

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)
Department of Education (Department) 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 the Department to pay off its \$3,191,000 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:

Fiscal Year	Annual Fiscal Year Payment / (Credit)
2023/2024	\$319,732
2024/2025 through 2035/2036	\$357,026
2036/2037	\$22,704
2037/2038	\$2,150
2038/2039	\$118,500
2039/2040	\$64,418
2040/2041	\$21,552
2041/2042 ¹	\$(2,671)
2042/2043	\$42,839
2043/2044	\$37,293

¹ The UAAL Payment Credits shown above for year 2041/2042 are before applying any tail volatility management on the Department's contributions that may be recommended by Segal in the future. The UAAL for the Department is not projected to be paid off until 2043/2044.

Background

In our letter to you dated August 5, 2022, we calculated the Department's UAAL to be \$2,993,000 as of December 31, 2021. In addition, we provided the amortization schedules² for the Department 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 Payment
2022/2023	\$314,187
2023/2024 through 2035/2036	\$319,732
2036/2037 ³	\$(14,589)
2037/2038 ³	\$(35,143)
2038/2039 ⁴	\$63,963

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 (2)) as Attachment A. It should be noted that we have continued to amortize the outstanding balance of each of the eight⁵ 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 the Department's members to be \$3,191,000.⁶ This is calculated by rolling forward the Valuation Value of Assets (VVA) for the Department as determined in the December 31, 2021 valuation to December 31, 2022 using the actual contributions, benefit payments and actual (smoothed)

² 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.

³ The UAAL Payment Credits shown above for year 2036/2037 and year 2037/2038 are before applying any tail volatility management on the Department's contributions that may be recommended by Segal in the future. The UAAL for the Department is not projected to be paid off until 2038/2039.

⁴ The UAAL will be fully amortized in fiscal year 2038/2039 with nine months of full payment and one month of partial payment.

⁵ 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.

⁶ See page 86 of our December 31, 2022 actuarial valuation report.

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 \$2,760,430. Again, that amount would be paid off by the Department assuming the scheduled payments were made starting FY 2023/2024 together with the 7.00% investment return assumption.

Based on the December 31, 2022 valuation, the UAAL was recalculated to be \$3,191,000 as of that date. When adjusted with interest at 7.00% and actual contributions⁷ made by the Department from January 1, 2023 to June 30, 2023, the UAAL is \$3,141,372 as of June 30, 2023. The difference between the \$3,141,372 and the \$2,760,430 is the actuarial loss of \$380,942⁸ for the Department 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 \$380,942 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 \$394,049. 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 \$407,608.

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 \$3,108 for a total annual payment of \$37,293. 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 2043/2044.

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.

⁷ 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).

⁸ This actuarial loss was primarily due to a mortality loss of \$201,218, COLA increases greater than expected for calendar year 2023 of \$127,658, and investment losses (after smoothing) of \$26,904.

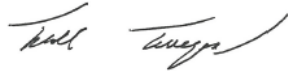
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Please let us know if you have any questions.

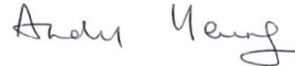
Sincerely,



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



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



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

JY/hy
Enclosures

cc: Suzanne Jenike
Brenda Shott

Department of Education 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 ^{1,2}	Interest Paid	Principal Paid	End of Period UAAL Balance
2023	\$ 2,822,639	\$ 316,960	\$ 185,572	\$ 131,388	\$ 2,693,268
2024	2,693,268	319,732	178,396	141,336	2,551,931
2025	2,551,931	319,732	168,502	151,230	2,400,701
2026	2,400,701	319,732	157,916	161,816	2,238,885
2027	2,238,885	319,732	146,589	173,143	2,065,742
2028	2,065,742	319,732	134,469	185,263	1,880,479
2029	1,880,479	319,732	121,501	198,232	1,682,248
2030	1,682,248	319,732	107,625	212,108	1,470,140
2031	1,470,140	319,732	92,777	226,955	1,243,185
2032	1,243,185	319,732	76,890	242,842	1,000,342
2033	1,000,342	319,732	59,891	259,841	740,501
2034	740,501	319,732	41,702	278,030	462,471
2035	462,471	319,732	22,240	297,492	164,979
2036	164,979	152,571	3,797	148,774	16,205
2037	16,205	(24,866)	1,743	(26,609)	42,814
2038	42,814	23,032	3,282	19,750	23,064
2039	23,064	54,165	(574)	54,739	(31,675) ³
2040	(31,675)	5,692	(2,772)	8,463	(40,138) ³
2041	(40,138)	(27,853)	(2,138)	(25,715)	(14,424) ³
2042	(14,424)	(17,210)	(67)	(17,143)	2,719 ³
2043	2,719	2,773	54	2,719	- ³
Total		\$ 4,322,051	\$ 1,497,396	\$ 2,824,655	

¹ Payments are assumed to be made at the end of each month.

² Annual payments are displayed for each calendar year.

³ 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 2039 with three months of full payment and one month of partial payment during 2039.

Note: Totals may be slightly off due to rounding

Department of Education UAAL Amortization Schedule New UAAL Loss 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 ^{1,2}	Interest Paid ³	Principal Paid	End of Period UAAL Balance
2023	\$ -	\$ -	\$ -	\$ -	\$ 394,049 ⁴
2024	394,049 ⁵	18,647	13,759	4,887	402,720
2025	402,720	37,293	27,009	10,285	392,435
2026	392,435	37,293	26,289	11,005	381,431
2027	381,431	37,293	25,518	11,775	369,655
2028	369,655	37,293	24,694	12,599	357,056
2029	357,056	37,293	23,812	13,481	343,575
2030	343,575	37,293	22,868	14,425	329,150
2031	329,150	37,293	21,859	15,435	313,715
2032	313,715	37,293	20,778	16,515	297,200
2033	297,200	37,293	19,622	17,671	279,528
2034	279,528	37,293	18,385	18,908	260,620
2035	260,620	37,293	17,062	20,232	240,388
2036	240,388	37,293	15,645	21,648	218,740
2037	218,740	37,293	14,130	23,163	195,577
2038	195,577	37,293	12,508	24,785	170,792
2039	170,792	37,293	10,774	26,520	144,272
2040	144,272	37,293	8,917	28,376	115,896
2041	115,896	37,293	6,931	30,363	85,533
2042	85,533	37,293	4,805	32,488	53,045
2043	53,045	37,293	2,531	34,762	18,283
2044	18,283	18,647	364	18,283	-
Total		\$ 745,868	\$ 338,260	\$ 407,607	

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

² Annual payments are displayed for each calendar year.

³ Interest paid from July 1, 2024.

⁴ The additional UAAL balance from the actuarial loss during 2022 is \$380,942 as of June 30, 2023. The UAAL balance as of December 31, 2023 is \$394,049.

⁵ The additional UAAL balance from the actuarial loss during 2022 is \$394,049 as of December 31, 2023. The UAAL balance as of June 30, 2024 before the UAAL payments are made starting July 1, 2024 is \$407,608.

Note: Totals may be slightly off due to rounding

Department of Education 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 ^{1,2}	Interest Paid	Principal Paid	End of Period UAAL Balance
2023	\$ 2,822,639	\$ 316,960	\$ 185,572	\$ 131,388	\$ 3,087,317
2024	3,087,317	338,379	192,155	146,224	2,954,651
2025	2,954,651	357,026	195,511	161,515	2,793,137
2026	2,793,137	357,026	184,205	172,821	2,620,316
2027	2,620,316	357,026	172,107	184,918	2,435,398
2028	2,435,398	357,026	159,163	197,863	2,237,535
2029	2,237,535	357,026	145,313	211,713	2,025,822
2030	2,025,822	357,026	130,493	226,533	1,799,289
2031	1,799,289	357,026	114,636	242,390	1,556,899
2032	1,556,899	357,026	97,668	259,357	1,297,542
2033	1,297,542	357,026	79,513	277,512	1,020,030
2034	1,020,030	357,026	60,087	296,938	723,091
2035	723,091	357,026	39,302	317,724	405,367
2036	405,367	189,865	19,442	170,422	234,945
2037	234,945	12,427	15,872	(3,446)	238,390
2038	238,390	60,325	15,791	44,534	193,856
2039	193,856	91,459	10,200	81,259	112,597
2040	112,597	42,985	6,146	36,839	75,757
2041	75,757	9,440	4,793	4,648	71,109
2042	71,109	20,084	4,738	15,345	55,764
2043	55,764	40,066	2,585	37,481	18,283
2044	18,283	18,647	364	18,283	-
Total		\$ 5,067,919	\$ 1,835,656	\$ 3,232,263	

¹ Payments are assumed to be made at the end of each month.

² Annual payments are displayed for each calendar year.

Note: Totals may be slightly off due to rounding