Department of Education	Transportation Corridor Agency	City of San Juan Capistrano
Deferred Outflows of Resources					
• Differences Between Expected and Actual Experience	\$32,626,893	\$947,260	\$329,790	\$685,795	\$319,511
• Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	28,451,703	70,662	180,006	624,027	966,308
• Changes of Assumptions	11,055,459	23,600	59,655	433,224	1,332,409
• Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>4,316,186</u>
• Total Deferred Outflows of Resources	\$72,134,055	\$1,041,522	\$569,451	\$1,743,046	\$6,934,414
Deferred Inflows of Resources					
• Differences Between Expected and Actual Experience	\$33,859,388	\$0	\$345,414	\$1,113,190	\$250,461
• Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	288,925,170	572,127	1,193,127	7,812,023	9,061,066
• Changes of Assumptions	40,876,171	9,779	80,616	0	0
• Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>3,587,902</u>
• Total Deferred Inflows of Resources	\$363,660,729	\$581,906	\$1,619,157	\$8,925,213	\$12,899,429
Net Pension Liability as of December 31, 2020	\$181,121,638	\$185,117	\$2,661,390	\$(3,881,366)	\$20,116,465
Net Pension Liability as of December 31, 2021	\$(104,907,413)	\$(103,379)	\$1,523,058	\$(10,881,786)	\$11,742,303
Pension Expense Excluding That Attributable to Employer-Paid Member Contributions					
• Proportionate Share of Allocable Plan Pension Expense	\$(36,559,011)	\$(105,942)	\$(256,098)	\$(1,612,661)	\$(86,681)
• Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>(115,038)</u>
• Total Employer Pension Expense Excluding That Attributable to Employer-Paid Member Contributions	\$(36,559,011)	\$(105,942)	\$(256,098)	\$(1,612,661)	\$(201,719)

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	O.C. Sanitation District	O.C. Transportation Authority	U.C.I.	O.C. Children and Families Comm.	Local Agency Formation Comm.
Deferred Outflows of Resources					
• Differences Between Expected and Actual Experience	\$15,066,130	\$2,618,961	\$1,580,070	\$(22,093)	\$24,837
• Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	13,140,560	13,108,759	1,483,018	(66,818)	75,116
• Changes of Assumptions	11,884,767	9,602,044	478,219	(92,133)	103,576
• Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	<u>0</u>	<u>0</u>	<u>0</u>	<u>113,879</u>	<u>267,727</u>
• Total Deferred Outflows of Resources	\$40,091,457	\$25,329,764	\$3,541,307	\$(67,165)	\$471,256
Deferred Inflows of Resources					
• Differences Between Expected and Actual Experience	\$18,908,781	\$26,420,471	\$799,253	\$(17,319)	\$19,470
• Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	116,780,014	121,050,493	9,948,282	(626,550)	704,367
• Changes of Assumptions	0	0	722,747	0	0
• Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	<u>0</u>	<u>0</u>	<u>0</u>	<u>1,089,285</u>	<u>98,003</u>
• Total Deferred Inflows of Resources	\$135,688,795	\$147,470,964	\$11,470,282	\$445,416	\$821,840
Net Pension Liability as of December 31, 2020	\$(68,643,380)	\$186,024,390	\$25,337,145	\$(612,417)	\$1,248,133
Net Pension Liability as of December 31, 2021	\$(178,731,247)	\$73,424,051	\$17,134,332	\$(811,951)	\$912,794
Pension Expense Excluding That Attributable to Employer-Paid Member Contributions					
• Proportionate Share of Allocable Plan Pension Expense	\$(23,493,339)	\$(9,524,661)	\$(1,124,992)	\$5,993	\$(6,738)
• Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	<u>25,423</u>	<u>0</u>	<u>0</u>	<u>(473,167)</u>	<u>84,662</u>
• Total Employer Pension Expense Excluding That Attributable to Employer-Paid Member Contributions	\$(23,467,916)	\$(9,524,661)	\$(1,124,992)	\$(467,174)	\$77,924

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	Rancho Santa Margarita	O.C. Superior Court	O.C. IHSS Public Authority	Total for all Employers
Deferred Outflows of Resources				
• Differences Between Expected and Actual Experience	\$1,145	\$5,081,537	\$0	\$143,247,717
• Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	588	15,368,255	54,327	272,055,737
• Changes of Assumptions	162	21,190,769	38,994	274,433,364
• Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	<u>0</u>	<u>2,513,172</u>	<u>20,505</u>	<u>25,034,306</u>
• Total Deferred Outflows of Resources	\$1,895	\$44,153,733	\$113,826	\$714,771,124
Deferred Inflows of Resources				
• Differences Between Expected and Actual Experience	\$1,430	\$3,983,349	\$134,718	\$166,626,218
• Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,364	144,108,081	513,700	2,600,993,035
• Changes of Assumptions	702	0	2,862	122,982,345
• Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	<u>0</u>	<u>12,600,403</u>	<u>210,699</u>	<u>25,034,306</u>
• Total Deferred Inflows of Resources	\$6,496	\$160,691,833	\$861,979	\$2,915,635,904
Net Pension Liability as of December 31, 2020	\$(2,733)	\$299,663,880	\$304,738	\$4,213,246,650
Net Pension Liability as of December 31, 2021	\$(6,231)	\$186,750,735	\$(233,222)	\$2,050,237,722
Pension Expense Excluding That Attributable to Employer-Paid Member Contributions				
• Proportionate Share of Allocable Plan Pension Expense	\$(3,698)	\$(1,378,575)	\$(74,140)	\$(121,126,855)
• Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	<u>0</u>	<u>(6,697,891)</u>	<u>(26,564)</u>	<u>0</u>
• Total Employer Pension Expense Excluding That Attributable to Employer-Paid Member Contributions	\$(3,698)	\$(8,076,466)	\$(100,704)	\$(121,126,855)

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Notes:

Amounts shown in this Appendix were allocated by employer based on the Employer Allocation Percentage calculated in the Schedule of Determination of Proportionate Share in this report.

In determining the pension expense:

- Any differences between projected and actual investment earnings on pension plan investments are recognized over a period of five years beginning with the year in which they occur.
- Current-period (i.e., 2021) differences between expected and actual experience and changes of assumptions are recognized over the average of the expected remaining service lives of all employees that are provided with pensions through OCERS determined as of December 31, 2020 (the beginning of the measurement period ending December 31, 2021) and is 5.45 years.
- Prior-period differences between expected and actual experience and changes of assumptions are continued to be recognized based on the expected remaining service lives of all employees calculated as of those prior measurement dates.

The average of the expected remaining service lives of all employees was determined by:

- Calculating each active employee's expected remaining service life as the present value of \$1 per year of future service at zero percent interest.
- Setting the remaining service life to zero for each nonactive or retired members.
- Dividing the sum of the above amounts by the total number of active employee, nonactive and retired members.

There was a decrease in the total employer pension expense from \$255.9 million calculated last year to a pension income of \$(121.2) million calculated this year. The primary cause of the decrease was due to an investment gain of \$1.9 billion with \$382.0 million being recognized in this year's expense.

Note: Results may not total due to rounding.

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Appendix C: Definition of Terms

Definitions of certain terms as they are used in Statement 68. The terms may have different meanings in other contexts.

Actuarial Present Value of Projected Benefit Payments:	Projected benefit payments discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment.
Actuarial Valuation:	The determination, as of a point in time (the actuarial valuation date), of the service cost, Total Pension Liability, and related actuarial present value of projected benefit payments for pensions performed in conformity with Actuarial Standards of Practice unless otherwise specified by the GASB.
Actuarial Valuation Date:	The date as of which an actuarial valuation is performed.
Actuarially Determined Contribution:	A target or recommended contribution to a defined benefit pension plan for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.
Ad Hoc Cost-of-Living Adjustments (Ad Hoc COLAs):	Cost-of-living adjustments that require a decision to grant by the authority responsible for making such decisions.
Ad Hoc Postemployment Benefit Changes:	Postemployment benefit changes that require a decision to grant by the authority responsible for making such decisions.
Automatic Cost-of-Living Adjustments (Automatic COLAs):	Cost-of-living adjustments that occur without a requirement for a decision to grant by a responsible authority, including those for which the amounts are determined by reference to a specified experience factor (such as the earnings experience of the pension plan) or to another variable (such as an increase in the consumer price index).
Automatic Postemployment Benefit Changes:	Postemployment benefit changes that occur without a requirement for a decision to grant by a responsible authority, including those for which the amounts are determined by reference to a specified experience factor (such as the earnings experience of the pension plan) or to another variable (such as an increase in the consumer price index).
Collective Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions:	Deferred outflows of resources and deferred inflows of resources related to pensions arising from certain changes in the collective Net Pension Liability.
Collective Pension Expense:	Pension expense arising from certain changes in the collective Net Pension Liability.
Cost-of-Living Adjustments:	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.

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Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (Cost-Sharing Pension Plan):	A multiple-employer defined benefit pension plan in which the pension obligations to the employees of more than one employer are pooled and pension plan assets can be used to pay the benefits of the employees of any employer that provides pensions through the pension plan.
Covered Payroll:	Payroll on which contributions to a pension plan are based.
Defined Benefit Pension Plans:	Pension plans that are used to provide defined benefit pensions.
Defined Benefit Pensions:	Pensions for which the income or other benefits that the employee will receive at or after separation from employment are defined by the benefit terms. The pensions may be stated as a specified dollar amount or as an amount that is calculated based on one or more factors such as age, years of service, and compensation. (A pension that does not meet the criteria of a defined contribution pension is classified as a defined benefit pension for purposes of Statement 67.)
Defined Contribution Pension Plans:	Pension plans that are used to provide defined contribution pensions.
Defined Contribution Pensions:	Pensions having terms that (1) provide an individual account for each employee; (2) define the contributions that an employer is required to make (or the credits that it is required to provide) to an active employee's account for periods in which that employee renders service; and (3) provide that the pensions an employee will receive will depend only on the contributions (or credits) to the employee's account, actual earnings on investments of those contributions (or credits), and the effects of forfeitures of contributions (or credits) made for other employees, as well as pension plan administrative costs, that are allocated to the employee's account.
Discount Rate:	<p>The single rate of return that, when applied to all projected benefit payments, results in an actuarial present value of projected benefit payments equal to the total of the following:</p> <ol style="list-style-type: none"> 1. The actuarial present value of benefit payments projected to be made in future periods in which (a) the amount of the pension Plan's Fiduciary Net Position is projected (under the requirements of Statement 67) to be greater than the benefit payments that are projected to be made in that period and (b) pension plan assets up to that point are expected to be invested using a strategy to achieve the long-term expected rate of return, calculated using the long-term expected rate of return on pension plan investments. 2. The actuarial present value of projected benefit payments not included in (1), calculated using the municipal bond rate.
Entry Age Actuarial Cost Method:	A method under which the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit age(s). The portion of this actuarial present value allocated to a valuation year is called the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is called the actuarial accrued liability.

Section 3: Actuarial Assumptions and Methods and Appendices

Inactive Employees:	Terminated individuals that have accumulated benefits but are not yet receiving them, and retirees or their beneficiaries currently receiving benefits.
Measurement Period:	The period between the prior and the current measurement dates.
Multiple-Employer Defined Benefit Pension Plan:	A defined benefit pension plan that is used to provide pensions to the employees of more than one employer.
Net Pension Liability (NPL):	The liability of employers and nonemployer contributing entities to employees for benefits provided through a defined benefit pension plan.
Other Postemployment Benefits:	All postemployment benefits other than retirement income (such as death benefits, life insurance, disability, and long-term care) that are provided separately from a pension plan, as well as postemployment healthcare benefits, regardless of the manner in which they are provided. Other postemployment benefits do not include termination benefits.
Pension Plans:	Arrangements through which pensions are determined, assets dedicated for pensions are accumulated and managed and benefits are paid as they come due.
Pensions:	Retirement income and, if provided through a pension plan, postemployment benefits other than retirement income (such as death benefits, life insurance, and disability benefits). Pensions do not include postemployment healthcare benefits and termination benefits.
Plan Members:	Individuals that are covered under the terms of a pension plan. Plan members generally include (1) employees in active service (active plan members) and (2) terminated employees who have accumulated benefits but are not yet receiving them and retirees or their beneficiaries currently receiving benefits (inactive plan members).
Postemployment	The period after employment.
Postemployment Benefit Changes:	Adjustments to the pension of an inactive employee.
Postemployment Healthcare Benefits:	Medical, dental, vision, and other health-related benefits paid subsequent to the termination of employment.
Projected Benefit Payments:	All benefits estimated to be payable through the pension plan to current active and inactive employees as a result of their past service and their expected future service.
Public Employee Retirement System:	A special-purpose government that administers one or more pension plans; also may administer other types of employee benefit plans, including postemployment healthcare plans and deferred compensation plans.
Real Rate of Return:	The rate of return on an investment after adjustment to eliminate inflation.
Service Costs:	The portions of the actuarial present value of projected benefit payments that are attributed to valuation years.
Single-Employer Defined Benefit Pension Plan (Single-Employer Pension Plan):	A defined benefit pension plan that is used to provide pensions to employees of only one employer.

Section 3: Actuarial Assumptions and Methods and Appendices

Termination Benefits:	Inducements offered by employers to active employees to hasten the termination of services, or payments made in consequence of the early termination of services. Termination benefits include early-retirement incentives, severance benefits, and other termination-related benefits.
Total Pension Liability (TPL):	The portion of the actuarial present value of projected benefit payments that is attributed to past periods of employee service in conformity with the requirements of Statement 68.

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San Francisco, CA 94105-6147
segalco.com

Via Email

May 27, 2022

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 (OCERS)
Reconciliation of the Plan's December 31, 2021 Net Pension Liability (NPL) and
Unfunded Actuarial Accrued Liability (UAAL)**

Dear Steve:

We have been requested by OCERS to reconcile, for each Rate Group, the December 31, 2021 Net Pension Liability (NPL) and the Unfunded Actuarial Accrued Liability (UAAL) as shown in the December 31, 2021 Governmental Accounting Standards Board (GASB) Statement 67 addendum letter and funding valuation report, respectively. (The breakdown of the NPL as disclosed in the GASB 67 addendum letter also appears in our GASB 68 financial report.)

The reconciliation is provided in Attachment A of this letter. The difference between the NPL and the UAAL is a direct result of the different liability and asset values we used in those developments.

Liability

The Total Pension Liability (TPL) shown in the GASB 67 addendum letter was measured based on the December 31, 2020 demographic data by: (i) rolling forward the liability from December 31, 2020 to December 31, 2021 and (ii) assuming that the actuarial experience of the System would match with that anticipated by the demographic assumptions. On the other hand, the Actuarial Accrued Liability (AAL) shown in the funding valuation report was measured based on the December 31, 2021 demographic data.

The differences between the TPL and the AAL were primarily due to: (a) actuarial gains/losses on the liability items as documented in Section 4, Exhibit 6 of the December 31, 2021 funding valuation report for each Rate Group and (b) differences between the rolled forward liabilities and the actual liabilities.

Mr. Steve Delaney
May 27, 2022
Page 2

Assets

The Plan Fiduciary Net Position shown in the GASB 67 report as of December 31, 2021 (that we subsequently used for our GASB 67 addendum letter) was based on the plan's Market Value of Assets (MVA) including the proceeds available in the County Investment Account and O.C. Sanitation District (OCSD) UAAL Deferred Account. On the other hand, the funding valuation report used the Valuation Value of Assets (VVA) after adjusting the MVA for asset smoothing.¹

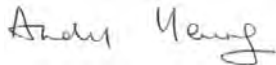
The differences between the Plan Fiduciary Net Position and the VVA were primarily due to adjustment of deferred investment gain.

The NPL and UAAL were calculated by taking the TPL and the AAL and subtracting the Plan Fiduciary Net Position and the VVA, respectively.

The undersigned is a member of the American Academy of Actuaries and meets the Qualification Standard of the American Academy of Actuaries to render the actuarial opinion contained herein.

Please let us know if you have any questions or comments.

Sincerely,



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

JY/hy
Enclosures

cc: Tracy Bowman
Brenda Shott

¹ There were no non-valuation reserves as of December 31, 2021.

Attachment A

All Rate Groups (Results are as of December 31, 2021)

(A) Liability Reconciliation	Rate Group #1	Rate Group #2	Rate Group #3	Rate Group #4
(1) Total Pension Liability Included in the development of the GASB 67 Addendum Letter	\$541,509,100	\$13,377,297,091	\$821,955,895	\$45,080
(2) (Gain)/Loss from (Lower)/Higher than Expected Salary Increases ¹	(1,618,000)	(45,145,000)	2,676,000	0
(3) Loss from Higher than Expected COLA Increases ¹	3,109,000	82,600,000	5,040,000	0
(4) Other Experience (Gain)/Loss ¹	978,000	(20,098,000)	5,335,000	0
(5) Other (Gain)/Loss from Rolled Forward Liabilities to Actual Liabilities	<u>(21,100)</u>	<u>3,734,909</u>	<u>11,105</u>	<u>920</u>
(6) Actuarial Accrued Liability Included in the Funding Valuation Report (sum of items (1) through (5))	\$543,957,000	\$13,398,389,000	\$835,018,000	\$46,000
(B) Asset Reconciliation				
(1) Market Value of Assets Excluding County Investment Account and OCSD UAAL Deferred Account	\$546,579,705	\$11,490,569,825	\$985,044,142	\$51,311
(2) County Investment Account and OCSD UAAL Deferred Account	<u>4,047,073</u>	<u>102,031,509</u>	<u>15,643,000</u>	<u>0</u>
(3) Plan's Fiduciary Net Position Included in the development of the GASB 67 Addendum Letter (1) + (2)	\$550,626,778	\$11,592,601,334	\$1,000,687,142	\$51,311
(4) Adjustment for Deferred Investment Return, Non-Valuation Reserve	(56,572,705)	(1,189,309,825)	(101,955,142)	(5,311)
(5) Valuation of Assets Included in the Funding Valuation Report (1) + (4)	\$490,007,000	\$10,301,260,000	\$883,089,000	\$46,000
Net Pension Liability Shown in the GASB 67 Addendum Letter (A1) - (B3)	\$(9,117,678)	\$1,784,695,757	\$(178,731,247)	\$(6,231)
Unfunded Actuarial Accrued Liability Shown in the Funding Valuation Report (A6) - (B5)	\$53,950,000	\$3,097,129,000	\$(48,071,000)	\$0

¹ These actuarial gain/loss items can be found in Section 4, Exhibit 6 of our December 31, 2021 funding valuation report.

Attachment A (continued)

All Rate Groups (Results are as of December 31, 2021)

(A) Liability Reconciliation	Rate Group #5	Rate Group #9	Rate Group #10	Rate Group #11
(1) Total Pension Liability Included in the development of the GASB 67 Addendum Letter	\$1,088,954,635	\$56,802,777	\$296,685,689	\$13,470,975
(2) (Gain)/Loss from (Lower)/Higher than Expected Salary Increases ¹	(19,493,000)	(426,000)	(1,561,000)	(60,000)
(3) Loss from Higher than Expected COLA Increases ¹	6,379,000	163,000	1,903,000	44,000
(4) Other Experience (Gain)/Loss ¹	(6,137,000)	(92,000)	2,983,000	112,000
(5) Other (Gain)/Loss from Rolled Forward Liabilities to Actual Liabilities	<u>88,365</u>	<u>223</u>	<u>(72,689)</u>	<u>2,025</u>
(6) Actuarial Accrued Liability Included in the Funding Valuation Report (sum of items (1) through (5))	\$1,069,792,000	\$56,448,000	\$299,938,000	\$13,569,000
(B) Asset Reconciliation				
(1) Market Value of Assets Excluding County Investment Account and OCSD UAAL Deferred Account	\$1,015,530,584	\$67,684,563	\$309,614,017	\$14,865,640
(2) County Investment Account and OCSD UAAL Deferred Account	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
(3) Plan's Fiduciary Net Position Included in the development of the GASB 67 Addendum Letter (1) + (2)	\$1,015,530,584	\$67,684,563	\$309,614,017	\$14,865,640
(4) Adjustment for Deferred Investment Return, Non-Valuation Reserve	(105,110,584)	(7,005,563)	(32,046,017)	(1,538,640)
(5) Valuation of Assets Included in the Funding Valuation Report (1) + (4)	\$910,420,000	\$60,679,000	\$277,568,000	\$13,327,000
Net Pension Liability Shown in the GASB 67 Addendum Letter (A1) - (B3)	\$73,424,051	\$(10,881,786)	\$(12,928,328)	\$(1,394,665)
Unfunded Actuarial Accrued Liability Shown in the Funding Valuation Report (A6) - (B5)	\$159,372,000	\$(4,231,000)	\$22,370,000	\$242,000

¹ These actuarial gain/loss items can be found in Section 4, Exhibit 6 of our December 31, 2021 funding valuation report.

Attachment A (continued)

All Rate Groups (Results are as of December 31, 2021)

(A) Liability Reconciliation	Rate Group #12	Rate Group #6	Rate Group #7	Rate Group #8	Total
(1) Total Pension Liability Included in the development of the GASB 67 Addendum Letter	\$11,936,922	\$1,007,468,667	\$4,696,638,164	\$2,059,654,727	\$23,972,419,722
(2) (Gain)/Loss from (Lower)/Higher than Expected Salary Increases ¹	(135,000)	(13,627,000)	(8,574,000)	801,000	(87,162,000)
(3) Loss from Higher than Expected COLA Increases ¹	61,000	5,115,000	30,416,000	14,000,000	148,830,000
(4) Other Experience (Gain)/Loss ¹	134,000	(676,000)	(10,265,000)	7,510,000	(20,216,000)
(5) Other (Gain)/Loss from Rolled Forward Liabilities to Actual Liabilities	<u>70,078</u>	<u>(31,667)</u>	<u>(549,164)</u>	<u>(1,031,727)</u>	<u>2,201,278</u>
(6) Actuarial Accrued Liability Included in the Funding Valuation Report (sum of items (1) through (5))	\$12,067,000	\$998,249,000	\$4,707,666,000	\$2,080,934,000	\$24,016,073,000
(B) Asset Reconciliation					
(1) Market Value of Assets Excluding County Investment Account and OCSD UAAL Deferred Account	\$14,566,699	\$933,832,586	\$4,208,821,116	\$2,151,633,812	\$21,738,794,000
(2) County Investment Account and OCSD UAAL Deferred Account	<u>0</u>	<u>9,756,386</u>	<u>51,910,032</u>	<u>0</u>	<u>183,388,000</u>
(3) Plan's Fiduciary Net Position Included in the development of the GASB 67 Addendum Letter (1) + (2)	\$14,566,699	\$943,588,972	\$4,260,731,148	\$2,151,633,812	\$21,922,182,000
(4) Adjustment for Deferred Investment Return, Non-Valuation Reserve	(1,507,699)	(96,654,586)	(435,626,116)	(222,700,812)	(2,250,033,000)
(5) Valuation of Assets Included in the Funding Valuation Report (1) + (4)	\$13,059,000	\$837,178,000	\$3,773,195,000	\$1,928,933,000	\$19,488,761,000
Net Pension Liability Shown in the GASB 67 Addendum Letter (A1) - (B3)	\$(2,629,777)	\$63,879,695	\$435,907,016	\$(91,979,085)	\$2,050,237,722
Unfunded Actuarial Accrued Liability Shown in the Funding Valuation Report (A6) - (B5)	\$(992,000)	\$161,071,000	\$934,471,000	\$152,001,000	\$4,527,312,000

¹ These actuarial gain/loss items can be found in Section 4, Exhibit 6 of our December 31, 2021 funding valuation report.

**ORANGE COUNTY EMPLOYEES
RETIREMENT SYSTEM
Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
Schedule of Allocated Pension Amounts by Employer
As of and for the Year Ended December 31, 2021**

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Report of Independent Auditors

The Board of Retirement
Orange County Employees Retirement System

Report on the Audit of the Schedule

Opinions

We have audited the totals for all employers of the rows titled net pension liability as of December 31, 2021, deferred outflows of resources, deferred inflows of resources, and pension expense (income) as of and for the year ended in the schedule of allocated pension amounts by employer (specific rows totals) of the Orange County Employees Retirement System (the System) as of and for the year ended December 31, 2021, and the related notes.

In our opinion, the accompanying schedule referred to above present fairly, in all material respects, totals for all the System's employers of the rows titled net pension liability, deferred outflows of resources, deferred inflows of resources, and pension expense (income) as of and for the year ended in the schedule of allocated pension amounts by employer as of December 31, 2021, in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinions

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards (Government Auditing Standards)*, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the schedule section of our report. We are required to be independent of the System's and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Responsibilities of Management for the Schedule

Management is responsible for the preparation and fair presentation of the schedule and specified row totals in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of schedule that are free from material misstatement, whether due to fraud or error.

In preparing the schedule, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the System's ability to continue as a going concern for twelve months beyond the schedule date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditor's Responsibilities for the Audit of the Schedule

Our objectives are to obtain reasonable assurance about whether the specified row totals included in the schedule of pension amounts by employer based on our audit as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the schedule.

In performing an audit in accordance with GAAS and *Government Auditing Standards*, we

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the schedule, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the schedule.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the System's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the schedule.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the System's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Other Matters

Financial Statements

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the System's as of and for the year ended December 31, 2021, and our report thereon dated June 2, 2022 expressed an unmodified opinion on those financial statements.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated June 2, 2022, on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the System's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control over financial reporting and compliance.

Restriction on Use

Our report is intended solely for the information and use of the System's management, members of the System's Board of Retirees, and the System's participating employers and their auditors, and is not intended to be and should not be used by anyone other than these specified parties.

[Signature]

Irvine, California
June 2, 2022

Draft

Orange County Employees Retirement System
Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
Schedule of Allocated Pension Amounts by Employer
As of and for the Year Ended December 31, 2021

	Orange County	O.C. Cemetery District	O.C. Public Law Library	O.C. Mosquito and Vector Control District	O.C. Employees Retirement System
Deferred Outflows of Resources					
Differences Between Expected and Actual Experience	\$ 82,799,096	\$ 443,549	\$ 25,545	\$ 274,103	\$ 445,588
Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	-	-	-	-	-
Changes of Assumptions	215,922,612	192,556	129,020	220,263	1,858,168
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	14,269,881	-	-	-	3,532,956
Total Deferred Outflows of Resources	<u>\$ 312,991,589</u>	<u>\$ 636,105</u>	<u>\$ 154,565</u>	<u>\$ 494,366</u>	<u>\$ 5,836,712</u>
Deferred Inflows of Resources					
Differences Between Expected and Actual Experience	\$ 78,100,654	\$ 273,583	\$ 674,335	\$ 1,409,750	\$ 349,290
Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	1,684,684,711	1,554,111	1,511,777	3,308,059	11,288,887
Changes of Assumptions	81,289,468	-	-	-	-
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	7,448,014	-	-	-	-
Total Deferred Inflows of Resources	<u>\$ 1,851,522,847</u>	<u>\$ 1,827,694</u>	<u>\$ 2,186,112</u>	<u>\$ 4,717,809</u>	<u>\$ 11,638,177</u>
Net Pension Liability/(Asset) as of December 31, 2021	<u>\$ 2,047,576,018</u>	<u>\$ (1,394,665)</u>	<u>\$ (2,629,777)</u>	<u>\$ (5,501,623)</u>	<u>\$ 16,375,725</u>
Pension Expense Excluding That Attributable to Employer-Paid Member Contributions					
Proportionate Share of Allocable Plan Pension Expense/(Income)	\$ (44,687,505)	\$ (181,718)	\$ (506,589)	\$ (1,409,616)	\$ (120,884)
Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	6,132,696	-	(25,423)	-	1,095,302
Total Employer Pension Expense/(Income) Excluding That Attributable to Employer-Paid Member Contributions	<u>\$ (38,554,809)</u>	<u>\$ (181,718)</u>	<u>\$ (532,012)</u>	<u>\$ (1,409,616)</u>	<u>\$ 974,418</u>

(Continued)

The accompanying notes are an integral part of these schedules.

Orange County Employees Retirement System
Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
Schedule of Allocated Pension Amounts by Employer
As of and for the Year Ended December 31, 2021

	O.C. Fire Authority	Cypress Recreation & Parks District	O.C. Department of Education	Transportation Corridor Agencies	City of San Juan Capistrano
Deferred Outflows of Resources					
Differences Between Expected and Actual Experience	\$ 32,626,893	\$ 947,260	\$ 329,790	\$ 685,795	\$ 319,511
Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	-	-	-	-	-
Changes of Assumptions	11,055,459	23,600	59,655	433,224	1,332,409
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	-	-	-	4,316,186
Total Deferred Outflows of Resources	\$ 43,682,352	\$ 970,860	\$ 389,445	\$ 1,119,019	\$ 5,968,106
Deferred Inflows of Resources					
Differences Between Expected and Actual Experience	\$ 33,859,388	\$ -	\$ 345,414	\$ 1,113,190	\$ 250,461
Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	260,473,467	501,465	1,013,121	7,187,996	8,094,758
Changes of Assumptions	40,876,171	9,779	80,616	-	-
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	-	-	-	3,587,902
Total Deferred Inflows of Resources	\$ 335,209,026	\$ 511,244	\$ 1,439,151	\$ 8,301,186	\$ 11,933,121
Net Pension Liability/(Asset) as of December 31, 2021	\$ (104,907,413)	\$ (103,379)	\$ 1,523,058	\$ (10,881,786)	\$ 11,742,303
Pension Expense Excluding That Attributable to Employer-Paid Member Contributions					
Proportionate Share of Allocable Plan Pension Expense/(Income)	\$ (36,559,011)	\$ (105,942)	\$ (256,098)	\$ (1,612,661)	\$ (86,681)
Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	-	-	-	(115,038)
Total Employer Pension Expense/(Income) Excluding That Attributable to Employer-Paid Member Contributions	\$ (36,559,011)	\$ (105,942)	\$ (256,098)	\$ (1,612,661)	\$ (201,719)

(Continued)

The accompanying notes are an integral part of these schedules.

Orange County Employees Retirement System
Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
Schedule of Allocated Pension Amounts by Employer
As of and for the Year Ended December 31, 2021

	O.C. Sanitation District	O.C. Transportation Authority	U.C.I. Medical Center and Campus	Children and Families Commission of O.C.	O.C. Local Agency Formation Commission
Deferred Outflows of Resources					
Differences Between Expected and Actual Experience	\$ 15,066,130	\$ 2,618,961	\$ 1,580,070	\$ (22,093)	\$ 24,837
Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	-	-	-	559,732	-
Changes of Assumptions	11,884,767	9,602,044	478,219	(92,133)	103,576
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	-	-	113,879	267,727
Total Deferred Outflows of Resources	\$ 26,950,897	\$ 12,221,005	\$ 2,058,289	\$ 559,385	\$ 396,140
Deferred Inflows of Resources					
Differences Between Expected and Actual Experience	\$ 18,908,781	\$ 26,420,471	\$ 799,253	\$ (17,319)	\$ 19,470
Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	103,639,454	107,941,734	8,465,264	-	629,251
Changes of Assumptions	-	-	722,747	-	-
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	-	-	1,089,285	98,003
Total Deferred Inflows of Resources	\$ 122,548,235	\$ 134,362,205	\$ 9,987,264	\$ 1,071,966	\$ 746,724
Net Pension Liability/(Asset) as of December 31, 2021	\$ (178,731,247)	\$ 73,424,051	\$ 17,134,332	\$ (811,951)	\$ 912,794
Pension Expense Excluding That Attributable to Employer-Paid Member Contributions					
Proportionate Share of Allocable Plan Pension Expense/(Income)	\$ (23,493,339)	\$ (9,524,661)	\$ (1,124,992)	\$ 5,993	\$ (6,738)
Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	25,423	-	-	(473,167)	84,662
Total Employer Pension Expense/(Income) Excluding That Attributable to Employer-Paid Member Contributions	\$ (23,467,916)	\$ (9,524,661)	\$ (1,124,992)	\$ (467,174)	\$ 77,924

(Continued)

The accompanying notes are an integral part of these schedules.

Orange County Employees Retirement System
Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
Schedule of Allocated Pension Amounts by Employer
As of and for the Year Ended December 31, 2021

	City of Rancho Santa Margarita	O.C. Superior Court of California	O.C. IHSS Public Authority	Total for all Employers
Deferred Outflows of Resources				
Differences Between Expected and Actual Experience	\$ 1,145	\$ 5,081,537	\$ -	\$ 143,247,717
Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	-	-	-	559,732
Changes of Assumptions	162	21,190,769	38,994	274,433,364
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	2,513,172	20,505	25,034,306
Total Deferred Outflows of Resources	<u>\$ 1,307</u>	<u>\$ 28,785,478</u>	<u>\$ 59,499</u>	<u>\$ 443,275,119</u>
Deferred Inflows of Resources				
Differences Between Expected and Actual Experience	\$ 1,430	\$ 3,983,349	\$ 134,718	\$ 166,626,218
Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	3,776	128,739,826	459,373	2,329,497,030
Changes of Assumptions	702	-	2,862	122,982,345
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	12,600,403	210,699	25,034,306
Total Deferred Inflows of Resources	<u>\$ 5,908</u>	<u>\$ 145,323,578</u>	<u>\$ 807,652</u>	<u>\$ 2,644,139,899</u>
Net Pension Liability/(Asset) as of December 31, 2021	<u>\$ (6,231)</u>	<u>\$ 186,750,735</u>	<u>\$ (233,222)</u>	<u>\$ 2,050,237,722</u>
Pension Expense Excluding That Attributable to Employer-Paid Member Contributions				
Proportionate Share of Allocable Plan Pension Expense/(Income)	\$ (3,698)	\$ (1,378,575)	\$ (74,140)	\$ (121,126,855)
Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(6,697,891)	(26,564)	-
Total Employer Pension Expense/(Income) Excluding That Attributable to Employer-Paid Member Contributions	<u>\$ (3,698)</u>	<u>\$ (8,076,466)</u>	<u>\$ (100,704)</u>	<u>\$ (121,126,855)</u>

The accompanying notes are an integral part of these schedules.

Orange County Employees Retirement System
Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
 Notes to the Schedule of Allocated Pension Amounts by Employer
 As of and for the Year Ended December 31, 2021

NOTE 1 – PLAN DESCRIPTION

The Orange County Employees Retirement System (OCERS or System) administers a cost-sharing multiple-employer defined benefit pension plan (the Plan) for the County of Orange, Orange County Superior Court of California, City of San Juan Capistrano, and ten special districts: Orange County Cemetery District, Children and Families Commission of Orange County, Orange County Employees Retirement System, Orange County Fire Authority, Orange County In-Home Supportive Services Public Authority, Orange County Local Agency Formation Commission, Orange County Public Law Library, Orange County Sanitation District, Orange County Transportation Authority and the Transportation Corridor Agencies. The Orange County Department of Education, University of California, Irvine Medical Center and Campus, Capistrano Beach Sanitation District, Cypress Recreation & Parks District, Orange County Mosquito and Vector Control District and City of Rancho Santa Margarita are no longer active employers, but retired members and their beneficiaries, as well as deferred members, remain in the System. Capistrano Beach is not presented in the accompanying schedule as this employer is no longer in existence and OCERS does not have the ability to collect any unfunded liabilities from this inactive employer. OCERS is legally and fiscally independent of the County of Orange.

OCERS provides retirement, disability, and death benefits to general and safety members. Safety membership includes those members serving in active law enforcement, fire suppression and as probation officers. General membership applies to all other occupations. Plan retirement benefits are tiered based upon the date of OCERS membership. Additional information regarding the pensions plan's benefit structure is included in the Summary of Plan Description that is available on the web at: <https://www.ocers.org/summary-plan-description>.

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation and Basis of Accounting

Employers participating in the Plan are required to report pension information in their financial statements in accordance with Governmental Accounting Standards Board (GASB) Statement No. 68, *Accounting and Financial Reporting for Pensions – an Amendment of GASB Statement No. 27*. The Schedule of Allocated Pension Amounts by Employer (the Schedule) along with OCERS' audited financial statements, the GASB Statement 67 Actuarial Valuation as of December 31, 2021 and the GASB Statement 68 Actuarial Valuation Based on the December 31, 2021 Measurement Date for Employer Reporting as of June 30, 2022, prepared by OCERS' third-party actuary, provide the required information for financial reporting related to the Plan that employers may use in their financial statements.

The accompanying Schedule was prepared by OCERS' third-party actuary and was derived from information provided by OCERS in accordance with accounting principles generally accepted in the United States of America (GAAP) as applicable to governmental organizations.

Orange County Employees Retirement System
Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
 Notes to the Schedule of Allocated Pension Amounts by Employer
 As of and for the Year Ended December 31, 2021

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Basis of Presentation and Basis of Accounting (Continued)

Legally or statutorily required employer contributions for the year ended December 31, 2021, less any amounts of those legally or statutorily required contributions that are paid by the employees (referred to as reverse pick-ups), are used as the basis for determining each employer's proportion of total contributions. For the year ended December 31, 2021, employer paid member contributions of \$32,000 under Government Code Section 31581.1 which OCERS reports as employer contributions as these payments do not become part of the accumulated employee contributions, have been excluded in determining each employer's proportion of total contributions. Contributions made by the employer on behalf of employees under Government Code Section 31581.2 are classified as employee contributions and are not included in the proportionate share calculation for the year ended December 31, 2021.

Employer contributions have not been reduced for discount due to prepaid contributions. Contributions for each employer are assigned to its respective participating Rate Group. Rate Groups are a collection of members who are or were employed by employers that offer similar pension benefit formula(s). Rate Groups exist for the purpose of risk-pooling and the contribution rates developed by the actuary should, in the long-term, fairly and accurately reflect the benefits offered/promised to members in each group. Rate Groups can contain one or more employers and employers may be included in one or more Rate Groups. If an employer participates in several Rate Groups, the employer's total proportionate share of the Net Pension Liability (NPL) and related allocated pension amounts is the sum of its NPL and allocated pension amounts from each Rate Group.

The following Rate Groups have only one active employer, so all of the NPL for that Rate Group is allocated to the corresponding employer:

Rate Group	Employer
3	Orange County Sanitation District
4	City of Rancho Santa Margarita
5	Orange County Transportation Authority
6	County of Orange (Probation)
7	County of Orange (Law Enforcement)
8	Orange County Fire Authority (Safety)
9	Transportation Corridor Agencies
10	Orange County Fire Authority (General)
11	Orange County Cemetery District
12	Orange County Public Law Library

The total Plan contributions are determined through OCERS' annual actuarial valuation process. The actuarially determined rate is the estimated amount necessary to finance the costs of benefits earned by employees during the year, with an additional amount to finance any unfunded accrued liability. California Government Code Title 3, Division 4, Parts 3 and 3.9, Articles 6 and 6.8 define the methodology used to calculate member basic contribution rates for General members and Safety members. The employer is required to contribute the difference between the actuarially determined rate and the contribution rate of employees. Legally or statutorily required employer contributions were determined by multiplying the employers' contribution rate by the employers' payrolls for the fiscal year.

Orange County Employees Retirement System
Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
 Notes to the Schedule of Allocated Pension Amounts by Employer
 As of and for the Year Ended December 31, 2021

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Basis of Presentation and Basis of Accounting (Continued)

The NPL is the Total Pension Liability (TPL) minus the Plan Fiduciary Net Position (plan assets). The TPL for each Rate Group is obtained from valuation results. The Fiduciary Net Position for each Rate Group is estimated by adjusting the valuation value of assets for each membership class by the ratio of the total Plan Fiduciary Net Position (excluding the balance of the County of Orange (County) Investment Account) to total OCERS’ valuation value of assets. The County Investment Account is then allocated among the four County Rate Groups using the proportion of the County’s most recent contributions that were derived from the proceeds of the Pension Obligation Bonds for each of the four County Rate Groups. The Orange County Sanitation District (OCSD) Unfunded Actuarial Accrued Liability (UAAL) Deferred Account balance of \$15,643,000 was allocated entirely to Rate Group 3 as of December 31, 2021. The NPL is then allocated to the respective employers based on the legally or statutorily required employer contributions within each Rate Group.

In developing the pension expense amounts, the NPL proportionate share percentage is used to calculate the employer’s pension expense components (service cost, interest, change in benefit terms, differences between expected and actual experience, changes in assumptions and benefit payments, including refunds of employee contributions), with the exception of the Orange County Mosquito and Vector Control District (Vector Control), Cypress Recreation & Parks District (CRPD), University of California, Irvine Medical Center and Campus (UCI) and the Orange County Department of Education (OCDE), which were adjusted to reflect the appropriate amount of service costs based on their current inactive membership.

The employer contributions used to determine the NPL proportionate share percentage excludes UCI and OCDE employer contributions of \$3,276,341 and \$345,566, respectively, for Rate Group 1, and a one-time employer contribution of \$6.5 million from the City of San Juan Capistrano (SJC) for Rate Group 2 (discussed further below). These employer contributions were intended to reduce the NPL of the specific employer, not the respective Rate Group as a whole.

On November 15, 2021, SJC contributed \$6.5 million to allow them to remain pooled with other employers in Rate Group 2. This additional required contribution was due to a triggering event under OCERS’ Declining Employer Payroll Policy after SJC transferred its Water Department employees to a separate special district that contracts with CalPERS for pension benefits for future service. This was a one-time contribution and SJC will continue to pay the Rate Group 2 contribution rates based on its reduced payroll, with no further contribution charges or credits for the Water Department employees who transferred out of the Plan.

The percentages of contributions by employer do not equal the percentages used to allocate the NPL by employer because the NPL for the County has been reduced to reflect the portion of the County Investment Account, as described above. The amounts of the County Investment Account that have been allocated to those Rate Groups are as follows:

Rate Group	2021
1	\$ 4,047,073
2	102,031,509
6	9,756,386
7	51,910,032
Total	\$ 167,745,000

Orange County Employees Retirement System
Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
 Notes to the Schedule of Allocated Pension Amounts by Employer
 As of and for the Year Ended December 31, 2021

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)
Basis of Presentation and Basis of Accounting (Continued)

In addition, the NPL for Rate Group 1 was adjusted by the NPL for Vector Control, OCDE, UCI and CRPD prior to allocating the net NPL to the other employers in Rate Group 1. The NPL for these four employers were calculated separately as follows:

The Vector Control is no longer an active employer, but retired members and their beneficiaries, as well as deferred members, remain in the Plan. For this employer, the allocated net pension liability is based on the most recent estimate of the withdrawal liability and adjusted to reflect the Plan Fiduciary Net Position as of December 31, 2021.

The participation in the Plan for the OCDE and UCI is closed to new members. The funding obligation for these employers' UAAL is no longer pro-rata based on its payroll as there are no active members. Instead, the employer's UAAL is determined based on its specific actuarial accrued liability and a share of assets allocated to the employer. The employer's contributions for its UAAL are to be paid at level, fixed-dollar amounts over a period not to exceed twenty years. The employer will also be liable, or receive a credit, for any change in its funding obligation determined annually thereafter as a result of actuarial experience or changes in actuarial assumptions.

On October 19, 2015, the Board of Retirement approved the amortization schedule for payment of the OCDE UAAL and UCI UAAL of \$3,238,000 and \$27,586,000, respectively. These balances were calculated based on the December 31, 2014 actuarial valuation assuming fixed-dollar payments over twenty years beginning on July 1, 2016. As per OCERS' Declining Payroll Policy, the UAAL balances were updated as of the December 31, 2020 actuarial valuation to reflect actuarial gains or losses and other events that will be captured in a new twenty-year closed amortization layer. The amortization schedules for the new UAAL layers for the OCDE and UCI, after being adjusted for interest to December 31, 2021, can be found on OCERS' website as discussed in Note 4 – Additional Financial and Actuarial Information.

CRPD and Capistrano Beach Sanitary District (CBSD) are no longer active employers. CRPD has twenty-two retired members and beneficiaries, as well as four deferred members, and CBSD has three retired members remaining in the Plan. At the time these employers left the System, OCERS did not have an express policy addressing how the UAAL would be funded for inactive employers. On October 15, 2018, OCERS entered into a withdrawing employer and continuing contribution agreement with the City of Cypress and received payment of the UAAL associated with CRPD members, including interest through October 14, 2018, for a total of \$740,000. As of December 31, 2020, and every three years thereafter, CRPD's UAAL obligation will be recalculated and in the event there is any new UAAL obligation, CRPD will have three years following the effective date of the recalculation to satisfy the obligation in full, including accrued interest. As of December 31, 2021, the allocated net pension asset is based on the most recent estimate of the withdrawal liability and adjusted to reflect the Plan Fiduciary Net Position as of December 31, 2021. CBSD is no longer in existence and OCERS does not have the ability to collect any UAAL from this inactive employer under OCERS' Declining Employer Payroll Policy; unpaid liabilities from this employer are deemed immaterial.

Orange County Employees Retirement System
Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
Notes to the Schedule of Allocated Pension Amounts by Employer
As of and for the Year Ended December 31, 2021

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**Use of Estimates in the Preparation of Financial Schedules**

The preparation of the Schedule in conformity with GAAP requires management to make significant estimates and assumptions that affect the reported amounts during the reporting period. Actual results could differ from those estimates.

The components of the NPL related to OCERS' plan at December 31, 2021, are as follows (dollars in thousands):

	2021
Total pension liability	\$ 23,972,420
Less: Plan fiduciary net position	(21,922,182)
Net pension liability	<u>\$ 2,050,238</u>

For the measurement period ended December 31, 2021 (the measurement date), total pension liability was determined by rolling forward the December 31, 2020 (the valuation date) total pension liability. The actuarial assumptions used were based on the results of an experience study for the period from January 1, 2017 through December 31, 2019.

NOTE 3 – ACTUARIAL METHODS AND ASSUMPTIONS**Actuarial Methods and Assumptions Used to Determine Total Pension Liability**

The December 31, 2021 total pension liability was based on the following actuarial methods and assumptions:

Actuarial Experience Study	Three-Year Period Ending December 31, 2019
Actuarial Cost Method	Entry Age in accordance with the requirements of GASB Statement No. 68
Actuarial Assumptions	
Investment Rate of Return	7.00%. net of pension plan investment expenses, including inflation
Inflation Rate	2.50%
Projected Salary Increases	General: 4.00% to 11.00% and Safety: 4.60% to 15.00% Vary by service, including inflation
Cost of Living Adjustments	2.75% of retirement income

Orange County Employees Retirement System
Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
 Notes to the Schedule of Allocated Pension Amounts by Employer
 As of and for the Year Ended December 31, 2021

NOTE 3 – ACTUARIAL METHODS AND ASSUMPTIONS (CONTINUED)

Actuarial Methods and Assumptions Used to Determine Total Pension Liability (Continued)

Mortality Assumptions

The mortality assumptions used in the TPL at December 31, 2021, were based on the results of the actuarial experience study for the period January 1, 2017 through December 31, 2019, using the Public Retirement Plans Mortality tables (Pub-2010) published by the Society of Actuaries. Within the Pub-2010 family of mortality tables, OCERS has adopted both the General and Safety Amount-Weighted Above-Median Mortality Tables (adjusted for OCERS experience), projected generationally with the two-dimensional mortality improvement scale MP-2019, and adjusted separately for healthy and disabled for both general and safety members.

Discount Rate

The discount rate used to measure the TPL as of December 31, 2021 was 7.00%. In determining the discount rate, OCERS took into account the projection of cash flows and assumed plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the actuarially determined contribution rates. For this purpose, only employer contributions that are intended to fund benefits for current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs for future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the Plan's fiduciary net position was projected to be available to make all projected future benefit payments for current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability as of December 31, 2021.

According to Paragraph 30 of Statement 68, the long-term expected rate of return should be determined net of pension plan investment expense but without reduction for pension plan administrative expense.

The 7.00% investment return assumption used in the actuarial valuation for funding is net of administrative expenses. Administrative expenses are assumed to be 11 basis points. The investment return assumption remained the same for reporting purposes due to the immaterial impact administrative expenses has on the overall assumed rate of return.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rate of return by the target asset allocation percentage and by adding expected inflation and deducting expected investment expenses and a risk margin. Additional information on the target allocation and projected arithmetic real rate of return for each major asset class is available in the OCERS' Annual Comprehensive Financial Report for the year ended December 31, 2021.

Orange County Employees Retirement System
Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
Notes to the Schedule of Allocated Pension Amounts by Employer
As of and for the Year Ended December 31, 2021

NOTE 3 – ACTUARIAL METHODS AND ASSUMPTIONS (CONTINUED)

Actuarial Methods and Assumptions Used to Determine Total Pension Liability (Continued)

Amortization of Deferred Outflows and Deferred Inflows of Resources

The net difference between projected and actual investment earnings on pension plan investments in the Schedule represents the unamortized balance relating to the current measurement period and the prior measurement periods on a net basis. The net difference between projected and actual investment earnings on pension plan investments is amortized over a five-year period on a straight-line basis beginning with the year in which they occur. One-fifth was recognized in pension expense during the measurement period, and the remaining net difference between projected and actual investment earnings on pension plan investments at the measurement date is to be amortized over the remaining period.

Deferred outflows of resources and deferred inflows of resources related to the differences between expected and actual experience, changes of assumptions, and changes in proportion and differences between employer contributions and proportionate share of contributions are recognized over the average of the expected remaining service lives of all employees that are provided with pensions through the Plan determined as of December 31, 2020 (the beginning of the measurement period ending December 31, 2021) which is 5.45 years. Prior measurement period differences between expected and actual experience, changes of assumptions, and changes in proportion and differences between employer contributions and proportionate share of contributions continue to be recognized based on the expected remaining service lives of all employees calculated as of the beginning of those measurement periods.

The Schedule of Allocated Pension Amounts by Employer does not reflect contributions made to OCERS subsequent to the measurement date as defined in GASB Statement No. 68 paragraph 57. Appropriate treatment of such amounts is the responsibility of the employers.

NOTE 4 – ADDITIONAL FINANCIAL AND ACTUARIAL INFORMATION

Additional financial and actuarial information required for GASB Statement No. 68 disclosures is presented in OCERS' Annual Comprehensive Financial Report as of and for the year ended December 31, 2021, the OCERS' GASB Statement No. 67 Actuarial Valuation as of December 31, 2021, the OCERS' GASB Statement No. 68 Actuarial Valuation Based on the December 31, 2021, Measurement Date for Employer Reporting as of June 30, 2022, and the Unfunded Actuarial Liability and Associated Amortization Schedules as of the December 31, 2020 valuation for the Orange County Department Education and University of California, Irvine Medical Center and Campus, which can be found on OCERS' website at www.ocers.org.



Memorandum

DATE: June 2, 2022
TO: Members of the Audit Committee
FROM: David Kim, Director of Internal Audit
SUBJECT: Actuarial Auditor Interviews

Recommendation

Staff recommends (1) selecting one of the two finalists chosen to make an oral presentation at the June 2, 2022 Audit Committee meeting to serve as OCERS actuarial auditor based on the firm's presentation, responsiveness to the Audit Committee's questions, and the written proposal submitted; and (2) after conducting such interviews, that the Audit Committee recommend to the Board of Retirement to award a contract for actuarial auditor services to the selected finalist, subject to satisfactory negotiation of terms.

Background/Discussion

At its March 30, 2022 meeting, the Audit Committee approved distribution of a Request for Proposal (RFP) to initiate a search for an actuarial auditor. The actuarial auditor will primarily determine the accuracy of the December 31, 2021, valuation performed by Segal, and include an assessment of actuarial assumptions and funding methodologies used, as further described in the RFP. The Actuarial Valuation Policy calls for an audit of the annual valuation by an external third-party actuary to be conducted every three to five years.

The Audit Committee Charter states that the Audit Committee's key areas of responsibility includes the oversight of External Auditors, including conducting the solicitation for the actuarial auditor, approving the RFPs or other solicitation vehicle, reviewing candidate qualifications and conducting interviews, and recommend one or more finalists to the Board for appointment. In addition, the Board's Procurement and Contracting Policy (Policy) designates the actuarial auditor as a "Named Service Provider."

Selection Process

In April 2022, the RFP for actuarial auditor services was posted on OCERS' website and released to various affiliates in addition to directly soliciting seven firms. OCERS received five proposals in response to the RFP:

- ∑ Buck Global, LLC
- ∑ Cavanaugh Macdonald Consulting, LLC
- ∑ Cheiron, Inc.
- ∑ Milliman, Inc
- ∑ Spring Consulting Group

All proposals received were reviewed for responsiveness based on the following criteria:

Experience & Reputation	35%
Quality of Team Assigned to OCERS	30%
Pricing & Value	25%



Memorandum

RFP Proposal Quality/Presentation

10%

The review panel, consisting of seven staff members reviewed all proposals and scored them on each criterion. Based on the total score from all panelists, the firms were ranked and the top two proposers who scored above the other three were determined to be the most qualified to provide OCERS with actuarial auditor services and were selected for interview:

- ∑ Buck Global, LLC (Buck)
- ∑ Cheiron, Inc. (Cheiron)

Please note that all references to the finalists in this memorandum and the documents that follow are in alphabetical order based on firm names.

Interview Process

The interviews will take place at the June 2, 2022 Audit Committee meeting. The planned procedure is for an approximately 45-minute interview with each firm as follows:

- ∑ Each candidate will be given ten minutes to make a general presentation about their firm.
- ∑ The Audit Committee will ask each firm the same five questions which will not be provided to the candidates ahead of time.
- ∑ The Audit Committee may ask the candidate additional or follow-up questions.
- ∑ Presentation to conclude with candidate summary.

The interview process will be explained to the candidates prior to the date of the Audit Committee. The finalist firm not being interviewed will be excused from the meeting during the other firm's interviews. Both firms will be excused from the meeting once the interview is complete. OCERS will then communicate the decision to both firms of the finalist who will be recommended to the Board of Retirement to be awarded the contract for actuarial auditor services the following day.

Summary of the RFP Responses

The summary below was based solely on staff's review and understanding of the firms' RFP responses and was not reviewed by the firms prior to inclusion with the Audit Committee materials.

Category	Buck	Cheiron
Total Fees	\$76,000	\$74,500*
Number of professionals and offices	2,200+ employees worldwide; 800 in the US; with over 50 Fellows of the Society of Actuaries 12 offices in 10 states/D.C; 2 in California	100 employees; 43 of which are Fellows of the Society of Actuaries 7 offices in 6 states; 2 in California



Memorandum

Retirement Plan Experience	<ul style="list-style-type: none"> Σ AC Transit Employees’ Retirement System Σ California Public Employees Retirement System Σ State of Alaska Σ New York Office of the Actuary Σ Pennsylvania Public School Employees’ Retirement System Σ West Virginia Consolidated Public Retirement Board (see proposal for full listing) 	<ul style="list-style-type: none"> Σ OCERS Σ Alameda County Employees’ Retirement Association Σ California Public Employees Retirement System Σ California State Teachers Retirement System Σ Contra Costa County Employees’ Retirement System Σ Kern County Employees’ Retirement Association (see proposal for full listing)
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*Additional charge of \$4,500 per meeting above one in-person meeting

The full proposals provided by each of the finalists in response to the RFP and the scoring summary are attached to this memorandum.

Submitted by:



DK- Approved

David Kim
 Director of Internal Audit

Orange County Employee Retirement System Actuarial Auditor RFP

Date: **May 18, 2022**

		Weighting %	Buck		Cheiron	
			Total	Weighted Score	Total	Weighted Score
Q1	Experience & reputation	35%	4	1.40	4	1.40
Q2	Quality of Team Assigned to OCERS	30%	3.5	1.05	4	1.20
Q3	Pricing & Value	25%	3	0.75	3	0.75
Q4	RFP Proposal Quality/Presentation	10%	3	0.30	4	0.40
Price			\$ 76,000		\$ 74,500*	
				3.50		3.75
				A		A

*Includes 1 in-person meeting. Additional in-person meetings is \$4,500 per meeting

Actuarial Auditor Services

Request for Proposal

April 2022

Orange County Employees Retirement System (OCERS)
2223 E Wellington Avenue Suite 100
Santa Ana, CA 92701 USA
1-(714)-558-6200
<http://www.ocers.org>

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Section 1: Introduction

The Orange County Employees Retirement System (“OCERS”) is requesting proposals from qualified firms interested in providing Actuarial Auditing services.

Those who wish to be considered must submit their completed proposal by **5:00 p.m., PDT, May 9, 2000**. Specific instructions for proposal submissions are contained in Section 7 of this RFP.

Questions about this RFP must be submitted in writing by **5:00 pm, PDT, April 18, 2022** to Jim Doezie, Contracts, Risk & Performance Administrator, by email at jdoezie@ocers.org.

Section 2: Background

OCERS was established in 1945 under the provisions of the County Employees Retirement Law of 1937, and provides members with retirement, disability, death, and cost-of-living benefits. There are approximately 47,000 members served by OCERS, of which over 19,000 are retirees. OCERS is governed by a nine-member Board of Retirement (“Board”) which has plenary authority and fiduciary responsibility for investment of moneys and administration of the retirement system. OCERS has over ninety employees and the Board appoints a Chief Executive Officer who is responsible for the management of the agency. For additional information about OCERS, please refer to the OCERS website at ocers.org.

Section 3: Scope of Services

The detailed scope of services for this engagement is outlined in the attached Exhibit “A” (“Scope of Services”). The primary objectives are to provide OCERS with: Actuarial Auditing services

The firm selected for this engagement will be expected to meet requirements that include, but are not limited to, the following:

1. The firm must have all necessary permits and licenses to perform the requested services and must be bonded where applicable.
2. Minimum insurance coverage must include the following items, and proof of such insurance must be provided to OCERS prior to the commencement of work, on an annual basis, and upon request:
 - Commercial General Liability: \$2M per occurrence, \$2M aggregate
 - Automobile Liability: \$1M per occurrence, \$2M aggregate
 - Workers Compensation: \$1M per occurrence, \$1M aggregate
 - Umbrella Liability: \$5M per occurrence, \$5M aggregate
 - *Professional Liability*: \$2M per occurrence, \$3M aggregate
 - *Cyber Security Insurance*: \$2M per occurrence, \$5M aggregate
 - *Fidelity Insurance*: \$5M per occurrence

OCERS must be listed as an additional insured on the above policies.

3. The firm shall provide all personnel, equipment, tools, materials, vehicles, supervision, and other items and services necessary to perform all services, tasks, and functions as requested in this RFP.
4. The initial term of the contract awarded pursuant to this RFP will be for a one-time period, with OCERS retaining the option to renew the contract.

5. All work under the contract awarded shall be performed and all equipment furnished or installed in accordance with applicable safety codes, ordinances, and other regulations, including the regulations of the State of California, Division of Industrial Safety and the provisions of the California Labor Code, the Occupational Safety and Health Act of 1970, the California Occupational Health and Safety Act.

6. Minimum Qualifications
 All respondents are required to sign and return the “Minimum Qualifications Certification,” attached as Exhibit “B.”

Section 4: General Conditions

All terms, conditions, requirements, and procedures included in this RFP must be met for a proposal to be qualified. A proposal that fails to meet any material term, condition, requirement, or procedure of this RFP may be disqualified. OCERS reserves the right to waive or permit cure of non-material errors or omissions. OCERS reserves the right to modify, amend, or cancel the terms of this RFP at any time.

OCERS may modify this RFP prior to the date fixed for submission of a proposal by posting, mailing or emailing an addendum to the respondents known to be interested in submitting a proposal. Failure of a respondent to receive or acknowledge receipt of any addendum shall not relieve the respondent of the responsibility for complying with the terms thereof.

A respondent’s proposal shall constitute an irrevocable offer for the 120 business days following the deadline for submission of proposals. Reference to a certain number of days in this RFP shall mean business days unless otherwise specified.

All proposals submitted in response to this RFP will become the exclusive property of OCERS. Proposals will not be returned to respondents.

By submitting a proposal, the respondent acknowledges that it has read this RFP, understands it, and agrees to be bound by its requirements unless clearly and specifically noted in the proposal submitted.

Section 5: Point of Contact

A quiet period will be in effect from the date of issuance of this RFP until announcement of the selection of a firm or firms under this RFP. During the quiet period, respondents are not permitted to communicate with any OCERS staff member or Board Member regarding this RFP except through the Point of Contact named herein. Respondents violating this quiet period may be disqualified at OCERS’ discretion. Respondents having current business with OCERS must limit their communications to the subject of such business.

OCERS’ normal business hours of operations are from 08:00 to 17:00 Monday through Friday, except for federal and state holidays.

The Point of Contact for all matters relating to this RFP is:

Name:	Jim Doezie
Title:	Contracts, Risk & Performance Administrator

Address:	OCERS 2223 E Wellington Ave., Suite 100 Santa Ana, CA 92701
Mail Address:	OCERS PO Box 1229 Santa Ana, CA 92701
Telephone:	(714) 569-4884
Email:	jdoezie@ocers.org
OCERS Website:	www.OCERS.org
Status:	See the OCERS website for status of the RFP and announcements. These items can also be found here: https://www.ocers.org/request-proposal

Section 6: Response to Request for Proposal

Proposals must be submitted to the Point of Contact identified in [Section 5](#) and delivered by the due date and time stated below in the RFP Schedule.

OCERS will accept electronic, paper, or both types of submissions. Proposals may be submitted electronically in Microsoft Word or Adobe Acrobat PDF format to the email address noted in [Section 5](#). Submission may also be made by mailing a USB flash drive with the electronic files, or a paper copy to the mailing address noted in [Section 5](#). If paper copies are submitted, three (3) copies must be submitted.

RFP Schedule

The following timetable constitutes a tentative schedule for this RFP process. OCERS reserves the right to modify this schedule at any time.

Deliverable	Date	Time
Release of RFP	April 4, 2022	
RFP Questions Deadline	April 18, 2022	5:00 P.M. PDT
RFP Answers Posted	April 25, 2022	5:00 P.M. PDT
RFP Submission Deadline	May 9, 2022	5:00 P.M. PDT
OCERS Review of RFP Submissions	May 10 to May 18, 2022	
Selection of Finalists	May 19, 2022	
Interviews of Finalists with Audit Committee	June 2, 2022	

Finalist Presentation to Board for Selection	June 20, 2022
Estimated Contract Start Date	July 1, 2022

Section 7: Proposal Requirements

Proposals must include the following information:

1. The "Minimum Qualifications Certification," attached as Exhibit "B."
2. The "Proposal Cover Page and Check List," attached as Exhibit "C."
3. An executive summary that provides the respondent's background, experience, and other qualifications to provide the services included in the Scope of Services.
4. A description of the respondent including:
 - a. Brief history, including year the respondent firm was formed.
 - b. Ownership structure.
 - c. Office locations.
 - d. Organization chart.
 - e. Number of employees.
 - f. Annual revenues.
 - g. Respondent's specialties, strengths, and limitations.
 - h. Describe the accounting systems used and financial reporting methodologies.
5. The names and qualifications of fully trained and qualified staff that will be assigned to OCERS work, including a detailed profile of each person's background and relevant individual experience.
6. At least three (3) references for which the respondent has provided services similar to those included in the Scope of Services. Please include for each reference the individual point of contact, a summary of the work performed, and the length of time the respondent provided each service.
7. Copies of any pertinent licenses required to deliver respondent's product or service (e.g., business license).
8. An explanation of the pricing proposal for the scope of work including pricing of fees and costs, billing practices, and payment terms that would apply. OCERS does not place any limits on the approach to pricing and is open to presentation of more than one pricing alternative for the scope of work, or portions of it. This section of the response should include an explanation as to how the pricing approach(es) will be managed to provide the best value to OCERS. The respondent should represent that the pricing offered to OCERS is, and will remain, equivalent to or better than that provided to other public pension fund or institutional investor clients or should provide an explanation as to why this representation cannot be provided. All pricing proposals should be "best and final," although OCERS reserves the right to negotiate on pricing.
9. An explanation of all actual or potential conflicts of interest that the respondent may have in contracting with OCERS.
10. A description of all past, pending, or threatened litigation, including malpractice claims, administrative, state ethics, disciplinary proceedings, and other claims against respondent and/or any of the individuals proposed to provide services to OCERS.

11. Any other information that the respondent deems relevant to OCERS' selection process.

Section 8: Evaluation Criteria

Responses will be evaluated based upon the following:

1. Experience and reputation of the respondent.
2. Quality of the team proposed to provide services to OCERS, including staffing depth, experience, turnover, and compensation.
3. Pricing and value.
4. The organization, completeness, and quality of the proposal.
5. Information provided by references.
6. Other factors OCERS determines to be relevant.

The factors will be considered as a whole, without a specific weighting.

OCERS may require one or more interviews with or personal presentations by finalists to be conducted with staff, Board Members, and/or the entire Board of Retirement.

If the information in the proposal is deemed to be insufficient for evaluation, OCERS may request additional information or reject the proposal outright at OCERS' sole discretion. Intentionally false, incomplete, or unresponsive statements in connection with a proposal will result in rejection of the proposal.

Section 9: Non-Discrimination Requirement

By submitting a proposal, the respondent represents that it and its subsidiaries do not and will not discriminate against any employee or applicant for employment on the basis of race, religion, color, national origin, ethnic group identification, mental disability, physical disability, medical condition, genetic information, marital status, ancestry, sex, gender, sexual orientation, gender identity, gender expression, age, or military and veteran status.

Section 10: Notice Regarding the California Public Records Act and the Brown Act

The information submitted in response to this RFP will be subject to public disclosure pursuant to the California Public Records Act (California Government Code Section 6250, et. seq., the "Act"). The Act provides generally that all records relating to a public agency's business are open to public inspection and copying unless specifically exempted under one of several exemptions set forth in the Act. If a respondent believes any portion of its proposal is exempt from public disclosure or discussion under the Act, the respondent must provide a full explanation and mark such portion "TRADE SECRETS," "CONFIDENTIAL," or "PROPRIETARY," and make it readily separable from the balance of the response. Proposals marked "TRADE SECRETS," "CONFIDENTIAL," or "PROPRIETARY" in their entirety will not be honored, and OCERS will not deny public disclosure of all or any portion of proposals so marked.

By submitting a proposal with material marked "TRADE SECRETS," "CONFIDENTIAL," or "PROPRIETARY," a respondent represents it has a good faith belief that the material is exempt from disclosure under the Act; however, such designations will not necessarily be conclusive, and a respondent may be required to justify in writing why such material should not be disclosed by OCERS under the Act. Fee and pricing proposals are not considered "TRADE SECRET," "CONFIDENTIAL," or "PROPRIETARY".

If OCERS receives a request pursuant to the Act for materials that a respondent has marked “TRADE SECRET,” “CONFIDENTIAL,” or “PROPRIETARY,” and if OCERS agrees that the material requested is not subject to disclosure under the Act, OCERS will either notify the respondent so that it can seek a protective order at its own cost and expense, or OCERS will deny disclosure of those materials. OCERS will not be held liable, however, for inadvertent disclosure of such materials, data, and information or for disclosure of such materials if deemed appropriate in OCERS’ sole discretion. OCERS retains the right to disclose all information provided by a respondent.

If OCERS denies public disclosure of any materials designated as “TRADE SECRETS,” “CONFIDENTIAL,” or “PROPRIETARY”, the respondent agrees to reimburse OCERS for, and to indemnify, defend and hold harmless OCERS, its Boards, officers, fiduciaries, employees, and agents from and against:

1. Any and all claims, damages, losses, liabilities, suits, judgments, fines, penalties, costs, and expenses, including, without limitation, attorneys’ fees, expenses, and court costs of any nature whatsoever (collectively, “Claims”) arising from or relating to OCERS’ non-disclosure of any such designated portions of a proposal; and
2. Any and all Claims arising from or relating to OCERS’ public disclosure of any such designated portions of a proposal if OCERS determines disclosure is required by law, or if disclosure is ordered by a court of competent jurisdiction.

Section 11: Contract Negotiations

OCERS will propose a contract to the successful respondent, which will contain such terms as OCERS, in its sole discretion, may require. In addition, the selected firm will agree that this RFP and the firm’s proposal will be incorporated by reference into any resulting contract.

This RFP is not an offer to contract. Acceptance of a proposal neither commits OCERS to award a contract to any respondent, nor does it limit OCERS’ right to negotiate the terms of a contract in OCERS’ best interest, including the addition of terms not mentioned in this RFP. The final contract must, among other terms and conditions required by OCERS, allow OCERS to terminate the contract a) for OCERS’ convenience, b) if funds are not appropriated for the services to be provided, or c) for default.

By submitting a proposal without comment on the OCERS Services Agreement, respondent will be deemed to have agreed to each term in the OCERS Services Agreement, and to not seek any modifications to it. If respondent objects to any term in the OCERS Services Agreement or wishes to modify or add terms to the OCERS Services Agreement, the proposal must identify each objection and propose language for each modification and additional term sought. A rationale should be included for each objection, modification, or addition.

Section 12: Reservations by OCERS

In addition to the other provisions of this RFP, OCERS reserves the right to:

1. Cancel or modify this RFP, in whole or in part, at any time.
2. Make such investigation as it deems necessary to determine the respondent’s ability to furnish the required services, and the respondent agrees to furnish all such information for this purpose as OCERS may request.

3. Reject the proposal of any respondent who is not currently in a position to perform the contract, or who has previously failed to perform similar contracts properly, or in a timely manner, or for any other reason in OCERS' sole discretion.
4. Waive irregularities, to negotiate in any manner necessary to best serve the public interest, and to make a whole award, multiple awards, a partial award, or no award.
5. Award a contract, if at all, to the firm which will provide the best match to the requirements of the RFP and the service needs of OCERS in OCERS' sole discretion, which may not be the proposal offering the lowest fees.
6. Request additional documentation or information from respondents, which may vary by respondent. OCERS may ask questions of any respondent to seek clarification of a proposal or to ensure the respondent understands the scope of the work or other terms of the RFP.
7. Reject any or all proposals submitted in response to this RFP.
8. Choose to not enter into an agreement with any of the respondents to this RFP or negotiate for the services described in this RFP with a party that did not submit a proposal.
9. Determine the extent, without limitation, to which the services of a successful respondent are or are not actually utilized.
10. Defer selection of a bidder to a time of OCERS' choosing.
11. Consider information about a respondent other than, and in addition to, that submitted by the respondent.

Exhibit A
Scope of Services

OCERS seeks one qualified actuarial firm to perform the following actuarial services:

- The audit will determine the accuracy of the December 31, 2021 valuation performed by Segal.
- The audit will assess the actuarial assumptions and funding methodologies used, including a comparison to industry standards. The purpose of the audit is to provide an opinion regarding the reasonableness and accuracy of the actuarial assumptions, actuarial cost methods, valuation results, and contribution rates.
- The audit will be a full replication parallel valuation audit, including a full re-run of the December 31, 2021 actuarial valuation and a review of detailed output on certain select test lives from the valuation group.
- The audit will not include a parallel experience analysis. Rather, the audit will focus on comparing OCERS' assumptions to industry norms as well as reviewing the structure and application of the assumptions based upon the test lives.
- The review of actuarial methods should be based on industry standards as well as the auditing firm's experience with similar retirement systems.
- The full replication parallel valuation, complimented by review of test lives, should allow the auditing firm to determine whether:
 1. The current valuation system used by Segal is accurately applying the assumptions as stated and is accurately valuing the appropriate benefits;
 2. The current valuation system used by Segal is properly allocating the present value of benefits between normal cost and actuarial accrued liability; and
 3. The current valuation system used by Segal is adding together liabilities appropriately for each decrement, for each member, and over the entire population so that there is reasonable assurance that no segment of the population is being ignored and no particular liabilities are being omitted.

Exhibit B

MINIMUM QUALIFICATIONS CERTIFICATION

All firms submitting a proposal in response to this RFP are required to sign and return this attachment, along with written evidence of how the respondent meets each qualification. The undersigned hereby certifies that it fulfills the minimum qualifications outlined below, as well as the requirements contained in the RFP.

Minimum Qualifications include:

1. The firm must be a professional actuarial services firm whose primary line of business includes providing actuarial valuation, experience investigations and analysis, actuarial audits, and pension consulting services to public pension plans or similar entities of substantial size;
2. The Primary Actuary performing the work must be a Fellow of the Society of Actuaries and an Enrolled Actuary. Any Supporting Actuary must be either a Fellow of the Society of Actuaries, an Enrolled Actuary or have five years of actuarial pension consulting experience;
3. The Primary Actuary performing the services under the Contract must have a minimum of ten years of experience as an actuary providing pension consulting services experience analysis, valuation assignments and actuarial audit assignments for multi-employer retirement plans. Experience with county retirement systems under the County Employees Retirement Law of 1937 is highly desirable.
4. The firm must have all necessary permits and licenses. Liability as well as errors and omissions insurance must be in full force at the time the proposal is submitted and must be maintained throughout the term of the contract.
5. The firm must provide its own work facilities, equipment, supplies and support staff to perform the required services;
6. All actuaries performing the work must meet the professional qualification standards of the American Academy of Actuaries

The undersigned hereby certifies that they are an individual authorized to bind the Firm contractually, and said signature authorizes verification of this information.

Authorized Signature

Date

Name and Title (please print)

Name of Firm

Exhibit C

PROPOSAL COVER PAGE AND CHECK LIST (TO BE SUBMITTED IN FIRM'S LETTERHEAD)

Respondent Name:

Respondent Address:

By submitting this response, the undersigned hereby affirms and represents that they have reviewed the proposal requirements and have submitted a complete and accurate response to the best of their knowledge. By signing below, I hereby affirm that the respondent has reviewed the entire RFP and intends to comply with all requirements.

Respondent specifically acknowledges the following:

1. Respondent possesses the required technical expertise and has sufficient capacity to provide the services outlined in the RFP.
2. Respondent has no unresolved questions regarding the RFP and believes that there are no ambiguities in the scope of services.
3. The fee schedule submitted in response to the RFP is for the entire scope of services and no extra charges or expenses will be paid by OCERS.
4. Respondent has completely disclosed to OCERS all facts bearing upon any possible interests, direct or indirect, that Respondent believes any member of OCERS, or other officer, agent, or employee of OCERS presently has, or will have, in this contract, or in the performance thereof, or in any portion of the profits thereunder.
5. Materials contained in the proposal and all correspondence and written questions submitted during the RFP process are subject to disclosure pursuant to the California Public Records Act.
6. Respondent is not currently under investigation by any state or federal regulatory agency for any reason.
7. Except as specifically noted in the proposal, respondent agrees to all of the terms and conditions included in OCERS Services Agreement.
8. The signatory is authorized to bind the respondent contractually.

**ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM
AGREEMENT FOR SERVICES**

This Agreement for Services (“Agreement”) is entered into this [REDACTED] day of [REDACTED], 20[REDACTED] (the “Effective Date”) by and between the Orange County Employees Retirement System, (“OCERS”) and [REDACTED] (“Contractor”). OCERS and Contractor are sometimes individually referred to as “Party” and collectively as “Parties.” The Parties hereby agree as follows:

1. PURPOSE.

1.1 Project.

Contractor desires to perform and assume responsibility for the provision of certain services required by OCERS on the terms and conditions set forth in this Agreement and OCERS desires to engage Contractor to render such services for **Actuarial Auditor Services** as set forth in this Agreement and its attached exhibits.

2. TERMS.

2.1 Scope of Services. Contractor promises and agrees to furnish to OCERS all labor, materials, tools, equipment, services, and incidental and customary work necessary to fully and adequately supply all services provided under this Agreement, (“Services”) as more particularly described in the attached **Exhibit “A”** (“Scope of Services”). All Services shall be subject to, and performed in accordance with, this Agreement, the exhibits attached hereto and incorporated herein by reference, and all applicable local, state, and federal laws, rules, and regulations. Contractor represents and warrants to OCERS that it will perform the Services in a professional and workmanlike manner, in accordance with best industry standards and practices used in well-managed operations performing services similar to the Services.

2.2 Term. The term of this Agreement shall commence upon the Effective Date and will continue for twelve (12) months or the completion of the services, whichever comes first, from the Effective Date (“Initial Term”), unless earlier terminated as provided herein. The Parties may, by mutual written agreement, extend the Initial Term for up to three (3) additional twelve (12) month periods. In no event shall the total term of the Agreement exceed seventy-two (72) months.

2.3 Consideration.

2.3.1 Compensation. Contractor shall receive compensation, including authorized reimbursements, for all Services rendered under this Agreement as set forth in **Exhibit “B”** (“Fee Schedule”).

2.3.2 Invoices and Payment. Contractor shall submit to OCERS monthly itemized invoices as required by Exhibit B, "Fee Schedule." OCERS shall pay all approved charges within net thirty (30) days of receiving such invoice.

2.3.3 Extra Work. At any time during the term of this Agreement, OCERS may request that Contractor perform Extra Work. As used herein, "Extra Work" means any work which is determined by OCERS to be necessary for the proper completion of the Services, but which the Parties did not reasonably anticipate would be necessary at the execution of this Agreement. Contractor shall not perform, nor be compensated for, Extra Work without written authorization by OCERS. Extra Work, if authorized, will be compensated at the rates and manner set forth in this Agreement.

2.4 Responsibilities of Contractor.

2.4.1 Independent Contractor. The Services shall be performed by Contractor or by Contractor's employees under Contractor's supervision. Contractor will determine the means, methods, and details of performing the Services subject to the requirements of this Agreement. Contractor is an independent contractor and not an employee of OCERS. Except as OCERS may agree in writing, Contractor shall have no authority, expressed or implied, to act on behalf of OCERS in any capacity whatsoever as an agent of OCERS. Any additional personnel performing the Services under this Agreement on behalf of Contractor will also not be employees of OCERS and will at all times be under Contractor's exclusive direction and control.

2.4.2 Payment of Subordinates. Contractor will pay all wages, salaries, and other amounts due such personnel in connection with their performance of Services under this Agreement and as required by law. Contractor shall be responsible for all reports and obligations respecting such additional personnel, including, but not limited to: social security taxes, income tax withholding, unemployment insurance, disability insurance, and workers' compensation insurance.

2.4.3 Licensing. Contractor represents that it, its employees and subcontractors have all licenses, permits, qualifications, and approvals of whatever nature that are legally required to perform the Services, and that such licenses and approvals shall be maintained throughout the term of this Agreement.

2.4.4 Conformance to Applicable Requirements. All work prepared by Contractor shall be subject to the approval of OCERS.

2.4.5 Substitution of Key Personnel. Contractor has represented to OCERS that certain key personnel will perform and coordinate the Services under this Agreement ("Key Personnel"). The Key Personnel assigned to this Agreement are identified in the attached **Exhibit "C"** ("Key Personnel"). Key Personnel will be available to perform Services under the terms and conditions of this Agreement immediately upon commencement of the term of this Agreement. Should one or more of such Key Personnel become unavailable, Contractor may substitute other personnel of at least equal competence upon written approval of OCERS.

Contractor shall provide OCERS written notification detailing the circumstances of the unavailability of the Key Personnel and designating replacement personnel prior to the effective date of the unavailability of such Key Personnel, to the maximum extent feasible, but no later than five (5) business days after the date of the Key Personnel's unavailability. OCERS will have the right to approve or disapprove the reassignment or substitution of Contractor Key Personnel for any reason at OCERS' sole discretion. In the event that OCERS and Contractor cannot agree as to the substitution of Key Personnel, OCERS will be entitled to terminate this Agreement for cause.

2.4.6 Removal of Key Personnel. Contractor agrees to remove any Key Personnel from performing work under this Agreement within twenty-four (24) hours or as soon thereafter as is practicable if reasonably requested to do so by the OCERS.

2.4.7 Laws and Regulations. Contractor shall keep itself fully informed of and in compliance with all local, state, and federal laws, rules, and regulations in any manner affecting the performance of the Services, including all Cal/OSHA requirements, and shall give all notices required by law. Contractor shall be liable for all violations of such laws and regulations in connection with Services. If the Contractor performs any work knowing it to be contrary to such laws, rules, and regulations, Contractor shall be solely responsible for all costs arising therefrom.

2.4.8 Labor Code Provisions.

(a) Prevailing Wages. Contractor is aware of the requirements of California Labor Code Section 1720, et seq., and 1770, et seq., as well as California Code of Regulations, Title 8, Section 16000, et seq. ("Prevailing Wage Laws"), which require the payment of prevailing wage rates and the performance of other requirements on "public works" and "maintenance" projects. If the Services are being performed as part of an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and if the total compensation is \$1,000 or more, Contractor agrees to fully comply with such Prevailing Wage Laws. Contractor shall comply with all prevailing wage requirements under the California Labor Code and Contractor shall forfeit as penalty to OCERS a sum of not more than \$200.00 for each calendar day, or portion thereof, for each worker paid less than the prevailing rates. This penalty shall be in addition to any shortfall in wages paid. OCERS has obtained the general prevailing rate of wages, as determined by the Director of the Department of Industrial Relations ("DIR"), a copy of which is on file in OCERS's office and shall be made available for viewing to any interested party upon request. Contractor shall make copies of the prevailing rates of per diem wages for each craft, classification, or type of worker needed to execute the Services available to interested parties upon request and shall post copies at the Contractor's principal place of business and at the site where Services are performed.

(b) Registration and Labor Compliance. If the Services are being performed as part of an applicable "public works" or "maintenance" project, then, in addition to the foregoing, pursuant to Labor Code sections 1725.5 and 1771.1, Contractor and all subcontractors must be registered with the DIR. Contractor shall maintain registration for the

duration of this Agreement and require the same of any subcontractors. The Services may also be subject to compliance monitoring and enforcement by the DIR. It shall be Contractor's sole responsibility to comply with all applicable registration and labor compliance requirements, including the submission of payroll records directly to the DIR.

(c) Labor Certification. By its signature hereunder, Contractor certifies that it is aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for Workers' Compensation or to undertake self-insurance in accordance with the provisions of that Code and agrees to comply with such provisions before commencing the performance of the Services.

2.4.9 Accounting Records. Contractor shall maintain complete and accurate records with respect to all costs and expenses incurred under this Agreement. All such records shall be clearly identifiable. Contractor shall allow a representative of OCERS during normal business hours to examine, audit, and make transcripts or copies of such records and any other documents created pursuant to this Agreement. Contractor shall allow inspection of all work, data, documents, proceedings, and activities related to the Agreement for a period of four (4) years from the date of final payment under this Agreement.

2.5 Representatives of the Parties.

2.5.1 OCERS' Representative. OCERS hereby designates its Chief Executive Officer, or their designee, to act as its representative for the performance of this Agreement ("OCERS' Representative"). Contractor shall not accept direction or orders from any person other than the OCERS' Representative.

2.5.2 Contractor's Representative. Contractor hereby designates [name or title], or their designee, to act as its representative for the performance of this Agreement ("Contractor's Representative"). Contractor's Representative shall have full authority to represent and act on behalf of the Contractor for all purposes under this Agreement. The Contractor's Representative shall supervise and direct the Services, using their best skill and attention, and shall be responsible for all means, methods, techniques, sequences, and procedures and for the satisfactory coordination of all portions of the Services under this Agreement.

2.6 Indemnification

To the fullest extent permitted by law, Contractor shall immediately indemnify and hold OCERS, the members of the OCERS Board of Retirement (each a "Board member"), and OCERS' officials, officers, employees, volunteers, and agents free and harmless from any and all claims, demands, causes of action, costs, expenses, liability, loss, damage, or injury of any kind, in law or equity, to property or persons, including wrongful death in any manner arising out of, pertaining to, or incident to any alleged acts, errors, omissions, or negligence of Contractor, its officials, officers, employees, subcontractors, contractors, or agents in connection with the performance of the Services, or this Agreement, including without limitation the payment of all

consequential damages, and attorneys' fees and costs, including expert witness fees (collectively, "Indemnity Claims"). Contractor's duty to indemnify does not extend to the Indemnity Claims caused by OCERS sole negligence or willful misconduct.

Contractor shall immediately defend, with legal counsel reasonably agreed to by OCERS and at Contractor's own cost, expense, and risk, any Indemnity Claims; excluding, however, such claims arising from OCERS' sole negligence or willful misconduct. Contractor shall control the defense or settlement of any such action, except that Contractor will not have the right to settle or compromise the claim without the consent of OCERS. Contractor shall pay and satisfy any judgment, award, or decree that may be rendered against OCERS or its Board members, officials, officers, employees, volunteers, and agents as part of any Indemnity Claim(s). Contractor shall also reimburse OCERS for the cost of any settlement paid by OCERS or its Board members, officials, officers, employees, agents, or volunteers as part of any Indemnity Claim. Such reimbursement shall include payment for OCERS' attorneys' fees and costs, including expert witness fees. Contractor's obligation to defend and indemnify shall survive expiration or termination of this Agreement, and shall not be restricted to insurance proceeds, if any, received by OCERS, its Board, officials, officers, employees, agents, or volunteers.

Notwithstanding the foregoing, to the extent the Services are subject to Civil Code Section 2782.8, the above indemnity and duty to defend shall be limited, to the extent required by Civil Code Section 2782.8, to claims that arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the Contractor.

2.7 Insurance

2.7.1 Time for Compliance. Contractor shall not commence work under this Agreement until it has provided evidence satisfactory to OCERS that it has secured all insurance required under this Section 2.7. In addition, Contractor shall not allow any subcontractor to commence work on any subcontract until Contractor has provided evidence satisfactory to OCERS that the subcontractor has secured all insurance required under this section. Failure to provide and maintain all required insurance shall be grounds for the OCERS to terminate this Agreement for cause.

2.7.2 Minimum Requirements. Contractor shall, at its expense, procure and maintain for the duration of the Agreement insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the Agreement by the Contractor, its agents, representatives, employees, or subcontractors. Contractor shall also require all of its subcontractors to procure and maintain the same insurance for the duration of the Agreement. Such insurance shall meet at least the following minimum levels of coverage:

(a) Commercial General Liability. Coverage for commercial general liability insurance shall be at least as broad as Insurance Services Office (ISO) Commercial General Liability Coverage (Occurrence Form CG 0001). Contractor shall maintain limits no less than two million dollars (\$2,000,000) per occurrence, or the full per occurrence limits of the

policies available, whichever is greater, for bodily injury, personal injury, and property damage. If Commercial General Liability Insurance or other form with general aggregate limit or product-completed operations aggregate limit is used, including but not limited to form CG 2503, either the general aggregate limit shall apply separately to this Agreement or the general aggregate limit shall be twice the required occurrence limit.

(b) Automobile Liability. Coverage shall be at least as broad as the latest version of the Insurance Services Office Business Auto Coverage form number CA 0001, code 1 (any auto). Contractor shall maintain limits no less than one million dollars (\$1,000,000) per accident for bodily injury and property damage. The automobile liability policy shall cover all owned, non-owned, and hired automobiles.

(c) Workers' Compensation and Employer's Liability Insurance. Contractor shall maintain Workers' Compensation insurance as required by the State of California and Employer's Liability Insurance in an amount no less than one million dollars (\$1,000,000) per accident for bodily injury or disease. The insurer shall agree to waive all rights of subrogation against OCERS, its Board of Trustees, officials, officers, employees, agents, and volunteers for losses paid under the terms of the insurance policy which arise from work performed by the Contractor.

(d) Professional Liability. Contractor shall procure and maintain, and require its subcontractors to procure and maintain, for a period of five (5) years following the termination or expiration of this Agreement, errors and omissions liability insurance appropriate to their profession covering Contractor's wrongful acts, negligent actions, errors, or omissions. The retroactive date (if any) is to be no later than the effective date of this Agreement. Contractor shall purchase a one-year extended reporting period: i) if the retroactive date is advanced past the effective date of this Agreement; ii) if the policy is canceled or not renewed; or iii) if the policy is replaced by another claims-made policy with a retroactive date subsequent to the effective date of this Agreement. Such insurance shall be in an amount not less than two million dollars (\$2,000,000) per claim.

(e) Fidelity Insurance. Contractor shall procure and maintain a comprehensive fidelity insurance policy. Such fidelity insurance coverage shall include employee dishonesty coverage in an amount not less than five million dollars (\$5,000,000) per occurrence and shall contain a deductible no greater than ten thousand dollars (\$10,000). Any such deductible shall be paid solely by Contractor.

(f) Excess Liability. The limits of insurance required in this Agreement may be satisfied by a combination of primary and umbrella or excess insurance. Any umbrella or excess coverage shall contain or be endorsed to contain a provision that such coverage shall also apply on a primary and non-contributory basis for the benefit of OCERS (if agreed to in a written contract or agreement) before OCERS's own primary or self-insurance shall be called upon to protect it as a named insured. The policy shall be endorsed to state that OCERS, its Board, officials, officers, employees, agents, and volunteers shall be covered as additional insured at least as broad a form as CG 20 10 11 85 or the latest versions of both CG

20 10 and CG 20 37. The coverage shall contain no special limitations on the scope of protection afforded to OCERS, its Board, officials, officers, employees, agents, and volunteers.

2.7.3 All Coverages. The general liability and automobile liability policy shall include or be endorsed to state that: (1) OCERS, its Board, officials, officers, employees, agents, and volunteers shall be covered as additional insured with respect to work by or on behalf of the Contractor, including materials, parts, or equipment furnished in connection with such work using as broad a form as CG 20 10 11 85 or the latest versions of both CG 20 10 and CG 20 37; and (2) the insurance coverage shall be primary insurance as respects the OCERS, its directors, officials, officers, employees, agents, and volunteers using as broad a form as CG 20 01 04 13, or if excess, shall stand in an unbroken chain of coverage excess of the Contractor's scheduled underlying coverage. Any insurance or self-insurance maintained by OCERS, its Board members, officials, officers, employees, agents, and volunteers shall be excess of the Contractor's insurance and shall not be called upon to contribute with it in any way.

(a) The insurance policies required above shall contain or be endorsed to contain the following specific provisions:

(i) The policies shall contain a waiver of transfer rights of recovery ("waiver of subrogation") against OCERS, its Board members, officers, employees, agents, and volunteers, for any claims arising out of the work of Contractor.

(ii) Policies may provide coverage which contains deductible or self-insured retentions. Such deductible and/or self-insured retentions shall not be applicable with respect to the coverage provided to OCERS under such policies. Contractor shall be solely responsible for deductible and/or self-insured retention and OCERS, at its option, may require Contractor to secure the payment of such deductible or self-insured retentions by a surety bond or an irrevocable and unconditional letter of credit. The insurance policies that contain deductibles or self-insured retentions in excess of \$25,000 per occurrence shall not be acceptable without the prior approval of OCERS.

(iii) Prior to start of work under this Agreement, Contractor shall file with OCERS evidence of insurance as required above from an insurer or insurers certifying to the required coverage. The coverage shall be evidenced on a certificate of insurance signed by an authorized representative of the insurer(s).

(iv) Each policy required in this section shall contain a policy cancellation clause that provides the policy shall not be cancelled or otherwise terminated by the insurer or the Contractor or reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to OCERS, Attention: Jim Doezie, Contracts Administrator: jdoezie@ocers.org

(v) Insurance required by this Agreement shall be placed with insurers licensed by the State of California to transact insurance business of the types required

herein. Each insurer shall have a current Best Insurance Guide rating of not less than A: VII unless prior approval is secured from OCERS as to the use of such insurer.

(vi) Contractor shall include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

2.7.4 Reporting of Claims. Contractor shall report to OCERS, in addition to Contractor's insurer, any and all insurance claims submitted by Contractor in connection with the Services under this Agreement.

2.8 Termination of Agreement. OCERS may, by written notice to Contractor, terminate the whole or any part of this Agreement without liability to OCERS if Contractor fails to perform or breaches any of the terms contained herein. In addition, either Party may terminate this Agreement for any reason or for no reason on thirty (30) days' written notice to the other Party. Upon termination, Contractor shall be compensated only for those Services that have been performed and delivered to OCERS' satisfaction, and Contractor shall be entitled to no further compensation.

2.9 Ownership of Materials and Confidentiality.

2.9.1 Documents & Data; Licensing of Intellectual Property. This Agreement creates a non-exclusive and perpetual license for OCERS to copy, use, modify, reuse, or sublicense any and all copyrights, designs, and other intellectual property embodied in plans, specifications, studies, drawings, estimates, and other documents or works of authorship fixed in any tangible medium of expression, including but not limited to, physical drawings or data magnetically or otherwise recorded on computer diskettes, which are prepared or caused to be prepared by Contractor under this Agreement ("Documents & Data"). Contractor shall deliver to OCERS on demand or upon the termination or expiration of this Agreement, all such Documents & Data which shall be and remain the property of the OCERS. If OCERS uses any of the data, reports, and documents furnished or prepared by Contractor for use in Services other than as shown on Exhibit A, Contractor shall be released from responsibility to third parties concerning the use of the data, reports, and documents. Contractor may retain copies of the materials. OCERS may use or reuse the materials prepared by Contractor without additional compensation to Contractor.

2.9.2 Confidential Information. Any financial, statistical, personal, technical, and other data and information relating to a Party's operations which are made available to the other Party in order to carry out this Agreement shall be reasonably protected by such other Party from unauthorized use, except to the extent that disclosure thereof is required to comply with applicable law, including the California Public Records Act. The disclosing Party shall identify all confidential data and information at the time it is provided. Confidentiality does not apply to information which is known to a receiving Party from other sources, which is otherwise

publicly available, or which is required to be disclosed pursuant to an order or requirements of a regulatory body or a court.

2.9.3 Customer Data. Contractor acknowledges that it may receive confidential information from OCERS or otherwise in connection with this Agreement or the performance of the Services, including personally identifiable information of OCERS' customers ("Customer Data"). Except for information in the public domain, unless such information falls into the public domain by disclosure or other acts of OCERS or through the fault of OCERS, Contractor agrees:

- (a) To maintain Customer Data in confidence;
- (b) Not to use Customer Data other than in the course of this Agreement;
- (c) Not to disclose or release Customer Data except on a need-to-know only basis;
- (d) Not to disclose or release Customer Data to any third person without the prior written consent of OCERS, except for authorized employees or agents of Contractor;
- (e) To promptly notify OCERS in writing of any unauthorized release of confidential information, including Customer Data;
- (f) To take all appropriate action, whether by instruction, agreement or otherwise, to ensure that third persons with access to the information under the direction or control or in any contractual privity with Contractor, do not disclose or use, directly or indirectly, for any purpose other than for performing the Services during or after the term of this Agreement, any confidential information, including Customer Data, without first obtaining the written consent of OCERS;
- (g) Upon request by OCERS and upon the termination or expiration of this Agreement for any reason, Contractor shall promptly return to OCERS all copies, whether in written, electronic, or other form or media, of Customer Data in its possession or in the possession of its employees or agents, or securely dispose of all such copies, and certify in writing to OCERS that such Customer Data has been returned to OCERS or disposed of securely; and
- (h) That the requirements in this Section 2.9.3 shall survive the expiration or termination of this Agreement.

2.9.4 Disclosure. Except as may be required by applicable law, neither Party shall make any disclosure of any designated confidential information related to this Agreement without the specific prior written approval from the other of the content to be disclosed and the form in which it is disclosed, except for such disclosures to the Parties' financing sources,

other secured parties, creditors, beneficiaries, partners, members, officers, employees, agents, consultants, attorneys, accountants, and exchange facilitators as may be necessary to permit each Party to perform its obligations hereunder and as required to comply with applicable laws or rules of any exchange upon which a Party's shares may be traded. Notwithstanding the foregoing, nothing contained herein shall be deemed to restrict or prohibit OCERS from complying with applicable law regarding disclosure of information, including the California Public Records Act.

2.9.5 Publicity. Contractor shall not use OCERS' name or insignia, photographs of OCERS property, or any publicity pertaining to the Services in any advertisement, magazine, trade paper, newspaper, television, or radio production, or other similar medium without the prior written consent of OCERS.

2.10 Subcontracting/Subconsulting.

2.10.1 Prior Approval Required. Contractor shall not subcontract any portion of the work required by this Agreement, except as expressly stated herein, without prior written approval of OCERS. Subcontracts, if any, shall contain a provision making them subject to all provisions stipulated in this Agreement. Contractor will be solely responsible for the payment of all subcontractors and other third parties engaged by or through Contractor to provide, perform, or assist in the provision and delivery of the Services.

3. General Provisions.

3.1.1 Notices. All notices permitted or required under this Agreement shall be given to the respective Parties at the following address, or at such other address as the respective Parties may provide in writing for this purpose:

OCERS:

**Orange County Employees Retirement System
2223 E. Wellington Avenue
Santa Ana, CA 92701
Attention: Jim Doezie
e-mail: jdoezie@ocers.org**

Contractor:

Such notice shall be deemed made when personally delivered or when mailed, upon deposit in the U.S. Mail, first class postage prepaid and registered or certified addressed to the Party at its applicable address. Actual notice shall be deemed adequate notice on the date actual notice occurred, regardless of the method of service.

3.1.2 Equal Opportunity Employment. Contractor represents that it is an equal opportunity employer and it shall not discriminate against any subcontractor, employee, or applicant for employment because of race, religion, color, national origin, ethnic group identification, mental disability, physical disability, medical condition, genetic information,

marital status, ancestry, sex, gender, sexual orientation, gender identity, gender expression, age, or military and veteran status. Such non-discrimination shall include, but not be limited to, all activities related to initial employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff, or termination.

3.1.3 Time of Essence. Time is of the essence for each and every provision of this Agreement. The acceptance of late performance shall not waive the right to claim damages for such breach nor constitute a waiver of the requirement of timely performance of any obligations remaining to be performed.

3.1.4 OCERS' Right to Employ Other Contractors. OCERS reserves the right to employ other contractors in connection with the Services.

3.1.5 Successors and Assigns. This Agreement shall be binding on the successors and assigns of the Parties.

3.1.6 Assignment or Transfer. Contractor shall not assign, hypothecate, or transfer, either directly or by operation of law, this Agreement or any interest herein without the prior written consent of OCERS.

3.1.7 Amendment. This Agreement may not be altered or amended except in a writing signed by both Parties.

3.1.8 Waiver. All waivers under this Agreement must be in writing to be effective. No waiver of any default shall constitute a waiver of any other default or breach, whether of the same or other covenant or condition.

3.1.9 No Third Party Beneficiaries. There are no intended third party beneficiaries of any right or obligation assumed by the Parties.

3.1.10 Invalidity; Severability. If any portion of this Agreement is declared invalid, illegal, or otherwise unenforceable by a court of competent jurisdiction, the remaining provisions shall continue in full force and effect.

3.1.11 Governing Law; Venue. This Agreement shall be governed by the laws of the State of California. The exclusive venue for any dispute arising out of or relating to this Agreement shall be in Orange County, California.

3.1.12 Attorneys' Fees. If either Party commences an action against the other Party, either legal, administrative, or otherwise, arising out of or in connection with this Agreement, the prevailing party in such litigation shall be entitled to have and recover from the losing party reasonable attorneys' fees and all other costs of such action.

3.1.13 Authority to Enter Agreement. Contractor has all requisite power and authority to conduct its business and to execute, deliver, and perform the Agreement. Each

Party warrants that the individuals who have signed this Agreement have the legal power, right, and authority to make this Agreement and bind each respective Party.

3.1.14 Counterparts. This Agreement may be signed in counterparts, each of which shall constitute an original.

3.1.15 Integration. This Agreement represents the entire understanding of OCERS and Contractor as to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to those matters covered hereunder. Neither Party shall be deemed to be the drafter of this Agreement and no presumption for or against the drafter shall be applicable in interpreting or enforcing this Agreement.

3.1.16 Precedence. In the event of any conflict, inconsistency, or ambiguity between the terms and conditions in the main body of this Agreement and the terms and conditions in any exhibit, the main body of this Agreement shall control. This Agreement and all attached exhibits will be construed to be consistent, insofar as reasonably possible. When interpreting this Agreement, precedence shall be given to its respective parts and amendments in the following descending order:

- (a) Amendments to this Agreement entered into pursuant to Section 3.1.7 herein.
- (b) This Agreement.
- (c) Exhibit A: Scope of Services, Exhibit B: Fee Schedule, and Exhibit C: Key Personnel.
- (d) OCERS Request for Proposal dated March, 2022, attached as Exhibit "D".
- (e) Contractor's Response to OCERS Request for Proposal, attached as Exhibit "E".

IN WITNESS WHEREOF, the Parties hereby have caused this Agreement to be executed on the Effective Date:

APPROVED:

APPROVED:

OCERS

[CONTRACTOR]

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

OCERS

By: _____

Name: _____

Title: _____

EXHIBIT A
SCOPE OF SERVICES

Starting on the Effective Date, and continuing during the Term, Contractor will perform the Services in accordance with the terms of the Agreement. The Services consist of the Contractor performing actuarial services as follows:

- The audit will determine the accuracy of the December 31, 2021, valuation performed by Segal.
- The audit will assess the actuarial assumptions and funding methodologies used, including a comparison to industry standards. The purpose of the audit is to provide an opinion regarding the reasonableness and accuracy of the actuarial assumptions, actuarial cost methods, valuation results, and contribution rates.
- The audit will be a full replication parallel valuation audit, including a full re-run of the December 31, 2021, actuarial valuation and a review of detailed output on certain select test lives from the valuation group.
- The audit will not include a parallel experience analysis. Rather, the audit will focus on comparing OCERS' assumptions to industry norms as well as reviewing the structure and application of the assumptions based upon the test lives.
- The review of actuarial methods should be based on industry standards as well as the auditing firm's experience with similar retirement systems.
- The full replication parallel valuation, complimented by review of test lives, should allow the auditing firm to determine whether:
 1. The current valuation system used by Segal is accurately applying the assumptions as stated and is accurately valuing the appropriate benefits;
 2. The current valuation system used by Segal is properly allocating the present value of benefits between normal cost and actuarial accrued liability; and
 3. The current valuation system used by Segal is adding together liabilities appropriately for each decrement, for each member, and over the entire population so that there is reasonable assurance that no segment of the population is being ignored and no particular liabilities are being omitted.

**EXHIBIT B
FEE SCHEDULE**

1. **Fees and Expenses.** Contractor agrees to accept the compensation set forth in this Exhibit B as full payment for performing all Services, including all staffing and materials required, for any reasonably unforeseen difficulties which may arise or be encountered in the execution of the Services, for risks connected with the Services, and for performance by Contractor of all its duties and obligations under the Agreement. OCERS will pay the following fees in accordance with the provisions of this Agreement:
 - XXXX
 - *The total compensation shall not exceed XXX Dollars (\$XXX.00) without written approval by OCERS.*
 - *[provision for expense reimbursement]*

2. **Payment Terms – Payment in Arrears:** Invoices are to be submitted in arrears to OCERS unless otherwise directed in this Agreement. Payment by OCERS will be net thirty (30) days after receipt and approval of an invoice in a format acceptable to OCERS.

3. **Payment – Invoicing Instructions:** Contractor will provide an invoice on the Contractor’s letterhead for services rendered under this Agreement. Each invoice will have a number and will include the following information:
 - a. Contractor’s name and address
 - b. Contractor’s remittance address, if different from item #1 above
 - c. Contractor’s Taxpayer ID Number
 - d. Name of OCERS Agency/Department
 - e. Delivery/service address
 - f. Agreement number
 - g. Agency/Department’s Account Number
 - h. Date of invoice
 - i. Description and price of services provided
 - j. Sales tax, if applicable
 - k. Freight/delivery charges, if applicable
 - l. Total

Invoice and support documentation are to be forwarded to:

Orange County Employees Retirement System
2223 E. Wellington Avenue
Santa Ana, CA 92701
Attention: Accounts Payable
Email: Accountspayable@ocers.org

EXHIBIT C
KEY PERSONNEL

Exhibit D
Request for Proposal

Exhibit E
Response to Request for Proposal



Jon Baeta
US West Region Managing Director
Buck
Two Embarcadero Center
9th Floor
San Francisco, CA 94111

May 9, 2022

Email: jon.baeta@buck.com
Tel: 415-913-0031

Jim Doezie
Contracts, Risk & Performance Administrator
OCERS
2223 E Wellington Ave., Suite 100
Santa Ana, CA 92701
Email: jdoezie@ocers.org

Dear Mr. Doezie,

Thank you for including Buck in your Actuarial Auditor Services RFP process with The Orange County Employees Retirement System (OCERS). We are honored to have this opportunity to partner with you to better ensure the financial futures of those you serve.

Respondent Name: Buck Global, LLC (Buck)

Respondent Address: 420 Lexington Avenue, Suite #2220, New York, NY 10170 (Corporate Office)

By submitting this response, the undersigned hereby affirms and represents that we have reviewed the proposal requirements and have submitted a complete and accurate response to the best of our knowledge. By signing below, I hereby affirm that the respondent (Buck) has reviewed the entire RFP and intends to comply with all requirements.

Buck specifically acknowledges the following:

1. Buck possesses the required technical expertise and has sufficient capacity to provide the services outlined in the RFP.
2. Buck has no unresolved questions regarding the RFP and believes that there are no ambiguities in the scope of services.
3. The fee schedule submitted in response to the RFP is for the entire scope of services and no extra charges or expenses will be paid by OCERS.
4. Buck has completely disclosed to OCERS all facts bearing upon any possible interests, direct or indirect, that Buck believes any member of OCERS, or other officer, agent, or employee of OCERS presently has, or will have, in this contract, or in the performance thereof, or in any portion of the profits thereunder.
5. Materials contained in the proposal and all correspondence and written questions submitted during the RFP process are subject to disclosure pursuant to the California Public Records Act.
6. Buck is not currently under investigation by any state or federal regulatory agency for any reason.
7. Except as specifically noted in the proposal, Buck agrees to all of the terms and conditions included in OCERS Services Agreement.
8. The signatory is authorized to bind Buck contractually.

Buck has a proud history of serving public retirement systems of both pension and health (OPEB) benefits. For more than a century, our consultants have delivered superior service and maximum value for our clients' benefit needs. We have been serving the public sector for nearly 106 years, ever since our founder George Buck set up the first rules of US public pension plan funding. This is longer than any other actuarial firm. Our first client, the City of New York, is still with us today.

At Buck, we put our clients first. We strive to be proactive, compassionate, and highly valued partners.

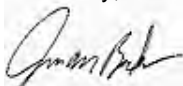
We have extensive experience performing actuarial audits of large systems, like OCERS, and we bring our public-sector clients a "best-of-both-worlds" approach, one that:

- Is informed by our deep experience supporting public-sector retirement programs – and delivers the specific services our public-sector clients need – while considering their unique characteristics, ranging from sources of funding to the composition of their members to their governance models.
- Brings a fresh perspective and innovative ideas to the table, based on our experience serving a vast array of organizations and plan types.

Additionally, we have completed and signed the "Minimum Qualifications Certification" (Exhibit B) in our Attachments section.

We are available to answer any questions you may have and look forward to the next steps in the process.

Sincerely,



Jon Baeta
US West Region Managing Director



David Kershner, FSA, EA, MAAA, FCA
Principal, Public Sector Wealth Practice



Buck's Response to OCERS' 2022 RFP

Actuarial Auditor Services

May 9, 2022



Contact

**Primary RFP
Contact**

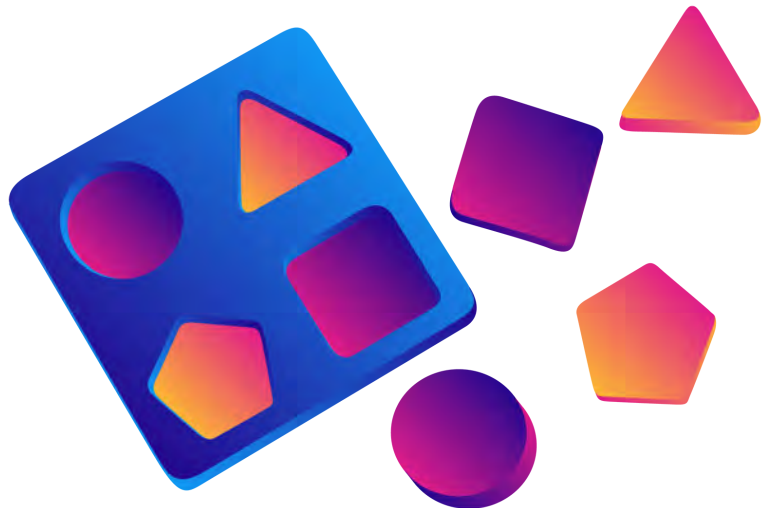
David Kershner, FSA, EA, MAAA, FCA
Principal, Public Sector Wealth Practice

602-803-6174
david.kershner@buck.com

**Secondary RFP
Contact**

Jon Baeta
US West Region Managing Director

415-913-0031
jon.baeta@buck.com

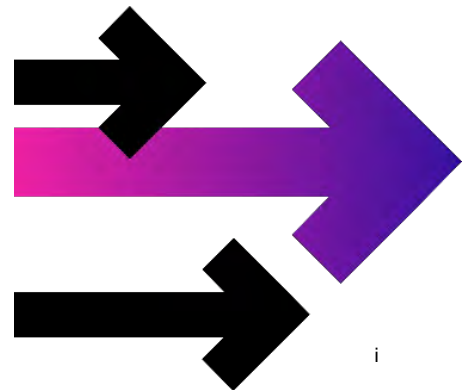


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Executive Summary



About Buck

Buck is one of the world's leading professional services firms, focused exclusively on human resource and actuarial benefits consulting, brokerage, technology, and administration services.

Our nearly 106-year heritage of excellence dates to 1916, when our founder, George B. Buck, established the actuarial basis of the New York State and City retirement systems. We have been serving government entities similar to OCERS since our founding – longer than any other benefits and retirement actuarial consulting firm. We know the industry and remain committed to serving the public-sector.



Sharing in your Mission – delivering to members

We are aligned with and share your Mission: ***“We provide secure retirement and disability benefits with the highest standards of excellence.”***

Engaging an independent actuarial firm to conduct an audit of your annual actuarial valuation and actuarial valuation report is a valuable tool in following your mission. Ensuring the fund is being funded properly provides both security and sustainability.

We understand you need an experienced actuarial audit partner, one who can:

- Navigate the structural complexities of your plans.
- Determine appropriate methods and assumptions are being used.
- Be current with and fully grasp actuarial best practices to ensure they are being followed.
- Understand challenges that arise in administering and operating a retirement system so areas of potential concerns can be addressed to ensure proper handling.
- Advise on funding strategies to align with your policies and current actuarial standards. At Buck, we not only audit the policies but provide any consultative advice that may come to light during our audit. A value many auditing actuaries do not offer.

About Buck:

- 100+ years**
Serving the public sector
- 40+ states**
Support for public sector entities across the U.S.
- 22 years**
Average public sector client tenure

Buck has an advantage when providing actuarial services to the public sector due to our size and structure. We can respond to the needs of the public sector in a nimble and flexible way, yet we have large-firm resources and bench strength, that can be scaled to meet needs and budget. Our competitors are generally either:

- Smaller companies that only offer one or two services and can struggle with meeting timing needs for their clients due to limited resources, or
- Large firms that have strict red-tape and set procedures to be applied to all clients regardless of the client's needs or consultants that have limited public-sector experience working on public-sector clients.

Our commitment and focus on public sector ensure we are not only currently qualified but will remain so for another 100 years and more. We remain committed to the public sector, providing actuarial and benefits consulting services for state, county and municipal governments, and quasi-governmental organizations.



Beyond the basics: strong subject matter expertise....

Within our firm are public sector consulting experts – individuals who are dedicated to working with government and public organizations to deliver health, wealth, communications, and compliance solutions. Our Wealth practice established a Public Sector Retirement specialty practice specifically designed for ensuring the highest quality public sector retirement practitioners are available to our clients.

Our client-facing public sector retirement actuaries formally meet on a monthly basis to stay connected and share ideas that may help a variety of our public sector retirement clients and collaborate informally on an ongoing basis. You'll work with a team who has deep knowledge of specific industry sectors, and who take the time to learn your unique situation in order to solve the complex organizational challenges facing public sector organizations.

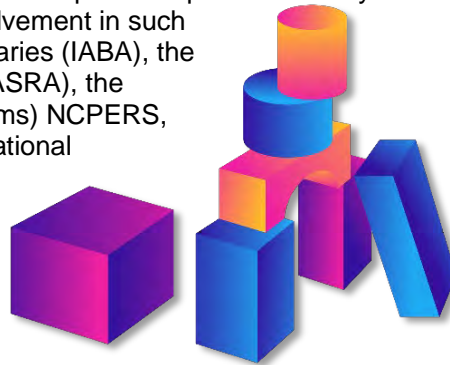
One of the areas we're especially proud of is our centralized peer review team. The combination of our experienced professionals and centralized review team is what allows us to ensure accuracy and consistency in the work we do for all our clients.



Extending excellence

We're actively involved in **advancing the health and vibrancy of the actuarial profession and the sectors we serve**, and to expanding our own membership to incorporate diversity of thought and perspectives. We achieve this through our involvement in such organizations as the International Association of Black Actuaries (IABA), the National Association of State Retirement Administrators (NASRA), the National Conference on Public Employee Retirement Systems (NCPERS), the National Council on Teacher Retirement (NCTR), the National Institute on Retirement Security (NIRS) and the California Actuarial Advisory Panel (CAAP).

Our colleagues are also contributing members of the public plans committees of the Society of Actuaries, and the Conference of Consulting Actuaries, and also hold memberships in local and state organizations.





Buck is the right choice for your actuarial audit needs

Buck provides the highest quality work as assured by our best-in-class independent peer review process.

We have the expertise and experience needed as indicated by our current actuarial audit services to CalPERS, our past history of audit services, and our annual actuarial services clients. CalPERS is the largest system in the US and has complicated benefits and huge datasets. The work performed for this client clearly indicates Buck is fully capable of handling large complex actuarial audits and datasets. We have performed audit services for CalPERS since 2015 and are proud to say we have been selected to continue providing audit services to CalPERS.

The members of the client team selected to perform the work are of the utmost importance. When deciding on the perfect client team for OCERS, we considered several key factors:

- Appropriate experience in relation to the scope of work
- Credentials in the profession as well as knowledge of current and past industry practices, laws, and regulations
- Capacity for performing the work at the highest quality, be readily available and able to meet necessary deadlines
- Desire and genuine interest in the scope of work and providing the client with the best possible consulting

We hope as you read through our proposal you will agree we have assembled a top-notch team who will use due diligence to perform a thorough audit and recognize the value in the audit is either a clean report of the incumbent actuarial firm's work or suggestion of improvement or error corrections, if applicable. Our actuaries will not just look for a minor issue "just to have something to report and therefore show the value of the audit". We believe our job is to uncover any issues if they exist, offer enhancement suggestions, or give OCERS the confidence that everything is as it should be.

Buck also strives to provide proactive consulting. Therefore, our pledge to you is that while we perform the actuarial audit, we will also share any consultative ideas we may uncover that may be valuable to the fund. This is a step beyond just making sure everything is reasonable and we believe this proactive consulting alongside an actuarial audit creates a partnership that other firms struggle to provide.

We trust that this proposal demonstrates our capabilities and look forward to discussing it with you in greater detail.



Response to RFP

Our responses are ordered per Section 7: Proposal Requirements. Item 1. “Minimum Qualifications Certification” (Exhibit B) is provided in our Attachments section. Item 2. “Proposal Cover page and Check List” (Exhibit C), and Item 3. Executive Summary is provided above.

4. A description of the respondent including:

- a. Brief history, including year the respondent firm was formed.
- b. Ownership structure.
- c. Office locations.
- d. Organization chart.
- e. Number of employees.
- f. Annual revenues.
- g. Respondent’s specialties, strengths, and limitations.
- h. Describe the accounting systems used and financial reporting methodologies.

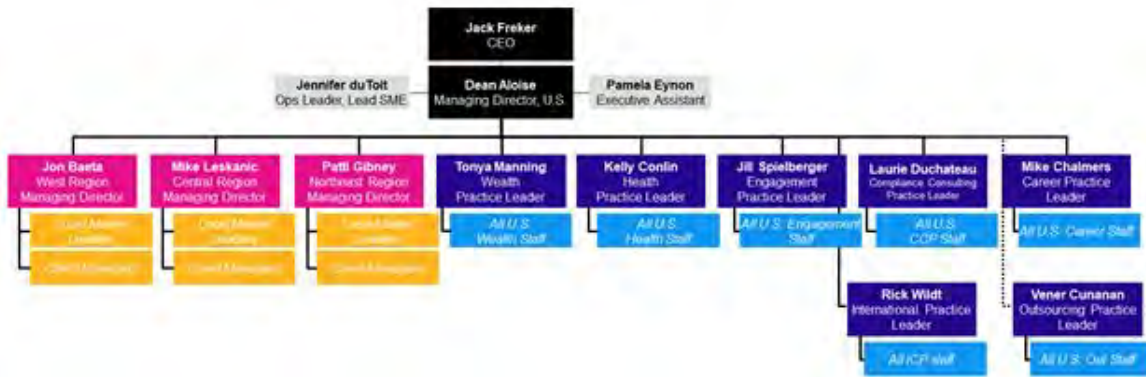
Buck has a long-standing commitment to serving the needs of our public sector clients. We have been serving government entities since our founding in 1916 – longer than any other benefits and retirement/actuarial consulting firm. We currently provide actuarial and consulting services to over 200 public-sector retirement systems. As such, we offer significant public-sector pension and health care experience providing actuarial and benefits consulting services for state and local governments with a broad range of size and complexity.

Today we are an independently operated entity, with strong financial backing led by H.I.G. Capital. We have approximately 2,200+ professionals worldwide. Since becoming independent in August 2018, our headcount has grown by 30%.

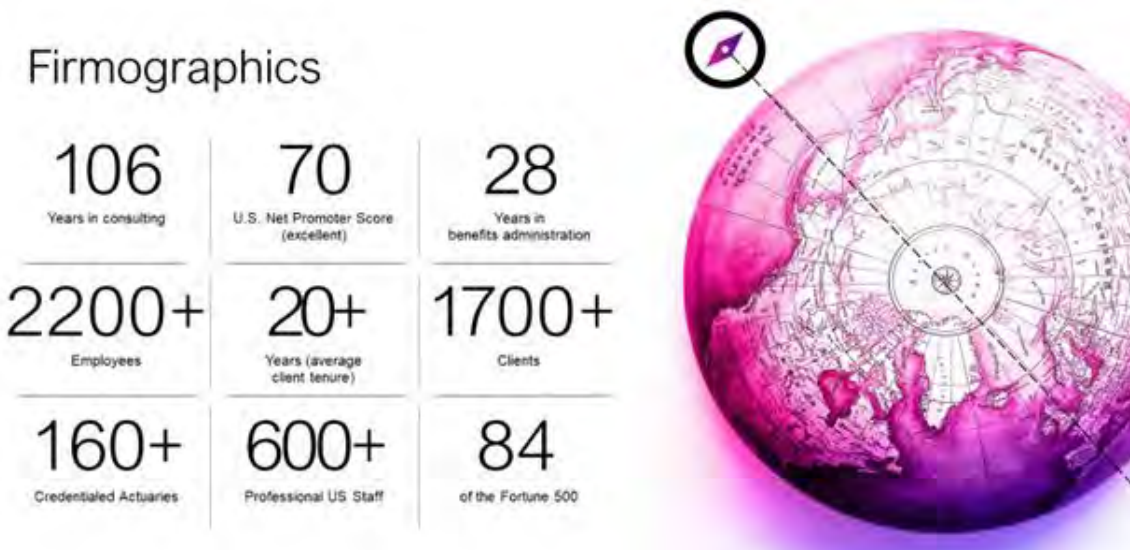
While we have consultants and employees in almost every State, our US-based office locations are in Atlanta, GA; Chicago, IL; Cleveland, OH; Ft. Wayne, IN; Los Angeles, CA; Philadelphia, PA; Pittsburgh, PA; New York, NY (headquarters); San Francisco, CA; Secaucus, NJ; St. Louis, MO, and Washington, D.C.

We operate in a flat management structure. Jack Freker, our CEO, has structured his leadership team to best support our consultants so they, in turn, can deliver on our commitments to our clients. Below is our leadership organizational chart.

About H.I.G. Capital
<ul style="list-style-type: none"> \$47 billion of equity capital under management. Current portfolio includes more than 300 companies with combined sales in excess of \$30 billion. The H.I.G. business model involves growing portfolio companies through investment in technology, personnel, and additive acquisitions. H.I.G. provides autonomy and independence to company management teams.



Our full global and US leadership structure is available at Buck.com.



Buck's total staff is over 2,200 employees. Approximately 800 are US employees. Of which, we have over 50 Fellows of the Society of Actuaries (FSA) – the highest designation for an actuary, over 60 Associates of the Society of Actuaries (ASA) – many of whom are still taking exams towards their Fellowship, and over 100 ERISA Enrolled Actuaries, all of whom are Members of the American Academy of Actuaries (MAAA) and many of whom are Fellows in the Conference for Consulting Actuaries (FCA).

In the US, there are over 600 total professional staff of benefit consultants, actuarial assistants, and investment managers. In the US we also employ ten compliance experts, nine ERISA attorneys, and a large team of over 40 administrators and over 20 Specialized Administrative Service providers.

Total annual revenue

Buck's annual revenue for 2020 was \$266M, firmwide.

Buck specializes in providing a wide range of actuarial and human resource consulting services through our Wealth, Health, Career, Engagement, Research and Compliance practices. We have the

expertise and the capacity to assist our clients with many special projects, ranging from strategic consulting to providing “extra hands” to help out with day-to-day tasks.

Capabilities overview

Consulting

Health

- Administration
- Audits and administration
- Core health strategy
- Financial and actuarial
- Global health
- Health intelligence
- Life, disability, and absence
- Pharmacy consulting
- Vendor governance
- Voluntary benefits

Wealth

- Actuarial and analytics
- Defined contribution plan management
- Delegated investment management
- Investment advisory
- Pension risk management
- Pension risk transfer
- Wealth analytics

Career

- DOL, FLSA, state wage and hour compliance
- Employee and leadership development
- Executive compensation
- Job analysis, descriptions, evaluation, leveling
- Pay-for-performance
- Performance management
- Recruiting and onboarding
- Sales compensation
- Sales effectiveness
- Workforce analytics
- Workforce planning

Engagement

- Branding
- Change management strategy and communications
- Compliance communications
- Custom total rewards / total wellbeing portals / mobile apps
- Employee value proposition and total rewards communications
- Engagement analytics
- Engagement and portal strategies
- Health and wellness communications
- HR technology strategy
- Retirement communications
- Total wellbeing consulting and delivery

International

- Analytics and reporting
- Benefits strategy and management
- Expat support
- Investment governance

Compliance

- Compliance reviews
- Fiduciary governance
- HIPAA operational review
- HR policies and employee handbooks

Technology

- **bEngaged™**
Simplify the complex through a human-centered experience.
- **bEnabled™**
Choose what works for efficient plan administration.
- **bEquipped™**
Don't think you know. Know you know. With analytics.

Administration

- Defined benefit administration
- Health and welfare administration
- Voluntary benefits administration

The greatest strength of any consulting firm is the depth of its talent and integrity of its people. Our professionals are at the top of their respective fields, many of whom are active across industry associations and regularly speak at industry conferences and gatherings. These efforts are illustrative of the professional training and advancement programs we've enacted across the firm and that our colleagues are required to complete.

Buck prides itself in its commitment to the public sector for over 100 years, and that we have evolved in a full-service actuarial and human resource provider. We are constantly seeking ways to advance for our clients and see no limitations to what we can provide in regard to benefits related services.

Please see Attachment A – Buck Financial Statement for more information on revenue, accounting, and our financial reporting.

5. [The names and qualifications of fully trained and qualified staff that will be assigned to OCERS work, including a detailed profile of each person's background and relevant individual experience.](#)

Providing comprehensive retirement and actuarial consulting services is at the heart of what we do – this includes funding valuations, financial statement reporting, experience studies, plan design analysis, actuarial reviews and audits, and multi-scenario projections.

Our actuaries and consultants prefer to work hands-on with our clients, and our cross-practice teams include credentialed specialists who understand the regulatory requirements and generally accepted operating practices of the public sector.

The team we've assembled to serve you is comprised of our most experienced and talented professionals on our public sector actuarial team. Each team member has been selected based on their experience working with similar clients, while their individual client load ensures you'll always have a white glove experience. Together, these individuals will deliver on our promises to you, your boards, committees, administrative staff, and others, while articulating complex actuarial concepts in ways that are relevant and understandable to each stakeholder group. The team proposed for the OCERS actuarial audit is:

Name Title	Role	Qualifications & Certifications	Public Sector Experience / Sample Clients
David Kershner Principal, Wealth Practice	Primary Actuary and Account Executive. Main contact and providing oversight for all work performed for OCERS. Has experience performing actuarial audits for multi-employer retirement plans.	30+ years of experience FSA, EA, MAAA, FCA	<ul style="list-style-type: none"> • CalPERS • State of Alaska • Pueblo County, CO • North Miami Police and Fire, FL • Clayton County, GA • AC Transit, CA • City of El Paso, TX • San Joaquin Regional Transit District, CA
Brett Hunter Senior Consultant, Wealth Practice	As a Senior Consultant, Brett will be a support actuary and secondary contact. He is responsible for managing projects, reviewing coding and replication results, and assisting the primary actuary in oversight of the audit work.	9 years of experience ASA, EA, MAAA	<ul style="list-style-type: none"> • State of Alaska • CalPERS • City of San Diego • Houston Firefighters Relief & Retirement Fund • Massachusetts Bay Transportation Authority
Matt Staback Senior Consultant, Wealth Practice	As a Senior Consultant, Matt is responsible for managing projects, reviewing coding and replication results, and liaison between analysts and lead actuaries. Matt will be a Project Manager and additional Support Actuary for OCERS.	7 years of experience FSA, EA, CERA, MAAA, FCA,	<ul style="list-style-type: none"> • Macon County, GA • Public Schools Retirement System of City of St. Louis, MO • St. Louis County, MO • City of Clayton, MO • City of Bridgeton, MO
David Driscoll Principal, Wealth Practice, National Public Sector Consulting Leader	Strategic Advisor and Plan Audit Expert. Strategic advisor providing knowledge about trends and activities among public sector retirement sponsors. Supports the actuarial team with strategic insights.	30+ years of experience FSA, EA, MAAA, FCA	<ul style="list-style-type: none"> • Public School Employees' Retirement System of Pennsylvania • West Virginia Consolidated Public Retirement Board • California Public Employees' Retirement System (CalPERS) • Houston Firefighters Relief & Retirement Fund
Kelly Adams Principal, Public Sector Retirement Leader, Retirement Reviewing Actuary	Provides independent peer review of all pension actuarial valuations and special projects; as a member of the Central Review Team, Kelly specializes in reviewing work for Buck's public sector clients. Provides internal audits of Buck's public sector work.	24+ years of experience FSA, EA, MAAA, FCA	<ul style="list-style-type: none"> • National peer review for public sector clients • Not assigned specific clients as she assists on all public sector clients

This core team will be supported by **our deep bench of subject matter experts**, including:

- Our Public Sector Retirement (PSR) practice, which brings a specialized focus to the needs and challenges facing public pension plan sponsors.
- Our centralized, credentialed, independent actuarial peer review team is a model for the industry. Our peer review team reviews all results and Statements of Actuarial Opinion, ensuring that all client deliverables meet our high standards and are communicated in an appropriate manner.

As shown above, we far exceed the minimum qualification to perform the services requested by OCERS. The Primary Actuary (David Kershner) and Strategic Advisor (David Driscoll) are both a Fellow of the Society of Actuaries and an Enrolled Actuary. The Primary Actuary performing the services under the Contract also has more than ten years of experience as an actuary providing pension consulting services experience analysis, valuation assignments and actuarial audit assignments for multi-employer retirement plans.

Our Support Actuary, Brett Hunter, is an Associate of the Society of Actuaries, an Enrolled Actuary and has more than five years of actuarial pension consulting experience. Our Project Manager, Matt Staback, is a Fellow of the Society of Actuaries and an Enrolled Actuary with more than five years of actuarial pension consulting experience.

All actuaries performing the work meet the professional qualification standards and are Members of the American Academy of Actuaries.

Full biographical profiles of all team members are provided as Attachment B – Buck Bios.

6. [At least three \(3\) references for which the respondent has provided services similar to those included in the Scope of Services. Please include for each reference the individual point of contact, a summary of the work performed, and the length of time the respondent provided each service.](#)

Recently Buck has performed actuarial audit services, similar to those identified under “Scope of Services” for CalPERS, South Dakota Retirement System, AC Transit Authority and in the past multiple other statewide systems including New Mexico, Kansas, Montana, North Dakota, Missouri, and Utah.

We were just recently awarded the audit services contract for the Colorado PERA and have begun work for that important assignment.

The following references are a sampling of representative current large public sector clients in which we performed similar, related services to those listed in the Scope of Services:

1. CalPERS – Actuarial audit including Parallel Valuation (2021)	
<i>Plan type:</i>	Defined Benefit
<i>Employer type:</i>	Statewide
<i>Number of participating employers:</i>	More than 2,800
<i>Membership:</i>	More than 2 million
<i>Assets:</i>	More than \$350 billion
<i>Relevance:</i>	We performed parallel valuation audits of the CalPERS staff actuaries. These are similar services requested for OCERS's audit. CalPERS is the largest system in the US and has complicated benefits and huge datasets. The work performed for this client clearly indicates Buck is fully capable of handling large complex actuarial audits and datasets. We have performed audit services for CalPERS since 2015 and are proud to say we have recently been selected to continue providing audit services to CalPERS.
<i>Contact info:</i>	Navdip Kang Senior Program Auditor Navdip.Kang@calpers.ca.gov

2. State of Alaska – Annual actuarial valuations and periodic experience studies (2021)	
<i>Plan type:</i>	Defined benefit, defined contribution and retiree health care
<i>Employer type:</i>	Statewide, 5 separate systems with 7 total plans
<i>Number of participating employers:</i>	Teachers Retirement System – 58; Public Employees Retirement System - 161
<i>Membership:</i>	Approximately 118,000 participants
<i>Assets:</i>	Approximately \$26 billion
<i>Relevance:</i>	Performing work similar to that being audited provides the knowledge necessary to properly audit actuarial services. Our actuarial work for the State of Alaska systems is required to be audited each year by an independent actuary. This demonstrates experience with cooperation between audit and annual service actuaries.
<i>Contact info:</i>	Kevin Worley CFO kevin.worley@alaska.gov

3. AC Transit Employees' Retirement System – Full-Scope Actuarial Audit of Plan Actuary (2018)	
<i>Plan type:</i>	Defined benefit
<i>Employer type:</i>	Single public entity
<i>Membership:</i>	4,502
<i>Assets:</i>	Systems total \$789 million
<i>Relevance:</i>	This demonstrates experience with performing the services of an actuarial audit, similar to the scope of services to be performed for OCERS actuarial audit.
<i>Contact info:</i>	Ken Meyers Controller kmyers@actransit.org

Additional References and their relevance to the OCERS actuarial audit.

New York Office of the Actuary – Annual retiree health care valuations and general pension consulting	
<i>Plan type:</i>	Retiree health care and defined benefit
<i>Employer type:</i>	Large City, 5 systems including TRS
<i>Number of Participating Employers:</i>	Not available
<i>Membership:</i>	Systems total 810,142
<i>Assets:</i>	Systems total \$185.9 billion
<i>Relevance:</i>	This demonstrates experience with large public systems, datasets, and multiple employers.

Pennsylvania Public School Employees' Retirement System (PSERS)– Annual actuarial valuations and experience studies	
<i>Plan type:</i>	Defined benefit, defined contribution and health care benefits
<i>Employer type:</i>	Statewide – school system, teachers
<i>Number of Participating Employers:</i>	Not available but all PA schools are eligible
<i>Membership:</i>	521,763 participants
<i>Assets:</i>	\$58.7 billion
<i>Relevance:</i>	PSERS is larger in size to OCERS showing our ability to handle large sized Systems. Providing annual actuarial valuation services requires the same expertise as conducting a parallel valuation. Providing experience studies for this client provides the expertise needed to audit reasonableness of other actuaries.

West Virginia Consolidated Public Retirement Board – Annual actuarial services and experience studies for 5 of the 7 systems, review & general consulting on other 2 systems	
<i>Plan type:</i>	Defined benefit
<i>Employer type:</i>	Statewide, 7 systems including TRS
<i>Number of Participating Employers:</i>	Not available
<i>Membership:</i>	178,990 participants
<i>Assets:</i>	\$17.3 billion in assets
<i>Relevance:</i>	Performing work similar to that being audited provides the knowledge necessary to properly audit actuarial services. West Virginia Consolidated Public Retirement Board has internal actuarial staff that we work with. We informally provide audits for the plans they value, and they do the same for the ones we value. This demonstrates experience with cooperation between actuaries.

- 7. Copies of any pertinent licenses required to deliver respondent’s product or service (e.g., business license).

Please see Attachment C for a copy of our business license to deliver our services in the State of California.

8. An explanation of the pricing proposal for the scope of work including pricing of fees and costs, billing practices, and payment terms that would apply. OCERS does not place any limits on the approach to pricing and is open to presentation of more than one pricing alternative for the scope of work, or portions of it. This section of the response should include an explanation as to how the pricing approach(es) will be managed to provide the best value to OCERS. The respondent should represent that the pricing offered to OCERS is, and will remain, equivalent to or better than that provided to other public pension fund or institutional investor clients or should provide an explanation as to why this representation cannot be provided. All pricing proposals should be “best and final,” although OCERS reserves the right to negotiate on pricing.

At Buck, we do not “nickel-and-dime” our clients. In fact, we encourage our clients to contact us, without fear of being charged, as communication is of utmost importance. We also believe in providing our clients with a fixed fee for projects before work commences and any fees are generated, so that there are no surprises.

We commonly will invoice in monthly or quarterly installments, with payment to be made within thirty days from receipt of invoice. However, this arrangement can be flexible to meet your need or preference.

Our proposed fee is based on the amount of staff hours expected, at each level, to perform the full scope of work for the County’s actuarial audit. We also know, from our extensive experience of performing other actuarial audits, the process and time it will take to complete the full audit for OCERS. As such, our proposed fee is fixed and based on our best pricing for a public-sector audit, considering your System’s size, complexity of the plan, and scope of work.

We propose a fixed fee of **\$76,000** to complete the full scope of the requested services, as listed in Exhibit A of Scope of Services of the RFP.

In addition, the proposed fee will include all miscellaneous tasks, emails, phone calls, travel expenses, and presentations to OCERS Staff and its Board.

9. An explanation of all actual or potential conflicts of interest that the respondent may have in contracting with OCERS.

We confirm there are no conflicts of interest that would prevent Buck from contracting with and servicing OCERS.

10. A description of all past, pending, or threatened litigation, including malpractice claims, administrative, state ethics, disciplinary proceedings, and other claims against respondent and/or any of the individuals proposed to provide services to OCERS.

Any litigious matters Buck may be involved in are confidential; however, no existing matter (if applicable) will affect the services provided by Buck to OCERS.

11. Any other information that the respondent deems relevant to OCERS’ selection process.

We have provided below more information about our proposed team and a suggested timeline to complete the full scope of services of the OCERS actuarial audit. This information details our talent and our full understanding of what is needed to meet and exceed OCERS’s expectations to complete this important project.

Buck’s consultants provide comprehensive retirement and actuarial consulting services including:

- funding valuations including actuarially determined contributions

- financial statement reporting including Governmental Accounting Standards Board (GASB) reporting and with the actuarial and statistical sections of Annual Comprehensive Financial Reports (ACFR)
- experience studies and interim or annual assumption reviews
- plan design analyses including legislative cost studies, actuarial impact statements, and union negotiation studies
- actuarial reviews / audits
- multi-scenario projections and strategic analyses of contribution and cash flow projections
- withdrawal liability calculations for participating employers who cease participation in multiple employer plans
- asset liability management studies and asset allocation assistance
- benefit, IRS 415 limit, and Domestic Relation Order (DRO) calculations or reviews
- Board education and information dissemination
- assistance in interpretation of Statutes or legislation regarding actuarial aspects of the System
- funding, accounting, investment, and benefit policies
- compliance, governance, and fiduciary services
- any other consultative assistance needed around retirement and postretirement benefits

As one of the largest pension consulting firms in the US, Buck has performed these services for some of the most complex retirement programs. Among them are some of the largest public-sector plans, including more than 20 statewide retirement systems.

Experience of accredited actuaries specifically assigned to this project

When deciding on the perfect client team for each engagement several factors need to be considered.

- Appropriate experience in relation to the scope of work
- Credentials in the profession as well as knowledge of current and past industry practices, laws, and regulations
- Capacity for performing the work at the highest quality, be readily available and able to meet necessary deadlines
- Desire and genuine interest in the scope of work and providing the client with the best possible consulting

We at Buck, take time and effort to consider these and other factors to form a client service team that will provide the best value to our client.

The following carefully selected team will be perfect to perform the actuarial audit for OCERS.

More information about OCERS audit team

The team will be led by **David Kershner, FSA, FCA, EA, MAAA.**

David Kershner contributes to the leadership of the team with recent audit experience for CalPERS, AC Transit and annual actuarial services for the State of Alaska.

David Kershner is a Principal with over 30 years of actuarial consulting experience including advising clients on funding policy, including calculations of minimum required and actuarially determined employer contributions, analysis of legislative cost proposals to determine financial and other impacts, oversight of experience reviews for large pension plans, and performing actuarial audits of public retirement systems, including technical review of actuarial calculations and presentation of findings.

- He brings extensive account management expertise, high client satisfaction ratings and strong team leadership capabilities.

To compliment the strong leadership of David, we are adding energy to the team with two of our younger rising stars in the public sector. To complete a project with the scope of work and complexities of OCERS there needs to be experienced and well-respected support actuary and project manager. **Brett Hunter, ASA, EA, MAAA** and **Matt Staback, FSA, EA, CERA, MAAA, FCA** are eager to serve as the support actuary and project manager, respectively that keep the project on time and running smoothly.

- Brett will serve as a secondary contact for OCERS and assist David in the oversight of the actuarial audit services.
- Matt is the day-to-day leader of the analysts that will help get the work completed at the highest quality, efficiently and timely.
- They will help David ensure the project team understands the scope of work and stays on track with deliverable deadlines.
- Matt will also serve as a back-up contact for OCERS.
- Brett and Matt are two of our most technically adept public sector actuaries and actuarial valuation system experts.

Brett Hunter serves with David Driscoll and David Kershner on the CalPERS actuarial audit team and therefore fully understands what it takes to get a large, complicated system coded, reconciled and on track in scope and timing.

- He also works on the annual actuarial valuation work for the State of Alaska with David Kershner.
- He is a Senior Consultant with over nine years of actuarial consulting experience. Brett can grasp complicated issues quickly and find unique solutions that others can't. This natural intelligence and ability make him invaluable in performing actuarial audit services. If there is something amiss, Brett will find it.

Matt serves as support actuary for Public School Retirement System of City of St Louis, City of Clayton and City of Bridgeton and lead actuary for the Ohio River Valley Water Sanitation Commission.

- Matt also serves as a Specialized Administrative Services (SAS) consultant for Macon County, GA and is a Senior Consultant with seven years of experience.
- Matt is increasingly taking on more responsibility as an actuarial consultant in our Public Sector Retirement specialty practice and therefore provides tremendous expertise as the project manager for OCERS.

The actuarial analysts who will perform the initial review of the data, code the system and initial review of the actuarial report under the day-to-day supervision of Matt will be selected based on their experience with public sector plans, their technical proficiency, capacity to handle the timelines of the project and audit experience.

An important member of the extended team is **David Driscoll, FSA, FCA, EA, MAAA**.

David Driscoll is a Principal and our National Public Sector Consulting Leader, with over 30 years of experience providing actuarial services:

- He is one of eight actuaries on the California Actuarial Advisory Panel.
- He leads the team that performs the actuarial audits for CalPERS.
 - In addition to leading actuarial audit teams, he leads several annual actuarial valuation client service teams, including those for the West Virginia Consolidated Public Retirement Board and Public School Employees' Retirement System of Pennsylvania.
- David has testified in front of legislative bodies, is presently the Chairman of the Actuarial Board for Counseling and Discipline (ABCD) and has served in the past on the Pension and General Committees of the Actuarial Standards Board.
 - While on the latter committee, he led the task force that developed the most recent version of Actuarial Standards of Practice (ASOP) No. 23, Data Quality.
- David's extensive volunteer experience with the Actuarial Standards Board provides Buck with an in-house expert on Actuarial Standards of Practice that are crucial in understanding when performing actuarial audits. He also serves on the Society of Actuaries (SOA) Retirement Plan Experience Committee (RPEC). He is a frequent speaker on actuarial aspects of retirement systems and has spoken in recent years at gatherings of the Society of Actuaries, the National Conference on Public Employee Retirement Systems, and the National Association of State Treasurers.
- David is frequently quoted in press coverage on matters related to public retirement systems in such publications as the New York Times, USA Today, the Miami Herald and Pensions & Investments.

David Driscoll clearly brings large complicated actuarial audit experience with clear understanding of ASOPs and the industry to the team and therefore will serve as a strategic advisor available as needed or desired by the Buck OCERS service team.

While OCERS is welcome to contact any member of the team, David Kershner will take the lead contact role for the pension deliverables while David Driscoll will provide an advisory role. However, both are available to OCERS to participate in presentations and client communications as appropriate.

As added value to OCERS, the audit work will be independently peer reviewed under Buck's Peer Review policy by **Kelly Adams, FSA, FCA, EA, MAAA**, Principal, Reviewing Actuary, and the Wealth practice's Public Sector Retirement (PSR) specialty practice leader. As Buck's National Public Sector Consulting Leader, David Driscoll serves in an advisory role to our public sector actuaries for consulting with clients. Kelly, however, as the leader of the PSR practice oversees the operations and growth of our public sector retirement business and consultants:

- She has over 24 years of experience in actuarial consulting and joined Buck in 2018 from a firm almost exclusively serving the public sector.
- Kelly is dedicated solely to the public sector and along with her peer review role conducts research, authors, and speaks about public sector retirement.

- She has previously conducted audits and work on annual actuarial valuations for statewide systems.
- Kelly brings an advantage that is unique to Buck to OCERS actuarial audit. Our independent, dedicated team of reviewing actuaries is unmatched by our peers/competition – our National Peer Review Team consists of reviewing actuaries who are devoted full time to providing independent peer review.

The review conducted includes the validation for compliance with relevant laws, regulations, accounting standards, and professional standards while also verifying any assumptions used are reasonable and appropriate. This is very similar to performing actuarial audits of external actuaries. Because Kelly's everyday job is to perform audits, she may be more capable of capturing areas of concern than others who only perform audits once in a while. Kelly shares this capability with Buck's audit teams whenever we perform external audits. Kelly also performs valuation system technical audits where she audits system coding and sample test lives to ensure coding is correct.

Our Wealth Practice Leader and Chief Actuary, **Tonya Manning FSA, EA, MAAA, FCA** is always a resource to Buck's Wealth clients:

- She has over 30 years of experience and is very active in the actuarial profession. She is renowned and respected in the actuarial profession.
- She has served as President of both the Society of Actuaries (SOA) and International Association of Actuaries (IAA). She is dedicated to enhancing and growing our already strong public sector practice.

To cap off the proposed team, we assign an Executive Sponsor to ensure client satisfaction and facilitate overall account management. **Jon Baeta**, Managing Director, US West Region will serve as the Executive Sponsor for OCERS.

Please refer to Attachment B – Buck Bios for full biographical profiles of team members.

Overall ability of firm to provide the requested services in a timely manner

There are several important aspects to being able to provide the requested actuarial audit services in a timely manner. They are:

- Selecting the best team for the job that has the capacity to take on the additional scope of work and the project management skills to keep it on track.
- Understanding the scope of work and based on this understanding along with prior similar experience know how long items specified in the scope of work should take.
- Cooperation from the client and the actuarial firm being audited.
- Having back-ups and a strong bench to pull from if additional resources are needed.

Please see additional details below:

Understanding the scope of work

OCERS is seeking the services of a qualified actuarial firm to perform an audit of the actuarial work performed by its current actuary, Segal. The focus will be on the most recent actuarial valuation.

The purpose will be to:

- review all assumptions and methods for their appropriateness, compliance with generally accepted actuarial principles, State statutes, and Board policies
- replicate most recent actuarial valuations
 - evaluate the census data used in the 2021 valuation, including OCERS's internal control procedures are being followed appropriately
 - replication and appropriateness of the Actuarial Value of Assets, Present Value of Future Benefits, Actuarial Accrued Liability, Normal Costs, Actuarially Determined Contributions, and the Automatic Adjustment Provision assessment
 - reconcile any significant differences
- provide written opinion to the accuracy of valuation results
- provide recommendations on alternate assumptions and any improvements on quality or understandability
- review actuarial projections and assumptions used for new entrant profiles
- review recent actuarial communications and most recent experience study analysis report

When performing the actuarial audit for OCERS, we will review each plan's provisions taking note of differences among employees between the twelve Rate Groups with active employees. We will code the audited data and plan provisions in our valuation system and determine an agreed upon threshold to which we will test our results versus those of Segal. To the extent there are differences outside the agreed upon threshold, we will attempt to reconcile them and comment on the potential for changes in the valuation processes currently in place for OCERS that could result in improvements in the work products it receives on an ongoing basis.

Step 1: Meeting to discuss project elements and information needed	
What Buck will do:	Confirm the project steps and timetable Discuss history of the plan Discuss any particular concerns Discuss the format of the final reports and board presentation Request needed information: <ul style="list-style-type: none"> • Actuarial valuation data. • Data given to system actuary. • Data used by system actuary. • Access to actuarial valuation reports, if not available online. • Sampling of benefit calculations covering different types of decrements and covering any different plan provisions; typically, one of each type of decrement and each benefit formula. This may be unique to Buck as others may not request this; however, in our experience issues found in actuarial valuation coding are often uncovered due to provisions of the actuarial system not matching the administration of actual benefit calculations. • Confirmation of applicable statutes for each plan. • Financial statements. Discuss availability for test case details from the system actuary in the event we cannot match within the target tolerance. Often actuaries will not provide full test lives as they

	believe they are proprietary information. We need to understand how reconciliation will be accomplished.
Why does Buck do this?	<p>Our experience shows a meeting at the beginning allows us to thoroughly understand your objectives. We may uncover particular issues or items of concern from OCERS that we should focus on in addition to our regular audit techniques. You may wish to include the system actuary in this phase to get their buy-in, or you may wish to discuss this with Buck only so that you can be more candid.</p> <p>As for the data requests, we've learned that our clients can save a lot of time with data collection if we explain exactly what is needed and why. When requested information is difficult to obtain, if our clients understand exactly why such information is requested, then we can decide together as to whether the data is absolutely necessary, or whether an approximation could be made using more easily obtainable data.</p>

Following is a summary of our proposed approach that may be implemented for the OCERS actuarial audit ensuring services are completed in a timely manner. However, this approach may change as the audit progresses if there is a need/desire to shift or make adjustments. These steps may be divided amongst team members, if applicable, to ensure deadlines are met.

Step 2: Review of statutes	
What Buck will do:	This is an independent review of the plan provisions and statutes pertaining to each plan. We will verify that the statutes and the benefits being valued are consistent. The sample benefit calculations will be compared to system member test cases allowing us to test that the plan provisions were properly implemented into the actuarial valuation's liability calculations.
Why does Buck do this?	We do not just duplicate the numbers. Buck takes a step back to see the big picture so that we can review whether or not the actuarial valuations are consistent with statutory requirements and plan administration.

Step 3: Collection of member and valuation data	
What Buck will do:	While OCERS staff and the system actuary are collecting the data requested, Buck will begin review of the actuarial assumptions and the most recent experience study. We will also work with the system actuary to coordinate test cases if they are willing to provide them. Test cases are detailed calculation results for a sampling of the members included in the valuation.
Why does Buck do this?	Data collection is a critical component of the review. The main data needed is the final individual census data used by the system actuary as input to the valuations. The data supplied to the system actuary is also needed in order to review the original data preparation procedures. We have been involved in prior review situations where the actuarial calculations based on the data were accurate, but a significant number of participants were "lost" by the actuary in the data preparation step.

Step 4: Member data review	
What Buck will do:	As discussed above, Buck will verify the system actuary's data collection procedures. We will test several samples from the data supplied by OCERS staff to ensure it was appropriately classified for input to the actuarial valuations. We will also review the asset data provided to the system actuary to test proper inclusion in the valuations.
Why does Buck do this?	An actuarial valuation is only as good as the data used. An actuary who does not confirm the incoming data may give a clean audit report, despite "garbage in-garbage out" problems.

Step 5: Analysis of actuarial assumptions	
What Buck will do:	We will review the system actuary's experience study and the assumption selection process. We will review each assumption independently based on the data provided in the experience study. We will assess the impact of credibility on the assumption setting process. We will also review the assumptions as a whole for reasonableness and internal consistency and review the reports to check that assumptions were properly disclosed. We will also review the retiree contribution methodology to verify that they were determined in a manner consistent with the intended policies.
Why does Buck do this?	Actuarial standards define the assumption setting process for both demographic and economic assumptions. The experience study should document the findings of the study and the proposed assumptions resulting from the study. In addition, setting demographic assumptions that are not internally consistent with benefit eligibility requirements can add a hidden risk of significant liability swings in future valuations.
Step 6: Calculation of individual member results	
What Buck will do:	This is a review of the liability calculated by the system actuary. We will calculate the liability of participants and compare the results with the individual results provided by the system actuary. Where discrepancies appear, we will need to obtain additional information from the system actuary to determine precisely what the differences are. We will discuss the differences with the system actuary on an as-needed basis. Cooperation between actuaries will be vital in this circumstance.
Why does Buck do this?	This is the actuarial "detective work" where we quantify and qualify the differences. Our experience shows the following examples of common problems detected during this review: <ul style="list-style-type: none"> • Improper application of retirement rates in valuing early retirement subsidies or late retirement benefits • Failure to value contribution refunds • Variety of issues around deferred termination benefits • Precise application of actuarial cost method • Temporary feature of a disability benefit • Improper handling of ancillary benefits (like death benefits) especially after a primary decrement • Service purchase subsidies
Step 7: Comprehensive analysis and peer review	
What Buck will do:	After the liability and experience analysis reviews are complete, we will take a comprehensive look at the results. We will analyze the funding method and actuarial asset valuation method and determine their reasonability. We will review the determination and appropriateness of the recommended contribution rates. We will reconcile any significant discrepancies between our results and those of the system actuary. Finally, we will thoroughly review and peer-review the actuarial report for completeness, comprehensibility, and accuracy.
Why does Buck do this?	The valuation results are reliable only if: <ul style="list-style-type: none"> • The plan provisions coded are accurate • The assumptions used are valid • The methods used are appropriate • The report is readable and complete <p>Our experience shows an actuarial audit is more than simply a check of the liability calculations. It must look at the big picture. Actuaries like to look at trees. The retirement system sees the forest. The actuarial review must consider both.</p>

Step 8: Completion of draft report	
What Buck will do:	We will send a draft report to OCERS and will be available to discuss our findings and go over the report in detail.
Why does Buck do this?	Our public plan clients' staff don't like to surprise their boards. We find that the staff can often add insight to our findings. After receiving feedback, we will revisit any aspect of our work, as needed, and begin drafting a final report and presentation.

Step 9: Final report issued	
What Buck will do:	As directed by OCERS staff, we will finalize the actuarial audit report and presentation. The presentation will be delivered in a timely manner so trustees may review it prior to the board meeting if they wish.
Why does Buck do this?	Buck's experience shows that some Board members like to review material prior to the meeting so they can ask detailed questions at the meeting.

Step 10: Board of trustees presentation	
What Buck will do:	We will attend meetings, as needed, with the OCERS Board and explain the findings of the review.
Why does Buck do this?	Buck prepares a Board presentation separately from the report because the report and presentation serve two different purposes. A key purpose of the report is comprehensiveness. By this point, we will have done a lot of work, and will want to make sure everything is documented. The key purpose of the presentation is comprehensibility. Your boards and legislators need to understand the major findings of the review and be comfortable with them.

FINAL STEP: Presentation of Actuarial Audit Results

Cooperation from the client and the actuarial firm being audited

Having completed many actuarial audits, we don't anticipate having issues with cooperation. However, if any arise, we will advise the OCERS contact as soon as practical so that the issue may be resolved in a timely manner.

Having back-ups and a strong bench to pull from if additional resources are needed

We do not anticipate a need for additional resources as we take great care to determine the team best fit to handle the scope of work. However, if an unforeseen circumstance occurs and a need for additional resources is needed Buck has over 2,200 employees globally and, in the U.S., we employ over 50 Fellows of the Society of Actuaries, 60 Associates of the Society of Actuaries, and 100 Enrolled Actuaries. Our PSR specialty practice is a smaller subset of these numbers. We would pull in assistance from the PSR first to ensure the public sector experience is maintained. Or course any additional or different team members would be vetted through OCERS staff first for approval.

Ability to accept and transfer member data in a secure manner

We use a number of secure methods to exchange data with clients and business affiliates to accommodate the needs of our clients. These include encrypted email, large file transfer capability,

automated batch data transfers, and transfer layer security (TLS). We take data security very seriously. Our websites and client portals are all encrypted with a state-of-the-art version of TLS.

[Agreement for Services](#)

Please see Attachment D – Redlined OCERS Agreement for Services.

Attachments

Attachment A – Buck Financial Statement

Attachment B – Buck Bios

Attachment C – Buck California Business License

Attachment D – Redlined Agreement for Services

Attachment E – Exhibit B, Minimum Qualifications Certification



Attachment A

Buck Financial Statement



BCHR Holdings. LLP
Income Statement
As of December 31, 2020
(in \$ millions)

	Audited	Adj (a)
	2020	Audited
	FY	FY
Consulting and outsourcing services	\$ 264.677	\$ 264.677
Cost of consulting and outsourcing services	<u>164.824</u>	<u>164.824</u>
Gross Margin	\$ 99.853	\$ 99.853
Operating costs and expenses:		
Selling, general and administrative	\$ 71.960	\$ 64.543
Amortization of intangible assets	18.939	-
Transaction costs	<u>0.368</u>	<u>-</u>
Total operating costs and expenses	\$ 91.267	\$ 64.543
Income (loss) from operations	\$ 8.586	\$ 35.310
Other income (expense):		
Interest expense	\$ (16.811)	\$ (16.811)
Other income, net	<u>2.435</u>	<u>2.435</u>
Total other income (expense), net	\$ (14.376)	\$ (14.376)
Income/(Loss) before income taxes	\$ (5.790)	\$ 20.934

Note:

(a) Adjusted Income statement excludes any one-time acquisition/transition expenses, and non-operating amortization of intangibles

BCHR Holdings, LLP
Balance Sheet
As of December 31, 2020

	2020 <u>31-Dec</u>
ASSETS	
Current Assets	
Cash	\$ 16.325
Accounts Receivable	48.089
Other Current Assets	<u>7.267</u>
Total Current Assets	<u>\$ 71.681</u>
Pension	\$ 20.992
Other LT Assets	46.795
Goodwill	63.994
Intangible Assets	<u>85.704</u>
TOTAL ASSETS	<u><u>\$ 289.166</u></u>
 LIABILITIES AND EQUITY	
Liabilities	
Current Liabilities	
Accounts Payable	\$ 24.731
Accrued Liabilities	22.897
Current Portion of LT debt	7.070
Current Portion of amount due to Seller	4.777
Deferred Revenue	<u>10.983</u>
Total Current Liabilities	<u>\$ 70.458</u>
Long-Term Liabilities	
Long-term debt, net of current portion	\$ 165.160
Amount due to Seller	3.471
Pension	63.752
Other Liabilities	<u>22.868</u>
Total Long-Term Liabilities	<u>\$ 255.251</u>
Total Liabilities	<u>\$ 325.709</u>
Equity	
Total Equity	<u>\$ (36.543)</u>
Total Equity	<u>\$ (36.543)</u>
TOTAL LIABILITIES AND EQUITY	<u><u>\$ 289.166</u></u>

Attachment B

Buck Bios





David Kershner, FSA, EA, MAAA, FCA

Principal, Wealth Practice



David is a Principal and consulting actuary in the Wealth practice of Buck Global, LLC. Located in Estero, FL, he exclusively serves public sector clients, helping them manage the ongoing financial risks associated with their retirement plans.

David has more than 30 years of experience focusing on the design, funding, and financing of pension and retiree welfare plans. Typical client projects include, but are not limited to, actuarial funding valuations, long-term multi-scenario forecasts of costs and contributions, experience studies to evaluate the appropriateness of actuarial assumptions, GASB 67/68/74/75 reporting, and cost studies related to potential plan changes.

David is a Fellow of the Society of Actuaries, an Enrolled Actuary, a Member of the American Academy of Actuaries, and a Fellow of the Conference of Consulting Actuaries. He graduated with a BA in Mathematics from York University in Toronto, Canada.

Clients

- Clayton County, GA
- El Paso County, CO
- North Miami Beach Police & Fire, FL
- Pueblo County, CO
- State of Alaska

Education and Achievements

- Fellow of the Society of Actuaries
- Enrolled Actuary
- Member of the American Academy of Actuaries
- Fellow of the Conference of Consulting Actuaries
- Bachelor of Arts in Mathematics from York University in Toronto, Canada

To contact me

david.kershner@buck.com



Brett Hunter, ASA, EA, MAAA



Consultant, Retirement

Brett Hunter is a Consultant in the Retirement Consulting practice at Buck. His responsibilities include the preparation of retirement plan valuations in accordance with applicable funding and accounting standards. Additionally, Brett is regularly involved with special projects including experience studies and plan design/assumption change analyses.

Experience

- Brett joined Buck in 2015. Prior to that he was with another pension consulting firm.
- Brett's expertise covers traditional and hybrid defined benefit plans in the public and private sector.
- Brett currently provides valuation support for more than 33 clients, comprised of governmental entities, defense contractor entities, and other private sector entities that cover approximately 240,000 participants.

Education and Achievements

- B.S. in Finance from Indiana University South Bend (2013)
- Associate of the Society of Actuaries
- Enrolled Actuary
- Member of the American Academy of Actuaries

To contact me

brett.hunter@buck.com



Matthew Staback, ASA, EA, MAAA, CERA, FCA

Consultant, Specialized Administration Services, Wealth



Matthew Staback is a Consultant for the Specialized Administration Services (SAS) team in the Wealth practice. He has seven years of actuarial valuation and defined benefit administration experience. Matthew provides project management and guidance for the team on a variety of projects including data remediation, benefit calculation support, compliance work, and valuation expertise. As a Consultant, Matthew is responsible for managing projects, reviewing benefit calculations, and running the valuation results for clients.

Experience

Matthew joined Buck in 2014 and has significant experience in both actuarial valuation and defined benefit administration. Matthew has valuation and defined benefit experience with a wide variety of client types, includes public and private sector, ranging from a couple hundred participants to 50,000 participants. In addition, Matthew has experience in data remediation, benefit calculation support, compliance work, calculation audits, non-discrimination testing, and lump sum cash-outs.

Recent Clients

- City of Bridgeton, MO
- City of Clayton, MO
- Entergy Services, Inc.
- Industrial Employers & Distributors Association
- Macon County, GA
- Ohio River Valley Water Sanitation Commission
- Public School Retirement System of City of St. Louis
- St. Louis County, MO

Education and Achievements

- Mathew graduated Summa Cum Laude from Maryville University with a B.S. in Actuarial Science with a minor in Business Administrations
- Associate of the Society of Actuaries
- Enrolled Actuary
- Chartered Enterprise Risk Analyst
- Member of the American Academy of Actuaries
Fellow of Conference of Consulting Actuaries

To contact me:

matthew.staback@buck.com



David Driscoll, FSA, EA, MAAA, FCA

**Principal, Consulting Actuary
National Public Consulting Leader**



David Driscoll is a Principal and Consulting Actuary Buck, where he also serves as National Public Sector Consulting Leader.

Experience

- David joined Buck in 1999 and has more than 30 years of actuarial consulting experience.
- Prior to joining Buck, David worked in the actuarial consulting division of a major insurance company.
- David is a frequent speaker on actuarial aspects of retirement systems, and has spoken in recent years at gatherings of the Society of Actuaries, the National Conference on Public Employee Retirement Systems, the National Association of State Treasurers, and the Actuaries' Clubs of Boston and Hartford/Springfield
- David is frequently quoted in press coverage on matters related to public retirement systems in such publications as the New York Times, USA Today, the Miami Herald and Pensions & Investments.

Several of David's workload in terms of number and size of clients are listed below.

- Pennsylvania Public School Employees' Retirement System: 515,860 participants, assets at market = \$58.687 billion (as of 6/30/2020)
- West Virginia Public Employees' Retirement System: 67,517 participants, assets at market = \$6.792 billion (as of 7/1/2019)
- West Virginia State Teachers' Retirement System: 78,931 participants, assets at market = \$7.788 billion (as of 7/1/2019)
- West Virginia State Police Death, Disability and Retirement Fund: 776 participants, assets at market = \$689.82 million (as of 7/1/2019)
- West Virginia State Police Retirement System: 809 participants, assets at market = \$207.1 million (as of 7/1/2019)
- West Virginia Judges' Retirement System: 138 participants, assets at market = \$212.65 million (7/1/2019)
- Massachusetts Bay Transportation Authority Retirement Fund: 12,710 participants, assets at market = \$1.614 billion (as of 12/31/2019)
- California Public Employees' Retirement System (CalPERS): 2,052,082 participants, assets at market = \$392.5 billion (as of 6/30/2020)



Clients

David's consulting clients have included:

- Alaska Retirement Management Board
- CalPERS
- Houston Firefighters' Relief and Retirement Fund Houston
- Maine Deferred Compensation Plan
- Massachusetts Bay Transportation Authority Retirement Fund
- Oerlikon USA Holding, Inc.
- Public School Employees' Retirement System of Pennsylvania
- West Virginia Consolidated Public Retirement Board
- NBC Universal

Education & Achievements

- Fellow of the Society of Actuaries
- Enrolled to perform actuarial services under ERISA by the Joint Board for the Enrollment of Actuaries
- Member of the American Academy of Actuaries
- Fellow of the Conference of Consulting Actuaries
- Member, Pension Committee (2003-2006) and General Committee (2015 – 2017) of the Actuarial Standards Board
- Member, Actuarial Board for Counseling and Discipline, 2016 - present
- B.A. with high distinction, Indiana University
- Master of Arts in Economics, University of Rochester

To contact me:

David.Driscoll@buck.com



Kelly L. Adams, ASA, EA, MAAA, FCA

Director, Retirement Reviewing Actuary



Kelly Adams is a Director and Reviewing Actuary with Buck. She works on the Central Review Team as the national public sector reviewer. In this capacity Kelly provides an independent review for all Buck's public sector clients.

Experience

- 20+ years of actuarial consulting experience for defined benefit and other postemployment benefit plans
- Joined Buck as reviewing actuary in 2018 from a national firm specializing predominantly in public sector actuarial consulting
- Consulted clients in areas such as funding, accounting, experience studies, DROP benefits, plan design changes, plan benchmarking, and many other aspects related to retirement benefits
- Served on prior firm's Governmental Accounting Standards Board (GASB) committee as well as the Other Postemployment Benefits (OPEB) committee
- Assisted client's auditors in understanding GASB 43 / 45 when first implemented and then more recently GASB 67 / 68 and GASB 74 / 75
- Extensive experience consulting Florida clients under Florida Statute Chapters 112, 175 and 185.
- Actuarial audit services for Statewide / large municipal clients

Clients

- As reviewing actuary - all Buck public sector clients
- Prior to joining Buck – approximately 20 Florida and 7 other public sector defined benefit clients

Education and Achievements

- Associate of the Society of Actuaries
- Enrolled Actuary
- Member of the American Academy of Actuaries
- Fellow of the Conference of Consulting Actuaries
- Bachelor of Science in Mathematical Sciences – Actuarial Science from University of North Carolina at Chapel Hill

To contact me

kelly.adams@buck.com

Attachment C

Buck California Business License





Resident Insurance Producer

Accident and Health Agent, Casualty Broker-Agent, Life-Only Agent, Property Broker-Agent, Variable Contracts Agent

BUCK GLOBAL, LLC

DBA: BUCK GLOBAL INSURANCE SERVICES

606 S. OLIVE STREET
23RD FLOOR
LOS ANGELES, CA 90017


is authorized to transact business as described above

License No: 0E72670

Issue Date: 03-09-2005

Expiration Date: 03-31-2023

Generated by Sircon 233439473

<p>California Department of Insurance THIS IS TO CERTIFY THAT</p>  <p>BUCK GLOBAL, LLC <i>DBA: BUCK GLOBAL INSURANCE SERVICES</i> 606 S. OLIVE STREET, 23RD FLOOR, LOS ANGELES, CA 90017</p> <p>LICENSE NUMBER: 0E72670</p>	<p>IS HEREBY AUTHORIZED TO TRANSACT BUSINESS IN ACCORDANCE TO THE LICENSE DESCRIPTION SHOWN BELOW:</p> <p>Resident Insurance Producer Accident and Health Agent, Casualty Broker-Agent, Life-Only Agent, Property Broker-Agent, Variable Contracts Agent</p> <p>Issue Date: 03-09-2005 Expiration Date: 03-31-2023</p> <p>Generated by Sircon 233439473</p>
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Attachment D

Redlined Agreement for Services



**ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM
AGREEMENT FOR SERVICES**

This Agreement for Services (“Agreement”) is entered into this [REDACTED] day of [REDACTED], 20[REDACTED] (the “Effective Date”) by and between the Orange County Employees Retirement System, (“OCERS”) and Buck Global, LLC, a Delaware limited liability company with its principal place of business located at 420 Lexington Avenue, Suite #2220, New York, NY 10170 [REDACTED] (“Contractor”). OCERS and Contractor are sometimes individually referred to as “Party” and collectively as “Parties.” The Parties hereby agree as follows:

1. PURPOSE.

1.1 Project.

Contractor desires to perform and assume responsibility for the provision of certain services required by OCERS on the terms and conditions set forth in this Agreement and OCERS desires to engage Contractor to render such services for **Actuarial Auditor Services** as set forth in this Agreement and its attached exhibits.

2. TERMS.

2.1 Scope of Services. Contractor promises and agrees to furnish to OCERS all labor, materials, tools, equipment, services, and incidental and customary work necessary to fully and adequately supply all services provided under this Agreement, (“Services”) as more particularly described in the attached **Exhibit “A”** (“Scope of Services”). All Services shall be subject to, and performed in accordance with, this Agreement, the exhibits attached hereto and incorporated herein by reference, and all applicable local, state, and federal laws, rules, and regulations as applicable to Contractor in the performance of the Services. Contractor represents and warrants to OCERS that it will perform the Services in a professional and workmanlike manner, in accordance with best industry standards and practices used in well commercially reasonably-managed operations performing services similar to the Services. THE FOREGOING EXPRESSED SERVICES WARRANTY IS OFFERED IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, THE WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

2.2 Term. The term of this Agreement shall commence upon the Effective Date and will continue for twelve (12) months or the completion of the services, whichever comes first, from the Effective Date (“Initial Term”), unless earlier terminated as provided herein. The Parties may, by mutual written agreement, extend the Initial Term for up to three (3) additional twelve (12) month periods (each, a “Renewal Term” and collectively with the Initial Term, the “Term”). In no event shall the total ~~£~~Term of the Agreement exceed seventy-two (72) months.

2.3 Consideration.

2.3.1 Compensation. Contractor shall receive compensation, including authorized reimbursements, for all Services rendered under this Agreement as set forth in Exhibit "B" ("Fee Schedule").

2.3.2 Invoices and Payment. Contractor shall submit to OCERS monthly itemized invoices as required by Exhibit B, "Fee Schedule." OCERS shall pay all approved charges within net thirty (30) days of receiving such invoice.

2.3.3 Extra Work. At any time during the term of this Agreement, OCERS may request that Contractor perform Extra Work. As used herein, "Extra Work" means any work which is determined by OCERS to be necessary for the proper completion of the Services, but which the Parties did not reasonably anticipate would be necessary at the execution of this Agreement. OCERS shall not request and Contractor shall not perform, nor be compensated for, Extra Work without written authorization by OCERS. Extra Work, if authorized, will be compensated at the rates and manner set forth in this Agreement.

2.4 Responsibilities of Contractor.

2.4.1 Independent Contractor. The Services shall be performed by Contractor or by Contractor's employees under Contractor's supervision. Contractor will determine the means, methods, and details of performing the Services subject to the requirements of this Agreement. Contractor is an independent contractor and not an employee of OCERS. Except as OCERS may agree in writing, Contractor shall have no authority, expressed or implied, to act on behalf of OCERS in any capacity whatsoever as an agent of OCERS. Any additional personnel performing the Services under this Agreement on behalf of Contractor will also not be employees of OCERS and will at all times be under Contractor's exclusive direction and control.

2.4.2 Payment of Subordinates. Contractor will pay all wages, salaries, and other amounts due such personnel in connection with their performance of Services under this Agreement and as required by law. Contractor shall be responsible for all reports and obligations respecting such additional personnel, including, but not limited to: social security taxes, income tax withholding, unemployment insurance, disability insurance, and workers' compensation insurance.

2.4.3 Licensing. Contractor represents that it, its employees and subcontractors have all licenses, permits, qualifications, and approvals of whatever nature that are legally required to perform the Services, and that such licenses and approvals shall be maintained throughout the term of this Agreement.

2.4.4 Conformance to Applicable Requirements. Intentionally Omitted. All work prepared by Contractor shall be subject to the approval of OCERS.

2.4.5 Substitution of Key Personnel. Contractor has represented to OCERS that certain key personnel will perform and coordinate the Services under this Agreement (“Key Personnel”). The Key Personnel assigned to this Agreement are identified in the attached **Exhibit “C”** (“Key Personnel”). Key Personnel will be available to perform Services under the terms and conditions of this Agreement immediately upon commencement of the term of this Agreement. Should one or more of such Key Personnel become unavailable, Contractor may substitute other personnel of at least equal competence upon written approval of OCERS. Contractor shall provide OCERS written notification detailing the circumstances of the unavailability of the Key Personnel and designating replacement personnel prior to the effective date of the unavailability of such Key Personnel, to the maximum extent feasible, but no later than five (5) business days after the date of the Key Personnel’s unavailability. OCERS will have the right to approve or disapprove the reassignment or substitution of Contractor Key Personnel for any reason at OCERS’ sole discretion. In the event that OCERS and Contractor cannot agree as to the substitution of Key Personnel, OCERS will be entitled to terminate this Agreement for cause.

2.4.6 Removal of Key Personnel. Contractor agrees to remove any Key Personnel from performing work under this Agreement within twenty-four (24) hours or as soon thereafter as is practicable if reasonably requested to do so by the OCERS.

2.4.7 Laws and Regulations. Contractor shall keep itself fully informed of and in compliance with all local, state, and federal laws, rules, and regulations in any manner as applicable to Contractor affecting in the performance of the Services, including all Cal/OSHA requirements, and shall give all notices required by applicable law. Contractor shall be liable for all violations of such laws and regulations as applicable to Supplier in connection with Services. If the Contractor performs any work knowing it to be contrary to such laws, rules, and regulations, Contractor shall be solely responsible for all costs arising therefrom.

2.4.8 Labor Code Provisions.

(a) Prevailing Wages. Contractor is aware of the requirements of California Labor Code Section 1720, et seq., and 1770, et seq., as well as California Code of Regulations, Title 8, Section 16000, et seq. (“Prevailing Wage Laws”), which require the payment of prevailing wage rates and the performance of other requirements on “public works” and “maintenance” projects. If the Services are being performed as part of an applicable “public works” or “maintenance” project, as defined by the Prevailing Wage Laws, and if the total compensation is \$1,000 or more, Contractor agrees to fully comply with such Prevailing Wage Laws. Contractor shall comply with all prevailing wage requirements under the California Labor Code and Contractor shall forfeit as penalty to OCERS a sum of not more than \$200.00 for each calendar day, or portion thereof, for each worker paid less than the prevailing rates. This penalty shall be in addition to any shortfall in wages paid. OCERS has obtained the general prevailing rate of wages, as determined by the Director of the Department of Industrial Relations (“DIR”), a copy of which is on file in OCERS’s office and shall be made available for viewing to any interested party upon request. Contractor shall make copies of the prevailing

rates of per diem wages for each craft, classification, or type of worker needed to execute the Services available to interested parties upon request and shall post copies at the Contractor's principal place of business and at the site where Services are performed.

(b) Registration and Labor Compliance. If the Services are being performed as part of an applicable "public works" or "maintenance" project, then, in addition to the foregoing, pursuant to Labor Code sections 1725.5 and 1771.1, Contractor and all subcontractors must be registered with the DIR. Contractor shall maintain registration for the duration of this Agreement and require the same of any subcontractors. The Services may also be subject to compliance monitoring and enforcement by the DIR. It shall be Contractor's sole responsibility to comply with all applicable registration and labor compliance requirements, including the submission of payroll records directly to the DIR.

(c) Labor Certification. By its signature hereunder, Contractor certifies that it is aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for Workers' Compensation or to undertake self-insurance in accordance with the provisions of that Code and agrees to comply with such provisions before commencing the performance of the Services.

2.4.9 Accounting Records. Contractor shall maintain complete and accurate records with respect to all costs and expenses incurred under this Agreement. All such records shall be clearly identifiable. Contractor shall allow a representative of OCERS during normal business hours to examine, audit, and make transcripts or copies of such records and any other documents created pursuant to this Agreement. Contractor shall allow inspection of all work, data, documents, proceedings, and activities related to the Agreement for a period of four (4) years from the date of final payment under this Agreement.

2.5 Representatives of the Parties.

2.5.1 OCERS' Representative. OCERS hereby designates its Chief Executive Officer, or their designee, to act as its representative for the performance of this Agreement ("OCERS' Representative"). Contractor shall not accept direction or orders from any person other than the OCERS' Representative.

2.5.2 Contractor's Representative. Contractor hereby designates [name or title] its U.S. Managing Director, or their designee, to act as its representative for the performance of this Agreement ("Contractor's Representative"). Contractor's Representative shall have full authority to represent and act on behalf of the Contractor for all purposes under this Agreement. The Contractor's Representative shall supervise and direct the Services, using their best commercially reasonable skill and attention, and shall be responsible for all means, methods, techniques, sequences, and procedures and for the satisfactory coordination of all portions of the Services under this Agreement. In no event shall the foregoing responsibilities be personal in nature.

2.6 Indemnification

To the fullest extent permitted by law, Contractor shall ~~immediately~~ indemnify and hold OCERS, the members of the OCERS Board of Retirement (each a "Board member"), and OCERS' officials, officers, employees, volunteers, and agents free and harmless from any and all third party claims, demands, causes of action, costs, expenses (including, without limitation, reasonable attorneys' fees and costs, including expert witness fees), liability, loss, damage, or injury of any kind, in law or equity, to property or persons, including wrongful death in any manner directly arising out of, ~~pertaining to, or incident to~~ any alleged ~~acts, errors, omissions, or gross~~ negligence, willful misconduct, recklessness, or fraudulent activities of Contractor, its officials, officers, employees, subcontractors, contractors, or agents in connection with the performance of the Services, or this Agreement, ~~including without limitation the payment of all consequential damages, and attorneys' fees and costs, including expert witness fees~~ (collectively, "Third Party Indemnity Claims"). Contractor's duty to indemnify does not extend to the Indemnity Claims to the extent caused by OCERS ~~contributory~~sole negligence or willful misconduct.

Contractor shall ~~immediately~~timely defend, with legal counsel reasonably agreed to by OCERS and at Contractor's own cost, expense, and risk, any Third Party Indemnity Claims; excluding, however, such claims to the extent arising from OCERS' ~~sole~~contributory negligence or willful misconduct. Contractor shall control the defense or settlement of any such action, except that Contractor will not have the right to settle or compromise the claim without the consent of OCERS. Contractor shall pay and satisfy any judgment, award, or decree that may be rendered against OCERS or its Board members, officials, officers, employees, volunteers, and agents as part of any Third Party Indemnity Claim(s). Contractor shall also reimburse OCERS for the cost of any settlement paid by OCERS or its Board members, officials, officers, employees, agents, or volunteers as part of any Third Party Indemnity Claim. Such reimbursement shall include payment for OCERS' attorneys' fees and costs, including expert witness fees. Contractor's obligation to defend and indemnify shall survive expiration or termination of this Agreement, and shall not be restricted to insurance proceeds, if any, received by OCERS, its Board, officials, officers, employees, agents, or volunteers.

Notwithstanding the foregoing, to the extent the Services are subject to Civil Code Section 2782.8, the above indemnity and duty to defend shall be limited, to the extent required by Civil Code Section 2782.8, to claims that arise out of, pertain to, or relate to the gross negligence, recklessness, or willful misconduct of the Contractor.

2.7 Insurance

2.7.1 Time for Compliance. Contractor shall not commence work under this Agreement until it has provided evidence satisfactory to OCERS that it has secured all insurance required under this Section 2.7. In addition, Contractor shall not allow any subcontractor to commence work on any subcontract until Contractor has provided evidence satisfactory to OCERS that the subcontractor has secured all insurance required under this section. Failure to

provide and maintain all required insurance shall be grounds for the OCERS to terminate this Agreement for cause.

2.7.2 Minimum Requirements. Contractor shall, at its expense, procure and maintain for the duration of the Agreement insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the Agreement by the Contractor, its agents, representatives, employees, or subcontractors. Contractor shall also require all of its subcontractors to procure and maintain the same insurance for the duration of the Agreement. Such insurance shall meet at least the following minimum levels of coverage:

(a) Commercial General Liability. Coverage for commercial general liability insurance shall be at least as broad as Insurance Services Office (ISO) Commercial General Liability Coverage (Occurrence Form CG 0001). Contractor shall maintain limits no less than two million dollars (\$2,000,000) per occurrence, or the full per occurrence limits of the policies available, whichever is greater, for bodily injury, personal injury, and property damage. If Commercial General Liability Insurance or other form with general aggregate limit or product-completed operations aggregate limit is used, including but not limited to form CG 2503, either the general aggregate limit shall apply separately to this Agreement or the general aggregate limit shall be twice the required occurrence limit.

(b) Automobile Liability. Coverage shall be at least as broad as the latest version of the Insurance Services Office Business Auto Coverage form number CA 0001, code 1 (any auto). Contractor shall maintain limits no less than one million dollars (\$1,000,000) per accident for bodily injury and property damage. The automobile liability policy shall cover all owned, non-owned, and hired automobiles.

(c) Workers' Compensation and Employer's Liability Insurance. Contractor shall maintain Workers' Compensation insurance as required by the State of California and Employer's Liability Insurance in an amount no less than one million dollars (\$1,000,000) per accident for bodily injury or disease. The insurer shall agree to waive all rights of subrogation against OCERS, its Board of Trustees, officials, officers, employees, agents, and volunteers for losses paid under the terms of the insurance policy which arise from work performed by the Contractor.

(d) Professional Liability. Contractor shall procure and maintain, and require its subcontractors to procure and maintain, for a period of five (5) years following the termination or expiration of this Agreement, errors and omissions liability insurance appropriate to their profession covering Contractor's wrongful acts, negligent actions, errors, or omissions. The retroactive date (if any) is to be no later than the effective date of this Agreement. Contractor shall purchase a one-year extended reporting period: i) if the retroactive date is advanced past the effective date of this Agreement; ii) if the policy is canceled or not renewed; or iii) if the policy is replaced by another claims-made policy with a retroactive date subsequent to the effective date of this Agreement. Such insurance shall be in an amount not less than two million dollars (\$2,000,000) per claim.

(e) Fidelity Insurance. Contractor shall procure and maintain a comprehensive fidelity insurance policy. Such fidelity insurance coverage shall include employee dishonesty coverage in an amount not less than five million dollars (\$5,000,000) per occurrence and shall contain a deductible no greater than ten thousand dollars (\$10,000). Any such deductible shall be paid solely by Contractor.

(f) Excess Liability. The limits of insurance required in this Agreement may be satisfied by a combination of primary and umbrella or excess insurance. Any umbrella or excess coverage shall contain or be endorsed to contain a provision that such coverage shall also apply on a primary and non-contributory basis for the benefit of OCERS (if agreed to in a written contract or agreement) before OCERS's own primary or self-insurance shall be called upon to protect it as a named insured. The policy shall be endorsed to state that OCERS, its Board, officials, officers, employees, agents, and volunteers shall be covered as additional insured at least as broad a form as CG 20 10 11 85 or the latest versions of both CG 20 10 and CG 20 37. The coverage shall contain no special limitations on the scope of protection afforded to OCERS, its Board, officials, officers, employees, agents, and volunteers.

2.7.3 All Coverages. The general liability and automobile liability policy shall include or be endorsed to state that: (1) OCERS, its Board, officials, officers, employees, agents, and volunteers shall be covered as additional insured with respect to work by or on behalf of the Contractor, including materials, parts, or equipment furnished in connection with such work using as broad a form as CG 20 10 11 85 or the latest versions of both CG 20 10 and CG 20 37; and (2) the insurance coverage shall be primary insurance as respects the OCERS, its directors, officials, officers, employees, agents, and volunteers using as broad a form as CG 20 01 04 13, or if excess, shall stand in an unbroken chain of coverage excess of the Contractor's scheduled underlying coverage. Any insurance or self-insurance maintained by OCERS, its Board members, officials, officers, employees, agents, and volunteers shall be excess of the Contractor's insurance and shall not be called upon to contribute with it in any way.

(a) The insurance policies required above shall contain or be endorsed to contain the following specific provisions:

(i) The policies shall contain a waiver of transfer rights of recovery ("waiver of subrogation") against OCERS, its Board members, officers, employees, agents, and volunteers, for any claims arising out of the work of Contractor.

(ii) Policies may provide coverage which contains deductible or self-insured retentions. Such deductible and/or self-insured retentions shall not be applicable with respect to the coverage provided to OCERS under such policies. Contractor shall be solely responsible for deductible and/or self-insured retention and OCERS, at its option, may require Contractor to secure the payment of such deductible or self-insured retentions by a surety bond or an irrevocable and unconditional letter of credit. The insurance policies that contain deductibles or self-insured retentions in excess of \$25,000 per occurrence shall not be acceptable without the prior approval of OCERS.

(iii) Prior to start of work under this Agreement, Contractor shall file with OCERS evidence of insurance as required above from an insurer or insurers certifying to the required coverage. The coverage shall be evidenced on a certificate of insurance signed by an authorized representative of the insurer(s).

(iv) Each policy required in this section shall contain a policy cancellation clause that provides the policy shall not be cancelled or otherwise terminated by the insurer or the Contractor or reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to OCERS, Attention: Jim Doezie, Contracts Administrator: jdoezie@ocers.org

(v) Insurance required by this Agreement shall be placed with insurers licensed by the State of California to transact insurance business of the types required herein. Each insurer shall have a current Best Insurance Guide rating of not less than A: VII unless prior approval is secured from OCERS as to the use of such insurer.

(vi) Contractor shall include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

2.7.4 Reporting of Claims. Contractor shall report to OCERS, in addition to Contractor's insurer, any and all insurance claims submitted by Contractor in connection with the Services under this Agreement.

2.8 Termination of Agreement. OCERS may, by ten (10) days' written notice to Contractor, terminate the whole ~~or any part~~ of this Agreement without liability to OCERS if Contractor fails to perform or breaches any of the terms contained herein and does not cure said breach. In addition, either Party may terminate this Agreement for any reason or for no reason on thirty (30) days' written notice to the other Party. Upon termination, Contractor shall be compensated only for those Services that have been performed and delivered to OCERS' satisfaction, and Contractor shall be entitled to no further compensation.

2.9 Ownership of Materials and Confidentiality

2.9.1 Documents & Data; Licensing of Intellectual Property. This Agreement creates an ~~non~~-exclusive and perpetual license for OCERS to copy, use, ~~modify, or reuse, or sublicense any and all copyrights, designs, and other~~ intellectual property ("Contractor's Pre-Existing IP") embodied or embedded in plans, specifications, studies, drawings, estimates, and other documents or works of authorship fixed in any tangible medium of expression, including but not limited to, physical drawings or data magnetically or otherwise recorded on computer diskettes, which are prepared or caused to be prepared by Contractor under this Agreement for OCERS' internal business purposes only ("Documents & Data"). Contractor shall deliver to OCERS on demand or upon the termination or expiration of this Agreement, all such Documents & Data which shall be and remain the property of the OCERS excluding Contractor's Pre-Existing

~~IP. If OCERS uses any of the data, reports, and documents furnished or prepared by Contractor for use in Services other than as shown on Exhibit A, Contractor shall be released from responsibility to third parties concerning the use of the data, reports, and documents.~~

Contractor may retain copies of the materials. OCERS may use or reuse the materials prepared by Contractor without additional compensation to Contractor.

2.9.2 Confidential Information. Any financial, statistical, personal, technical, and other data and information relating to a Party's operations which are made available to the other Party in order to carry out this Agreement shall be reasonably protected by such other Party from unauthorized use, except to the extent that disclosure thereof is required to comply with applicable law, including the California Public Records Act. The disclosing Party shall identify all confidential data and information at the time it is provided, however, if not identified, be kept confidential if it can be reasonably determined by the receiving Party that such information is commercially confidential. Confidentiality does not apply to information which is known to a receiving Party from other sources, which is otherwise publicly available, or which is required to be disclosed pursuant to an order or requirements of a regulatory body or a court.

2.9.3 Customer Data. Contractor acknowledges that it may receive confidential information from OCERS or otherwise in connection with this Agreement or the performance of the Services, including personally identifiable information of OCERS' customers ("Customer Data"). Except for information in the public domain, unless such information falls into the public domain by disclosure or other acts of OCERS or through the fault of OCERS, Contractor agrees:

- (a) To maintain Customer Data in confidence;
- (b) Not to use Customer Data other than in the course of this Agreement;
- (c) Not to disclose or release Customer Data except on a need-to-know only basis;
- (d) Not to disclose or release Customer Data to any third person without the prior written consent of OCERS, except for authorized employees or agents of Contractor;
- (e) To promptly notify OCERS in writing of any unauthorized release of confidential information, including Customer Data;
- (f) To take all appropriate action, whether by instruction, agreement or otherwise, to ensure that third persons with access to the information under the direction or control or in any contractual privity with Contractor, do not disclose or use, directly or indirectly, for any purpose other than for performing the Services during or after the term of

this Agreement, any confidential information, including Customer Data, without first obtaining the written consent of OCERS;

(g) Upon request by OCERS and upon the termination or expiration of this Agreement for any reason, Contractor shall promptly return to OCERS all copies, whether in written, electronic, or other form or media, of Customer Data in its possession or in the possession of its employees or agents, or securely dispose of all such copies, and certify in writing to OCERS that such Customer Data has been returned to OCERS or disposed of securely; and

(h) That the requirements in this Section 2.9.3 shall survive the expiration or termination of this Agreement.

2.9.4 Disclosure. Except as may be required by applicable law, neither Party shall make any disclosure of any designated confidential information related to this Agreement without the specific prior written approval from the other of the content to be disclosed and the form in which it is disclosed, except for such disclosures to the Parties' financing sources, other secured parties, creditors, beneficiaries, partners, members, officers, employees, agents, consultants, attorneys, accountants, and exchange facilitators as may be necessary to permit each Party to perform its obligations hereunder and as required to comply with applicable laws or rules of any exchange upon which a Party's shares may be traded. Notwithstanding the foregoing, nothing contained herein shall be deemed to restrict or prohibit OCERS from complying with applicable law regarding disclosure of information, including the California Public Records Act.

2.9.5 Publicity. Contractor shall not use OCERS' name or insignia, photographs of OCERS property, or any publicity pertaining to the Services in any advertisement, magazine, trade paper, newspaper, television, or radio production, or other similar medium without the prior written consent of OCERS.

2.10 Subcontracting/Subconsulting.

2.10.1 Prior Approval Required. Contractor shall not subcontract any portion of the work required by this Agreement, except as expressly stated herein, without prior written approval of OCERS. Subcontracts, if any, shall contain a provision making them subject to all provisions stipulated in this Agreement. Contractor will be solely responsible for the payment of all subcontractors and other third parties engaged by or through Contractor to provide, perform, or assist in the provision and delivery of the Services.

3. General Provisions.

3.1.1 Notices. All notices permitted or required under this Agreement shall be given to the respective Parties at the following address, or at such other address as the respective Parties may provide in writing for this purpose:

OCERS:

Orange County Employees Retirement System
2223 E. Wellington Avenue
Santa Ana, CA 92701
Attention: Jim Doezie
e-mail: jdoezie@ocers.org

Contractor:

[Buck Global, LLC](#)
[420 Lexington Avenue](#)
[Suite #2220](#)
[New York, NY 10170](#)
[Attn: Legal Department](#)
[e-mail: roderick.bernstein@buck.com](mailto:roderick.bernstein@buck.com)

Such notice shall be deemed made when personally delivered or when mailed, upon deposit in the U.S. Mail, first class postage prepaid and registered or certified addressed to the Party at its applicable address. Actual notice shall be deemed adequate notice on the date actual notice occurred, regardless of the method of service.

3.1.2 Equal Opportunity Employment. Contractor represents that it is an equal opportunity employer and it shall not discriminate against any subcontractor, employee, or applicant for employment because of race, religion, color, national origin, ethnic group identification, mental disability, physical disability, medical condition, genetic information, marital status, ancestry, sex, gender, sexual orientation, gender identity, gender expression, age, or military and veteran status. Such non-discrimination shall include, but not be limited to, all activities related to initial employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff, or termination.

3.1.3 Time of ~~Essence~~Importance. Time is of ~~the essence~~importance for each and every provision of this Agreement. The acceptance of late performance shall not waive the right to claim damages for such breach nor constitute a waiver of the requirement of timely performance of any obligations remaining to be performed.

3.1.4 OCERS' Right to Employ Other Contractors. OCERS reserves the right to employ other contractors in connection with the Services.

3.1.5 Successors and Assigns. This Agreement shall be binding on the successors and assigns of the Parties.

3.1.6 Assignment or Transfer. Excluding change of control, Contractor shall not assign, hypothecate, or transfer, either directly or by operation of law, this Agreement or any interest herein without the prior written consent of OCERS.

3.1.7 Amendment. This Agreement may not be altered or amended except in a writing signed by both Parties.

3.1.8 Waiver. All waivers under this Agreement must be in writing to be effective. No waiver of any default shall constitute a waiver of any other default or breach, whether of the same or other covenant or condition.

3.1.9 No Third Party Beneficiaries. There are no intended third party beneficiaries of any right or obligation assumed by the Parties.

3.1.10 Invalidity; Severability. If any portion of this Agreement is declared invalid, illegal, or otherwise unenforceable by a court of competent jurisdiction, the remaining provisions shall continue in full force and effect.

3.1.11 Governing Law; Venue. This Agreement shall be governed by the laws of the State of ~~California~~New York. The exclusive venue for any dispute arising out of or relating to this Agreement shall be in ~~Orange~~New York County, ~~California~~New York.

3.1.12 Attorneys' Fees. If either Party commences an action against the other Party, either legal, administrative, or otherwise, arising out of or in connection with this Agreement, the prevailing party in such litigation shall be entitled to have and recover from the losing party reasonable attorneys' fees and all other costs of such action.

3.1.13 Authority to Enter Agreement. Contractor has all requisite power and authority to conduct its business and to execute, deliver, and perform the Agreement. Each Party warrants that the individuals who have signed this Agreement have the legal power, right, and authority to make this Agreement and bind each respective Party.

3.1.14 Counterparts. This Agreement may be signed in counterparts, each of which shall constitute an original.

3.1.15 Integration. This Agreement represents the entire understanding of OCERS and Contractor as to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to those matters covered hereunder. Neither Party shall be deemed to be the drafter of this Agreement and no presumption for or against the drafter shall be applicable in interpreting or enforcing this Agreement.

3.1.16 Precedence. In the event of any conflict, inconsistency, or ambiguity between the terms and conditions in the main body of this Agreement and the terms and conditions in any exhibit, the main body of this Agreement shall control. This Agreement and all attached exhibits will be construed to be consistent, insofar as reasonably possible. When interpreting this Agreement, precedence shall be given to its respective parts and amendments in the following descending order:

- (a) Amendments to this Agreement entered into pursuant to Section 3.1.7 herein.
- (b) This Agreement.
- (c) Exhibit A: Scope of Services, Exhibit B: Fee Schedule, and Exhibit C: Key Personnel.
- (d) OCERS Request for Proposal dated March, 2022, attached as Exhibit "D".

(e) Contractor's Response to OCERS Request for Proposal, attached as Exhibit "E".

4. Limitation of Liability. The sole liability of Contractor and any of its affiliates (whether in contract, tort, negligence, strict liability in tort, by statute or otherwise) for any and all claims in any manner related to this Agreement, including the deliverables and/or services, will be the payment of direct damages, not to exceed (in the aggregate) the fees received by Contractor with respect to the services or deliverables involved under the applicable scope of services during the twelve (12) months preceding the event giving rise to liability. IN NO EVENT WILL EITHER PARTY BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, INDIRECT, SPECIAL OR PUNITIVE DAMAGE, LOSS OR EXPENSES (INCLUDING, BUT NOT LIMITED TO, BUSINESS INTERRUPTION, REPUTATIONAL DAMAGES, LOST BUSINESS, LOST PROFITS OR LOST SAVINGS) EVEN IF IT HAS BEEN ADVISED OF THEIR POSSIBLE EXISTENCE.

IN WITNESS WHEREOF, the Parties hereby have caused this Agreement to be executed on the Effective Date:

APPROVED:

APPROVED:

OCERS

[CONTRACTOR]BUCK GLOBAL, LLC

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

OCERS

By: _____

Name: _____

Title: _____

EXHIBIT A
SCOPE OF SERVICES

Starting on the Effective Date, and continuing during the Term, Contractor will perform the Services in accordance with the terms of the Agreement. The Services consist of the Contractor performing actuarial services as follows:

- The audit will determine the accuracy of the December 31, 2021, valuation performed by Segal.
- The audit will assess the actuarial assumptions and funding methodologies used, including a comparison to industry standards. The purpose of the audit is to provide an opinion regarding the reasonableness and accuracy of the actuarial assumptions, actuarial cost methods, valuation results, and contribution rates.
- The audit will be a full replication parallel valuation audit, including a full re-run of the December 31, 2021, actuarial valuation and a review of detailed output on certain select test lives from the valuation group.
- The audit will not include a parallel experience analysis. Rather, the audit will focus on comparing OCERS' assumptions to industry norms as well as reviewing the structure and application of the assumptions based upon the test lives.
- The review of actuarial methods should be based on industry standards as well as the auditing firm's experience with similar retirement systems.
- The full replication parallel valuation, complimented by review of test lives, should allow the auditing firm to determine whether:
 1. The current valuation system used by Segal is accurately applying the assumptions as stated and is accurately valuing the appropriate benefits;
 2. The current valuation system used by Segal is properly allocating the present value of benefits between normal cost and actuarial accrued liability; and
 3. The current valuation system used by Segal is adding together liabilities appropriately for each decrement, for each member, and over the entire population so that there is reasonable assurance that no segment of the population is being ignored and no particular liabilities are being omitted.

**EXHIBIT B
FEE SCHEDULE**

1. **Fees and Expenses.** Contractor agrees to accept the compensation set forth in this Exhibit B as full payment for performing all Services, including all staffing and materials required, for any reasonably unforeseen difficulties which may arise or be encountered in the execution of the Services, for risks connected with the Services, and for performance by Contractor of all its duties and obligations under the Agreement. OCERS will pay the following fees in accordance with the provisions of this Agreement:

- XXXXFee is fixed.
- The total compensation shall not exceed ~~XXX~~ *Seventy Six Thousand* Dollars (\$~~XXX~~76,000.00) without written approval by OCERS.
- The fee is inclusive of expenses which includes all miscellaneous tasks, emails, phone calls, travel expenses, and presentations to OCERS Staff and its Board. [provision for expense reimbursement]

2. **Payment Terms – Payment in Arrears:** Invoices are to be submitted in arrears to OCERS unless otherwise directed in this Agreement. Payment by OCERS will be net thirty (30) days after receipt and approval of an invoice in a format acceptable to OCERS.
3. **Payment – Invoicing Instructions:** Contractor will provide an invoice on the Contractor’s letterhead for services rendered under this Agreement. Each invoice will have a number and will include the following information:
- a. Contractor’s name and address
 - b. Contractor’s remittance address, if different from item #1 above
 - c. Contractor’s Taxpayer ID Number
 - d. Name of OCERS Agency/Department
 - e. Delivery/service address
 - f. Agreement number
 - g. Agency/Department’s Account Number
 - h. Date of invoice
 - i. Description and price of services provided
 - j. Sales tax, if applicable
 - k. Freight/delivery charges, if applicable
 - l. Total

Invoice and support documentation are to be forwarded to:

Orange County Employees Retirement System
2223 E. Wellington Avenue
Santa Ana, CA 92701
Attention: Accounts Payable
Email: Accountspayable@ocers.org

EXHIBIT C
KEY PERSONNEL

[Proposed team is listed in Buck's Response to Request for Proposal for Actuarial Audit Services](#)

Exhibit D
Request for Proposal

OCERS Request for Proposal for Actuarial Auditor Services issued April 2022 will be inserted in final Agreement.

Exhibit E

Response to Request for Proposal

Buck's submitted proposal to OCERS Request for Proposal for Actuarial Auditor Services issued April 2022, dated May 9, 2022, will be inserted in final Agreement.

Attachment E

Exhibit B, Minimum Qualifications Certification



Exhibit B


MINIMUM QUALIFICATIONS CERTIFICATION

All firms submitting a proposal in response to this RFP are required to sign and return this attachment, along with written evidence of how the respondent meets each qualification. The undersigned hereby certifies that it fulfills the minimum qualifications outlined below, as well as the requirements contained in the RFP.

Minimum Qualifications include:

1. The firm must be a professional actuarial services firm whose primary line of business includes providing actuarial valuation, experience investigations and analysis, actuarial audits, and pension consulting services to public pension plans or similar entities of substantial size;
2. The Primary Actuary performing the work must be a Fellow of the Society of Actuaries and an Enrolled Actuary. Any Supporting Actuary must be either a Fellow of the Society of Actuaries, an Enrolled Actuary or have five years of actuarial pension consulting experience;
3. The Primary Actuary performing the services under the Contract must have a minimum of ten years of experience as an actuary providing pension consulting services experience analysis, valuation assignments and actuarial audit assignments for multi-employer retirement plans. Experience with county retirement systems under the County Employees Retirement Law of 1937 is highly desirable.
4. The firm must have all necessary permits and licenses. Liability as well as errors and omissions insurance must be in full force at the time the proposal is submitted and must be maintained throughout the term of the contract.
5. The firm must provide its own work facilities, equipment, supplies and support staff to perform the required services;
6. All actuaries performing the work must meet the professional qualification standards of the American Academy of Actuaries

The undersigned hereby certifies that they are an individual authorized to bind the Firm contractually, and said signature authorizes verification of this information.



Authorized Signature

May 6, 2022
Date

Managing Director, US West Region
Name and Title (please print)

Buck Global, LLC
Name of Firm



Classic Values, Innovative Advice



Orange County Employees Retirement System (OCERS)

Actuarial Auditing Services

**Produced by Cheiron, Inc.
May 9, 2022**

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APPENDICES

- Appendix A – California Certificate of Authority





Classic Values, Innovative Advice

May 9, 2022

Mr. Jim Doezie
Contracts, Risk & Performance Administrator
Orange County Employee Retirement System (OCERS)
P.O. Box 1229
Santa Ana, California 9270
jdoezie@ocers.org

Re: Actuarial Auditor Services Rest for Proposal

Dear Mr. Doezie:

Cheiron is pleased to present our proposal for actuarial audit services to the Orange County Employees Retirement System (OCERS).

We are an actuarial consulting firm with a reputation for creativity, technological prowess, independence, and integrity. Cheiron is staffed by accomplished actuaries with decades of experience advising state and local retirement systems. In fact, we are often invited by financially troubled plans to help them navigate safely through difficult financial times.

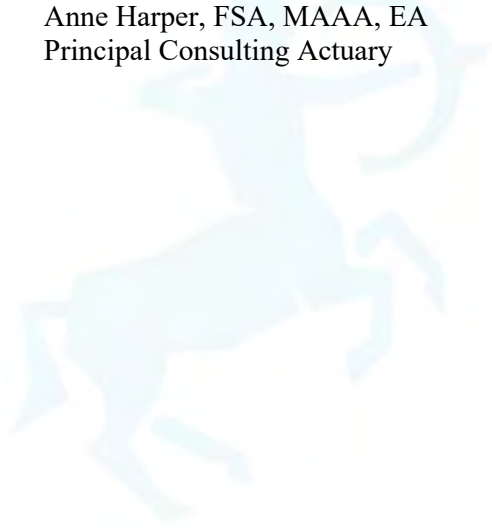
Because of our expertise and experience we believe we are uniquely qualified to serve as your auditing actuary. We performed the most recent actuarial audit for OCERS and have also provided actuarial audits to eight of the other 1937 Act Counties in the past five years.

Thank you for considering Cheiron. We are confident we can provide the best actuarial auditing services for the System, and we look forward to answering any questions you may have.

Sincerely,
Cheiron

Anne Harper, FSA, MAAA, EA
Principal Consulting Actuary

Graham Schmidt, ASA, FCA, MAAA, EA
Consulting Actuary



www.cheiron.us 1.877.CHEIRON (243.4766)



Classic Values, Innovative Advice

Exhibit B

MINIMUM QUALIFICATIONS CERTIFICATION

All firms submitting a proposal in response to this RFP are required to sign and return this attachment, along with written evidence of how the respondent meets each qualification.* The undersigned hereby certifies that it fulfills the minimum qualifications outlined below, as well as the requirements contained in the RFP.

Minimum Qualifications include:

1. The firm must be a professional actuarial services firm whose primary line of business includes providing actuarial valuation, experience investigations and analysis, actuarial audits, and pension consulting services to public pension plans or similar entities of substantial size;
2. The Primary Actuary performing the work must be a Fellow of the Society of Actuaries and an Enrolled Actuary. Any Supporting Actuary must be either a Fellow of the Society of Actuaries, an Enrolled Actuary or have five years of actuarial pension consulting experience;
3. The Primary Actuary performing the services under the Contract must have a minimum of ten years of experience as an actuary providing pension consulting services experience analysis, valuation assignments and actuarial audit assignments for multi-employer retirement plans. Experience with county retirement systems under the County Employees Retirement Law of 1937 is highly desirable.
4. The firm must have all necessary permits and licenses. Liability as well as errors and omissions insurance must be in full force at the time the proposal is submitted and must be maintained throughout the term of the contract.
5. The firm must provide its own work facilities, equipment, supplies and support staff to perform the required services;
6. All actuaries performing the work must meet the professional qualification standards of the American Academy of Actuaries

The undersigned hereby certifies that they are an individual authorized to bind the Firm contractually, and said signature authorizes verification of this information.

Authorized Signature

May 9, 2022

Date

Gene Kalwarski, CEO

Name and Title (please print)

Cheiron Inc.

Name of Firm

* Please refer to "Minimum Qualifications" section in the pages that follow.



Orange County Employees Retirement System (OCERS)
Actuarial Audit OCERS
May 9, 2022

Minimum Qualifications

- 1. The firm must be a professional actuarial services firm whose primary line of business includes providing actuarial valuation, experience investigations and analysis, actuarial audits, and pension consulting services to public pension plans or similar entities of substantial size.**

Cheiron is a full-service independent professional pension and health actuarial consulting firm. We provide valuations, actuarial audits, experience studies, asset/liability studies, and pension consulting services to public employers, Taft-Hartley plans, non-profit organizations and corporations.

- 2. The Primary Actuary performing the work must be a Fellow of the Society of Actuaries and an Enrolled Actuary. Any Supporting Actuary must be either a Fellow of the Society of Actuaries, an Enrolled Actuary or have five years of actuarial pension consulting experience**

The Primary Actuaries assigned to the contract are both Enrolled Actuaries. Anne Harper is a Fellow of the Society of Actuaries and Graham Schmidt is an Associate of the Society of Actuaries. Michael Moehle, the senior Supporting Actuary, is also an Enrolled Actuary and Fellow of the Society of Actuaries.

- 3. The Primary Actuary performing the services under the Contract must have a minimum of ten years of experience as an actuary providing pension consulting services experience analysis, valuation assignments and actuarial audit assignments for multi-employer retirement plans. Experience with county retirement systems under the County Employees Retirement Law of 1937 is highly desirable.**

Our co-lead actuaries, Anne Harper and Graham Schmidt, have 25 and 23 years of experience, respectively, providing pension consulting services, experience analysis, and valuation assignments for multi-employer public retirement systems. Both also have extensive experience with county retirement systems under the County Employees Retirement Law of 1937. Please refer to their biographies later in this proposal for their roster of 1937 Act clients.

Cheiron has assigned two primary actuaries as co-leads to the OCERS account to ensure that at least one actuary is available for immediate needs and both actuaries will be fully engaged in all aspects of our work with OCERS. Through our co-lead structure, which we apply for all client teams, we already have in place a method to ensure the availability of one of the lead consulting actuaries on the team at all times to address urgent client needs.

Michael Moehle, he proposed project manager for this engagement, has four decades of experience providing pension consulting services, experience analysis, and valuation assignments for multi-employer public retirement systems, including California 1937 Act

Orange County Employees Retirement System (OCERS)
Actuarial Audit OCERS
May 9, 2022

County Retirement Systems and statewide public employee retirement systems in Nevada, North Dakota, Minnesota, and Washington.

- 4. The firm must have all necessary permits and licenses. Liability as well as errors and omissions insurance must be in full force at the time the proposal is submitted and must be maintained throughout the term of the contract.**

Cheiron has all necessary permits and licenses to perform actuarial consulting services. We have liability and errors and omissions insurance that we have had for our entire duration and will continue to maintain during the term of the contract.

Cheiron and our professional staff are covered by professional liability Errors & Omission (E&O) insurance of \$5 million with a deductible of \$50,000 per claim. Cheiron also carries excess E&O insurance of \$5 million and \$10 million. Thus, Cheiron has E&O insurance coverage totaling \$20 million. The insurance coverage applies to the entire firm.

Cheiron also maintains commercial general liability insurance of \$2 million, automobile liability insurance of \$1 million, and umbrella liability insurance of \$5 million. We also maintain cyber liability insurance coverage in the following limit: \$5 million aggregate and per occurrence.

- 5. The firm must provide its own work facilities, equipment, supplies and support staff to perform the required services.**

Cheiron will provide its own work facilities, equipment, supplies and support staff necessary to provide the required services to OCERS. Cheiron has seven offices nationwide, all of which have their own facilities, equipment, supplies and support staff to perform contract services.

- 6. All actuaries performing the work must meet the professional qualification standards of the American Academy of Actuaries.**

All proposed actuaries performing the work are Members of the American Academy of Actuaries and meet the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States as adopted by the Board of the American Academy of Actuaries.



Exhibit C

PROPOSAL COVER PAGE AND CHECK LIST (TO BE SUBMITTED IN FIRM'S LETTERHEAD)

Respondent Name: Cheiron Inc.

Respondent Address: 8300 Greensboro Drive, Suite 800, McLean, VA 22102

By submitting this response, the undersigned hereby affirms and represents that they have reviewed the proposal requirements and have submitted a complete and accurate response to the best of their knowledge. By signing below, I hereby affirm that the respondent has reviewed the entire RFP and intends to comply with all requirements.

Respondent specifically acknowledges the following:

1. Respondent possesses the required technical expertise and has sufficient capacity to provide the services outlined in the RFP.
2. Respondent has no unresolved questions regarding the RFP and believes that there are no ambiguities in the scope of services.
3. The fee schedule submitted in response to the RFP is for the entire scope of services and no extra charges or expenses will be paid by OCERS.
4. Respondent has completely disclosed to OCERS all facts bearing upon any possible interests, direct or indirect, that Respondent believes any member of OCERS, or other officer, agent, or employee of OCERS presently has, or will have, in this contract, or in the performance thereof, or in any portion of the profits thereunder.
5. Materials contained in the proposal and all correspondence and written questions submitted during the RFP process are subject to disclosure pursuant to the California Public Records Act.
6. Respondent is not currently under investigation by any state or federal regulatory agency for any reason.
7. Except as specifically noted in the proposal, respondent agrees to all of the terms and conditions included in OCERS Services Agreement.
8. The signatory is authorized to bind the respondent contractually.



Authorized Signature

May 9, 2022

Date

Gene Kalwarski, CEO

Name and Title (please print)



Orange County Employees Retirement System (OCERS)**Actuarial Audit OCERS**May 9, 2022

3. An executive summary that provides the respondent's background, experience, and other qualifications to provide the services included in the Scope of Services.

We would like to highlight the following:

- **Public Sector Experience:** Our consultants have advised some of the nation's largest public pension plans, including comparably sized and complex retirement systems, for decades.

Within California, the members of the OCERS consulting team serve as the consulting actuaries for six of the 1937 Act County retirement systems. We are also the consulting actuary for the independent charter systems of the City and County of San Francisco Employees' Retirement System, the City of San Jose Federated City Employees' Retirement System, the City of San Jose Police and Fire Department Retirement Plan, the San Diego City Employees' Retirement System, and the San Luis Obispo County Pension Trust.

We have audited nine of the other 1937 Act systems (including OCERS) within the past five years. We have audited most of the other large public systems in California including the California Public Employees' Retirement System, the California State Teachers' Retirement System, the University of California and the three main systems of the City of Los Angeles (Employees Retirement System, Fire and Police, and Water and Power). Cheiron has also recently completed actuarial audits for the state systems of Alabama, Illinois, Maryland, the Municipal Employees' Retirement System of Michigan, New York State Teachers' Retirement System, and the Texas County and District Retirement System)

- **Innovation:** Our technological innovations set us apart from other actuarial firms. We make extensive use of internally developed interactive projection models which are flexible, powerful, and easy to understand. In an actuarial audit, we use these projections to identify potential systemic issues or risks to the funding of the system.

We recognized in this era of Zoom meetings that online slide presentations presented challenges for audience engagement, so we developed new, interactive tools for presenting to clients and other stakeholder audiences. As an example of this new technology, we invite you to review this [presentation](#) we recently created to deliver the results of an actuarial audit to another 1937 Act system.

- **Professional Leadership:** Both co-leads on the OCERS team serve on the California Actuarial Advisory Panel and are frequent speakers at California public sector retirement conferences and other events, including SACRS and CALAPRS. Our consultants are active in professional organizations such as the American Academy of Actuaries and the Public Plan Steering committee of the Conference of Consulting Actuaries. They also serve on the Pension Committee of the Actuarial Standards Board, the rulemaking body for the actuarial profession.



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- **Qualifications:** All our co-lead actuaries and project managers are Fellows or Associates of the Society of Actuaries and specialize in pension or healthcare. More than 40 percent of all our employees are FSAs.

4. A description of the respondent including:**a. Brief history, including year the respondent firm was formed.**

Cheiron is a full-service employee-owned actuarial consulting firm incorporated as a C-corporation in Delaware in September 2002 and began business in November 2002. The firm will celebrate 20 years in November 2022 and employs 100 people, 69 of them credentialed actuaries in seven offices around the country.

We provide valuations, experience studies, audits, and pension consulting services to public employers, Taft-Hartley plans, non-profit organizations and corporations.

Integrity is the cornerstone of the firm's creation. Our founding partners worked at one of the nation's largest actuarial consulting firms and vigorously objected to the push to require plans to accept liability limits for their work. Rather than compromise their principles, our founders quit their jobs and established Cheiron as an employee-owned firm.

We are proud of our record of offering objective advice free of any conflicts of interest. We stand fully behind our work and do not ask clients to accept limits on our liability for the quality of our work.

b. Ownership structure.

Cheiron has no parent organization and is wholly owned by its employees.

c. Office locations.Washington (Headquarters)

8300 Greensboro Drive, Suite 800
McLean, VA 22102

Charlotte, NC

9115 Harris Corners Parkway, Suite 380
Charlotte, NC 28269

Chicago

200 West Monroe Street, Suite 1800
Chicago, IL 60606

Oakland, CA

3685 Mount Diablo Boulevard, Suite 250
Lafayette, CA 94549

Philadelphia

701 East Gate Drive, Suite 330
Mount Laurel, NJ 08054

Portland, OR

101 SW Main Street, Suite 1602
Portland, OR 97204

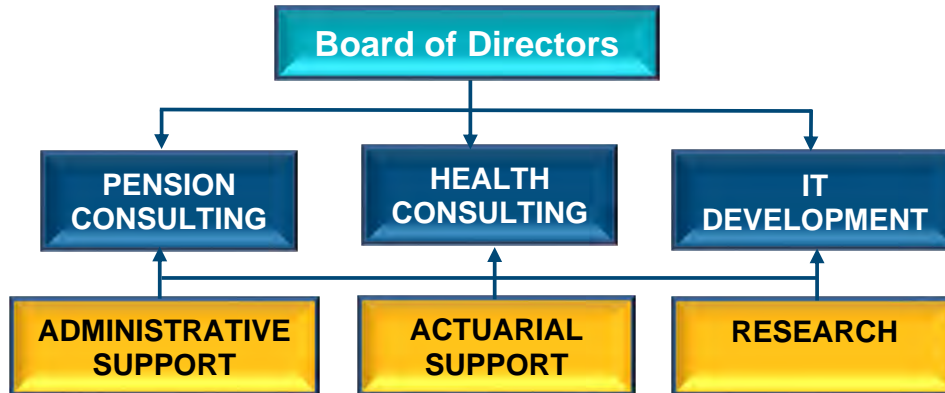
San Diego

201 Lomas Santa Fe Drive, Suite 400
Solana Beach, CA 92075



Orange County Employees Retirement System (OCERS)**Actuarial Audit OCERS**

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d. Organization chart.**e. Number of employees.**

The firm, which will celebrate 20 years in November 2022, employs 100 people—69 of whom are credentialed actuaries. Of these 69, 63% are Fellows of the Society of Actuaries, 72% are Enrolled Actuaries, and 88% are Members of the American Academy of Actuaries.

f. Annual revenues.

Cheiron's gross annual revenue in 2021 was approximately \$30 million.

g. Respondent's specialties, strengths, and limitations.**Experience with audits:**

In addition to our numerous audits of the 1937 Act County plans, Cheiron has considerable experience conducting audits of statewide pension systems, including the California Public Employees' Retirement System (CalPERS), California State Teachers' Retirement System (CalSTRS), University of California Retirement System, Illinois Office of the Auditor General, Missouri Department of Transportation and Highway Patrol Employees' Retirement System (MPERS), Municipal Employees' Retirement System of Michigan (MERS), New Mexico Public Employees' Retirement Association, New York State Teachers' Retirement System, Retirement Systems of Alabama, Texas County and District Retirement System, and the West Virginia Municipal Pensions Oversight Board.

Most of these audits included a full replication of the valuation results, and some replicated sample lives or were limited to a higher level of review for reasonableness. Many of the audits included a review of an experience study, and some included a full replication of the experience study.

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Sophisticated interactive technological tools: We believe we are eminently qualified to undertake the proposed engagement because of our leadership in developing and using interactive projection modeling tools to communicate the financial risks facing retirement systems.

Our founders began stress testing pension plans as early as 1987, decades before many state legislatures mandated regular stress testing of public plans to gauge their vulnerability to adverse conditions, and well before the Actuarial Standards Board's ASOP 51 required actuaries to better educate pension plans about risks. Stress testing is an integral element of our annual service for all our clients.

P-Scan and R-Scan, our interactive deterministic and stochastic pension projection modeling tools, can simulate thousands of scenarios and identify the biggest financial risks to your pension plan. Our projection modeling tools can simulate these scenarios in real time at board meetings, enabling trustees to make informed decisions after evaluating the risks to their plan. Once those risks have been identified, we can help you develop a long-term strategy to manage their impact. Our hands-on approach means all our actuaries are not only adept at modeling, they create their own tools.

We custom-build projection models for each client. Starting with your existing assumptions and contribution levels, we add the most relevant variables for your plan into *P-Scan* to demonstrate the likely impact of changes in those on your pension plan. *P-Scan* lets us illustrate the range of possible long-term funded ratios—assets divided by liabilities—and determine how this ratio could change under different asset allocations and risk profiles.

While other firms' actuarial reports focus primarily on the present and the past, Cheiron's standard reports present that information and stress testing projections under alternative economic scenarios and discuss the system's risks going forward, allowing our clients to focus on the risk management elements of their retirement systems and the adequacy of current funding policies.

Clear Communications:

Our clients value our ability to explain complicated actuarial and financial concepts in clear and understandable terms. We also pride ourselves in our development in new paradigms for presenting information to Boards and other stakeholders. As noted earlier, we have recognized that in the time of "Zoom Fatigue," audience engagement is key, so we developed new, interactive tools for presenting. These tools include the use of innovative data visualization techniques – such as those found in this [audit presentation](#) – to make it easy for you to discern trends, observations, and risks.

Integrity: Integrity is the cornerstone of our firm's creation. Our founding partners worked at one of the nation's largest actuarial consulting firms and strenuously objected to the push to require plans to accept limits on the firm's liability for its work. Rather than compromise their principles, our founders quit their jobs and established Cheiron.



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Since the firm's inception in 2002, we have produced the highest quality of work in the profession without shielding ourselves from any liability. We are proud of our record of offering objective advice free of any conflicts of interest. We stand fully behind our work and do not ask clients to accept limits on our liability for the quality of our work.

Checks and Balances: We use co-lead consultants for every client to ensure that we are always available for you, and that you get two perspectives. We also have a full-time internal auditor who independently audits every valuation for every client and then submits a report.

High retention rate: Most of our clients stay with us. Four of our multi-billion dollar public sector clients have worked with our consultants since the mid-1980s. We also have above-industry average retention rates for our own staff.

Creativity: Cheiron is known for developing creative solutions and because of our track record in developing creative solutions we're often brought in to rescue troubled public pension plans around the country and ensure their long-term solvency.

Dedicated Team with Auditing Experience: We believe our proposed team will create greater value than any other firm can offer you. We always staff large accounts with at least two lead credentialed and experienced actuaries. As a result, our work product will represent a consensus of a group of actuaries reflecting significant experience with different opinions and peer review automatically built into the process. Our entire team will be available for presentations, offering alternative views of results, and to address any questions with our findings. All the consultants on the team have considerable experience with conducting audits.

Some might consider it a limitation that we are purely an actuarial consulting firm; we have no subsidiaries or parent corporations that provide other services such as investment consulting, plan administration, or other unrelated businesses. As a result, we are unable to provide bundled services, and we defer to experts in other fields as necessary, such as developing expectations for investment returns for individual asset classes. However, what some consider to be a weakness we find to be a strength, as it allows us to be completely independent and objective in our recommendations and allows us to focus on our actuarial strengths.

h. Describe the accounting systems used and financial reporting methodologies.

Cheiron prepares its accounts using QuickBooks Enterprise software. Cheiron's financial statements are prepared on an accruals basis under U.S. GAAP and reviewed annually by the accounting firm RSM. As a personal services corporation Cheiron also prepares financial statements on a cash basis for Federal corporation income tax reporting (Form 1120).



Orange County Employees Retirement System (OCERS)

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5. The names and qualifications of fully trained and qualified staff that will be assigned to OCERS work, including a detailed profile of each person's background and relevant individual experience.

- **Anne Harper, FSA, MAAA, EA**, Principal Consulting Actuary, is the proposed co-lead actuary for this engagement.
- **Graham Schmidt, ASA, FCA, MAAA, EA**, Consulting Actuary, is the proposed co-lead actuary for this engagement.
- **Michael Moehle, FSA, FCA, MAAA, EA**, Public Pension Oversight, is the proposed project manager for this engagement.

Please see the following pages for resumes of these co-lead actuaries.

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Anne Harper, FSA, MAAA, EA
Principal Consulting Actuary

Anne Harper has 26 years of experience advising large complex public retirement systems, mainly in California. Anne was recently appointed to the California Actuarial Advisory Panel by Governor Gavin Newsom.



Her experience includes developing funding policies, performing actuarial valuations, cost projections, conducting experience studies and sensitivity analyses, producing GASB accounting disclosures, and consulting on complex Internal Revenue Code section 415 issues and GASB 73 disclosures.

Her role as lead or co-lead consultant on her clients include Santa Barbara County Employees' Retirement System, Merced County Employees' Retirement Association, San Joaquin County Employees' Retirement Association, the City and County of San Francisco Employees' Retirement System, San Luis Obispo County Pension Trust, City of San José Police and Fire Department Retirement Plan and Denver Employees Retirement Plan

She also has led or was co-lead on many actuarial audits including the following 1937 Act Counties: Fresno, Kern, Orange, San Mateo, Sacramento, San Bernardino, San Diego, and Sonoma; as well as the Los Angeles City Employees Retirement System in 2019, the University of California Retirement Plan.

Her recent presentations include:

- National Conference on Public Employees Retirement Systems (NCPERS) – The Pandemic's Impact on Retirement Plans
- State Association of County Retirement Systems (SACRS) and International Foundation of Employee Benefit Plans (IFEFP) – COVID Era Funding Strategies and Stress Testing
- CalAPRS Intermediate Course – “So... What's on the Board's Agenda?”
- CalAPRS Beginning Course – Pension Funding

She co-authored an article for The State Association of County Retirement Systems Winter 2019 magazine entitled, “Mature Pension Plans are Sensitive—Manage with Care.”

She joined Cheiron in February 2007 and set up the firm's San Diego office.

She is Fellow of the Society of Actuaries, a Member of the American Academy of Actuaries, and an Enrolled Actuary under ERISA. She graduated with High Distinction in Economics from the University of Michigan.



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Graham Schmidt, ASA, FCA, MAAA, EA
Consulting Actuary

Graham Schmidt is a well-known expert on public pension plans with more than 23 years of experience. Graham is a member of California's Actuarial Advisory Panel.



His experience includes working on audits, accounting and disclosure issues, and risk analyses. He oversees Cheiron's retiree medical benefit trusts practice, developing more than a dozen tax-advantaged union-run trusts that provide pooled lifetime benefits under a fixed contribution. He is also the chairperson of Cheiron's Technology Committee and has led our efforts in developing the interactive online reports presented in our proposal.

His clients include the Santa Barbara County Employees' Retirement System, Merced County Employees' Retirement Association, San Joaquin County Employees' Retirement Association, Marin County Employees' Retirement Association, Stanislaus County Employees' Retirement Association, Tulare County Employees' Retirement Association, and the Denver Employees' Retirement Plan

He also is the lead consultant or co-lead consultant on many of Cheiron's actuarial audits, including studies for the Los Angeles City Employees Retirement System, Water and Power Employees Retirement Plan, the Public Employees Retirement Association of New Mexico PERA, CalSTRS, the San Mateo County Employees' Retirement Association, the Los Angeles City Employees Retirement System, and the San Diego County Employee Retirement Association.

He is a member of the Society of Actuaries' Retirement Plans Experience Committee and has volunteered on other public plan committees of the Academy of Actuaries and the Conference of Consulting Actuaries.

He often speaks about public pension issues at various industry and professional conferences, including recent sessions for the International Foundation of Employee Benefit Plans, the Conference of Consulting Actuaries, and the National Council on Teacher Retirement. He co-authored an article for the State Association of County Retirement Systems (SACRS) Winter 2019 magazine entitled, *Mature Pension Plans are Sensitive—Manage with Care*, and presented a webinar on *COVID Era Funding Strategies and Stress Testing* at a SACRS conference. He is a frequent instructor for the California Association of Public Retirement Systems Staff Training and the SACRS Public Plan Investment Management programs.

He joined Cheiron in January 2013 and opened the firm's Bay Area office that year.

He is an Associate of the Society of Actuaries, a Fellow of the Conference of Consulting Actuaries, a Member of the American Academy of Actuaries, and an Enrolled Actuary under ERISA. He received a B.A. in Mathematics and B.S. in Mathematical Science with Departmental Honors from the Johns Hopkins University.



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Michael Moehle, FSA, FCA, MAAA, EA
Public Pension Oversight

Michael Moehle has four decades of experience as an actuarial consultant working with California and other Western public sector and corporate pension funds.



He performs internal audits and reviews of all public sector and multiemployer pension work at Cheiron. In that role he conducts independent validations of liability and asset valuation results. He also reviews valuation assumptions and methods for compliance with applicable actuarial and GASB standards along with written evaluations of compliance with Cheiron's internal quality control guidelines.

He previously worked at the City of San Jose Retirement Services in California as the retirement investment officer and in-house actuary and consultant. Before joining the City of San José, he was a principal and senior consultant with a large national benefits consulting firm in California, where he served as consultant with several California 1937 Act County Retirement Systems and multiple statewide public employees retirement systems in Nevada, North Dakota, Minnesota and Washington, where he provided funding valuations and GASB 25, 27, 43 and 45 valuations and disclosures, as well as analysis and consulting regarding plan changes and plan alternatives.

He joined Cheiron in July 2011.

He is a Fellow of the Society of Actuaries, a Fellow of the Conference of Consulting Actuaries, a Member of the American Academy of Actuaries, and an Enrolled Actuary under ERISA.

He graduated with a B.S. with a double major in Mathematics and Economics from Southern Illinois University.

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6. At least three (3) references for which the respondent has provided services similar to those included in the Scope of Services. Please include for each reference the individual point of contact, a summary of the work performed, and the length of time the respondent provided each service.

Client:	Alameda County Employees' Retirement Association
Contact:	Dave Nelson, Chief Executive Officer Phone: 510-628-3000 Email: dnelsen@acera.org
Scope of Services:	Full replication of 12/31/2017 valuation and review of actuarial methods and assumptions
Date of Engagement:	2017-2018

Client:	Contra Costa County Employees' Retirement Association
Contact:	Gail Strohl, Chief Executive Officer Phone: 925-521-3960 Email: gstrohl@cccera.org
Scope of Services:	Full replication of 12/31/2018 valuation and experience study
Date of Engagement:	2019

Client:	Kern County Employees' Retirement Association
Contact:	Dominic Brown, Chief Executive Officer Phone: 661-381-7753 Email: dominic.brown@kcera.org
Scope of Services:	Full replication of 6/30/2019 valuation and review of actuarial assumptions and methods
Date of Engagement:	2020-2021

Client:	Mendocino County Employees' Retirement Association
Contact:	Doris Rentschler, Executive Director Phone: 707-463-4329 Email: Doris.Rentschler@mendocinocounty.org
Scope of Services:	Full replication of June 30, 2017 valuation and review of actuarial assumptions and methods
Date of Engagement:	2017-2018

Client:	Sacramento County Employees' Retirement System
Contact:	Eric Stern, Chief Executive Officer Phone: 916-874-9119 Email: sterne@saccounty.net
Scope of Services:	Full replication audit of 6/30/2016 and 6/30/2021 actuarial valuations and review of actuarial assumptions and methods.
Date of Engagement:	2017 and 2021-2022



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Client:	San Bernardino County Employees' Retirement Association
Contact:	Amy McInerny, Chief Financial Officer Phone: 909-885-7980 Email: amcinerny@sbcera.org
Scope of Services:	Full replication of 6/30/2018 valuation, GASB 67 valuation and review of actuarial assumptions and methods
Date of Engagement:	2018

Client:	San Diego County Employees' Retirement Association
Contact:	Tracy Sandoval Phone: 619-515-6800 Email: tsandoval@sdcera.org
Scope of Services:	Full replication of the 6/30/2018 valuation and 2015-2018 Experience Study
Date of Engagement:	2018

Client:	San Mateo County Employees' Retirement Association
Contact:	Scott Hood, Chief Executive Officer Phone: 650-363-4882 Email: shood@samcera.org
Scope of Services:	Full replication of the 6/30/2020 valuation and review of actuarial methods and assumptions
Date of Engagement:	2020

7. Copies of any pertinent licenses required to deliver respondent's product or service (e.g., business license).

Please see Appendix A for a copy of Cheiron's State of California, Secretary of State, Certificate of Qualification to transact intrastate business in the State of California.

8. An explanation of the pricing proposal for the scope of work including pricing of fees and costs, billing practices, and payment terms that would apply. OCERS does not place any limits on the approach to pricing and is open to presentation of more than one pricing alternative for the scope of work, or portions of it. This section of the response should include an explanation as to how the pricing approach(es) will be managed to provide the best value to OCERS. The respondent should represent that the pricing offered to OCERS is, and will remain, equivalent to or better than that provided to other public pension fund or institutional investor clients or should provide an explanation as to why this representation cannot be provided. All pricing proposals should be "best and final," although OCERS reserves the right to negotiate on pricing.

We propose a fixed fee price of \$74,500 for the engagement, including attendance at one in-person (or virtual, if preferred by OCERS) meeting by the co-lead actuaries to present the



Orange County Employees Retirement System (OCERS)**Actuarial Audit OCERS****May 9, 2022**

results of the audit. This fee is inclusive of all expenses and will be billed upon completion of the project. Additional meetings will result in an additional charge of \$4,500 per meeting, plus reasonable travel expenses if applicable. We believe a fixed fee proposal provides the best value to OCERS, as it protects OCERS from any cost overruns that could occur as a result of additional work by the Actuary.

We note that the fixed fee is less than that charged as part of our prior actuarial audit and is possible because of the prior experience we have with OCERS. This pricing is equivalent or better than that provided to other public pension funds of similar size and complexity.

9. An explanation of all actual or potential conflicts of interest that the respondent may have in contracting with OCERS.

We foresee no actual or potential conflicts of interest in providing services to OCERS.

10. A description of all past, pending, or threatened litigation, including malpractice claims, administrative, state ethics, disciplinary proceedings, and other claims against respondent and/or any of the individuals proposed to provide services to OCERS.

Neither Cheiron nor any of the individuals proposed to provide services to OCERS have been subject to any litigation, including malpractice claims, administrative, state ethics, disciplinary proceedings, or other claims.

11. Any other information that the respondent deems relevant to OCERS' selection process.

We invite you to review a sample of interactive presentations as an indicator of our recent innovations in presenting complex technical issues to public retirement boards. In addition to the [audit example](#) provided earlier, we encourage you to review this [interactive valuation report](#) and this [presentation to the SACRS Investment Management Symposium](#).

Appendix A

*California Certificate of Qualification to
Transact Intrastate Business*

2628217

State of California



SECRETARY OF STATE

CERTIFICATE OF QUALIFICATION

I, KEVIN SHELLEY, Secretary of State of the State of California, hereby certify:

That on the **21ST day of SEPTEMBER, 2004, CHEIRON, INC.**, a corporation organized and existing under the laws of **DELAWARE**, complied with the requirements of California law in effect on that date for the purpose of qualifying to transact intrastate business in the State of California, and that as of said date said corporation became and now is qualified and authorized to transact intrastate business in the State of California, subject however, to any licensing requirements otherwise imposed by the laws of this State.

IN WITNESS WHEREOF, I execute this certificate and affix the Great Seal of the State of California this day of September 21, 2004.



Kevin Shelley
KEVIN SHELLEY
Secretary of State



Memorandum

DATE: June 2, 2022
TO: Members of the Audit Committee
FROM: Suzanne Jenike, Asst. CEO, External Operations
SUBJECT: **ALAMEDA IMPLEMENTATION PROJECT UPDATE**

Staff will give the Committee an update on the Alameda implantation project. We will review major milestones and achievements, risks and mitigation strategies as well as monetary impact the active, deferred and retired members.

Submitted by:



SJ-APPROVED

Suzanne Jenike
Asst. CEO, External Operations



**Alameda Decision Implementation
Project Update
Audit Committee Meeting
June 2, 2022**

Suzanne Jenike
Assistant CEO, External Operations



Board Directives



OCERS Board directed staff to take the following steps to implement the Supreme Court decision in *Alameda* effective July 15, 2021:

For impacted Active & Deferred Members

- **Identify** compensation for work member performed outside of normal working hours as NON-Pensionable as of January 1, 2013; AND
- **Refund** the contributions, plus interest, paid by the member on those non-pensionable pay items directly to the member.





Board Directives (continued)

For impacted Retired Members (and Payees)

- **Identify** compensation for work member performed outside of normal working hours as NON-Pensionable as of January 1, 2013; AND
- **Recalculate** their benefit payments prospectively to exclude the benefit derived from any such excluded compensation; AND
- **Offset** overpaid benefits from over collected contributions paid by the member on excluded compensation. Over collected contributions are contributions made to the plan from 1/1/2013 through 10/1/2020 for excluded pay items.
- **Refund** any excess contributions, after offsetting overpaid benefits, directly to the member; AND
- **Recover** overpaid benefits which were paid to member from October 1, 2020, if any to the upcoming date of recalculation directly from the member in accordance with OCERS' Overpaid/Underpaid Benefits policy.





Project Goals

- Implement the Board's directives in accordance with the Overpaid and Underpaid Plan Benefits Policy and Overpaid and Underpaid Plan Contributions Policy with 100% accuracy.
- Maintain documentation of decisions, processes and procedures to implement changes and corrections due to the Alameda decision.
- Ensure accuracy of all calculations through appropriate testing, review, documentation and audits by Member Services QA and Internal Audit.
- Automate corrections to participant accounts as much as possible to reduce potential manual errors.





Major Milestones

	Milestone	Target Deadline
1	Ceased collection of pension contributions on excluded pay items and including them in new benefit calculations	Completed October 2020
2	Board approval of updated pensionable pay items, policies, and parameters for recalculations, overpayments, and refunds.	Completed June 2021
3	Impacted participants (Alameda universe) identified	Completed September 2021
4	Implementation of tool in V3 pension administration system to correct participant account history	Completed March 2022
5	Contributions and interest refund calculations completed and audited	June 30, 2022
6	Notify Active and Deferred members of contribution & interest refunds	June 30, 2022
7	Benefit recalculations started	Delayed to September 2022
8	Contributions and interest refund payments/rollovers processed (for Active)	December 2022
9	Benefit recalculations completed	December 2022



Project Top Risks & Issues

Risk/Issue	Mitigation Strategies
<p>This Project is underway during a time when the volume of retirement applications is at an all-time high, new staff are being hired, and accuracy of benefit calculations is of the highest priority. These activities introduce both quality and resource risks.</p>	<ul style="list-style-type: none"> Project management plan to manage resources, schedule, quality, risk and issues
<p>Alameda Project staff resources (Members Services, Finance and IT) continue to be challenged with balancing multiple projects and priorities, presenting resource and schedule risks.</p>	<ul style="list-style-type: none"> Seek reprioritization of projects as necessary Limit or defer additional projects/major activities
<p>Limited trained staff to perform benefit recalculations.</p>	<ul style="list-style-type: none"> Hiring additional member services staff which will allow trained staff to focus on recalculations Hire retired OCERS staff to assist with recalculations
<p>Challenge presented to the Alameda project schedule. Because OCERS is experiencing higher than normal volume of new retirements, staff is performing new retirement calculations with base FAS to ensure timely retirement benefit payments of over 600 new retirements for May and June. These new retirements will require benefit recalculations and take priority over Alameda recalculations.</p>	<ul style="list-style-type: none"> Delay start of benefit recalculations for Alameda Consider waiving overpayments for members under a low threshold dollar amount.



Project Top Risks & Issues (continued)

Risk/Issue	Mitigation Strategies
<p>A high level of stakeholder interest increases the need for adequate and effective communication planning and stakeholder expectation management.</p>	<ul style="list-style-type: none"> • Provide regular updates and communications to all stakeholder groups • Provide monthly updates to the Board in CEO report • Provide quarterly project updates to the Board starting with June Board meeting
<p>Prolonging the completion of retirement benefit recalculations extends the overpayment period and amounts that will need to be collected from affected participants. Frequent communications to participants will be required to keep them informed of the timing and progress of recalculations.</p>	<ul style="list-style-type: none"> • Send reminder letters on a quarterly basis • Provide regular updates to the Retiree Association
<p>AB 2493 applies only to sworn peace officers and firefighters. Passage of AB 2493 legislation would require OCERS to modify certain aspects of the Alameda decision implementation directed by the Board.</p>	<ul style="list-style-type: none"> • Track bill • Discuss changes in the implementation plan due to this legislation
<p>Interest calculations on member contributions specific to Alameda pay items must be done manually because V3 pension administration system cannot isolate contributions on those specific pay items. (involves 80,000 pay transactions)</p>	<ul style="list-style-type: none"> • Developed a more automated approach to calculate interest outside of the system utilizing methodology prepared by Segal



Active & Deferred Members Contribution & Interest Refunds

Members Receiving Refund Only

Range of Reduction	Total Member Count	Total Contribution Refund	Total Interest Refund	Total Dollar Refund	Avg Refund
\$75.00 and \$100.00	121	\$ 8,311.07	\$ 2,176.19	\$ 10,487.26	\$ 86.67
\$100.00 and \$500.00	764	\$ 154,780.41	\$ 39,370.91	\$ 194,151.32	\$ 254.12
\$500.00 and \$1,000.00	285	\$ 157,598.79	\$ 37,180.36	\$ 194,779.15	\$ 683.44
\$1,000.00 and \$2,000.00	157	\$ 179,520.94	\$ 40,948.08	\$ 220,469.02	\$ 1,404.26
\$2,000.00 and \$3,000.00	104	\$ 212,769.66	\$ 46,007.21	\$ 258,776.87	\$ 2,488.24
\$3,000.00 and \$4,000.00	82	\$ 232,131.22	\$ 51,590.07	\$ 283,721.29	\$ 3,460.02
\$4,000.00 and \$5,000.00	64	\$ 235,291.96	\$ 53,216.21	\$ 288,508.17	\$ 4,507.94
\$5,000.00 and \$7,500.00	96	\$ 487,251.64	\$ 101,157.80	\$ 588,409.44	\$ 6,129.27
\$7,500.00 and \$10,000.00	37	\$ 253,380.56	\$ 64,774.57	\$ 318,155.13	\$ 8,598.79
\$10,000.00 and \$20,000.00	96	\$ 1,077,641.72	\$ 258,607.86	\$ 1,336,249.58	\$ 13,919.27
\$20,000.00 and \$30,000.00	25	\$ 510,355.88	\$ 121,524.03	\$ 631,879.91	\$ 25,275.20
\$30,000.00 and \$40,000.00	7	\$ 193,065.89	\$ 46,611.13	\$ 239,677.02	\$ 34,239.57
\$40,000.00 and \$50,000.00	4	\$ 135,874.32	\$ 35,021.44	\$ 170,895.76	\$ 42,723.94
\$50,000.00 and \$75,000.00	5	\$ 238,712.48	\$ 60,302.56	\$ 299,015.04	\$ 59,803.01
\$75,000.00 and \$100,000.00	2	\$ 147,949.01	\$ 35,769.13	\$ 183,718.14	\$ 91,859.07
\$100,000.00 and \$120,000.00	1	\$ 94,171.80	\$ 22,685.34	\$ 116,857.14	\$116,857.14
Totals	1,850	\$ 4,318,807.35	\$ 1,016,942.89	\$ 5,335,750.24	

Note: The totals include 174 Retired members with benefit effective dates on/or after 10/1/2020. Members with contribution & interest of less than \$75 may not receive a refund.



Retired Member Corrections

- OCERS has identified 695 payees (retired members, surviving spouses and DROs) who are subject to benefit corrections due to erroneous inclusion of pay items that are no longer considered pensionable in the calculation of their retirement allowances.





Breakdown of Benefit Corrections for Retirees

Range of Reduction	Main Retiree	Attorney Retiree	High Dollar Impact	Beneficiary	DRO	Totals	Total Reduction	Avg. Reduction
\$0.01 and \$10.00	291	4	0	6	32	333	\$1,002.96	\$3.01
\$10.00 and \$50.00	88	10	0	7	7	112	\$2,695.90	\$24.07
\$50.00 and \$100.00	35	13	0	7	1	56	\$4,092.53	\$73.08
\$100.00 and \$500.00	80	25	0	1	5	111	\$25,303.50	\$227.96
\$500.00 and \$1,000.00	51	1	0	1	1	54	\$40,800.19	\$755.56
\$1,000.00 and \$2,000.00	0	0	17	2	0	19	\$22,930.91	\$1,206.89
\$2,000.00 and \$3,000.00	0	0	6	0	1	7	\$16,623.48	\$2,374.78
\$4,500.00 and \$5,500.00	0	0	2	1	0	3	\$15,182.33	\$5,060.78
Totals	545	53	25	25	47	695	\$128,631.79	\$185.08

- Of the 695 payees, 501 would see less than \$100 a month impact.



Benefit Recalculation Approach

- Prioritize benefit recalculations in the following order:
 1. Highest impacted members (25) – highest dollar amounts and complex calculations
 2. Attorneys (53) – more complex calculations
 3. All others (545)
 4. Surviving spouses and DROs (72)
- Perform recalculations in batches each month
- Notify payees of their impending benefit correction as they are completed
- Send quarterly updates to the remaining impacted payees until their recalculations are completed



Major Accomplishments

- Implemented a tool in the V3 system to correct member accounts electronically to exclude Alameda pay items from benefit calculations.
- Tested and implemented contribution interest calculation method outside of the system utilizing methodology developed by Segal.
- Completed data analysis of approximately 223,000 records to identify 80,000 Alameda pay transactions subject to contribution refunds.
- Completed calculations of contributions and interests for member refunds. Being reviewed and validated by Finance, IT, Internal Audit and Segal.
- Developed benefit recalculations plan and process.
- Developed Communications Plan.
- Prepared and mailed update letters on May 18, 2022 to
 - 1,850 Active and Deferred (and Retirees with a benefit effective date on/after 10/1/20)
 - 573 Retired
 - 56 DRO and Survivors





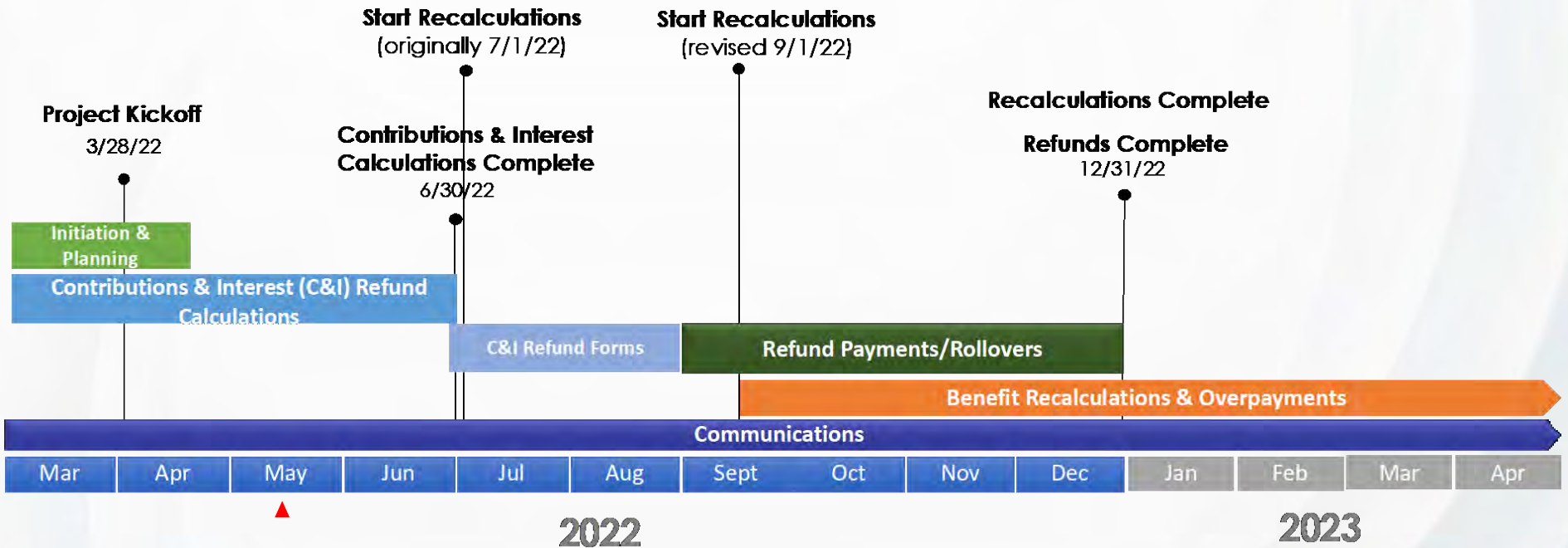
Activities Ahead

- Finance, Internal Audit and Segal to complete review and testing of the contributions & interest calculations to ensure accuracy and completeness.
- Provide project update to Retiree Association and Employer Groups in June.
- Starting regular updates to Board in June 2022.
- Continue regular updates to payees.
- Preparing contributions & interest refund letter and payment election form for Active & Deferred members.





Project Timeline





Questions

Q & A



Memorandum

DATE: June 2, 2022
TO: Members of the Audit Committee
FROM: David Kim, Director of Internal Audit
SUBJECT: MANAGEMENT ACTION PLAN VERIFICATION REPORT

Written Report

Background/Discussion

Under the International Standards for the Professional Practice of Internal Auditing (“Standards”), Internal Audit must establish and maintain a system to monitor the disposition of prior results communicated to management. This includes a follow-up process to monitor and ensure that management action plans have been implemented or that management and the Audit Committee has accepted the risk of not taking action.

The follow-up on management action plans (MAPs) involves:

- Confirming management has implemented an action plan and no further action is required.
- Internal Audit has tested the operational effectiveness MAP.

The following report contains the status of the MAPs that have been reported to the Audit Committee:

- For the MAPs noted as Open, Internal Audit will continue to work with the respective parties until the MAP is closed and verified.
- For the MAPs noted as Closed – No Further Action Required (YTD), Internal Audit has confirmed the MAPs have been implemented and operating effectively during the current year.
- For the MAPs noted as Closed – No Further Action Required (Prior Years), MAPs that have been implemented and confirmed as operating effectively prior to the current year.

Submitted by:

DK - Approved

David Kim
Director of Internal Auditor



Management Action Plan Status Re

Project(s): ALL
Mgmt. Status: ALL

Process Owner(s): EMPLOYER,
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REPORTING FOR: 2018, 2019, 2020, 2021, 2022, ARCHIVED	OPEN	Closed - No Further Action Required (YTD)	Closed - No Further Action Required (Prior Years)	Total
Process Owner				
EMPLOYER	0	1	12	13
EXECUTIVE	1	0	5	6
FINANCE	0	1	19	20
INFORMATION TECHNOLOGY	7	1	7	15
INVESTMENTS	1	0	9	10
MEMBER SERVICES	8	3	30	41
Total Count:	17	6	82	105

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Management Action Plan Status Re

Project(s): ALL
Mgmt. Status: ALL

Process Owner(s): EMPLOYER,
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Project: Audit of the Benefit Setup Process (2012)

Report Date: 12/04/2012

Total Observations: 6

Open Observations: 1

Closed 5

Observation #1 - Manual FAS override

OPEN

Process Owner: Member Services

Due Date: 08/31/2022

Action Plan: Management agreed to the following recommendation: Subsequent changes made to FAS after the initial benefit setup process should require a supervisory approval prior to making an override in the system. Additionally, management should use a system-generated report from V3 that lists all manual overrides to identify all such changes made in the system. Management should review and sign off on each manual override on that report for propriety and accuracy to mitigate the risk of unauthorized or incorrect amounts being entered in the system.

IA Follow-Up: IA to confirm action plan has been implemented in Q3 2019 and to perform testing in Q3 2021.

Observation #3 - Benefit setup checklist

CLOSED

Process Owner: Member Services

Completion Date: 05/21/2019

Action Plan: A check list that contains all of the required forms and documents necessary for each type of benefit setup will be created and scanned into LibertyNET until we have fully implemented V3. We have configured several workflows in V3 which will act as an electronic check list to ensure that all required documents are not only received but verified and audited by supervisors.

IA Follow-Up: IA has verified the use of a workflow process in V3 in V3 benefit setup audits performed after V3 go-live in December 2014.

Observation #5 - Automation with V3 system

CLOSED

Process Owner: Member Services

Completion Date: 06/05/2019

Action Plan: Every attempt is being done to incorporate as many of the manual processes into V3 as possible so the application is automated.

IA Follow-Up: IA has verified the implementation of automated process in V3 that were previously manual within PensionGold. Processes related to reciprocity, service credit purchases, interest postings, domestic relations orders, and initial FAS calculations were tested.

Observation #7 - Update written procedures

CLOSED

Process Owner: Member Services

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Management Action Plan Status Re

Project(s): ALL
Mgmt. Status: ALL

Process Owner(s): EMPLOYER,
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Completion Date: 05/21/2019
Action Plan: Member Services has agreed to revise its written procedures to explicitly state the reviewer's practice of signing and dating the spreadsheet template to indicate approval of the FAS calculation. Management recently updated to include this recommendation. However, at the time of the audit it was pending final manager sign off.
IA Follow-Up: IA has verified the signature requirement process with benefit setup audits performed after the V3 go-live date in December 2014.

Observation #8 - Manual FAS supporting documentation

CLOSED

Process Owner: Member Services
Completion Date: 09/16/2021
Action Plan: Management agreed to the following recommendation: All manual overrides to data should be fully documented with the staff that made the change, date the change was made, prior amount, revised amount, and reason for the change with supervisory approval documented in V3 in accordance with the current method of maintaining supporting documentation for benefits calculation. Member Services personnel are required to document V3 via note for any member file that requires a manual override.
IA Follow-Up: IA to confirmed the FAS Review process contains steps to review the supporting documentation.

Observation #9 - FAS audit trail

CLOSED

Process Owner: Member Services
Completion Date: 04/27/2020
Action Plan: Management agreed to the following recommendation: We recommend that the new pension administration system (V3) include an audit trail within the system for manual override and other changes made to records. There should be a better audit trail in the new pension administration system to account for changes made in the system instead of relying only on records scanned into LibertyNET or similar imaging software for an explanation.
IA Follow-Up: IA confirmed an audit trail function exists in V3 noting the original and new FAS, change date and Changed by.

Project: Audit of OCERS' Practices and Procedures for the Recording and Reconciliation the Investments (2013)

Report Date: 02/18/2013
Total Observations: 6
Open Observations: 0
Closed: 6

Observation #1 - Automated journal voucher entries

CLOSED

Process Owner: Finance
Completion Date: 05/03/2019



Management Action Plan Status Re

Project(s): ALL
Mgmt. Status: ALL

Process Owner(s): EMPLOYER,
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Action Plan: Management agreed to the following recommendation: Finance should consider use of State Street's General Ledger Feed software or consider building a Microsoft Access database. We are in the process of working with State Street to implement an automated process for downloading the trial balances with a goal of completing this by year end. Manual JV preparation will continue until detailed research/analysis is successfully completed with regards to automation of the GL feed with State Street in 2013. Target Completion Date: December 31, 2013.

IA Follow-Up: IA verified that Finance is no longer manually entering State Street trial balance information, but uploading a State Street spreadsheet file into the monthly Investment Journal Entry worksheet.

Observation #2 - Update policy over manager statement reconciliations

CLOSED

Process Owner: Finance

Completion Date: 05/07/2019

Action Plan: Management agreed to the following recommendation: Finance should enforce timely due dates for when quarterly investment manager reconciliations are to be completed; the policy should be updated accordingly. Due date for the quarterly investment reconciliation between investment managers and State Street will be established to reflect 45-60 days after quarter-end. Policy will be updated to include the changes effective January 2013. Finance has prepared both the 1st quarter 2012 and 2nd quarter 2012 reconciliations and are pending review and approval by management. Target Completion Date: March 31, 2013.

IA Follow-Up: IA verified that policy requires a reconciliation after Investment Managers Reports are collected from emailed statements and working trial balances are received from the State Street website. Private investment statements are often not available after the 45-60 day period.

Observation #3 - Update Finance manual for manager statement reconciliations

CLOSED

Process Owner: Finance

Completion Date: 05/07/2019

Action Plan: Management agreed to the following recommendation: Management should revise appropriate sections of the policy to reflect the current practice of performing quarterly, not monthly, reconciliations of investment manager statements and State Street trial balances.

IA Follow-Up: IA verified that policy requires a reconciliation after Investment Managers Reports are collected from emailed statements and working trial balances are received from the State Street website. Private investment statements are often not available after the 45-60 day period.

Observation #4 - Finance manager signoff for reconciliations

CLOSED

Process Owner: Finance

Completion Date: 05/03/2019

Action Plan: Management agreed to the following recommendation: Finance should revise its policy to require management signoff of the reconciliation of the general ledger to evidence review and approval. Furthermore, Finance should perform these reconciliations on a monthly basis to help ensure that reconciling items are resolved in a timely manner. The Trial Balance Reconciliation process and policy will be revised to include Management signoff requirement. The revised policy will also show that the reconciliation process will be performed on a monthly basis in 2013 and the worksheet will reflect the names of preparer, approver, and approval date. Target Completion Date: March 31, 2013.

IA Follow-Up: IA verified that internal policy now requires a management signoff review of the monthly trial balance reconciliation for investment accounts.

Observation #5 - Manager review of CIO Investment report reconciliation

CLOSED



Management Action Plan Status Re

Project(s): ALL
Mgmt. Status: ALL

Process Owner(s): EMPLOYER,
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Process Owner: Finance
Completion Date: 05/07/2019
Action Plan: Management agreed to the following recommendation: A supervisor should review and approve reconciliations of the CIO Investment Report. As evidence of review, the supervisor should sign and date the reconciliations, and note any discrepancies found. Finance policies and procedures should be updated accordingly. Current policy will be updated to include management signoff of the reconciliation. The reconciliation worksheet will reflect the names of preparer, approver, and approval date. Target Completion Date: December 31, 2012.
IA Follow-Up: IA verified that policy requires management signoff on the reconciliation with the worksheet reflecting the names of the preparer, approver and approval date.

Observation #6 - State Street bank - customer services issues

CLOSED

Process Owner: Finance
Completion Date: 05/03/2019
Action Plan: We believe management has addressed customer service issues with State Street custodian bank. We recommend that OCERS staff continue to monitor State Street's compliance with the action plan.
IA Follow-Up: OCERS staff continues to monitor and address any issues/discrepancies in State Street reporting. This occurs through emails and periodic meetings between OCERS investments and finance staff and State Street staff. Annually, the review of the custodial relationship with State Street is presented to the Investment Committee.

Project: Review of OCERS' Derivatives Investments (2014)
Report Date: 07/10/2014
Total Observations: 3
Open Observations: 0
Closed: 3

Observation #1 - OCERS is not in compliance with the Investment Policy Statement regarding the speculative use of derivatives.

CLOSED

Process Owner: Investments
Completion Date: 09/25/2019
Action Plan: OCERS should either follow the current investment policy and discontinue the practice of using derivatives for speculative purposes, or amend the Investment Policy Statement to follow the current practice. Staff has clarified the language on the derivatives within the Investment Policy Statement and the Investment Committee approved the changes at the 6/25/14 meeting.
IA Follow-Up: Internal Audit reviewed the minutes of the June 25, 2014 Investment Committee meeting and the updated Investment Policy Statement

Observation #2 - Annual reporting of derivatives to the Investment Committee

CLOSED

Process Owner: Investments



Management Action Plan Status Re

Project(s): ALL
Mgmt. Status: ALL

Process Owner(s): EMPLOYER,
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Completion Date: 08/10/2020

Action Plan: Currently, the quarterly Derivatives Report provides information relating to the separately managed accounts. The commingled fund investments do not provide similar level of transparency, therefore the quarterly report does not include commingled funds data.
The Investments staff has created a template (undergoing internal review) which could be used as a tool to receive information relating to derivatives directly from the investment managers. Such a disclosure and declaration is outside the norm, so it is difficult to predict how many or if the investment managers will comply. As soon as the template is finalized, staff will send it out to gather responses from the various investment managers. Our current expectation is that OCERS will not be able to impose periodic reporting requirements of our own on certain managers, and that in some if not most cases, we will be compelled to accept data as it can be provided by them on their annual cycles. Efforts will be made to achieve more-frequent reporting, but at this time there can be no assurance that such efforts will be successful.
The Investment Policy Statement, approved at the 6/25/14 Investment Committee meeting, was amended in part to include the following: "The compliance report for separate account managers will be reviewed with the Investment Committee on a quarterly basis. The CIO shall report to the Committee annually on the staff and consultants' surveillance of diversification and risk controls associated with [derivatives]."

IA Follow-Up: Internal Audit reviewed the 2019 Security Report reviewed and approved by the Investment Department.
The Investment Team provided an update to the action plan. The quarterly Derivatives Report had been discontinued for a number of years and is no longer reported to the Investment Committee. For the action plan, Investments reviews the derivative information in preparation of the CAFR, which is presented to the Audit Committee. Internal Audit to follow-up during the Investment teams review of the derivative information as part of the 2019 CAFR preparation.
Updated 8/10/20
Investments provided the "Derivatives List - 2019.xls" file which includes the securities inventory that Investments provides to Finance with the investment types and leveling of assets.

Observation #3 - Counterparty risk reporting

CLOSED

Process Owner: Investments

Completion Date: 05/21/2020

Action Plan: Management has agreed to the recommendation: Counterparty risk, the risk that a financial institution will not honor the terms of a derivative contract due to poor financial health, is a key risk for derivatives.
The Board is not getting complete information on the counterparty risks of all investment managers. Because many of OCERS' investment managers use the same institutions as counterparties, if a counterparty fails, it would affect several investment managers in the OCERS' portfolio simultaneously. Therefore, reporting on total counterparty risk to OCERS would be useful for accessing a concentration of risk with a single counterparty.
OCERS' custodian bank, State Street, provides data on investment holdings and counterparty holdings that can be used to create a compilation of counterparties in the OCERS portfolio, though this will only include the OCERS' separately managed accounts.
OCERS should request that State Street on a quarterly basis provide a report listing derivatives holdings by counterparty with amounts of currency forward contracts, swaps, and total fair value.
The report should also include a credit rating agency's rating.
This report should be included with the derivatives report to the Investment Committee.

IA Follow-Up: Internal Audit reviewed the 2019 Counterparty Risk Report reviewed and signed by the CIO.



Management Action Plan Status Re

Project(s): ALL
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Project: Audit of OCERS' Due Diligence Process (2015)

Report Date: 08/06/2015

Total Observations: 5
Open Observations: 0
Closed: 5

Observation #1 - No Due Diligence Policy

CLOSED

Process Owner: Investments

Completion Date: 01/07/2021

Action Plan: Management has agreed to the recommendation: The CIO and his staff should create written procedures that specifically document the steps necessary to conduct adequate due diligence. We concur with the recommendation that written procedures are desirable, and staff is working on the development of a document that would fulfill this objective.

IA Follow-Up: The CIO and Investment Team developed Investment due diligence procedural documents including the Contract Due Diligence Checklist Procedure document and the Contract Due Diligence Checklist document.

Observation #2 - Operational Due Diligence

CLOSED

Process Owner: Investments

Completion Date: 02/13/2020

Action Plan: Management has agreed to the recommendation: For non-traditional pension fund managers that have not undergone an operational due diligence review from the OCERS' investment consultants, OCERS should consider the following on a case-by-case basis or at the CIO's discretion. A criteria or threshold (e.g., a dollar amount of an investment) should be set by the CIO to trigger when such a review will occur. Management agrees that a "deeper dive" could be appropriate for certain non-traditional managers, but only if a majority of the Board considers such measures to be necessary, cost-beneficial or justifiable on a risk-vs-cost basis. Cost-sharing strategies and outsourcing-versus-internal capacity should be explored and considered, along with a prioritization protocol.

IA Follow-Up: In discussions with CIO, and review of the September Investment Committee meeting minutes, confirmed OCERS no longer requires the use of a special operational due diligence consultant. The consultant was not used or required when initially contracts.

Observation #3 - Due diligence for RFP managers

CLOSED

Process Owner: Investments

Completion Date: 02/13/2020

Action Plan: Management has agreed to the recommendation: For RFP-sourced managers, there should be consistent narrative due diligence reporting provided to the Investment Committee. Investments should consider using a checklist to make sure all documents are included for the Investment Committee to consider. We agree that our written procedures and future practices should include routine reporting of internal due diligence when the RFP channel is deployed for manager selection. The Director of Investment Operations has already included this step in the working draft of written procedures we are formulating and refining.

IA Follow-Up: Due Diligence would apply to all managers, not just under an RFP process. Internal Audit observed due diligence process during Investment Consulting engagement.

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Project(s): ALL
Mgmt. Status: ALL

Process Owner(s): EMPLOYER,
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Observation #4 - Manager RFP standardized questioning

CLOSED

Process Owner: Investments

Completion Date: 01/07/2021

Action Plan: Management has agreed to the recommendation: Future RFP questionnaires should include interrogatories regarding a manager's operational infrastructure and negative findings disclosed from their annual external audit. We agree that future RFPs should include standard (first-stage or second stage) provisions and questions that are relatively uniform regarding due diligence, operations, and related legal, regulatory and compliance risks. The cited incident was an oversight that need not recur. Written procedures and a process to review those routinely will be helpful to assure consistency.

IA Follow-Up: Investments included in the Contract Due Diligence Checklist document and the Compliance Report document steps to validate operational infrastructure of money managers.

Observation #5 - Consultant due diligence documentation

CLOSED

Process Owner: Investments

Completion Date: 02/13/2020

Action Plan: Management has agreed to the recommendation: As part of its due diligence process, OCERS' Investments staff should obtain and review NEPC's Investment Due Diligence Research Report for all managers NEPC recommends to OCERS. We agree that consultant documentation or pertinent summaries of their due diligence should routinely and consistently be included in Committee materials when managers are presented, or subsequently as a validating consent agenda item if their work follows a provisional approval.

IA Follow-Up: As part of the investment consulting engagement, Internal Audit was able to observe the due diligence process which included reviewing the materials from the investment consultants.

Project: Audit of OCERS' Private Equity Managers Abbott Capital and Pantheon (2016)

Report Date: 03/21/2016

Total Observations: 4

Open Observations: 0

Closed: 4

Observation #1 - Estimated management fees

CLOSED

Process Owner: Finance

Completion Date: 04/29/2019

Action Plan: The Investments Division staff will coordinate with Finance to review the management fees for the 40 funds with OCERS' four private equity managers on a sampling or rotation basis. Finance concurs with this recommendation and will compare expected management fees provided by Investments to actual fees disclosed in the private equity managers' quarterly financial statements.

IA Follow-Up: Management modified the approach with approval from the Board to use the annual Investment Fee Report prepared in accordance with the Board's Investment Fee Policy as the method by which OCERS' investment management costs are and will be tracked, reported and managed.



Management Action Plan Status Re

Project(s): ALL
Mgmt. Status: ALL

Process Owner(s): EMPLOYER,
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Observation #2 - State Street reporting of manager fees

CLOSED

Process Owner: Finance

Completion Date: 05/03/2019

Action Plan: Management agreed to the following recommendation: OCERS' Finance should consult with State Street to ensure that State Street includes the management fees for Abbott Capital and Pantheon in the information for monthly journal entries provided to OCERS, since these fees are disclosed on the managers' quarterly investment statements. OCERS is currently working with State Street on the consistency of their reporting and directing them to capture all non-cash investment management fees in their custodial reports.

IA Follow-Up: IA verified that Finance is reconciling fees noted on the manager statements are being captured in State Street journal entries.

Observation #3 - CAFR fee disclosures

CLOSED

Process Owner: Finance

Completion Date: 04/29/2019

Action Plan: Management agreed to the following recommendation: OCERS' financial management should consider stating that the "Schedule of Investment Expenses" disclosure does not include underlying fund management fees and performance fees which are netted with investment returns. Finance will consider adding this disclosure in OCERS' 2015 CAFR as part of an overall review of all investment-related disclosures with its external auditors, Macias Gini & O'Connell LLP, and ensure that any changes in the disclosures are in compliance with GASB.

IA Follow-Up: Disclosure has been added to the CAFR and confirmed by IA.

Observation #4 - Consideration of ILPA best practices

CLOSED

Process Owner: Investments

Completion Date: 01/25/2021

Action Plan: OCERS should implement Institute of Limited Partners Association (ILPA) best practices in LPAs with direct investment private equity funds if OCERS goes into direct private equity program. In considering whether OCERS should adopt a direct private equity program, OCERS' Investments management should consider the cost of implementing the ILPA best practices. OCERS investment staff will first work with our private equity fund of funds managers to monitor their use of ILPA guidelines and best practices, as we further our own internal education about these evolving standards.

IA Follow-Up: Investment Team developed a guide to track and assess the key legal and ILPA-related terms OCERS negotiates through the private markets investment manager contracting processes.



Management Action Plan Status Re

Project(s): ALL
Mgmt. Status: ALL

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Project: Audit of OCERS' Death Match Process (2016)

Report Date: 06/24/2016

Total Observations: 7

Open Observations: 1

Closed: 6

Observation #4 - Death data vendors

OPEN

Process Owner: Member Services

Due Date: 12/30/2022

Action Plan: Management agreed to the following recommendation: OCERS management should consider using only death audit vendors that hire external auditors to review its client data security controls. OCERS should require that death audit vendors provide copies of the audit report and the audit results to OCERS on an annual basis for review. OCERS management should consider using the RFP process to compare the services of death audit vendors and obituary review service vendors. Quality of services, price, and data security controls of vendors should be compared.

IA Follow-Up: Management to discuss the approach for obtaining and reviewing vendor security report on an entity wide approach, with a completion date of 12/31/2021.

Observation #1 - Overpayment to deceased members

CLOSED

Process Owner: Member Services

Completion Date: 12/21/2021

Action Plan: The deceased members identified by Internal Audit will be processed immediately according to the specific circumstances of the accounts. Overpayments will be processed according to policy and beneficiaries will be contacted regarding lump sum payment options for refunds. Management will investigate possible options for instituting a multi-step review process to ensure entries are made into V3 or a quarterly/annually comparison of the database with the information from a death match service provider.

IA Follow-Up: Member Services has repaid or wrote off \$421,402 of the \$990,694 of the 24 deferred members. Additionally, Member Services has recovered \$16,008 of the \$20,620 from the four deceased payees. Process is in place to review updates from death data vendor. Member Services will provide updates to the remaining overpayments bi-annually to Internal Audit, starting June 2022

Observation #2 - Manual query of V3 until new report is created

CLOSED

Process Owner: Member Services

Completion Date: 12/21/2021

Action Plan: The overpayment to the specific member and DRO payee identified by Internal Audit will be dealt with immediately according to current policy. As V3 is currently configured the system will prevent future overpayments from occurring by suspending the benefit once a death date is entered. The items on the overpayment log need to be reconciled with V3 as a post-go live project but it was envisioned that V3 will replace the need for a manual spreadsheet outside of the system. A query or report may be needed during the transition period.

IA Follow-Up: Query has been implemented. Recoupment of overpayment to be reviewed biannually with Internal Audit. The Benefit Recoupment Report has been created, refer to Benefit Recoupment Report 2021.pdf

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Management Action Plan Status Re

Project(s): ALL
Mgmt. Status: ALL

Process Owner(s): EMPLOYER,
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Observation #3 - Certification letters

CLOSED

Process Owner: Member Services

Completion Date: 04/07/2021

Action Plan: Management agreed to the following recommendation: OCERS' management should consider sending a certification letter to payees over a selected age to confirm the status of the payee. Management should consider stopping benefit payments if OCERS does not receive a response after a reasonable number of attempts in order to incentivize the payee to return the letter. OCERS' management should also consider the costs/benefits of hiring a third party to perform random physical alive and well checks with payees that meet a given profile. However clear communication will need to be developed as the payees within this demographic may be the hardest to reach. In addition, the implications to payee's medical insurance needs to be considered any time a benefit is suspended.

IA Follow-Up: After Member Services management discussed formulating a formal policy addressing when such certification letters should be sent and to whom after the result of a cost benefit analysis to be performed. Certification letters are sent to all international payees. Member Services relies on the death match file for updates to domestic members.

Observation #5 - Member banking information within V3

CLOSED

Process Owner: Member Services

Completion Date: 09/23/2021

Action Plan: Management agreed to the following recommendation: To reduce the possibility of fraudulently diverting benefit payments for deceased members, OCERS should implement automated checks and balances within the V3 system to ensure that no one employee can unilaterally change a payee's banking information without supervisory approval. The resulting change to V3 may require an additional change order to reconfigure the V3 system. However, the headline risk to OCERS outweighs the financial cost of making such a change.

IA Follow-Up: Workflow approvals were reviewed by Internal Audit. An audit in member banking to be proposed as a future audit.

Observation #6 - Pro-rating final payment for deceased members

CLOSED

Process Owner: Member Services

Completion Date: 02/25/2021

Action Plan: OCERS' management should consider the costs versus benefits of prorating a deceased member's final monthly benefit payment based upon the actual date of death versus making a full payment. V3 is not configured to calculate a prorated final benefit payment and a prorated initial continuance benefit payment effective the day after death for the remainder of the month. OCERS would have to pay additional costs to have Vitech reconfigure V3 and for OCERS' employees and consultants to test the changes. The estimated cost of reconfiguring and testing V3 to prorate the final benefit payment, the initial continuance payment, and payroll deductions is estimated by Vitech at \$144,000. In addition, management estimates that testing of the system changes would need to be done by staff or consultants at an estimated cost of \$150,000. A prorated final benefit policy would also result in more overpayments for Member Services to pursue for collection since the benefit payment is paid on the first of the month. Under current policy, deaths reported to OCERS in the month following death allows enough time for Member Services to terminate the benefit with no need to prorate. Under a prorated policy, it would be impossible for Member Services to prorate the final payment on the 1st of the month if the death was reported in the month after death. Member Services would possibly need to cross train staff in collection efforts to accommodate such an increase in collection efforts.

Management Response

Management considered the costs versus benefits of adopting a proration of the final benefit payment policy, but determined to continue the current practice of paying in full the final month's benefit. Prorating the member's final payment and survivor continuance first payment introduces additional complexity to the administration of the system and would require additional staff in Member Services and possibly Finance, in addition to the V3 configuration changes. Retiree payroll is typically

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IA Follow-Up: Management considered the costs versus benefits of adopting a proration of the final benefit payment policy, but determined to continue the current practice of paying in full the final month's benefit.

Observation #7 - Debt collection versus debt forgiveness

CLOSED

Process Owner: Member Services

Completion Date: 04/17/2020

Action Plan: Management agreed to the following recommendation: For overpayments in which Member Services has exhausted internal collection efforts, Member Services should inquire of the CEO and/or Board to forgive or partially forgive overpayments to these deceased payees or possibly make use of a collections agency for additional collection efforts.

IA Follow-Up: OCERS' Board Policy Write Off Policy now provides guidelines regarding when OCERS is permitted to forgo collection of amounts overpaid by or owing to OCERS, and when OCERS will not be required to make corrective distributions to OCERS members or their beneficiaries.

Project: Audit of V3 Benefit Setup Process (2016)

Report Date: 07/21/2016

Total Observations: 2

Open Observations: 0

Closed: 2

Observation #1 - Use of 2,088 hours for benefit calculation

CLOSED

Process Owner: Member Services

Completion Date: 04/01/2020

Action Plan: Management will follow up with staff regarding the applicability of 2,088 to all retiring members and will review all benefits established in V3 to ensure the appropriate salary was used regardless of status. The part-time member's benefit identified by Internal Audit as being incorrect will be recalculated to reflect the salary associated to 2,088 hours.

IA Follow-Up: IA reviewed the FAS recalculations performed by Member Services.

Observation #2 - V3 workflow process

CLOSED

Process Owner: Member Services

Completion Date: 04/02/2020

Action Plan: The workflow module in V3 was an area that contained defects when we went live with the new system which prevented effective use. The majority of the defects have been addressed and staff is utilizing the workflows as part of their daily operations. However, we have found that a workflow can be completed without all of the steps being marked individually and as a result additional modifications to the overall configuration are being discussed. Management will work with staff to ensure that proper use of the workflow is being followed for all benefit setups. In addition, we will review the workflow steps as currently configured and make enhancements as needed to ensure all critical steps in the process are appropriated captured.

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IA Follow-Up: IA confirmed worksteps are completed and V3 enhancements were implemented.

Project: Audit of OCERS' Service Credit Purchase Process (2016)

Report Date: 11/26/2016
Total Observations: 2
Open Observations: 0
Closed: 2

Observation #1 - Work in Process reporting

CLOSED

Process Owner: Member Services
Completion Date: 04/07/2021
Action Plan: OCERS' management agrees to initiate discussions with Vitech for best cost-benefit solutions to building work-in-process reporting to track the status of buybacks throughout its business processes to provide additional management oversight of staffing and resources; track compliance with business goals; and improve customer service response times to members.
IA Follow-Up: IA has verified that OCERS has implemented a work-in-process tracking database within SharePoint.

Observation #2 - Reconfigure V3 data entry sheet

CLOSED

Process Owner: Member Services
Completion Date: 06/04/2019
Action Plan: Management agreed to investigate the costs versus benefits of reconfiguring V3's SCP datasheet for faster data entry.
IA Follow-Up: IA verified that OCERS has implemented an automated data entry process for SCP calculations.

Project: Audit of OCERS' Bank Wire and ACH Transfer Process (2016)

Report Date: 11/30/2016
Total Observations: 5
Open Observations: 0
Closed: 5

Observation #1 - Finance review of new manager fundings

CLOSED



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Process Owner: Finance

Completion Date: 04/23/2019

Action Plan: Management agreed to the following recommendation: Before sending a written wire request to State Street to fund a new manager or rebalance the investment portfolio, the Investments Divisions should also obtain approval from authorized initiators within the Finance Division. The Finance Division should review the wire transfer request letter prepared by the Investments Division against the money manager's wire instructions or funding agreement. Management concurs that the Finance Department should review wire transfer request letters prepared by the Investment Department and compare against the investment manager's wire instructions or funding agreement for transactions related to initial funding of investments and portfolio rebalancing transfers.

IA Follow-Up: Internal Audit confirmed Finance is following proposed audit report resolution response as noted via email with appropriate attachments and inclusion of both Finance and Investments in confirmation email.

Observation #2 - Verification call backs on all wire transfer amounts

CLOSED

Process Owner: Finance

Completion Date: 05/03/2019

Action Plan: Management agreed to the following recommendation: Finance Division should instruct State Street to telephone OCERS' authorized verifiers to verify wire transfer request letters for amounts under \$100,000. Management concurs that all wires should be verified regardless of amount. State Street has a standard limit where call backs are not completed on wires under \$100,000. OCERS' Client Service Representative at State Street is looking into whether the limit can be removed and call backs placed on all wires.

IA Follow-Up: IA verified that under the new eCFM (State Street's web-based wire transfer system) that transfer amounts under \$100,000 require dual approval.

Observation #3 - Timely review of bank account reconciliations

CLOSED

Process Owner: Finance

Completion Date: 05/03/2019

Action Plan: Management agreed to the following recommendation: In addition to the daily reconciliations of online bank activity, the Finance Division should perform monthly bank reconciliations ideally within 30 days after month-end. Management concurs that bank reconciliations should be performed and reviewed on a timely basis.

IA Follow-Up: IA verified that the monthly Wells Fargo bank reconciliation is being performed in a timely manner.

Observation #4 - System limits for wire transfer amount authorizations

CLOSED

Process Owner: Finance

Completion Date: 04/23/2019

Action Plan: Management agreed to the following recommendation: Management should consider decreasing the cumulative dollar limit for daily wire transfers within CEO Portal® to appropriate business levels. Current monthly wire transfer activity is approximately \$5.2 million. Management concurs that the cumulative dollar limit for daily wire transfers can be reduced from its current limit of \$20 million to \$6 million.

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IA Follow-Up: Cumulative daily dollar limit for wire transfers has been reduced from \$20 million to \$6 million, and has been adjusted to \$8 million based on current activity.

Observation #5 - Encryption of payroll file

CLOSED

Process Owner: Finance

Completion Date: 05/03/2019

Action Plan: Management agreed to the following recommendation: Management should consider encrypting the ACH file before uploading to Wells Fargo's CEO Portal® in order to add another layer of protection over payees' confidential banking information. Encrypted files intercepted by fraudsters are unreadable.

IA Follow-Up: IA verified that the monthly payroll file is encrypted before it is sent to Wells Fargo bank.

Project: Audit of City of San Juan Capistrano Payroll Transmittals (2017)

Report Date: 03/22/2017

Total Observations: 4

Open Observations: 0

Closed: 4

Observation #1 - Manual transmittal file adjustments

CLOSED

Process Owner: Employer

Completion Date: 08/11/2020

Action Plan: Management agreed to the following recommendation: San Juan Capistrano will submit manual payroll adjustments into V3 that contain the payroll records required by OCERS for every subsequent pay period until year-end.

IA Follow-Up: IA noted that SJC has submitted manual payroll adjustments into V3 required by OCERS.

Observation #2 - Contribution basis dates

CLOSED

Process Owner: Employer

Completion Date: 04/27/2020

Action Plan: San Juan Capistrano's V3 transmittal file should reflect the correct reciprocal start date or the correct enrollment date with OCERS in the transmittal file field labeled "Reported Contribution Basis Date" in order to prevent these payroll exceptions from occurring again in V3. San Juan Capistrano concurs with this recommendation, which has been addressed based on information provided by OCERS' Member Services to SJC's Payroll Accountant.

IA Follow-Up: IA examined a recent V3 payroll transmittal exception report for PP#2, 2020 and noted there were no exceptions related to reported contribution basis dates.



Management Action Plan Status Re

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Observation #3 - Earnable salary records

CLOSED

Process Owner: Employer

Completion Date: 08/11/2020

Action Plan: San Juan Capistrano will submit manual payroll adjustments into V3 that contain earnable salary payroll records required by OCERS during each pay period that the employee is out on leave of absence.

IA Follow-Up: IA noted that SJC has submitted manual payroll adjustments for employees Away On Leave into V3, as required by OCERS.

Observation #4 - Incorrect age of entry

CLOSED

Process Owner: Member Services

Completion Date: 05/21/2019

Action Plan: Member Services will notify the member that there was an error in the contribution basis date used to collect contributions since their date of entry. Member Services will update V3 accordingly and finalize the calculation of contributions due from the member plus interest. OCERS staff will offer the member a payment plan pursuant to our standard process and work with SJC to establish the collection via payroll deductions from the member's biweekly paycheck.

IA Follow-Up: IA verified that the Member Services communicated the age of entry error to the member and that the member repaid undercollected contributions via payroll adjustments.

Project: Audit of OCERS' Reciprocity Process (2017)

Report Date: 08/02/2017

Total Observations: 3

Open Observations: 0

Closed 3

Observation #1 - Member educational efforts

CLOSED

Process Owner: Member Services

Completion Date: 05/21/2019

Action Plan: Consideration will be given to the following: OCERS should take additional steps to educate members of the benefits of reciprocity and the importance of timely notifying OCERS of previous public service. OCERS' welcome letters to new members could also include existing pamphlets describing the benefits of reciprocity. Furthermore, OCERS should inquire with the County if it would allow OCERS to present the benefits of reciprocity during the County's lunch time seminars available to County staff. In addition, staff should use the OCERS' At Your Service newsletter, the County Connection magazine, and other sources of communications with members to publicize the need for members to notify OCERS early about their eligibility for reciprocity. Member Services will work with Legal on the following: OCERS should consider recognizing a member's reciprocity only on a go-forward basis from the date of the member's reciprocity request, after confirming eligibility with the reciprocal system.

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IA Follow-Up: IA verified that quarterly newsletters to OCERS membership discussed the benefits of establishing reciprocity with other systems as well as the steps necessary to establish reciprocity. IA verified that OCERS has put in place a self-certification process to recognize reciprocity on a go-forward basis pending verification with the reciprocal system.

Observation #2 - Calculation of OCFA reciprocity refunds

CLOSED

Process Owner: Member Services

Completion Date: 06/05/2019

Action Plan: Management agreed to the following recommendation: Member Services staff should be trained, with the assistance of OCFA payroll personnel, in how OCFA calculates reciprocity refunds so that Member Services can add its own secondary review process over OCFA reciprocity refunds. Management has been in contact with the payroll team at OCFA and we have taken steps to reinstate the review process.

IA Follow-Up: IA verified that OCERS Member Services is now calculating OCFA's reciprocity refund calculations. The calculations are reviewed by management.

Observation #3 - Write off

CLOSED

Process Owner: Member Services

Completion Date: 06/05/2019

Action Plan: Management agreed to the following recommendation: Member Services should write off the \$36 due to immateriality or attempt to recover the \$36 overpayment from the member.

IA Follow-Up: IA verified that Member Services has written off the amount as per OCERS Write-Off policy.

Project: Audit of Orange County Fire Authority (2018)

Report Date: 10/23/2018

Total Observations: 8

Open Observations: 1

Closed: 7

Observation #6 - V3 contribution rate configurations SOD

OPEN

Process Owner: Information Technology

Due Date: 06/30/2022

Action Plan: Management agreed to the following recommendation: OCERS' management should re-assign the duties of configuring updated rates in V3 from OCERS' Director of IT to the appropriate personnel for cross-training, process documentation, and backup purposes. The revised process will encompass multiple departments, and will segregate duties related to preparing the rate schedules, data input into V3 and verification/audit of contribution rates.

IA Follow-Up: Internal Audit has spoken with management about action plan and will verify when duties are transitioned. ETA end of June 2022.



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Observation #1 - Contributions - Vacation Excess Pay

CLOSED

Process Owner: Member Services

Completion Date: 04/02/2019

Action Plan: Management agreed to the following recommendation: On a go-forward basis, OCERS should now require that OCFA and its Legacy employees pay employer and employee contributions on the "Vacation Excess" pensionable pay item on a bi-weekly basis. This would also require OCERS to reconfigure the "Vacation Excess" pay item in V3 to expect bi-weekly contributions from OCFA via the bi-weekly payroll transmittal process.
OCERS management agrees that any pensionable pay item should be reported biweekly and subject to employer and employee contributions. This would include "Vacation Excess" for Legacy members employed at OCFA. OCERS is in the process of reviewing the pay of all Plan Sponsors so that OCERS' management can ensure accurate reporting on a biweekly basis as well as consistency across the organization.

IA Follow-Up: Internal Audit confirmed OCERS management sent a memo to OCFA on the Vacation Excess contributions and that V3 was configured to address the bi-weekly contributions.
IA confirmed that OCFA and Legacy OCFA employees are paying contributions directly on VE (Vacation Excess) Pay.

Observation #2 - Contributions - On Call Pay

CLOSED

Process Owner: Member Services

Completion Date: 04/02/2019

Action Plan: Management agreed to the following recommendation: On a go-forward basis, OCERS should now require that OCFA report "On Call" pay to Legacy members as a pensionable pay item in its automated bi-weekly payroll transmittals and that OCFA and its employees pay both employer and Legacy employee contributions on a bi-weekly basis.
OCERS management agrees that any pensionable pay item should be reported biweekly and subject to employer and employee contributions. This would include "On Call" pay for Legacy members employed at OCFA. OCERS is in the process of reviewing the pay of all Plan Sponsors so that OCERS' management can ensure accurate reporting on a biweekly basis as well as consistency across the organization.

IA Follow-Up: Internal Audit confirmed OCERS management sent a memo to OCFA on the On Call contributions.
IA confirmed that both OCFA and Legacy OCFA employees are paying contributions directly on (On Call) Pay.

Observation #3 - Contribution Discrepancy Tracking Report

CLOSED

Process Owner: Information Technology

Completion Date: 04/02/2019

Action Plan: In June 2018, OCERS incorporated the necessary changes to the V3 "Contribution Discrepancy Tracking Report" within a system enhancement to V3. The cost to incorporate these changes was approximately \$7,800.

IA Follow-Up: 1. IA confirmed that modifications to the report were made, tested, and put into production.
2. IA obtained user testing documentation indicating that the modifications were made, tested, approved and put into production. IT also pulled a recent report with these modifications incorporated.

Observation #4 - OCFA's MOU for employer paid pickups of Legacy employee contributions does not reflect actual payroll processes.

CLOSED



Management Action Plan Status Re

Project(s): ALL
Mgmt. Status: ALL

Process Owner(s): EMPLOYER, EXECUTIVE, FINANCE.

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Process Owner: Employer
Completion Date: 04/02/2019
Action Plan: OCFA agrees that this needs to be corrected, but not by a side letter. Effective pay period 21 (pay date 10/19/18) OCFA management corrected the OCFA payroll interface to the OCERS' V3 system to be consistent with the Firefighter MOU. Per CERL 31581.2 the employer paid pickup of employee contributions are to be considered vested with the employee.
IA Follow-Up: Internal audit verified that OCFA employer paid pickups of employee contributions are properly classified as § 31581.2 pickups on the transmittal files.

Observation #5 - Transition to OCFA Payroll Manager

CLOSED

Process Owner: Employer
Completion Date: 04/02/2019
Action Plan: As discussed and agreed to by OCERS Internal Auditor, this is not reflective of an internal control weakness for OCFA. The original intent of having both OCFA and OCERS staff maintain the spreadsheets was to prevent the errors that would occur due to either rounding differences or applying actuarial discounts differently. OCFA staff will take over the maintenance of the spreadsheets from OCERS Director of Technology. OCERS would need to ensure that the OCFA rates reflected in the rate spreadsheets provided by OCFA staff to OCERS are the same rates as those entered into the V3 system. The above transition from OCERS to OCFA took place beginning with Pay Period #14 in 2018.
IA Follow-Up: Internal audit confirmed that maintenance of the spreadsheets has transitioned to OCFA's payroll manager.

Project: Audit of Orange County Superior Court Payroll Transmittal (2018)
Report Date: 11/08/2018
Total Observations: 6
Open Observations: 0
Closed: 6

Observation #1 - CRR Pay Certification

CLOSED

Process Owner: Employer
Completion Date: 04/03/2019
Action Plan: Superior Court will implement a process in October 2018 by which Court Reporters receiving CRR pay must provide proof of active certification (such as proof of training transcripts over a three year period) within 90 days or have the CRR pay removed. Record of this will be placed in the employee's electronic personnel file. Additionally, a reminder in the Court's training system will be flagged on these employees to check for certification every 3 years.
IA Follow-Up: IA confirmed a notification had been distributed noting the requirements for CRR pay and CRR documentation for court reporters has been recorded.

Observation #2 - QRR Pay Certification

CLOSED

Process Owner: Employer



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Process Owner(s): EMPLOYER,
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Completion Date: 04/03/2019
Action Plan: Superior Court will implement annually signed attestations beginning October 2018. Employees currently receiving QRR pay will need to complete the annual 45 day attestation within 90 days of the announcement to maintain the QRR pay. If no attestation is received, QRR pay will be removed for that employee. The Court will verify that at least 45 days of realtime court reporting services have been worked by the employee over the course of the last year.
IA Follow-Up: IA confirmed a notification had been distributed noting the requirements for QRR pay and QRR documentation for court reporters has been recorded

Observation #3 - Superior Court does not monitor independent contractor court reporters who are OCERS' retirees for compliance with CERL and PEPRA 960 hour rule limit.

CLOSED

Process Owner: Employer
Completion Date: 04/10/2019
Action Plan: Superior Court will monitor hours worked for all retired independent contractor court reporters to ensure they do not work more than 960 hours in a fiscal year. A new report has been established through Superior Court's RITS tracking system and will be monitored monthly. Current retired independent contractors who have already worked more than 960 hours in the current fiscal year will not work hours until the next fiscal year.
IA Follow-Up: IA confirmed Superior Court is monitoring the hourly limit for retired members and the retired members have not exceeded 960 hours.

Observation #4 - Superior Court's HR Department does not have policies and procedures in place to determine if the independent contractor status for its independent contractors complies with IRS rules

CLOSED

Process Owner: Employer
Completion Date: 01/05/2022
Action Plan: Superior Court to review independent contractors working for court reporting services, court language services and court technology to determine if their independent contractor status complies with IRS rules defined for independent contractors.
IA Follow-Up: Superior Court no longer use independent contractors as court reporters. New employee classification/class spec for "Assignment Court Reporter" was created.

Observation #5 - Employees On-Leave Status

CLOSED

Process Owner: Employer
Completion Date: 04/23/2019
Action Plan: Orange County Superior Court currently uses the CAPS+ system that is administered by Orange County Auditor Controller. The current CAPS+ system has known limitations for employees in an "O" (unpaid leave) status. These employees are not included on the regular transmittal file to OCERS and thus no earnable record is generated. They do appear on the missing member report from OCERS Auditor Controller is working on a long-term solution for "O" status employees to still appear on the OCERS transmittal file. There is no current timeline for implementation. However, in the meantime, Superior Court's human resources staff will create updated employment records indicating a "Leave of Absence" in V3 for the above employees. Also, on a go-forward basis Superior Court's human resources staff will perform the same step in V3 for each employee who becomes classified with the above "O" status in CAPS+. This will allow OCERS personnel to more easily identify the reason for gaps in earnable salary records until the point in time when Auditor-Controller can correct the above CAPS+ limitations.

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IA Follow-Up: Internal Audit and management agreed that currently existing controls are sufficient to address the risk of missing pay periods. Internal Audit verified in V3 the automated messages that help the retirement specialist identify potential missing pay periods when retiring a member.

Observation #6 - Member Affidavit

CLOSED

Process Owner: Member Services

Completion Date: 04/03/2019

Action Plan: Beginning in 4th quarter 2018, OCERS' Member Services will run a recently updated V3 report ("Missing Member Affidavit" report) that flags any member account without the Member Affidavit document type. OCERS' Member Services' Payroll Transmittal Team will monitor this quarterly report and contact plan sponsors to request a completed Member Affidavit for any members flagged in the above report.

IA Follow-Up: Confirmed missing Member Affidavit was received and Member Services has scheduled the Missing Member Affidavit to be run on a monthly basis.

Project: Audit of Orange County Transportations Authority (2018)

Report Date: 11/12/2018

Total Observations: 1

Open Observations: 0

Closed: 1

Observation #1 - Contributions on PTO cashouts

CLOSED

Process Owner: Member Services

Completion Date: 04/02/2019

Action Plan: OCERS is in the process of reviewing and evaluating all pay items in order to categorize and document in policy each item of compensation earnable for Legacy members and pensionable compensation for PEPRA members. OCERS intends to present this policy to the OCERS Board for review and approval by 1st quarter of 2019.

The majority of OCERS' plan sponsors do not apply the contribution rates to cashouts (as does OCTA); instead, they rely on the actuarial cash out assumption (Load Factor) to pay for the actuarial cost of adding vacation pay and sick pay to a Legacy member's FAS calculation upon retirement. OCERS believes this is the better approach and will incorporate this in the new policy in order to have consistency among all plan sponsors. In addition to the new policy, by 1st quarter of 2019, OCERS intends to distribute a circular letter to all plan sponsors informing them of this approach to not collect contributions on these cashouts.

IA Follow-Up: Internal Audit confirmed the circular letters have been posted to the OCERS website.



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Project: Disability Payment Audit (2018)
Report Date: 01/28/2019
Total Observations: 1
Open Observations: 0
Closed: 1

Observation #1 - Disability payment calculation

CLOSED

Process Owner: Member Services

Completion Date: 01/05/2022

Action Plan: Member Services will be continuing to review with increased diligence or newly implementing to ensure accuracy of Disability benefits that are setup:

- Ensure that all disability benefits are peer audited (FAS calc) before benefit setup, including disability recalculations (from Service Retirement to SCD, Service Retirement to NSCD, NSCD to SCD)
- Verify selected data points on the "New Benefit Setup Validation Report" (which will contain a subset of 16 reports – expected to be ready by Q3 2019)
- Additional training will be provided to the RPS assigned to the disability department (this was a new position in 2018). These types of benefits are more specialized than regular retirement setups, and the Disability RPS will be trained to look for specific factors that affect the benefit, such as gaps in service, measuring period compression, manual calculations of FAS, recalculation issues.

IA Follow-Up: IA confirmed action plan has been implemented. A new Disability Process has been implemented along with the appropriate training.

Project: 1901 - Finance Contributions audit
Report Date: 05/16/2019
Total Observations: 1
Open Observations: 1
Closed: 0

Observation #1 - A formal periodic review of proper user access to OCERS applications and network is not documented by the appropriate members of the business.

OPEN

Process Owner: Information Technology

Due Date: 12/30/2022

Action Plan: Per IT Governance and Information Security action items to address Center for Internet Security (CIS) Control 16: Account Monitoring and Control, OCERS IT and the Executive management team are establishing the following:

1. Develop Account Management and Access Control Policies.
2. Create an annual User Account review process and supporting documentation.
3. Setup means for staff to review and enter data in SharePoint with associated workflow to complete and track reviews initiated with IT managed systems.

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IA Follow-Up: Access review is underway. Formal policies are currently in working draft as of February 2021 to be formalized by Dec 2022.

Project: 1943 2019 BCDR Audit
Report Date: 10/17/2019
Total Observations: 8
Open Observations: 2
Closed: 6

Observation #3 - 3. A formal process involving critical OCERS stakeholders is not in place to test the recovery of dependent IT applications.

OPEN

Process Owner: Information Technology
Due Date: 12/30/2022
Action Plan: OCERS IT will formalize and adopt a new Business Continuity and Disaster Recovery test plan that will include test activities, confirmation, and sign-off by the various business units within OCERS.
IA Follow-Up: IT will develop testing templates and scenarios and will coordinate with management to perform testing.

Observation #6 - 6. Recovery procedures for dependent IT applications are not documented in the recovery plans.

OPEN

Process Owner: Information Technology
Due Date: 12/30/2022
Action Plan: End User documents are being developed for the purpose of providing recovery instructions to the crisis management team, in the event IT staff are not available in the event of an emergency. The documents will provide simple easy to follow instructions on how to failover and/or recover sites or systems in the event of a technology failure. These documents will be included in OCERS IT Backup and Recovery test plan stored in Catalyst to ensure procedures are complete and can be followed by non- IT staff
IA Follow-Up: Procedures the steps involved in the recovery process have been drafted, however, an overall backup policy needs to be formally developed.

Observation #1 - OCERS Business Continuity Policy document has existed since 2015 but the documentation of the approvals were not formalized.

CLOSED

Process Owner: Finance
Completion Date: 12/13/2019
Action Plan: We believe that the current document titled "OCERS Business Continuity Policy" would be more accurately described as a program document. As such, our plan is to retile the document to be OCERS Business Continuity Program and review it with the CMT making updates as deemed appropriate. The Chief Executive Office will then formally approve the updated document. The updated document will be reviewed every three years for necessary changes. As an extension to this observation, staff will also recommend to the Board of Retirement a change to the CEO Charter the next time the Charter is due for a review. The change will be to specifically delegate to the CEO the duty of implementing, testing and maintaining a Business Continuity Program.



Management Action Plan Status Re

Project(s): ALL
Mgmt. Status: ALL

Process Owner(s): EMPLOYER,
EXECUTIVE,
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IA Follow-Up: IA confirmed the Business Continuity Program documents has been formally approved by the CMT.

Observation #2 - The Business Continuity Program Standard Operating Procedures document has existed since 2015 but the documentation of the approvals by the Crisis Management Team were not formalized.

CLOSED

Process Owner: Finance

Completion Date: 02/26/2020

Action Plan: We concur with the observation and will formalize the approval of the document.

IA Follow-Up: IA confirmed the Business Continuity Standard Operating Procedure document has been formally approved by the CMT.

Observation #4 - The tabletop exercise did not fully validate the organization's preparedness at an entity or department level in the event of a disaster.

CLOSED

Process Owner: Executive

Completion Date: 12/06/2019

Action Plan: We believe the program is ready to enhance future exercises by including more functional testing. As an example, during our July 2019 tabletop, a component of the Finance team was asked to work from home in order to test their connectivity and functionality. In future exercises, we will expand the scenarios to encompass various departments within the organization such that over time, all departments with a recovery plan will have participated in a functional exercise. For upcoming exercises, we will create scenarios which allow us to include departments which have not yet participated in an exercise.
We have added an item to the October 2019 Crisis Management Team meeting to discuss timing of the expansion of functional testing efforts as well as the importance of referring to the Crisis Management Plan and Department Recovery Plans during exercises. Our recommendation will be to conduct IT testing as part of our January exercises and deeper functional testing as part of our July exercises.

IA Follow-Up: IA confirmed the Q4 CMT meeting discussed expanding the functional testing with plans to start with IT testing in January.

Observation #5 - Management personnel are not consistently updating the relevant information in the Business Impact Analysis and Department Recovery Plan documents in a timely manner.

CLOSED

Process Owner: Executive

Completion Date: 12/13/2019

Action Plan: The CMT Leader, OCERS CEO, will remind the CMT at least two weeks prior to the quarterly Business Continuity meetings to update the appropriate Business Continuity documents to reflect any changes in personnel, technology or vendors since the last meeting. Additionally, the CMT Leader will add as a standing agenda item for the quarterly meetings a reminder that the CMT should update the appropriate Business Continuity documents. The plan owners will update the necessary documents based on the reminder at least on a quarterly basis.

The CMT Leader will also work with Administrative Services to add a workstep in the off-boarding and on-boarding processes for the plan owners to assess the organizational impact of the terminated or new employee to the Business Continuity documentation. Based on the assessment, the plan owner will update the documentation accordingly.

IA Follow-Up: IA was able to confirm:
- the BCDR CMT Meeting email contained a reminder for the CMT to review/update their documents
- the agenda did contain an item notifying CMT members to update their documents
- a workstep was added to the on-boarding and off-boarding checklist



Management Action Plan Status Re

Project(s): ALL
Mgmt. Status: ALL

Process Owner(s): EMPLOYER,
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Observation #7 - 7. The identification of alternative facility locations has not been formally documented and approved in the BCDR system.

CLOSED

Process Owner: Executive

Completion Date: 12/13/2019

Action Plan: The Business Continuity Coordinator team is currently working with the County of Orange to formalize an agreement to use County facilities as an alternate workspace location in the event of a localized disaster at OCERS headquarters. The County requested OCERS to complete a questionnaire, which was completed and sent back to the County on August 8, 2019. The most recent conversations with the County occurred on August 21, 2019; we will schedule a follow-up call with County representatives in the very near future. Once the agreement is formalized, all program documentation will be updated to include the alternate workspace site information and an action item to review the alternate workspace location on an annual basis will be created. This action item will serve to ensure that the alternate workspace location is still viable. The BC Coordinator team will continue to refine the alternate workspace options for additional scenarios. In addition, the BC Coordinators will create a schedule detailing space needs over time.

IA Follow-Up: IA confirmed the Alternate Facility plan has been formally approved. Additionally, the BC Coordinator follow-ed up with the County contact. Progress is being made to secure a location for OCERS.

Observation #8 - 8. Key members of the Crisis Management Team (CMT) are not consistently taking the assigned electronic resources when traveling from the office.

CLOSED

Process Owner: Executive

Completion Date: 12/06/2019

Action Plan: The CMT Leader, OCERS CEO, will remind the CMT at the quarterly Business Continuity meetings of the importance of taking the necessary resources (laptops) when traveling away from the office.

IA Follow-Up: IA confirmed the Q4 CMT agenda included a reminder to take the necessary resources when traveling.

Project: 1944 - Finance Benefits Audit

Report Date: 01/13/2020

Total Observations: 4

Open Observations: 0

Closed: 4

Observation #1 - V3's Pre Disbursement Register report contains payee's full social security numbers and full names.

CLOSED

Process Owner: Finance

Completion Date: 12/09/2019

Action Plan: Build 8.14 will include the replacement of full Social Security Numbers with OCERS ID# (OID) and/or OIP# on the Pre-Disbursement Register Report and Disbursement Schedule.

IA Follow-Up: IA confirmed the updated Disbursement Schedule Detail Report and Pre-Disbursement Register Report now display the OID numbers in place of SSNs.



Management Action Plan Status Re

Project(s): ALL
Mgmt. Status: ALL

Process Owner(s): EMPLOYER,
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Observation #2 - Finance does not systematically delete V3's ACH files containing beneficiaries' banking information from local hard drives.

CLOSED

Process Owner: Finance

Completion Date: 03/14/2022

Action Plan: Management will establish procedures to delete copies of the ACH text files from local hard drives after a copy of the file has been uploaded to Wells Fargo.

Finance will work with IT and Vitech to consider the cost/benefit of changing the ACH file process to directly upload an ACH file once it has been created in V3 and directly downloading the file to a secured network folder in the Finance directory.

IA Follow-Up: IA confirmed with the Finance team the deletion of the ACH file from the local hard drive is now being performed by management. IA reviewed the procedures updated to reflect this practice. Due to COVID, the cost/benefit analysis has been moved to 2021.
2/3/22 - OCERS IT was able to modify the PM Export file process. The PM Export is now going to be run as a batch export file and will automatically save into a new secured folder location in the Finance folder on the F drive. In addition, access to run the PM Export is restricted to the Finance Accountant Auditor, Senior Accountant Auditor and Supervisor roles
3/14/22 - IA was able to confirm the PM Export file automatically uploads to a secured folder with limited access. IA also confirmed a documented procedure exists.

Observation #3 - Finance procedures manual related to benefit and lump sum payments (i.e. payroll) do not reflect all current procedures.

CLOSED

Process Owner: Finance

Completion Date: 10/05/2020

Action Plan: Finance will be creating and updating stand-alone procedures for all of its processes as part of an organization-wide 2020 Business Plan Initiative.

IA Follow-Up: Internal Audit reviewed the documented lump sum payroll procedures.

Observation #4 - General Ledger entries to transfer employee contribution reserves were not booked timely.

CLOSED

Process Owner: Finance

Completion Date: 12/20/2019

Action Plan: In the instance noted here, processes with material impact to operations and financials were performed during the unforeseen long-term leave of absence of one of the Finance Managers, but in the future, Management will document approval of decisions to postpone processes due to extenuating circumstances noting impact and materiality of postponement.

IA Follow-Up: IA confirmed the Finance Risk and Control Matrix (RACM) was updated to include additional documentation requirement.



Management Action Plan Status Re

Project(s): ALL
Mgmt. Status: ALL

Process Owner(s): EMPLOYER,
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Project: 1971-IT General Controls
Report Date: 06/04/2020
Total Observations: 4
Open Observations: 2
Closed: 2

Observation #2 - OCERS should formalize a process to annually obtain and review SOC reports for relevant IT vendors.

OPEN

Process Owner: Information Technology

Due Date: 12/30/2022

Action Plan: OCERS has developed criteria to identify IT vendors and technology service providers' requiring SOC2 reports, and will enhance our systems to notify staff to request and review SOC2 reports annually. Process and review documentation is being developed along with updates to our procurement process to mandate SOC2 reports as a deliverable

IA Follow-Up: Enhancements have been made to the vendor management system. Processes and Procurement policy needs to be formally updated.

Observation #3 - OCERS does not maintain data flow diagrams or other documentation of information flow both internally and to external parties.

OPEN

Process Owner: Information Technology

Due Date: 12/30/2022

Action Plan: Phase one of OCERS Data Classification project, will identify data elements in our V3 system and include the creation of data flow diagrams for data elements classified as "sensitive". In addition, OCERS IT Programming team will develop data flow diagrams of their internal datasets and reporting platform.

Additional data flow diagrams may be developed along with process flow diagrams as part of future lean process improvements.

IA Follow-Up: IT to discuss solutions with other vendors. IT will focus on Member data and related data from business processes (e.g. member payroll, death data). Focus on data flows either instead of or before data classifications, depending on the nature of the observation.

Observation #1 - Administrator access granted to the financial reporting and intranet portal applications present a higher than normal risk due to segregation of duties concerns.

CLOSED

Process Owner: Information Technology

Completion Date: 01/13/2022



Management Action Plan Status Re

Project(s): ALL
Mgmt. Status: ALL

Process Owner(s): EMPLOYER,
EXECUTIVE,
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Action Plan: As OCERS is in the process of issuing an RFP for a new financial accounting system, we will defer changes to our current financial accounting system, and focus on building a secure segregated system with the appropriate controls and check and balances as part of the new system to be implemented in 2021.

Due to the size of the OCERS IT Programming group, team members share many administrative responsibilities and needs to be able to cover for other team member assignments and responsibilities when out of the office.

Both the intranet portal and the intranet portal source code repository provide account auditing features that track all changes are made, along with the user that made the change. This information is reported daily to the IT Programming Supervisor, so that he and the IT Management team have complete visibility into any administrative operations that are performed and by whom.

In addition to this audit trail, we have implemented a mandatory workflow process with each IT Programming Request that requires the review of a secondary team member when making changes to the intranet portal or source code in the intranet portal source code repository. This serves as an additional validation and backup to protect against segregation of duties concerns.

IA Follow-Up: New financial accounting system implementation was moved to 2021 with move to production in Jan 2022. IA confirmed that the Intranet Portal has restricted administrative access. IA also confirmed the new financial accounting system has restricted administrative access

Observation #4 - Evidence of testing of Intranet portal changes are not retained.

CLOSED

Process Owner: Information Technology

Completion Date: 06/12/2020

Action Plan: Currently, OCERS IT Programming records all requested changes to its intranet portal environment in an IT Programming Request list located on OCERS Intranet site. The list includes automated notifications sent to stakeholders and approval workflows generated for approvals and sign off of requests.

To better capture evidence of testing performed prior to implementing changes to the intranet portal or hosted reports, this ticketing system has been modified to include a field for 'Testing Performed'. This field will be used to specifically capture testing that was performed by the developer and/or the end user prior to the implementation of the change. In addition, this field will include instructions the 'attach supporting testing documentation as necessary'.

IA Follow-Up: Internal Audit confirmed the creation and use of the "Testing and Validation Performed" field in the IT Programming Requests to document the review of Intranet Portal Changes.

Project: 1945- FAS Pay Items Audit

Report Date: 06/04/2020

Total Observations: 3

Open Observations: 1

Closed: 2

Observation #3 - A process does not exist to identify updates to Employer documentation that may impact the list of pay items.

OPEN

Process Owner: Member Services

Due Date: 12/30/2022



Management Action Plan Status Re

Project(s): ALL
Mgmt. Status: ALL

Process Owner(s): EMPLOYER,
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Action Plan: Member Services is in the process of documenting all current MOU's and will draft an update to the pay item review procedure to include a section on monitoring MOU's for adjustments made by Employers to ensure Employers have obtained OCERS approval prior to implementing a new pay item.

Currently, the Employer is required to submit a "pay item request form" to OCERS for approval in order to add a new or adjust an existing pay item. This is required to be done at least two pay periods prior to implementation of the pay item in the Employer payroll. If however an Employer attempts to pass a pay item that has not been added for that Employer, the system will produce an error for the Employer when they submit the payroll. This process assists Member Services in monitoring the implementation of pay items directly by the Employer.

IA Follow-Up:

Observation #1 - A formal reconciliation was not performed to ensure the pay items reported to the Board accurately and completely corresponded with the configuration in V3.

CLOSED

Process Owner: Member Services

Completion Date: 09/16/2021

Action Plan: Member Services will address the variances noted in the audit, which includes making the appropriate configuration updates to the V3 system, communicating the updates to the Employers and following procedures in the OCERS' Overpaid and Underpaid Plan Contributions Policy in regards to the over and underpayment of contributions of the variances noted. At the next update to the Board, Member Services will include the corrections identified in this audit for pensionable attributes of relevant pay items. Going forward, Member Services will develop a process to perform a full reconciliation of the pay item file presented to the Board with the pay item configurations in the V3 system periodically, at least prior to the annual presentation to the Board to ensure accurate and complete reporting of pay items to the Board. Any discrepancies identified by the reconciliation will be addressed as needed.

IA Follow-Up: Internal Audit reviewed updated procedure document and annual reconciliation file.

Observation #2 - Member Services does not have written procedures in regards to the processing, review and authorization of Employer pay items into V3.

CLOSED

Process Owner: Member Services

Completion Date: 09/16/2020

Action Plan: Member Services has since implemented a process to review the configurations made by OCERS IT to ensure every new or updated Pay Item is configured accurately in OCERS V3 Pension Administration System. This process will include a post review notification to all stakeholders from Member Services (IT, Member Services Director, and the Assistant CEO of External Operations) that will be kept in the same Network Directory as the rest of the supporting documentation (e.g. New Pay Item Submission Form, MOU/Side Letter Agreements, New Pay Item approvals)

In addition to the above procedure, Member Services is working with our third party vendor (Vitech) to implement a process for submitting and approving pay items within the V3 Pension Administration Software. Early analysis began prior to the work from home order.

IA Follow-Up: IA confirmed the review process of pay codes in V3 was implemented and documented. The review consisted of walking through a pay item.



Management Action Plan Status Re

Project(s): ALL
Mgmt. Status: ALL

Process Owner(s): EMPLOYER, EXECUTIVE, FINANCE.

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Project: 2031 - Audit of Orange County Sanitation District (OCSD) Payroll Transmittals

Report Date: 06/04/2020
Total Observations: 1
Open Observations: 0
Closed 1

Observation #2031 - An employee in our sample was not entitled to receive a pensionable premium pay item, resulting in an overpayment of that pensionable premium pay item (and contributions paid to OCERS).

CLOSED

Process Owner: Employer

Completion Date: 05/21/2020

Action Plan: Development Pay requests are manually tracked in Excel, and entered in the FIS system. OCSD staff has begun using an exception report to compare the records from these two data sources, to ensure the number of employees listed on the Excel tracking sheet match the number of employees receiving Development Pay per the FIS system. Secondly, the Development Pay program will be audited bi-annually to capture and correct any administrative errors that may have occurred. Additionally, data entered in the FIS system is now done by using an employee identification (ID) number rather than an employee's last name to ensure the correct record is being updated each time. Lastly, in the past 4 years, we've had 5 different staff members administer the Development Pay program due to staff turnover. We now have a dedicated staff member that is knowledgeable in the program and is solely responsible for entering requests in the Excel worksheet and the FIS system, and a supervisor overseeing the function. OCSD is also working with the employee on a repayment plan to reimburse OCSD for the pensionable pay granted in error. Once this is finalized, the Development Pay for the impacted employee will be reversed and an adjustment entry (for contributions) will be done in V3 for each pay period affected.

IA Follow-Up: IA confirmed the correct employee qualified for the certification pay, the premium payment in error was corrected with collections and the semi-annual audit has been implemented.

Project: 2032 - Actuarial Extract Audit

Report Date: 10/13/2020
Total Observations: 7
Open Observations: 2
Closed 5

Observation #4 - 4. Numerical thresholds under which further investigation of validation results are no longer considered necessary are not formally defined.

OPEN

Process Owner: Information Technology

Due Date: 06/30/2022

Action Plan: The IT Programming team will work with OCERS Management to develop acceptable thresholds to use when reviewing the actuarial validation results.

IA Follow-Up: IT has developed threshold recommendations and will coordinate with business owners for final approval.



Management Action Plan Status Re

Project(s): ALL
Mgmt. Status: ALL

Process Owner(s): EMPLOYER,
EXECUTIVE,
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Observation #5 - 5. Member Services does not have policies and procedures related to the use of the pension administration system member data validation queries.

OPEN

Process Owner: Member Services

Due Date: 09/30/2022

Action Plan: The Member Services team will document and formalize policies and procedures related to the pension administration system data queries created by the OCERS IT Department. We will also document the personnel structure responsible for the process as well as the timing and scheduling cycles for the annual review.

IA Follow-Up:

Observation #1 - 1. The pension administration system's actuarial extract reporting does not extract the correct status (e.g. Active, Deferred, Retired, Terminated) of a member under certain scenarios, resulting in the need to manually correct the actuarial extract report

CLOSED

Process Owner: Information Technology

Completion Date: 09/22/2021

Action Plan: OCERS is working with pension administration vendor to correct issues associated with the member status logic used for the actuarial export and subsequent data cleanup.

IA Follow-Up: Member status logic recoding is complete and deployment launched.

Observation #2 - 2. IT Programming performs logical testing of the programming code behind its actuarial extract validation process but does not keep formalized documentation evidencing the testing.

CLOSED

Process Owner: Information Technology

Completion Date: 03/11/2021

Action Plan: The IT Programming team will formalize and document the process by which logical testing of our actuarial validation code will be performed.

IA Follow-Up: Formalized testing process has been documented and reviewed by IA

Observation #3 - 3. Formal documentation of the approval of validation programming code changes does not exist.

CLOSED

Process Owner: Information Technology

Completion Date: 03/11/2021

Action Plan: The IT Programming team will formalize and document the process of how actuarial extract validation code changes will be approved, including how all approvals will be tracked and logged within our system.

IA Follow-Up: IT Programming has formalized the code change validations process.



Management Action Plan Status Re

Project(s): ALL
Mgmt. Status: ALL

Process Owner(s): EMPLOYER,
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Observation #6 - 6. A minor variance noted and addressed during the validation process was not accurately updated in the data extract file sent to the actuary.

CLOSED

Process Owner: Information Technology

Completion Date: 03/11/2021

Action Plan: The IT Programming team will enhance its process to incorporate all validation review updates and related data cleanup changes to ensure all updates are included in the final export to OCERS Actuary.

IA Follow-Up: Data cleanup process has been updated and data validation has occurred.

Observation #7 - 7. OCERS Actuarial Extract Processing Guide does not describe Informational queries which do not require investigation unless requested by Segal.

CLOSED

Process Owner: Information Technology

Completion Date: 03/11/2021

Action Plan: The IT Programming team will add a section to the Actuarial Extract Processing guide that will describe the additional Informational queries available to OCERS staff to preview potential member datasets based on annual actuarial review question posed by OCERS actuary.

IA Follow-Up: IA confirmed the Actuarial Extract Processing guide has been updated with the informational queries description.

Project: 2090 - Vulnerability and Patch Management

Report Date: 03/22/2021

Total Observations: 2

Open Observations: 1

Closed 1

Observation #1 - Details Removed - Discussed in Closed Session

OPEN

Process Owner: Executive

Due Date:

Action Plan: Details Removed - Discussed in Closed Session

IA Follow-Up:

Observation #2 - Details Removed - Discussed in Closed Session

CLOSED



Management Action Plan Status Re

Project(s): ALL
Mgmt. Status: ALL

Process Owner(s): EMPLOYER,
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Process Owner: Executive
Completion Date: 05/27/2021
Action Plan: Details Removed - Discussed in Closed Session
IA Follow-Up: Closed

Project: 2020 - Continuous Audit of Final Average Salary Calculations (Q3/Q4 2020)
Report Date: 03/22/2021
Total Observations: 2
Open Observations: 0
Closed: 2

Observation #1 - 1. Internal Audit noted an 8% error rate (six errors) with the 75 FAS calculations sampled from the 3rd and 4th quarters of 2020.

CLOSED

Process Owner: Member Services

Completion Date:

Action Plan: Member Services has reviewed and is in the process of addressing the recalculations for members identified by Internal Audit during their review. Member Services Management has also taken the following steps which are further detailed in our "Member Services Management Quality Assurance Review Final Average Salary Q1-Q2 2020 Report.docx" document provided to the committee (Action Item A-5).
 1. Reorganization of the Retirement Program Specialist (RPS) department.
 2. Development of the OCERS Retirement Transaction Tool.
 3. Development of detailed written procedures for the entire Retirement Transaction Process.
 4. Retrained the RPS teams on the newly developed Retirement Transaction Tool.
 5. Development of a fully focused Quality Assurance Review Team and Reporting process.
 6. Random Sampling of Retirement Transactions by Member Services Management Team.

IA Follow-Up: As part of the continuous audit for the FAS calculation, Internal Audit noted the MAP was completed during the July 1 payroll review.

Observation #2 - 2. The FAS supporting documentation for three members needed to be updated in the pension administration system (no FAS impact).

CLOSED

Process Owner: Member Services

Completion Date: 04/02/2021

Action Plan: Member Services has reviewed and updated the member files for the calculation documents for members identified by Internal Audit during their review. Member Services Management has also implemented a checklist within the new tool mentioned above.

IA Follow-Up: Internal Audit noted the checklist was included in the new FAS tool.



Management Action Plan Status Re

Project(s): ALL
 Mgmt. Status: ALL
 Process Owner(s): EMPLOYER, EXECUTIVE, FINANCE.

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Project: 2132 - Continuous Audit of Final Average Salary Calculations (Q2 2021)
Report Date: 06/04/2021
Total Observations: 2
 Open Observations: 0
 Closed: 2

Observation #1 - 1. Internal Audit noted a 6.7% error rate (four errors) out of the 60 FAS calculations sampled from the 2nd quarter of 2021.

CLOSED

Process Owner: Member Services

Completion Date: 05/20/2021

Action Plan: Member Services Management team takes all errors very seriously. As discussed before, we reorganized our team and implemented a full Quality Assurance process to review all payroll transactions and perform recalculations on any member's account where we found an error. We are reviewing the root cause of all errors and we are providing ongoing training on the errors found each month. We are providing direct feedback to the specific team members who processed the original calculations where errors occurred. We are also reporting up to senior management weekly on the results of our efforts.
 As to the fourth error, we are working with ViTech, our V3 pension administration system vendor to develop a solution to this issue. We are also working with our team to review any accounts with similar employment history to ensure this error does not occur in the future until we can have the systematic issue fixed in V3. Upon our initial review of all member retirements that have been processed since the implementation of V3 (2016 forward), it is believed to impact approximately 11 members, but the investigation is ongoing. We will provide an update on the final number of members affected at the time of the June Audit Committee Meeting.
 Member Services is also providing training to the team on how to identify members with this potential issue to ensure additional members are not impacted in the future until the fix in V3 is made

IA Follow-Up: Internal Audit reviewed the ViTech submission and confirmed with Member Services of the additional training.

Observation #2 - 2. The FAS supporting documentation for two members needed to be updated in the pension administration system (no FAS impact).

CLOSED

Process Owner: Member Services

Completion Date: 05/20/2021

Action Plan: Member Services Management team is providing feedback to our team and the 2 specific team members who did not upload the fully completed supporting documentation to the V3 system. We will continue to reiterate the importance of maintaining the fully completed documentation in the members' files in V3 and will have the supervisor team monitor compliance.

IA Follow-Up: Internal Audit confirmed the documents have been uploaded and the feedback to the team members have been provided.



Management Action Plan Status Re

Project(s): ALL
Mgmt. Status: ALL

Process Owner(s): EMPLOYER,
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Project: 2133 - Dependent Survivor Eligibility Audit

Report Date: 10/04/2021

Total Observations: 4

Open Observations: 2

Closed: 2

Observation #2 - 2. Upon reviewing a survivor's benefit payment, we noted errors with the deceased member's benefit payment history from 2002 to the member's death in 2018.

OPEN

Process Owner: Member Services

Due Date: 08/31/2022

Action Plan:
1. Per the OCERS' Overpaid and Underpaid Plan Benefits Policy, OCERS will not recoup the overpaid funds from the surviving spouse's continuance.
2. Current procedures requires Member Services to perform a comparison of the benefit components on both member and survivor to identify any possible discrepancies at the time of the survivorship establishment. We will review our current procedures to see if there are any additional steps, we can take to ensure we do not miss this type of discrepancy moving forward. We will also update our team and provide training specific to this issue.

IA Follow-Up:

Observation #3 - 3. A lump sum beneficiary payment to a deceased DRO survivor payee's estate was overpaid by \$200.

OPEN

Process Owner: Member Services

Due Date: 08/31/2022

Action Plan: Member Services Management will perform a root cause analysis and develop a QA process specific to the Manual Tertiary Applications. This type of application is very rare and is not fully developed and automated in V3. We will work to incorporate this in either a V3 upgrade or the new PAS system in the future.

IA Follow-Up:

Observation #1 - 1. OCERS does not have a formalized and systematic process to address survivor benefits unclaimed over an extended period of time.

CLOSED

Process Owner: Member Services

Completion Date: 01/05/2022



Management Action Plan Status Re

Project(s): ALL
Mgmt. Status: ALL

Process Owner(s): EMPLOYER,
EXECUTIVE,
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Action Plan: Member Services Management has worked with our IT partners to develop two reports that will alert us if we have a member that has a death date entered but does not have a survivorship processed. This will help us catch this type of oversight in the future. A process will be developed to monitor the reports/alerts and take appropriate action. Member Services will also research with ViTech to see if it would be possible to have an automated letter mailed out each month to a member's beneficiaries once a death date is entered and to conclude when a survivorship is processed to the beneficiaries. This will help ensure member beneficiaries are made aware of their possible benefit.

- 2 Reports are as follows:
- Deceased Retirees with No Associated Burial Benefit nor Survivorship benefit established.
 - Deceased Retirees with an Associated Burial Benefit but no Survivorship benefit established.

IA Follow-Up: Internal Audit confirmed the reports have been implemented

Observation #4 - 4. A member's Disability Application was not located in the member's V3 records.

CLOSED

Process Owner: Member Services

Completion Date: 03/16/2022

Action Plan: Member Services/Disability team will ensure all the documents are uploaded before completing the Required Proof Doc Checklist. Member Services will validate at the time of disability recalculation that the required disability documentation is within the V3 member file.

IA Follow-Up: IA confirmed the disability documents have been uploaded to V3 and a process was implemented to validate documents have been uploaded.

Project: 2135 - Quarterly FAS Review (Q4 2021)

Report Date: 10/04/2021

Total Observations: 1

Open Observations: 0

Closed: 1

Observation #1 - 1. Internal Audit noted an 8% error rate (six errors) with the 75 FAS calculations tested from the 3rd quarter of 2021.

CLOSED

Process Owner: Member Services

Completion Date: 10/01/2021



Management Action Plan Status Re

Project(s): ALL
Mgmt. Status: ALL

Process Owner(s): EMPLOYER,
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with the highest standards of excellence."*



Action Plan: Member Services has recalculated the 6 accounts and made corrective retroactive payments/adjustments to each of the members in accordance with OCERS Overpaid and Underpaid Plan Benefits Policy. The first 5 members were corrected with the 9/1/2021 payroll and the last account was corrected on the 10/1/2021 payroll. Member Services RPS management team formed a committee to assist in developing new controls. One specific solution that came from this committee was the need to have a consistent process for them to follow to sort through the pay data used in determining FAS pay items. Member Services management developed new controls within the FAS Calculation Tool that incorporate macros to help sort and organize the work history for pay items to ensure all team members are working in a consistent process and to make it easier to identify the pay items to include in the FAS. We implemented and trained the RPS team on the new process in September.

Member Services management has also enacted version control on the FAS Calculation tool to ensure it is easy to identify if calculations are performed on an outdated file. Member Services management will continue to find new ways to eliminate errors in this process and implement them quickly with appropriate training and documentation on the processes for the team.

IA Follow-Up: Member Services shared the updated version of the FAS excel tool.

Project: 2231 - SSA Employer Audit

Report Date: 03/30/2022

Total Observations: 1

Open Observations: 1

Closed: 0

Observation #1 - 1. The job title in the OCERS pension administration system (PAS) records for a Social Services Agency retiree in our sample did not reflect the retiree's actual job title.

OPEN

Process Owner: Member Services

Due Date: 12/01/2022

Action Plan: Member Services Employer Payroll (EP) Management Team will perform a one-time audit of the records between OCERS and all employers supported through the County (Not Just SSA). Once Complete, updates will be sent to OCERS IT to make the necessary changes. After IT makes the changes to the system, a member of the EP Team will verify that the changes were successfully implemented. Ongoing, accuracy validation of the data at the time a member retires is currently performed and is also part of our updated Quality Assurance Process initiated in 2021. As a result of our updated quality assurance program and the fact that we rarely receive new or changed Bargaining Units and Job Class, Management is recommending we continue to review the quality for these records at the time of retirement. We will perform another global reconciliation at the time we perform a migration from the current pension administration system to our new pension administration system in the coming years.

IA Follow-Up:



Management Action Plan Status Re

Project(s): ALL
Mgmt. Status: ALL

Process Owner(s): EMPLOYER,
EXECUTIVE,
FINANCE.

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Project: 2211 - Investment Manager Fee Report
Report Date: 03/30/2022
Total Observations: 1
Open Observations: 1
Closed: 0

Observation #1 - Evidence of management review over the preparation of the Fee Report and the underlying Excel schedule used to help compile the report is not formalized and retained

OPEN

Process Owner: Investments

Due Date: 09/30/2022

Action Plan: We acknowledge and concur with the observation. We believe that documenting the process will strengthen Investment Division's procedures while also providing a strong audit trail.

IA Follow-Up:

Project: 2232 - Quarterly FAS Review (Q1 2022)
Report Date: 03/30/2022
Total Observations: 1
Open Observations: 1
Closed: 0

Observation #1 - 1. Internal Audit noted a 4.0% error rate (two errors) with the 50 FAS calculations sampled from the 1st quarter of 2022

OPEN

Process Owner: Member Services

Due Date: 12/31/2022

Action Plan: Member Services (M.S.) Management team investigated the first error reported by Internal Audit for this quarter, and we determined that the original data came to OCERS from CalPERS in an Excel spreadsheet that contained improper formatting for the salary records. M.S. management has engaged the leadership team at CalPERS for the department that prepares this information to inform them of the formatting error. We have also reviewed additional member accounts for which we had received salary information from CalPERS to determine if any other accounts had a similar issue. All of the other accounts we reviewed contained spreadsheets that contained merged fields similar to this account, but they were formatted properly and correctly reported final average salary. We are also training our staff to be aware of the possibility of formatting errors from any outside agency using Excel to report data to OCERS.

Regarding the second account with an error, M.S. Management team is working with ViTech to determine the reason for the error and fix the PAS software to ensure it is following the configuration settings properly. We are also working to query the PAS software to see if there are any other accounts that may have been affected in a similar way to this account.

IA Follow-Up:

Executed: 5/26/2022 8:24:07 AM
Executed By: OCERS\dkim

Doc. No. 0080-0120-R0001
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Memorandum

DATE: June 2, 2022
TO: Members of the Audit Committee
FROM: David Kim, Director of Internal Audit
SUBJECT: STATUS UPDATE OF 2022 AUDIT PLAN

Written Report

Background/Discussion

Attached is a comparison of budgeted 2022 audit plan hours versus the completed program actual hours, by project.

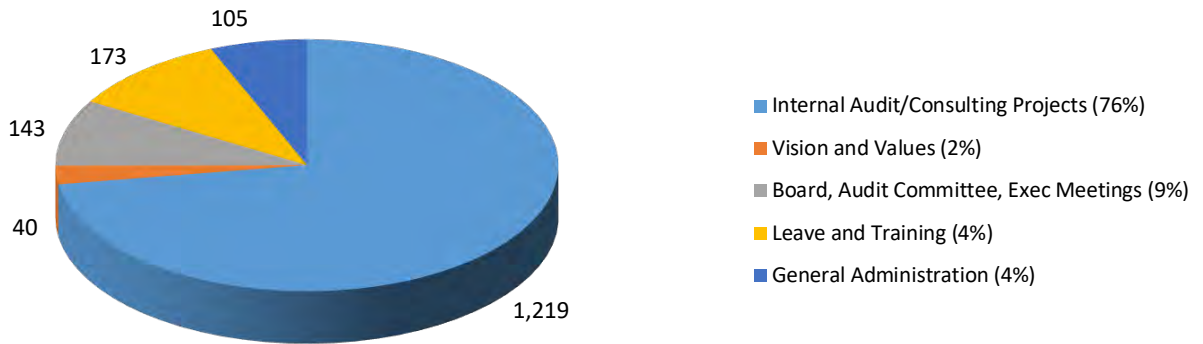
Submitted by:

DK - Approved

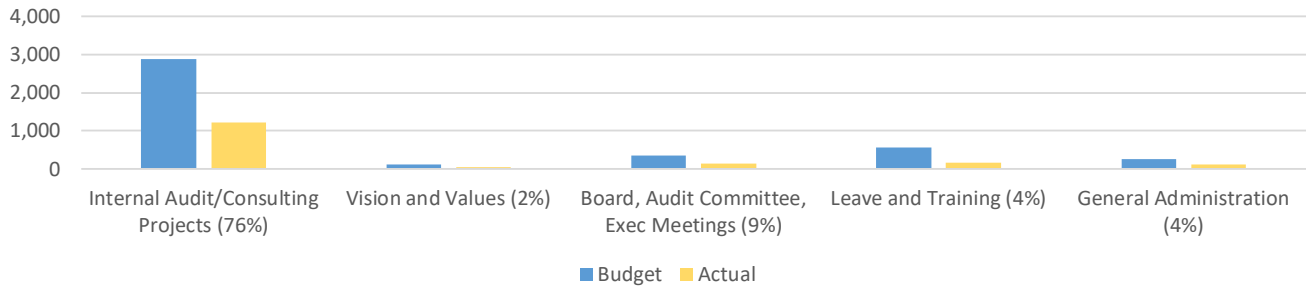
David Kim
Director of Internal Audit

2022 Internal Audit Plan

2022 Audit Hours (through 5/31/2022)
(1,680 Actual Hours)



2022 Internal Audit Hours Budget vs. Actuals
(% of Actual Hours)
(through 5/31/2022)



**Orange County Employees Retirement System
2022 Internal Audit Plan**

Audit Activity	Description	Planned Hours	Actual Hours	Projected Remaining Hours	Comments
Internal Audit/Consulting/Planning/QAIP		2,880	1,219	1,661	
Internal Audits - Assurance		2,290	1,143	1,147	
IT Automated Controls (carryover from 2021 audit plan)	The objective of the audit is to validate the policies and procedures over V3 System calculations of the Percent of Final Average Salary and Base Final Average Salary prior to management's manual adjustment process, as well as the calculation of the Plan Benefit after the manual adjustment process. Performed by RSM.	30	25	5	Reviewing results with management
Annual Investment Committee - Investment Manager Fee Reporting	Review Investment Division's controls that verify the compilation and review of the annual fee report provided to the Investment Committee.	300	302	0	First time audit - complete
Procurement Process	Review the controls over the procurement and contracting process at OCERS to ensure that the controls are designed and operating effectively in compliance with the Procurement and Contracting Policy.	300	238	62	First time audit, finalizing testing.
Alameda Implementation	Perform an independent review of the controls in place to ensure the recalculation of contribution refunds and retirement benefits related to the Alameda decision are complete and accurate; member information updated in V3 are reviewed and approved; and recording to the General Ledger is supported and authorized.	420	100	320	
Employer Audit (County of Orange - Social Services Agency)	Review employer's supporting documentation to verify accuracy and completeness of payroll data transmitted to OCERS pension administration system; review employer's controls to ensure compliance with OCERS Membership Eligibility Requirements Policy.	300	298	0	Complete
Employer Audit (Transportation Corridor Agency)	Review employer's supporting documentation to verify accuracy and completeness of payroll data transmitted to OCERS pension administration system; review employer's controls to ensure compliance with OCERS Membership Eligibility Requirements Policy. Last time audited in 2013.	300	0	300	
Internal Audit - Management Action Plan Follow-up	Action Plan Follow-up - Perform MAP follow-ups with management.	170	60	110	Ongoing review of implemented MAPs from completed audits.
Continuous Audit - Final Average Salary (FAS) Calculation	Continuous audit of FAS calculations with criteria for manual adjustments to the FAS. Sample on quarterly basis	470	120	350	Q1 testing complete
Internal Audits - Consulting		200	72	128	
IT Audit Program	Azure Active Directory and MS365 Security – review the state of services deployed and determine if the current configuration aligns with leading practices (200 hours from RSM).	40	0	40	
Consulting/Ad-hoc projects	Open for any ad-hoc project TBD	160	72	88	Adhoc member benefit review; RFP review of Actuarial Auditor
Internal Audits - Planning		250	0	250	
Annual Audit Planning	Review and update Risk and Control Matrix.	100	0	100	
	Annual preparation of the Audit Plan, updates to the current Audit Plan.	150	0	150	

**Orange County Employees Retirement System
2022 Internal Audit Plan**

Audit Activity	Description	Planned Hours	Actual Hours	Projected Remaining Hours	Comments
Internal Audits - Quality Assurance and Improvement Program		140	4	136	
Quality Assurance and Improvement Program	IA Quality Review- self assessment - QAIP program	60	0	60	
	Use of hotline reporting system.	80	4	76	
Vision and Values		110	40	70	
	Vision and Values - Continuous Improvement Program	50	20	30	Route to appropriate parties, report to OCERS executives.
	Vision and Values Committee (Internal OCERS Committee)	60	20	40	Internal committee to promote a positive culture at OCERS - Committee Vice Chair.
Board, AC, OCERS Executive Meetings		356	143	213	
	Board meetings, Audit Committee, Personnel Committee, Governance Committee, Executive meeting	290	116	174	
	Weekly meetings with CEO	26	11	15	
	Monthly meeting with Audit Committee Chair	40	16	24	
General admin time		250	105	145	
	General admin time	250	105	145	6% of total hours.
Leave (Holiday/Annual) and Training		564	173	391	
	Holidays (12 days), Annual Leave (15 days)	432	103	330	
	Training and Continuing Education	132	71	62	
Grand Total Hours		4,160	1,680	2,480	