

September 27, 2023

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)  
University of California-Irvine (UCI) Unfunded Actuarial Accrued Liability as of  
December 31, 2022 - Setting Contributions for FY 2024/2025**

Dear Steve:

As requested, we have determined the payments starting in FY 2024/2025 required for UCI<sup>1</sup> to pay off its \$26,647,000 in Unfunded Actuarial Accrued Liability (UAAL) with OCERS measured as of December 31, 2022. To summarize our results, here are the total fiscal year payments based on the December 31, 2022 actuarial valuation, assuming no future actuarial gains or losses or changes in actuarial assumptions:

<b>Fiscal Year</b>	<b>Annual Payment / (Credit)</b>
2023/2024	\$2,865,674
2024/2025 through 2035/2036	\$3,018,297
2036/2037	\$209,098
2037/2038	\$ 9,238
2038/2039 <sup>2</sup>	\$92,204

<sup>1</sup> This analysis includes members reported with employer code 113 (biweekly) or 114 (monthly).

<sup>2</sup> The UAAL will be fully amortized in fiscal year 2038/2039 with two months of full payment and one month of partial payment.

## Background

In our letter to you dated August 5, 2022, we calculated UCI's UAAL to be \$26,595,000 as of December 31, 2021. In addition, we provided the amortization schedules<sup>3</sup> for UCI assuming level dollar monthly payments over various payment periods for the UAAL calculated in that letter. Based on the December 31, 2021 valuation, the total annual payments, assuming payments will be made at the end of each month, are summarized in the table below:

Fiscal Year	Annual Fiscal Year Payment / (Credit)
2022/2023	\$3,077,555
2023/2024 through 2034/2035	\$2,865,674
2035/2036 <sup>4</sup>	\$2,218,318

Continuing the practice used in preparing last year's letter, we have consolidated the two detailed amortization payment schedules from our earlier letter (see footnote (3)) as Attachment A. It should be noted that we have continued to amortize the outstanding balance of each of the eight<sup>5</sup> UAAL amounts over the corresponding remaining payment period to pay off the UAAL.

## Increase in UAAL Due to Actuarial Loss from December 31, 2022 Valuation

In the December 31, 2022 valuation, we have determined the UAAL for UCI's members to be \$26,647,000.<sup>6</sup> This is calculated by rolling forward the Valuation Value of Assets (VVA) for UCI as determined in the December 31, 2021 valuation to December 31, 2022 using the actual contributions, benefit payments and actual (smoothed) return during 2022 and subtracting that amount from the Actuarial Accrued Liability (AAL) as of December 31, 2022.

Based on our letter dated August 5, 2022, the UAAL as of December 31, 2021 adjusted with interest of 7.00% and scheduled payments to June 30, 2023 is \$24,439,332. Again, that amount would be paid off by UCI assuming the scheduled payments were made starting FY 2023/2024 together with the 7.00% investment return assumption.

<sup>3</sup> As of the December 31, 2021 valuation there were separate amortization schedules for paying off:

- (a) all of the UAAL prior to the December 31, 2021 valuation; and
- (b) the change in the UAAL in the December 31, 2021 valuation.

<sup>4</sup> The UAAL will be fully amortized in fiscal year 2035/2036 with nine months of full payment and one month of partial payment.

<sup>5</sup> There was a payment schedule for all of the UAAL in the December 31, 2014 valuation and a payment schedule for the change in the UAAL in each of the valuations through December 31, 2021.

<sup>6</sup> See page 86 of our December 31, 2022 actuarial valuation report.

Based on the December 31, 2022 valuation, the UAAL was recalculated to be \$26,647,000 as of that date. When adjusted with interest at 7.00% and actual contributions<sup>7</sup> made by UCI from January 1, 2023 to June 30, 2023, the UAAL is \$25,998,334 as of June 30, 2023. The difference between the \$24,439,332 and the \$25,998,334 is the actuarial loss of \$1,559,002<sup>8</sup> for UCI during calendar year 2022 adjusted with interest and contributions at 7.00% from December 31, 2022 to June 30, 2023.

If we assume that the first payment to amortize the additional UAAL of \$1,559,002 would not be made until July 1, 2024, we would first adjust the additional UAAL amount with interest at 7.00% from June 30, 2023 to December 31, 2023. The amount when adjusted with interest to December 31, 2023 is \$1,612,644. We would then further adjust the amount with interest at 7.00% from December 31, 2023 to June 30, 2024. The amount when adjusted with interest to June 30, 2024 is \$1,668,132.

Assuming level dollar monthly payments towards the additional UAAL over a 20-year period beginning July 2024, the monthly payment, assuming the payment will be made at the end of each month, is \$12,719 for a total annual payment of \$152,623. A copy of that amortization schedule associated with the actuarial loss from the December 31, 2022 valuation is provided in Attachment B. The combined amortization schedule (for both Attachments A and B) showing the annual calendar year payments is provided in Attachment C. As can be observed in Attachment C, the combined UAAL will be fully amortized in fiscal year 2038/2039.

## Assumptions

The results in this study were calculated using the actuarial assumptions adopted by the Board for the December 31, 2022, actuarial valuation. That valuation and these calculations were prepared under the supervision of Andy Yeung, ASA, MAAA, FCA, EA.

We are members of the American Academy of Actuaries and we meet the qualification requirements to render the actuarial opinion contained herein.

<sup>7</sup> The timings of the actual contributions were slightly different from what we previously assumed in preparing the amortization schedule (i.e., end of the month payment).

<sup>8</sup> This actuarial loss was primarily due to a mortality loss of \$328,911, COLA increases greater than expected for calendar year 2023 of \$1,056,318, and investment losses (after smoothing) of \$224,939.

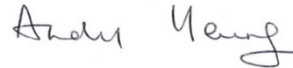
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Please let us know if you have any questions.

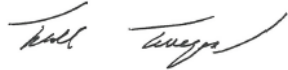
Sincerely,



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



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



Todd Tauzer, FSA, MAAA, FCA, CERA  
Senior Vice President & Actuary

JY/hy  
Enclosures

cc: Suzanne Jenike  
Brenda Shott

**University of California-Irvine UAAL Amortization Schedule  
UAAL Prior to December 31, 2022 Valuation**

**Before Considering When Combined UAAL from Both Attachments A and B Will Become Fully Amortized Before the End of the Corresponding Amortization Periods**

Annual Interest Rates: 7.00%  
Annual Payment Growth: 0.00%

Calendar Year	Beginning of Period UAAL Balance	Annual Payment <sup>1,2</sup>	Interest Paid	Principal Paid	End of Period UAAL Balance
2023	\$ 25,135,173	\$ 2,971,614	\$ 1,740,471	\$ 1,231,144	\$ 23,826,997
2024	23,826,997	2,865,674	1,577,073	1,288,601	22,538,396
2025	22,538,396	2,865,674	1,486,870	1,378,803	21,159,593
2026	21,159,593	2,865,674	1,390,354	1,475,320	19,684,273
2027	19,684,273	2,865,674	1,287,082	1,578,592	18,105,681
2028	18,105,681	2,865,674	1,176,580	1,689,094	16,416,587
2029	16,416,587	2,865,674	1,058,344	1,807,330	14,609,257
2030	14,609,257	2,865,674	931,831	1,933,843	12,675,414
2031	12,675,414	2,865,674	796,462	2,069,212	10,606,202
2032	10,606,202	2,865,674	651,617	2,214,057	8,392,145
2033	8,392,145	2,865,674	496,633	2,369,041	6,023,104
2034	6,023,104	2,865,674	330,800	2,534,874	3,488,230
2035	3,488,230	2,865,674	153,359	2,712,315	775,915
2036	775,915	1,461,074	(16,498)	1,477,573	(701,658) <sup>3</sup>
2037	(701,658)	(43,455)	(49,483)	6,028	(707,686) <sup>3</sup>
2038	(707,686)	52,929	(47,790)	100,719	(808,404) <sup>3</sup>
2039	(808,404)	86,094	(62,163)	148,257	(956,661) <sup>3</sup>
2040	(956,661)	(213,866)	(62,576)	(151,290)	(805,371) <sup>3</sup>
2041	(805,371)	(416,117)	(44,331)	(371,787)	(433,585) <sup>3</sup>
2042	(433,585)	(346,720)	(17,010)	(329,710)	(103,875) <sup>3</sup>
2043	(103,875)	(105,941)	(2,066)	(103,875)	- <sup>3</sup>
Total		\$ 37,833,700	\$ 12,775,559	\$ 25,058,141	

<sup>1</sup> Payments are assumed to be made at the end of each month.

<sup>2</sup> Annual payments are displayed for each calendar year.

<sup>3</sup> The end of period UAAL balances provided for these calendar years are before reducing the annual payments after the UAAL becomes fully amortized. If we have taken that into account, the combined UAAL will be fully amortized in calendar year 2036 with three months of full payments and one month of partial payment during 2036.

Note: Totals may be slightly off due to rounding

**University of California-Irvine UAAL Amortization Schedule  
New UAAL Losses from the December 31, 2022 Valuation**

**Before Considering When Combined UAAL from Both Attachments A and B Will Become Fully Amortized Before the End of the Corresponding Amortization Periods**

Annual Interest Rate: 7.00%  
Annual Payment Growth: 0.00%

Calendar Year	Beginning of Period UAAL Balance	Annual Payment <sup>1,2</sup>	Interest Paid <sup>3</sup>	Principal Paid	End of Period UAAL Balance
2023	\$ -	\$ -	\$ -	\$ -	\$ 1,612,644 <sup>4</sup>
2024	1,612,644 <sup>5</sup>	76,312	56,310	20,001	1,648,131
2025	1,648,131	152,623	110,532	42,091	1,606,040
2026	1,606,040	152,623	107,586	45,037	1,561,003
2027	1,561,003	152,623	104,433	48,190	1,512,813
2028	1,512,813	152,623	101,060	51,563	1,461,250
2029	1,461,250	152,623	97,451	55,172	1,406,078
2030	1,406,078	152,623	93,589	59,034	1,347,044
2031	1,347,044	152,623	89,456	63,167	1,283,877
2032	1,283,877	152,623	85,035	67,588	1,216,288
2033	1,216,288	152,623	80,303	72,320	1,143,969
2034	1,143,969	152,623	75,241	77,382	1,066,587
2035	1,066,587	152,623	69,824	82,799	983,788
2036	983,788	152,623	64,028	88,595	895,193
2037	895,193	152,623	57,827	94,796	800,397
2038	800,397	152,623	51,191	101,432	698,965
2039	698,965	152,623	44,091	108,532	590,433
2040	590,433	152,623	36,493	116,130	474,303
2041	474,303	152,623	28,364	124,259	350,044
2042	350,044	152,623	19,666	132,957	217,088
2043	217,088	152,623	10,359	142,264	74,824
2044	74,824	76,312	1,488	74,824	-
<b>Total</b>		\$ 3,052,460	\$ 1,384,328	\$ 1,668,132	

<sup>1</sup> Payments are assumed to be made at the end of each month and are assumed to begin on July 1, 2024.

<sup>2</sup> Annual payments are displayed for each calendar year.

<sup>3</sup> Interest paid from July 1, 2024.

<sup>4</sup> The additional UAAL balance from the actuarial loss during 2022 is \$1,559,002 as of June 30, 2023. The UAAL balance as of December 31, 2023 is \$1,612,644.

<sup>5</sup> The additional UAAL balance from the actuarial loss during 2022 is \$1,612,644 as of December 31, 2023. The UAAL balance as of June 30, 2024 before the UAAL payments are made starting July 1, 2024 is \$1,668,132.

Note: Totals may be slightly off due to rounding

**University of California-Irvine UAAL Amortization Schedule**  
**Combined UAAL as of December 31, 2022 Valuation**

After Considering When Combined UAAL from Both Attachments A and B Will Become  
Fully Amortized Before the End of the Corresponding Amortization Periods

Annual Interest Rates: 7.00%  
Annual Payment Growth: 0.00%

Calendar Year	Beginning of Period UAAL Balance	Annual Payment <sup>1,2</sup>	Interest Paid	Principal Paid	End of Period UAAL Balance
2023	\$ 25,135,173	\$ 2,971,614	\$ 1,740,471	\$ 1,231,144	\$ 25,439,641
2024	25,439,641	2,941,985	1,633,383	1,308,603	24,186,527
2025	24,186,527	3,018,297	1,597,403	1,420,894	22,765,633
2026	22,765,633	3,018,297	1,497,940	1,520,357	21,245,276
2027	21,245,276	3,018,297	1,391,515	1,626,782	19,618,494
2028	19,618,494	3,018,297	1,277,640	1,740,656	17,877,838
2029	17,877,838	3,018,297	1,155,795	1,862,502	16,015,335
2030	16,015,335	3,018,297	1,025,419	1,992,878	14,022,458
2031	14,022,458	3,018,297	885,918	2,132,379	11,890,079
2032	11,890,079	3,018,297	736,651	2,281,646	9,608,433
2033	9,608,433	3,018,297	576,936	2,441,361	7,167,073
2034	7,167,073	3,018,297	406,041	2,612,256	4,554,817
2035	4,554,817	3,018,297	223,183	2,795,114	1,759,703
2036	1,759,703	1,613,697	47,530	1,566,167	193,535
2037	193,535	109,168	8,344	100,824	92,711
2038	92,711	96,822	4,111	92,711	- <sup>3</sup>
2039	-	-	-	-	-
2040	-	-	-	-	-
2041	-	-	-	-	-
2042	-	-	-	-	-
2043	-	-	-	-	-
2044	-	-	-	-	-
Total		\$ 40,934,553	\$ 14,208,280	\$ 26,726,273	

<sup>1</sup> Payments are assumed to be made at the end of each month.

<sup>2</sup> Annual payments are displayed for each calendar year.

<sup>3</sup> The combined UAAL will be fully amortized by year 2038 with eight months of full payment and one month of partial payment during 2038.

Note: Totals may be slightly off due to rounding