LIVERMORE AMADOR VALLEY TRANSIT AUTHORITY

STAFF REPORT

SUBJECT: Consideration and approval of the establishment of a California Employers' Pension prefunding trust account with CalPERS

FROM: Tamara Edwards, Finance and Grants Manager

DATE: August 24, 2021

Action Requested
Staff requests that the Finance and Administration Committee recommend that the Board of Directors Approve Resolution 29-2021 establishing a California Employers' Pension Prefunding Trust (CEPPT) Account with CalPERS for the purpose of refunding LAVTA's required pension contributions and authorize an initial payment of $100,000 to open the trust account. Additionally, staff requests that the Finance and Administration Committee recommend that the Board authorize the Executive Director to execute the required documentation for participation in the CEPPT.
Staff is also seeking a recommendation from the Finance and Administration committee in regard to an asset allocation strategy, and FY 22 and FY 23 contribution amounts.

Background
In September of 2018, the California State Legislature passed Senate Bill 1413 (SB 1413) which created the California Employers' Pension Prefunding Trust (CEPPT). The CEPPT is a special irrevocable trust fund, that allows State and local public agencies that provide a defined benefit pension plan to their employees to prefund the pension contributions. A defined benefit plan is prefunded when it is a trust fund for the purpose of investing employer assets toward future required pension contributions. Required pension contributions include any pension liabilities, ongoing payroll contributions and administrative costs.

Discussion
Under SB 1413, CalPERS has implemented a new CEPPT trust fund that allows public employers to prefund their future pension costs. The new program provides the state and public agencies and additional investment vehicle to accumulate assets over time to help manager long-term costs. Establishing a CEPPT trust fund provides an opportunity for LAVTA to address its pension costs and liabilities.

Some of the benefits of the CalPERS CEPPT Trust are:

- Assets in the trust can be used to manage growing pension liabilities, including future normal costs an Unfunded Accrued Liability (UAL) payments.
- Contributions to the trust from both a funding and a timing perspective, are controlled by LAVTA and are voluntary.

- Promotes fiscal responsibility and accountability for LAVTA to deal with long term pension liabilities and costs.
- LAVTA can select an asset allocation strategy that matches its tolerance for risk, given the investment time horizon.
- Assets can be used to stabilize rates to offset unexpected contribution rate increases or be used as a rainy-day fund when revenues are impaired based on economic or other conditions.
- The trust is used to reimburse LAVTA for CalPERS pension contributions or for making direct payments to CalPERS pension.
- Provides effective cost management, low administrative fees, investment management, GASB compliant financial reporting, streamlined transfers, and an established working relationship with CalPERS.

Recommendation

Staff recommends that the Finance &Administration Committee recommend that the Board approve Resolution 29-2021 establishing a California Employers' Pension Prefunding Trust (CEPPT) Account with CalPERS for the purpose of refunding LAVTA's required pension contributions and authorize an initial payment of $100,000 to open the trust account. Additionally, staff requests that the Finance and Administration Committee recommend that the Board authorize the Executive Director to execute the required documentation for participation in the CEPPT.

Attachments:

1. Resolution 29-2021
2. Annual Valuation Report as of June 30,2020 for the Misc. Plan of the LAVTA
3. Annual Valuation Report as of June 30,2020 for the PEPRA Misc. plan of the LAVTA
4. CEPPT Certification of Funding Policy
5. CEPPT Participation Agreement
6. CEPPT Delegation of Authority

RESOLUTION NO. 29-2021

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE LIVERMORE AMADOR VALLEY TRANSIT AUTHORITY AUTHORIZING THE EXECUTIVE DIRECTOR TO ESTABLISH A CALIFORNIA EMPLOYERS' PENSION PREFUDING TRUST (CEPPT) ACCOUNT WITH CALPERS AND DELEGATION OF AUTHORITY TO REQUEST DISBURSEMENTS FROM CALPERS CEPPT PREFUNDING PLAN

WHEREAS, LAVTA has determined it to be in its best interest to set aside funds for the pre-funding of it CalPERS pension obligation, to be held in trust for the exclusive purpose of making future contributions of the LAVTA's required pension contributions and any employer contributions in excess of required contributions; and

WHEREAS, LAVTA desires to participate in the California Employers Pension Prefunding Trust (CEPPT) by signing the CEPPT Participation Agreement; and

WHEREAS, the Board of Directors delegates the Executive Director and Director of Finance to request, on behalf of LAVTA, disbursements from the Pension Prefunding Trust and to certify as to the purpose for which the disbursed funds will be used.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Livermore Amador Valley Transit Authority:

1. Approves the establishment of an Internal Revenue Cos S115 Irrevocable Trust through California Employers' Pension Prefunding Trust (CEPPT); and
2. Authorizes and directs the Executive Director to execute any and all required documentation, including CEPPT Participation Agreement, CEPPT Delegation of Authority to Request Disbursements; CEPPT Certification of Funding Policy; and any other required documentation.

PASSED AND ADOPTED this 13th day of September 2021.

BY____________________________________
Karla Brown, Chair

ATTEST_______________________________
Michael Tree, Executive Director

CalPERS

California Public Employees' Retirement System
Actuarial Office
400 Q Street, Sacramento, CA 95811 | Phone: (916) 795-3000 | Fax: (916) 795-2744
888 CalPERS (or **888**-225-7377) | TTY: (877) 249-7442 | **www.calpers.ca.gov**

July 2021

Miscellaneous Plan of the Livermore/Amador Valley Transit Authority
(CalPERS ID: 5624616425)
Annual Valuation Report as of June 30, 2020

Dear Employer,

Attached to this letter, you will find the June 30, 2020 actuarial valuation report of your CalPERS pension plan. **Provided in this report is the determination of the minimum required employer contributions for fiscal year 2022-23**. In addition, the report contains important information regarding the current financial status of the plan as well as projections and risk measures to aid in planning for the future.

Because this plan is in a risk pool, the following valuation report has been separated into two sections:

- Section 1 contains specific information for the plan including the development of the current and projected employer contributions, and
- Section 2 contains the Risk Pool Actuarial Valuation appropriate to the plan as of June 30, 2020.

Section 2 can be found on the CalPERS website (calpers.ca.gov). From the home page, go to *"Forms & Publications"* and select *"View All"*. In the search box, enter *"Risk Pool"* and from the results list download the Miscellaneous Risk Pool Actuarial Valuation Report for June 30, 2020.

Your June 30, 2020 actuarial valuation report contains important actuarial information about your pension plan at CalPERS. Your assigned CalPERS staff actuary, whose signature appears in the Actuarial Certification section on page 1, is available to discuss the report with you.

Actuarial valuations are based on assumptions regarding future plan experience including investment return and payroll growth, eligibility for the types of benefits provided, and longevity among retirees. The CalPERS Board of Administration adopts these assumptions after considering the advice of CalPERS actuarial and investment teams and other professionals. Each actuarial valuation reflects all prior differences between actual and assumed experience and adjusts the contribution rates as needed. This valuation is based on an investment return assumption of 7.0% which was adopted by the board in December 2016. Other assumptions used in this report are those recommended in the CalPERS Experience Study and Review of Actuarial Assumptions report from December 2017.

Required Contribution

The exhibit below displays the minimum employer contributions for fiscal year 2022-23 along with estimates of the required contributions for fiscal year 2023-24. Member contributions other than cost sharing (whether paid by the employer or the employee) are in addition to the results shown below. **The employer contributions in this report do not reflect any cost sharing arrangements you may have with your employees**.

Fiscal Year	Employer Normal Cost Rate	Employer Amortization of Unfunded Accrued Liability
2022-23	10.87%	$113,208
Projected Results		
2023-24	*10.9%*	*$123,000*

The actual investment return for fiscal year 2020-21 was not known at the time this report was prepared. The projections above assume the investment return for that year would be 7.00%. ***To the extent the actual investment return for fiscal year 2020-21 differs from 7.00%, the actual contribution requirements for fiscal year 2023-24 will differ from those shown above.*** For additional details regarding the assumptions and methods used for these projections please refer to the "Projected Employer Contributions" in the "Highlights and Executive Summary" section. This section also contains projected required contributions through fiscal year 2027-28.

Changes from Previous Year's Valuation

There are no significant changes in actuarial assumptions or policies in your 2020 actuarial valuation. Your annual valuation report is an important tool for monitoring the health of your CalPERS pension plan. Your report contains useful information about future required contributions and ways to control your plan's funding progress. In addition to your annual actuarial report my office has developed tools for employers to plan, project and protect the retirement benefits of your employees. Pension Outlook is a tool to help plan and budget pension costs into the future with easy to understand results and charts.

You will be able to view the projected funded status and required employer contributions for pension plans in different potential scenarios for up to 30 years into the future — which will make budgeting more predictable. While Pension Outlook can't predict the future, it can provide valuable planning information based on a variety of future scenarios that you select.

Pension Outlook can help you answer specific questions about your plans, including:

- When is my plan's funded status expected to increase?
- What happens to my required contributions in a down market?
- How does the discount rate assumption affect my contributions?
- What is the impact of making an additional discretionary payment to my plan?

To get started, visit our Pension Outlook page at www.calpers.ca.gov/page/employers/actuarial-resources/pension-outlook-overview and take the steps to register online.

CalPERS will be completing an Asset Liability Management (ALM) review process in November 2021 that will review the capital market assumptions and the strategic asset allocation and ascertain whether a change in the discount rate and other economic assumptions is warranted. In addition, the Actuarial Office will be completing its Experience Study to review the demographic experience within the pension system and make recommendations to modify future assumptions where appropriate.

Furthermore, this valuation does not reflect any impacts from the COVID-19 pandemic on your pension plan. The impact of COVID-19 on retirement plans is not yet known and CalPERS actuaries will continue to monitor the effects and where necessary make future adjustments to actuarial assumptions.

Further descriptions of general changes are included in the "Highlights and Executive Summary" section and in Appendix A of the Section 2 report, "Actuarial Methods and Assumptions."

Questions

We understand that you might have questions about these results, and your assigned CalPERS actuary whose signature is on the valuation report is available to discuss. If you have other questions, you may call the Customer Contact Center at (888)-CalPERS or (**888-225-7377**).

Sincerely,

SCOTT TERANDO, ASA, EA, MAAA, FCA, CFA
Chief Actuary

Actuarial Valuation
as of June 30, 2020

for the
Miscellaneous Plan
of the
Livermore/Amador Valley Transit Authority

(CalPERS ID: 5624616425)

Required Contributions
for Fiscal Year
July 1, 2022 - June 30, 2023

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Section 1

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

Plan Specific Information for the Miscellaneous Plan of the Livermore/Amador Valley Transit Authority

(CalPERS ID: 5624616425)
(Rate Plan ID: 1507)

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Actuarial Certification

Section 1 of this report is based on the member and financial data contained in our records as of June 30, 2020 which was provided by your agency and the benefit provisions under your contract with CalPERS. Section 2 of this report is based on the member and financial data as of June 30, 2020 provided by employers participating in the Miscellaneous Risk Pool to which the plan belongs and benefit provisions under the CalPERS contracts for those agencies.

As set forth in Section 2 of this report, the pool actuaries have certified that, in their opinion, the valuation of the risk pool containing your Miscellaneous Plan has been performed in accordance with generally accepted actuarial principles consistent with standards of practice prescribed by the Actuarial Standards Board, and that the assumptions and methods are internally consistent and reasonable for the risk pool as of the date of this valuation and as prescribed by the CalPERS Board of Administration according to provisions set forth in the California Public Employees' Retirement Law.

Having relied upon the information set forth in Section 2 of this report and based on the census and benefit provision information for the plan, it is my opinion as the plan actuary that the Unfunded Accrued Liability amortization bases as of June 30, 2020 and employer contribution as of July 1, 2022 have been properly and accurately determined in accordance with the principles and standards stated above.

The undersigned is an actuary who satisfies the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States with regard to pensions.

EDDIE W. LEE, ASA, EA, FCA, MAAA
Senior Pension Actuary, CalPERS

Highlights and Executive Summary

- **Introduction**
- **Purpose of Section 1**
- **Required Employer Contributions**
- **Additional Discretionary Employer Contributions**
- **Plan's Funded Status**
- **Projected Employer Contributions**
- **Other Pooled Miscellaneous Risk Pool Rate Plans**
- **Cost**
- **Changes Since the Prior Year's Valuation**
- **Subsequent Events**

Introduction

This report presents the results of the June 30, 2020 actuarial valuation of the Miscellaneous Plan of the Livermore/Amador Valley Transit Authority of the California Public Employees' Retirement System (CalPERS). This actuarial valuation sets the required employer contributions for fiscal year 2022-23.

Purpose of Section 1

This Section 1 report for the Miscellaneous Plan of the Livermore/Amador Valley Transit Authority of CalPERS was prepared by the plan actuary in order to:

- Set forth the assets and accrued liabilities of this plan as of June 30, 2020;
- Determine the minimum required employer contribution for this plan for the fiscal year July 1, 2022 through June 30, 2023; and
- Provide actuarial information as of June 30, 2020 to the CalPERS Board of Administration and other interested parties.

The pension funding information presented in this report should not be used in financial reports subject to Governmental Accounting Standards Board (GASB) Statement No. 68 for a Cost Sharing Employer Defined Benefit Pension Plan. A separate accounting valuation report for such purposes is available on the CalPERS website.

The measurements shown in this actuarial valuation may not be applicable for other purposes. The employer should contact their actuary before disseminating any portion of this report for any reason that is not explicitly described above.

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; changes in actuarial policies; and changes in plan provisions or applicable law.

Assessment and Disclosure of Risk

This report includes the following risk disclosures consistent with the recommendations of Actuarial Standards of Practice No. 51 and recommended by the California Actuarial Advisory Panel (CAAP) in the Model Disclosure Elements document:

- A "Scenario Test," projecting future results under different investment income returns.
- A "Sensitivity Analysis," showing the impact on current valuation results using alternative discount rates of 6.0% and 8.0%.
- A "Sensitivity Analysis," showing the impact on current valuation results assuming rates of mortality are 10% lower or 10% higher than our current post- retirement mortality assumptions adopted in 2017.
- Pension Plan maturity measures quantifying the risks the employer bears.

Required Employer Contributions

	Fiscal Year
Required Employer Contributions	**2022-23**
Employer Normal Cost Rate	**10.87%**
Plus	
Required Payment on Amortization Bases[1]	**$113,208**
Paid either as	
1) Monthly Payment	**$9,434.00**
Or	
2) Annual Prepayment Option*	**$109,442**

The total minimum required employer contribution is the sum of the Plan's Employer Normal Cost Rate (expressed as a percentage of payroll and paid as payroll is reported) plus the Employer Unfunded Accrued Liability (UAL) Contribution Amount (billed monthly (1) or prepaid annually (2) in dollars).

** Only the UAL portion of the employer contribution can be prepaid* ***(which must be received in full no later than July 31)****.*

	Fiscal Year 2021-22	Fiscal Year 2022-23
Development of Normal Cost as a Percentage of Payroll		
Base Total Normal Cost for Formula	17.25%	17.24%
Surcharge for Class 1 Benefits[2]		
a) FAC 1	0.54%	0.55%
Phase out of Normal Cost Difference[3]	0.00%	0.00%
Plan's Total Normal Cost	17.79%	17.79%
Formula's Expected Employee Contribution Rate	6.91%	6.92%
Employer Normal Cost Rate	10.88%	10.87%

[1] The required payment on amortization bases does not take into account any additional discretionary payment made after April 30, 2021.

[2] Section 2 of this report contains a list of Class 1 benefits and corresponding surcharges for each benefit.

[3] The normal cost change is phased out over a five-year period in accordance with the CalPERS contribution allocation policy.

Additional Discretionary Employer Contributions

The minimum required employer contribution towards the Unfunded Accrued Liability (UAL) for this rate plan for the 2022-23 fiscal year is $113,208. CalPERS allows employers to make additional discretionary payments (ADPs) at any time and in any amount. These optional payments serve to reduce the UAL and future required contributions and can result in significant long-term savings. Employers can also use ADPs to stabilize annual contributions as a fixed dollar amount, percent of payroll or percent of revenue.

Provided below are select ADP options for consideration. Making such an ADP during fiscal year 2022-23 does not require an ADP be made in any future year, nor does it change the remaining amortization period of any portion of unfunded liability. For information on permanent changes to amortization periods, see the "Amortization Schedule and Alternatives" section of the report.

If you are considering making an ADP, please contact your actuary for additional information.

Minimum Required Employer Contribution for Fiscal Year 2022-23

Estimated Normal Cost	Minimum UAL Payment	ADP	Total UAL Contribution	Estimated Total Contribution
$64,895	$113,208	$0	$113,208	$178,103

Alternative Fiscal Year 2022-23 Employer Contributions for Greater UAL Reduction

Funding Target	Estimated Normal Cost	Minimum UAL Payment	ADP[1]	Total UAL Contribution	Estimated Total Contribution
20 years	$64,895	$113,208	$21,789	$134,997	$199,892
15 years	$64,895	$113,208	$43,815	$157,023	$221,918
10 years	$64,895	$113,208	$90,414	$203,622	$268,517
5 years	$64,895	$113,208	$235,594	$348,802	$413,697

[1] The ADP amounts are assumed to be made in the middle of the fiscal year. A payment made earlier or later in the fiscal year would have to be less or more than the amount shown to have the same effect on the UAL amortization.

Note that the calculations above are based on the projected Unfunded Accrued Liability as of June 30, 2022 as determined in the June 30, 2020 actuarial valuation. New unfunded liabilities can emerge in future years due to assumption or method changes, changes in plan provisions and actuarial experience different than assumed. Making an ADP illustrated above for the indicated number of years will not result in a plan that is exactly 100% funded in the indicated number of years. Valuation results will vary from one year to the next and can diverge significantly from projections over a period of several years.

Plan's Funded Status

	June 30, 2019	June 30, 2020
1. Present Value of Projected Benefits (PVB)	$6,502,523	$6,790,870
2. Entry Age Accrued Liability (AL)	5,702,119	5,986,230
3. Plan's Market Value of Assets (MVA)	4,397,903	4,530,569
4. Unfunded Accrued Liability (UAL) [(2) - (3)]	1,304,216	1,455,661
5. Funded Ratio [(3) / (2)]	77.1%	75.7%

This measure of funded status is an assessment of the need for future employer contributions based on the selected actuarial cost method used to fund the plan. The UAL is the present value of future employer contributions for service that has already been earned and is in addition to future normal cost contributions for active members. For a measure of funded status that is appropriate for assessing the sufficiency of plan assets to cover estimated termination liabilities, please see "Hypothetical Termination Liability" in the "Risk Analysis" section.

Projected Employer Contributions

The table below shows the required and projected employer contributions (before cost sharing) for the next six fiscal years. The projection assumes that all actuarial assumptions will be realized and that no further changes to assumptions, contributions, benefits, or funding will occur during the projection period. Actual contribution rates during this projection period could be significantly higher or lower than the projection shown below.

	Required Contribution	Projected Future Employer Contributions (Assumes 7.00% Return for Fiscal Year 2020-21)				
Fiscal Year	**2022-23**	**2023-24**	**2024-25**	**2025-26**	**2026-27**	**2027-28**
	Rate Plan 1507 Results					
Normal Cost %	10.87%	10.9%	10.9%	10.9%	10.9%	10.9%
UAL Payment	$113,208	$123,000	$133,000	$140,000	$146,000	$149,000

For some sources of UAL, the change in UAL is amortized using a 5-year ramp up. For more information, please see "Amortization of the Unfunded Actuarial Accrued Liability" under "Actuarial Methods" in Appendix A of the Section 2 Report. This method phases in the impact of the change in UAL over a 5-year period in order to reduce employer cost volatility from year to year. As a result of this methodology, dramatic changes in the required employer contributions in any one year are less likely. However, required contributions can change gradually and significantly over the next five years. In years when there is a large increase in UAL, the relatively small amortization payments during the ramp up period could result in a funded ratio that is projected to decrease initially while the contribution impact of the increase in the UAL is phased in.

For projected contributions under alternate investment return scenarios, please see the "Future Investment Return Scenarios" in the "Risk Analysis" section.

Our online pension plan modeling and projection tool, Pension Outlook, is available in the Employers section of the CalPERS website. Pension Outlook is a tool to help plan and budget pension costs into the future with results and charts that are easy to understand.

Other Pooled Miscellaneous Risk Pool Rate Plans

All of the results presented in this Section 1 report, except those shown below, correspond to rate plan 1507. In many cases, employers have additional rate plans within the same risk pool. For cost analysis and budgeting it is useful to consider contributions for these rate plans as a whole rather than individually. The estimated contribution amounts and rates for all of the employer's rate plans in the Miscellaneous Risk Pool are shown below and assume that the payroll for each rate plan will grow according to the overall payroll growth assumption of 2.75% per year for three years.

	Fiscal Year 2021-22	**Fiscal Year 2022-23**
Estimated Combined Employer Contributions for all Pooled Miscellaneous Rate Plans		
Projected Payroll for the Contribution Year	$1,374,626	$1,549,227
Estimated Employer Normal Cost	$123,076	$136,026
Required Payment on Amortization Bases	$100,114	$117,750
Estimated Total Employer Contributions	$223,190	$253,776
Estimated Total Employer Contribution Rate (illustrative only)	16.24%	16.38%

Cost

Actuarial Determination of Pension Plan Cost

Contributions to fund the pension plan are comprised of two components:

- Normal Cost, expressed as a percentage of total active payroll
- Amortization of the Unfunded Accrued Liability (UAL), expressed as a dollar amount

For fiscal years prior to 2016-17, the Amortization of UAL component was expressed as a percentage of total active payroll. Starting with fiscal year 2016-17, the Amortization of UAL component was expressed as a dollar amount and invoiced on a monthly basis. There continues to be an option to prepay this amount during July of each fiscal year.

The Normal Cost component is expressed as a percentage of active payroll with employer and employee contributions payable as part of the regular payroll reporting process.

The determination of both components requires complex actuarial calculations. The calculations are based on a set of actuarial assumptions which can be divided into two categories:

- Demographic assumptions (e.g., mortality rates, retirement rates, employment termination rates, disability rates)
- Economic assumptions (e.g., future investment earnings, inflation, salary growth rates)

These assumptions reflect CalPERS' best estimate of future experience of the plan and are long term in nature. We recognize that all assumptions will not be realized in any given year. For example, the investment earnings at CalPERS have averaged 5.5% over the 20 years ending June 30, 2020, yet individual fiscal year returns have ranged from -23.6% to +20.7%. In addition, CalPERS reviews all actuarial assumptions by conducting in-depth experience studies every four years, with the most recent experience study completed in 2017.

Changes Since the Prior Year's Valuation

Benefits

The standard actuarial practice at CalPERS is to recognize mandated legislative benefit changes in the first annual valuation following the effective date of the legislation. Voluntary benefit changes by plan amendment are generally included in the first valuation that is prepared after the amendment becomes effective, even if the valuation date is prior to the effective date of the amendment.

This valuation generally reflects plan changes by amendments effective before the date of the report. Please refer to the "Plan's Major Benefit Options" and Appendix B of the Section 2 Report for a summary of the plan provisions used in this valuation.

Actuarial Methods and Assumptions

The are no significant changes to the actuarial methods or assumptions for the 2020 actuarial valuation.

Subsequent Events

The contribution requirements determined in this actuarial valuation report are based on demographic and financial information as of June 30, 2020. Changes in the value of assets subsequent to that date are not reflected. Investment returns below the assumed rate of return will increase future required contributions while investment returns above the assumed rate of return will decrease future required contributions.

CalPERS will be completing an Asset Liability Management (ALM) process in November 2021 that will review the capital market assumptions and the strategic asset allocation and ascertain whether a change in the discount rate and other economic assumptions is warranted. As part of the ALM process the Actuarial Office will be completing an Experience Study to review the demographic experience of the retirement system and make recommendations to modify future assumptions where appropriate.

Furthermore, this valuation does not reflect any impacts from the COVID-19 pandemic on your pension plan. The impact of COVID-19 on retirement plans is not yet known and CalPERS actuaries will continue to monitor the effects and where necessary make future adjustments to actuarial assumptions.

The projected employer contributions on Page 6 are calculated under the assumption that the discount rate remains at 7.0% going forward and that the realized rate of return on assets for fiscal year 2020-21 is 7.0%.

This actuarial valuation report reflects statutory changes, regulatory changes and CalPERS Board actions through January 2021. Any subsequent changes or actions are not reflected.

Assets and Liabilities

- **Breakdown of Entry Age Accrued Liability**
- **Allocation of Plan's Share of Pool's Experience/Assumption Change**
- **Development of Plan's Share of Pool's Market Value of Assets**
- **Schedule of Plan's Amortization Bases**
- **Amortization Schedule and Alternatives**
- **Employer Contribution History**
- **Funding History**

Breakdown of Entry Age Accrued Liability

Active Members	$1,912,986
Transferred Members	536,549
Terminated Members	60,090
Members and Beneficiaries Receiving Payments	3,476,605
Total	$5,986,230

Allocation of Plan's Share of Pool's Experience/Assumption Change

It is the policy of CalPERS to ensure equity within the risk pools by allocating the pool's experience gains/losses and assumption changes in a manner that treats each employer equitably and maintains benefit security for the members of the System while minimizing substantial variations in employer contributions. The Pool's experience gains/losses and impact of assumption/method changes is allocated to the plan as follows:

1.	Plan's Accrued Liability	$5,986,230
2.	Projected UAL balance at 6/30/2020	1,329,903
3.	Pool's Accrued Liability[1]	19,314,480,060
4.	Sum of Pool's Individual Plan UAL Balances at 6/30/2020[1]	4,306,566,797
5.	Pool's 2019/20 Investment (Gain)/Loss[1]	344,968,792
6.	Pool's 2019/20 Non-Investment (Gain)/Loss[1]	60,428,629
7.	Plan's Share of Pool's Investment (Gain)/Loss: [(1) - (2)] ÷ [(3) - (4)] × (5)	107,029
8.	Plan's Share of Pool's Non-Investment (Gain)/Loss: (1) ÷ (3) × (6)	18,729
9.	Plan's New (Gain)/Loss as of 6/30/2020: (7) + (8)	125,758

[1] Does not include plans that transferred to Pool on the valuation date.

Development of the Plan's Share of Pool's Market Value of Assets

10.	Plan's UAL: (2) + (9)	$1,455,661
11.	Plan's Share of Pool's MVA: (1) - (10)	$4,530,569

Schedule of Plan's Amortization Bases

Note that there is a two-year lag between the valuation date and the start of the contribution fiscal year.

- The assets, liabilities, and funded status of the plan are measured as of the valuation date: June 30, 2020.
- The required employer contributions determined by the valuation are for the fiscal year beginning two years after the valuation date: fiscal year 2022-23.

This two-year lag is necessary due to the amount of time needed to extract and test the membership and financial data, and the need to provide public agencies with their required employer contribution well in advance of the start of the fiscal year.

The Unfunded Accrued Liability (UAL) is used to determine the employer contribution and therefore must be rolled forward two years from the valuation date to the first day of the fiscal year for which the contribution is being determined. The UAL is rolled forward each year by subtracting the expected payment on the UAL for the fiscal year and adjusting for interest. The expected payment for the first fiscal year is determined by the actuarial valuation two years ago and the contribution for the second year is from the actuarial valuation one year ago. Additional discretionary payments are reflected in the Expected Payments column in the fiscal year they were made by the agency.

Reason for Base	Date Est.	Ramp Level 2022-23	Ramp Shape	Escala-tion Rate	Amort. Period	Balance 6/30/20	Expected Payment 2020-21	Balance 6/30/21	Expected Payment 2021-22	Balance 6/30/22	Minimum Required Payment 2022-23
Share of Pre-2013 Pool UAL	6/30/13	No Ramp		2.75%	15	262,414	21,653	258,385	22,248	253,458	22,860
Non-Investment (Gain)/Loss	6/30/13	100%	Up/Down	2.75%	23	(4,335)	(294)	(4,334)	(302)	(4,325)	(310)
Investment (Gain)/Loss	6/30/13	100%	Up/Down	2.75%	23	451,060	30,599	450,982	31,440	450,029	32,305
Non-Investment (Gain)/Loss	6/30/14	100%	Up/Down	2.75%	24	393	26	394	27	394	27
Investment (Gain)/Loss	6/30/14	100%	Up/Down	2.75%	24	(370,879)	(24,525)	(371,472)	(25,200)	(371,408)	(25,892)
Assumption Change	6/30/14	100%	Up/Down	2.75%	14	219,389	20,862	213,166	21,435	205,915	22,025
Non-Investment (Gain)/Loss	6/30/15	100%	Up/Down	2.75%	25	(19,108)	(999)	(19,412)	(1,284)	(19,443)	(1,319)
Investment (Gain)/Loss	6/30/15	100%	Up/Down	2.75%	25	244,808	12,804	248,700	16,446	249,097	16,898
Non-Investment (Gain)/Loss	6/30/16	100%	Up/Down	2.75%	26	(37,168)	(1,461)	(38,258)	(2,001)	(38,866)	(2,570)
Investment (Gain)/Loss	6/30/16	100%	Up/Down	2.75%	26	315,340	12,392	324,595	16,978	329,754	21,806
Assumption Change	6/30/16	100%	Up/Down	2.75%	16	93,028	5,065	94,301	6,939	93,724	8,912
Non-Investment (Gain)/Loss	6/30/17	80%	Up/Down	2.75%	27	(8,079)	(215)	(8,422)	(331)	(8,669)	(453)
Investment (Gain)/Loss	6/30/17	80%	Up/Down	2.75%	27	(164,521)	(4,373)	(171,514)	(6,740)	(176,548)	(9,234)
Assumption Change	6/30/17	80%	Up/Down	2.75%	17	108,473	3,956	111,974	6,096	113,506	8,352
Non-Investment (Gain)/Loss	6/30/18	60%	Up/Down	2.75%	28	23,964	327	25,303	673	26,378	1,037
Investment (Gain)/Loss	6/30/18	60%	Up/Down	2.75%	28	(50,555)	(690)	(53,380)	(1,419)	(55,649)	(2,187)
Assumption Change	6/30/18	60%	Up/Down	2.75%	18	171,861	3,204	180,577	6,585	186,406	10,149
Method Change	6/30/18	60%	Up/Down	2.75%	18	47,156	879	49,548	1,807	51,147	2,785
Non-Investment (Gain)/Loss	6/30/19	No Ramp		0.00%	19	23,545	0	25,193	2,299	24,578	2,299

Schedule of Plan's Amortization Bases (continued)

Reason for Base	Date Est.	Ramp Level 2022-23	Ramp Shape	Escala-tion Rate	Amort. Period	Balance 6/30/20	Expected Payment 2020-21	Balance 6/30/21	Expected Payment 2021-22	Balance 6/30/22	Minimum Required Payment 2022-23
Investment (Gain)/Loss	6/30/19	40%	Up Only	0.00%	19	23,117	0	24,735	541	25,907	1,082
Non-Investment (Gain)/Loss	6/30/20	No Ramp		0.00%	20	18,729	0	20,040	0	21,443	1,957
Investment (Gain)/Loss	6/30/20	20%	Up Only	0.00%	20	107,029	0	114,521	0	122,537	2,679
Total						**1,455,661**	**79,210**	**1,475,622**	**96,237**	**1,479,365**	**113,208**

The (gain)/loss bases are the plan's allocated share of the risk pool's (gain)/loss for the fiscal year as disclosed in "Allocation of Plan's Share of Pool's Experience/Assumption Change" earlier in this section. These (gain)/loss bases will be amortized in accordance with the CalPERS amortization policy in effect at the time the base was established.

Amortization Schedule and Alternatives

The amortization schedule on the previous page shows the minimum contributions required according to the CalPERS amortization policy. Many agencies have expressed a desire for a more stable pattern of payments or have indicated interest in paying off the unfunded accrued liabilities more quickly than required. As such, we have provided alternative amortization schedules to help analyze the current amortization schedule and illustrate the potential savings of accelerating unfunded liability payments.

Shown on the following page are future year amortization payments based on 1) the current amortization schedule reflecting the individual bases and remaining periods shown on the previous page, and 2) alternative "fresh start" amortization schedules using two sample periods that would both result in interest savings relative to the current amortization schedule. To initiate a Fresh Start, please consult with your plan actuary.

The Current Amortization Schedule typically contains both positive and negative bases. Positive bases result from plan changes, assumption changes, method changes or plan experience that increase unfunded liability. Negative bases result from plan changes, assumption changes, method changes, or plan experience that decrease unfunded liability. The combination of positive and negative bases within an amortization schedule can result in unusual or problematic circumstances in future years, such as:

- When a negative payment would be required on a positive unfunded actuarial liability; or
- When the payment would completely amortize the total unfunded liability in a very short time period, and results in a large change in the employer contribution requirement.

In any year when one of the above scenarios occurs, the actuary will consider corrective action such as replacing the existing unfunded liability bases with a single "fresh start" base and amortizing it over a reasonable period.

The Current Amortization Schedule on the following page may appear to show that, based on the current amortization bases, one of the above scenarios will occur at some point in the future. It is impossible to know today whether such a scenario will in fact arise since there will be additional bases added to the amortization schedule in each future year. Should such a scenario arise in any future year, the actuary will take appropriate action based on guidelines in the CalPERS amortization policy.

Amortization Schedule and Alternatives (continued)

			Alternate Schedules			
	Current Amortization Schedule		**15 Year Amortization**		**10 Year Amortization**	
Date	**Balance**	**Payment**	**Balance**	**Payment**	**Balance**	**Payment**
6/30/2022	1,479,365	113,208	1,479,365	157,023	1,479,365	203,622
6/30/2023	1,465,814	123,009	1,420,495	157,024	1,372,292	203,622
6/30/2024	1,441,181	133,451	1,357,503	157,024	1,257,724	203,622
6/30/2025	1,404,022	139,943	1,290,101	157,023	1,135,136	203,622
6/30/2026	1,357,544	145,986	1,217,982	157,023	1,003,967	203,622
6/30/2027	1,301,560	149,439	1,140,815	157,024	863,616	203,622
6/30/2028	1,238,087	152,990	1,058,245	157,023	713,441	203,622
6/30/2029	1,166,500	156,635	969,896	157,023	552,754	203,622
6/30/2030	1,086,133	160,385	875,363	157,024	380,819	203,622
6/30/2031	996,258	164,233	774,212	157,024	196,848	203,621
6/30/2032	896,113	162,411	665,980	157,023		
6/30/2033	790,842	160,384	550,173	157,024		
6/30/2034	680,299	155,665	426,258	157,023		
6/30/2035	566,901	147,611	293,670	157,024		
6/30/2036	453,893	132,709	151,800	157,023		
6/30/2037	348,391	89,168				
6/30/2038	280,545	78,435				
6/30/2039	219,050	69,881				
6/30/2040	162,098	64,219				
6/30/2041	107,017	49,710				
6/30/2042	63,088	33,191				
6/30/2043	33,170	26,427				
6/30/2044	8,156	8,437				
6/30/2045						
6/30/2046						
6/30/2047						
6/30/2048						
6/30/2049						
6/30/2050						
6/30/2051						
Total		**2,617,527**		**2,355,352**		**2,036,219**
Interest Paid		**1,138,162**		**875,987**		**556,854**
Estimated Savings				**262,175**		**581,308**

Employer Contribution History

The table below provides a recent history of the required employer contributions for the plan. The amounts are based on the actuarial valuation from two years prior and does not account for prepayments or benefit changes made during a fiscal year. Additional discretionary payments before July 1, 2019 or after June 30, 2020 are not included.

Fiscal Year	Employer Normal Cost	Unfunded Liability Payment ($)	Additional Discretionary Payments
2016 - 17	8.880%	$30,279	N/A
2017 - 18	8.921%	39,011	N/A
2018 - 19	9.409%	52,764	N/A
2019 - 20	10.221%	67,324	0
2020 - 21	11.031%	79,210	
2021 - 22	10.88%	96,237	
2022 - 23	10.87%	113,208	

Funding History

The table below shows the recent history of the actuarial accrued liability, share of the pool's market value of assets, unfunded accrued liability, funded ratio, and annual covered payroll.

Valuation Date	Accrued Liability (AL)	Share of Pool's Market Value of Assets (MVA)	Unfunded Accrued Liability (UAL)	Funded Ratio	Annual Covered Payroll
06/30/2011	$2,896,996	$2,370,599	$526,397	81.8%	$963,759
06/30/2012	2,902,914	2,240,379	662,535	77.2%	963,770
06/30/2013	3,285,199	2,669,868	615,331	81.3%	888,329
06/30/2014	3,780,028	3,251,402	528,626	86.0%	758,121
06/30/2015	4,134,997	3,423,257	711,740	82.8%	762,792
06/30/2016	4,549,003	3,516,658	1,032,345	77.3%	628,383
06/30/2017	4,981,014	3,961,929	1,019,085	79.5%	597,599
06/30/2018	5,503,207	4,282,160	1,221,047	77.8%	504,487
06/30/2019	5,702,119	4,397,903	1,304,216	77.1%	525,123
06/30/2020	5,986,230	4,530,569	1,455,661	75.7%	550,347

Risk Analysis

- **Future Investment Return Scenarios**
- **Discount Rate Sensitivity**
- **Mortality Rate Sensitivity**
- **Maturity Measures**
- **Maturity Measures History**
- **Hypothetical Termination Liability**

Future Investment Return Scenarios

Analysis was performed to determine the effects of various future investment returns on required employer contributions. The projections below provide a range of results based on five investment return scenarios assumed to occur during the next four fiscal years (2020-21, 2021-22, 2022-23 and 2023-24). The projections also assume that all other actuarial assumptions will be realized and that no further changes to assumptions, contributions, benefits, or funding will occur.

For fiscal years 2020-21, 2021-22, 2022-23, and 2023-24, each scenario assumes an alternate fixed annual return. The fixed return assumptions for the five scenarios are 1.0%, 4.0%, 7.0%, 9.0% and 12.0%.

These alternate investment returns were chosen based on stochastic analysis of possible future investment returns over the four-year period ending June 30, 2024. Using the expected returns and volatility of the asset classes in which the funds are invested, we produced five thousand stochastic outcomes for this period based on the most recently completed Asset Liability Management process. We then selected annual returns that approximate the 5th, 25th, 50th, 75th, and 95th percentiles for these outcomes. For example, of all the 4-year outcomes generated in the stochastic analysis, approximately 25% had an average annual return of 4.0% or less.

Required contributions outside of this range are also possible. In particular, whereas it is unlikely that investment returns will average less than 1.0% or greater than 12.0% over this four-year period, the likelihood of a single investment return less than 1.0% or greater than 12.0% in any given year is much greater.

Assumed Annual Return From 2020-21 through 2023-24	**Projected Employer Contributions**			
	2023-24	**2024-25**	**2025-26**	**2026-27**
1.0%				
Normal Cost	10.9%	10.9%	10.9%	10.9%
UAL Contribution	$130,000	$154,000	$181,000	$214,000
4.0%				
Normal Cost	10.9%	10.9%	10.9%	10.9%
UAL Contribution	$126,000	$144,000	$161,000	$181,000
7.0%				
Normal Cost	10.9%	10.9%	10.9%	10.9%
UAL Contribution	$123,000	$133,000	$140,000	$146,000
9.0%				
Normal Cost	11.1%	11.3%	11.5%	11.8%
UAL Contribution	$121,000	$128,000	$130,000	$129,000
12.0%				
Normal Cost	11.1%	11.3%	11.5%	11.8%
UAL Contribution	$118,000	$118,000	$108,000	$91,000

Discount Rate Sensitivity

The discount rate assumption is calculated as the sum of the assumed real rate of return and the assumed annual price inflation, currently 4.50% and 2.50%, respectively. Changing either the price inflation assumption or the real rate of return assumption will change the discount rate. The sensitivity of the valuation results to the discount rate assumption depends on which component of the discount rate is changed. Shown below are various valuation results as of June 30, 2020 assuming alternate discount rates by changing the two components independently. Results are shown using the current discount rate of 7.0% as well as alternate discount rates of 6.0% and 8.0%. The rates of 6.0% and 8.0% were selected since they illustrate the impact of a 1.0% increase or decrease to the 7.0% assumption.

Sensitivity to the Real Rate of Return Assumption

As of June 30, 2020	1% Lower Real Return Rate	Current Assumptions	1% Higher Real Return Rate
Discount Rate	**6.0%**	**7.0%**	**8.0%**
Inflation	2.5%	2.5%	2.5%
Real Rate of Return	**3.5%**	**4.5%**	**5.5%**
a) Total Normal Cost	22.18%	17.79%	14.42%
b) Accrued Liability	$6,831,746	$5,986,230	$5,290,188
c) Market Value of Assets	$4,530,569	$4,530,569	$4,530,569
d) Unfunded Liability/(Surplus) [(b) - (c)]	$2,301,177	$1,455,661	$759,619
e) Funded Status	66.3%	75.7%	85.6%

Sensitivity to the Price Inflation Assumption

As of June 30, 2020	1% Lower Inflation Rate	Current Assumptions	1% Higher Inflation Rate
Discount Rate	**6.0%**	**7.0%**	**8.0%**
Inflation	**1.5%**	**2.5%**	**3.5%**
Real Rate of Return	4.5%	4.5%	4.5%
a) Total Normal Cost	18.96%	17.79%	16.39%
b) Accrued Liability	$6,293,940	$5,986,230	$5,580,970
c) Market Value of Assets	$4,530,569	$4,530,569	$4,530,569
d) Unfunded Liability/(Surplus) [(b) - (c)]	$1,763,371	$1,455,661	$1,050,401
e) Funded Status	72.0%	75.7%	81.2%

Mortality Rate Sensitivity

The following table looks at the change in the June 30, 2020 plan costs and funded status under two different longevity scenarios, namely assuming post-retirement rates of mortality are 10% lower or 10% higher than our current mortality assumptions adopted in 2017. This type of analysis highlights the impact on the plan of improving or worsening mortality over the long-term.

As of June 30, 2020	10% Lower Mortality Rates	Current Assumptions	10% Higher Mortality Rates
a) Total Normal Cost	18.10%	17.79%	17.50%
b) Accrued Liability	$6,113,020	$5,986,230	$5,869,722
c) Market Value of Assets	$4,530,569	$4,530,569	$4,530,569
d) Unfunded Liability/(Surplus) [(b) - (c)]	$1,582,451	$1,455,661	$1,339,153
e) Funded Status	74.1%	75.7%	77.2%

Maturity Measures

As pension plans mature they become more sensitive to risks. Understanding plan maturity and how it affects the ability of a pension plan sponsor to tolerate risk is important in understanding how the pension plan is impacted by investment return volatility, other economic variables and changes in longevity or other demographic assumptions. Since it is the employer that bears the risk, it is appropriate to perform this analysis on a pension plan level considering all rate plans. The following measures are for one rate plan only.

One way to look at the maturity level of CalPERS and its plans is to look at the ratio of a plan's retiree liability to its total liability. A pension plan in its infancy will have a very low ratio of retiree liability to total liability. As the plan matures, the ratio starts increasing. A mature plan will often have a ratio above 60%-65%.

Ratio of Retiree Accrued Liability to Total Accrued Liability	**June 30, 2019**	**June 30, 2020**
1. Retired Accrued Liability	3,494,018	3,476,605
2. Total Accrued Liability	5,702,119	5,986,230
3. Ratio of Retiree AL to Total AL [(1) / (2)]	0.61	0.58

Another measure of maturity level of CalPERS and its plans is to look at the ratio of actives to retirees, also called the Support Ratio. A pension plan in its infancy will have a very high ratio of active to retired members. As the plan matures, and members retire, the ratio starts declining. A mature plan will often have a ratio near or below one. The average support ratio for CalPERS public agency plans is 1.25.

Support Ratio	**June 30, 2019**	**June 30, 2020**
1. Number of Actives	6	6
2. Number of Retirees	17	17
3. Support Ratio [(1) / (2)]	0.35	0.35

Maturity Measures (Continued)

The actuarial calculations supplied in this communication are based on various assumptions about long-term demographic and economic behavior. Unless these assumptions (e.g., terminations, deaths, disabilities, retirements, salary growth, and investment return) are exactly realized each year, there will be differences on a year-to-year basis. The year-to-year differences between actual experience and the assumptions are called actuarial gains and losses and serve to lower or raise required employer contributions from one year to the next. Therefore, employer contributions will inevitably fluctuate, especially due to the ups and downs of investment returns.

Asset Volatility Ratio (AVR)

Shown in the table below is the asset volatility ratio (AVR), which is the ratio of market value of assets to payroll. Plans that have higher AVR experience more volatile employer contributions (as a percentage of payroll) due to investment return. For example, a plan with an asset-to-payroll ratio of 8 may experience twice the contribution volatility due to investment return volatility than a plan with an asset-to-payroll ratio of 4. It should be noted that this ratio is a measure of the current situation. It increases over time but generally tends to stabilize as the plan matures.

Liability Volatility Ratio (LVR)

Also shown in the table below is the liability volatility ratio (LVR), which is the ratio of accrued liability to payroll. Plans that have a higher LVR experience more volatile employer contributions (as a percentage of payroll) due to investment return and changes in liability. For example, a plan with LVR ratio of 8 is expected to have twice the contribution volatility of a plan with LVR of 4. It should be noted that this ratio indicates a longer-term potential for contribution volatility. The AVR, described above, will tend to move closer to the LVR as a plan matures.

Contribution Volatility	**June 30, 2019**	**June 30, 2020**
1. Market Value of Assets	$4,397,903	$4,530,569
2. Payroll	525,123	550,347
3. Asset Volatility Ratio (AVR) [(1) / (2)]	8.4	8.2
4. Accrued Liability	$5,702,119	$5,986,230
5. Liability Volatility Ratio (LVR) [(4) / (2)]	10.9	10.9

Maturity Measures History

Valuation Date	**Ratio of Retiree Accrued Liability to Total Accrued Liability**	**Support Ratio**	**Asset Volatility Ratio**	**Liability Volatility Ratio**
06/30/2017	0.57	0.47	6.6	8.3
06/30/2018	0.63	0.38	8.5	10.9
06/30/2019	0.61	0.35	8.4	10.9
06/30/2020	0.58	0.35	8.2	10.9

Hypothetical Termination Liability

The hypothetical termination liability is an estimate of the financial position of the plan had the contract with CalPERS been terminated as of June 30, 2020. The plan liability on a termination basis is calculated differently compared to the plan's ongoing funding liability. For the hypothetical termination liability calculation, both compensation and service are frozen as of the valuation date and no future pay increases or service accruals are assumed. This measure of funded status is not appropriate for assessing the need for future employer contributions in the case of an ongoing plan, that is, for an employer that continues to provide CalPERS retirement benefits to active employees.

A more conservative investment policy and asset allocation strategy was adopted by the CalPERS Board for the Terminated Agency Pool. The Terminated Agency Pool has limited funding sources since no future employer contributions will be made. Therefore, expected benefit payments are secured by risk-free assets and benefit security for members is increased while limiting the funding risk. However, this asset allocation has a lower expected rate of return than the PERF and consequently, a lower discount rate is assumed. The lower discount rate for the Terminated Agency Pool results in higher liabilities for terminated plans.

The effective termination discount rate will depend on actual market rates of return for risk-free securities on the date of termination. As market discount rates are variable, the table below shows a range for the hypothetical termination liability based on the lowest and highest interest rates observed during an approximate 19-month period from 12 months before the valuation date to 7 months after.

Market Value of Assets (MVA)	Hypothetical Termination Liability[1,2] at 0.75%	Funded Status	Unfunded Termination Liability at 0.75%	Hypothetical Termination Liability[1,2] at 2.50%	Funded Status	Unfunded Termination Liability at 2.50%
$4,530,569	$13,683,150	33.1%	$9,152,581	$10,163,365	44.6%	$5,632,796

[1] The hypothetical liabilities calculated above include a 5% mortality contingency load in accordance with Board policy. Other actuarial assumptions can be found in Appendix A of the Section 2 report.

[2] The current discount rate assumption used for termination valuations is a weighted average of the 10-year and 30-year U.S. Treasury yields where the weights are based on matching asset and liability durations as of the termination date. The discount rates used in the table are based on 20-year Treasury bonds, rounded to the nearest quarter percentage point, which is a good proxy for most plans. The 20-year Treasury yield was 1.18% on June 30, 2020, and was 1.68% on January 31, 2021.

In order to terminate the plan, you must first contact our Retirement Services Contract Unit to initiate a Resolution of Intent to Terminate. The completed Resolution will allow the plan actuary to give you a preliminary termination valuation with a more up-to-date estimate of the plan liabilities. CalPERS advises you to consult with the plan actuary before beginning this process.

Participant Data

The table below shows a summary of your plan's member data upon which this valuation is based:

	June 30, 2019	June 30, 2020
Active Members		
Counts	6	6
Average Attained Age	N/A	44.9
Average Entry Age to Rate Plan	N/A	30.6
Average Years of Credited Service	N/A	14.2
Average Annual Covered Pay	$87,521	$91,725
Annual Covered Payroll	$525,123	$550,347
Projected Annual Payroll for Contribution Year	$569,648	$597,011
Present Value of Future Payroll	$5,187,705	$5,220,748
Transferred Members	8	8
Separated Members	4	4
Retired Members and Beneficiaries		
Counts*	17	17
Average Annual Benefits*	N/A	$17,500

Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double counting of liabilities.

* Values include community property settlements.

List of Class 1 Benefit Provisions

This plan has the additional Class 1 Benefit Provisions:

- One Year Final Compensation (FAC 1)

Plan's Major Benefit Options

Shown below is a summary of the major optional benefits for which your agency has contracted. A description of principal standard and optional plan provisions is in Section 2.

	Benefit Group	
Member Category	Misc	
Demographics		
Actives	Yes	
Transfers/Separated	Yes	
Receiving	Yes	
Benefit Provision		
Benefit Formula	2% @ 55	
Social Security Coverage	No	
Full/Modified	Full	
Employee Contribution Rate	7.00%	
Final Average Compensation Period	One Year	
Sick Leave Credit	Yes	
Non-Industrial Disability	Standard	
Industrial Disability	No	
Pre-Retirement Death Benefits		
Optional Settlement 2	Yes	
1959 Survivor Benefit Level	Level 4	
Special	No	
Alternate (firefighters)	No	
Post-Retirement Death Benefits		
Lump Sum	$500	
Survivor Allowance (PRSA)	No	
COLA	2%	

Section 2

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

Risk Pool Actuarial Valuation Information

Section 2 may be found on the CalPERS website (calpers.ca.gov) in the Forms and Publications section

California Public Employees' Retirement System
Actuarial Office
400 Q Street, Sacramento, CA 95811 | Phone: (916) 795-3000 | Fax: (916) 795-2744
888 CalPERS (or **888**-225-7377) | TTY: (877) 249-7442 | **www.calpers.ca.gov**

July 2021

PEPRA Miscellaneous Plan of the Livermore/Amador Valley Transit Authority
(CalPERS ID: 5624616425)
Annual Valuation Report as of June 30, 2020

Dear Employer,

Attached to this letter, you will find the June 30, 2020 actuarial valuation report of your CalPERS pension plan. **Provided in this report is the determination of the minimum required employer contributions for fiscal year 2022-23**. In addition, the report contains important information regarding the current financial status of the plan as well as projections and risk measures to aid in planning for the future.

Because this plan is in a risk pool, the following valuation report has been separated into two sections:

- Section 1 contains specific information for the plan including the development of the current and projected employer contributions, and
- Section 2 contains the Risk Pool Actuarial Valuation appropriate to the plan as of June 30, 2020.

Section 2 can be found on the CalPERS website (calpers.ca.gov). From the home page, go to *"Forms & Publications"* and select *"View All"*. In the search box, enter *"Risk Pool"* and from the results list download the Miscellaneous Risk Pool Actuarial Valuation Report for June 30, 2020.

Your June 30, 2020 actuarial valuation report contains important actuarial information about your pension plan at CalPERS. Your assigned CalPERS staff actuary, whose signature appears in the Actuarial Certification section on page 1, is available to discuss the report with you.

Actuarial valuations are based on assumptions regarding future plan experience including investment return and payroll growth, eligibility for the types of benefits provided, and longevity among retirees. The CalPERS Board of Administration adopts these assumptions after considering the advice of CalPERS actuarial and investment teams and other professionals. Each actuarial valuation reflects all prior differences between actual and assumed experience and adjusts the contribution rates as needed. This valuation is based on an investment return assumption of 7.0% which was adopted by the board in December 2016. Other assumptions used in this report are those recommended in the CalPERS Experience Study and Review of Actuarial Assumptions report from December 2017.

Required Contribution

The exhibit below displays the minimum employer contributions and the Employee PEPRA Rate for fiscal year 2022-23 along with estimates of the required contributions for fiscal year 2023-24. Member contributions other than cost sharing (whether paid by the employer or the employee) are in addition to the results shown below. **The employer contributions in this report do not reflect any cost sharing arrangements you may have with your employees**.

Fiscal Year	Employer Normal Cost Rate	Employer Amortization of Unfunded Accrued Liability	PEPRA Employee Rate
2022-23	7.47%	$4,542	6.75%
Projected Results			
2023-24	*7.5%*	*$5,700*	*TBD*

The actual investment return for fiscal year 2020-21 was not known at the time this report was prepared. The projections above assume the investment return for that year would be 7.00%. ***To the extent the actual investment return for fiscal year 2020-21 differs from 7.00%, the actual contribution requirements for fiscal year 2023-24 will differ from those shown above.*** For additional details regarding the assumptions and methods used for these projections please refer to the "Projected Employer Contributions" in the "Highlights and Executive Summary" section. This section also contains projected required contributions through fiscal year 2027-28.

Changes from Previous Year's Valuation

There are no significant changes in actuarial assumptions or policies in your 2020 actuarial valuation. Your annual valuation report is an important tool for monitoring the health of your CalPERS pension plan. Your report contains useful information about future required contributions and ways to control your plan's funding progress. In addition to your annual actuarial report my office has developed tools for employers to plan, project and protect the retirement benefits of your employees. Pension Outlook is a tool to help plan and budget pension costs into the future with easy to understand results and charts.

You will be able to view the projected funded status and required employer contributions for pension plans in different potential scenarios for up to 30 years into the future — which will make budgeting more predictable. While Pension Outlook can't predict the future, it can provide valuable planning information based on a variety of future scenarios that you select.

Pension Outlook can help you answer specific questions about your plans, including:

- When is my plan's funded status expected to increase?
- What happens to my required contributions in a down market?
- How does the discount rate assumption affect my contributions?
- What is the impact of making an additional discretionary payment to my plan?

To get started, visit our Pension Outlook page at www.calpers.ca.gov/page/employers/actuarial-resources/pension-outlook-overview and take the steps to register online.

CalPERS will be completing an Asset Liability Management (ALM) review process in November 2021 that will review the capital market assumptions and the strategic asset allocation and ascertain whether a change in the discount rate and other economic assumptions is warranted. In addition, the Actuarial Office will be completing its Experience Study to review the demographic experience within the pension system and make recommendations to modify future assumptions where appropriate.

Furthermore, this valuation does not reflect any impacts from the COVID-19 pandemic on your pension plan. The impact of COVID-19 on retirement plans is not yet known and CalPERS actuaries will continue to monitor the effects and where necessary make future adjustments to actuarial assumptions.

Further descriptions of general changes are included in the "Highlights and Executive Summary" section and in Appendix A of the Section 2 report, "Actuarial Methods and Assumptions."

Questions

We understand that you might have questions about these results, and your assigned CalPERS actuary whose signature is on the valuation report is available to discuss. If you have other questions, you may call the Customer Contact Center at (888)-CalPERS or (**888-225-7377**).

Sincerely,

SCOTT TERANDO, ASA, EA, MAAA, FCA, CFA
Chief Actuary

Actuarial Valuation
as of June 30, 2020

for the
PEPRA Miscellaneous Plan
of the
Livermore/Amador Valley Transit Authority

(CalPERS ID: 5624616425)

Required Contributions
for Fiscal Year
July 1, 2022 - June 30, 2023

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Section 1

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

Plan Specific Information for the PEPRA Miscellaneous Plan of the Livermore/Amador Valley Transit Authority

(CalPERS ID: 5624616425)
(Rate Plan ID: 27069)

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Actuarial Certification

Section 1 of this report is based on the member and financial data contained in our records as of June 30, 2020 which was provided by your agency and the benefit provisions under your contract with CalPERS. Section 2 of this report is based on the member and financial data as of June 30, 2020 provided by employers participating in the Miscellaneous Risk Pool to which the plan belongs and benefit provisions under the CalPERS contracts for those agencies.

As set forth in Section 2 of this report, the pool actuaries have certified that, in their opinion, the valuation of the risk pool containing your PEPRA Miscellaneous Plan has been performed in accordance with generally accepted actuarial principles consistent with standards of practice prescribed by the Actuarial Standards Board, and that the assumptions and methods are internally consistent and reasonable for the risk pool as of the date of this valuation and as prescribed by the CalPERS Board of Administration according to provisions set forth in the California Public Employees' Retirement Law.

Having relied upon the information set forth in Section 2 of this report and based on the census and benefit provision information for the plan, it is my opinion as the plan actuary that the Unfunded Accrued Liability amortization bases as of June 30, 2020 and employer contribution as of July 1, 2022 have been properly and accurately determined in accordance with the principles and standards stated above.

The undersigned is an actuary who satisfies the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States with regard to pensions.

EDDIE W. LEE, ASA, EA, FCA, MAAA
Senior Pension Actuary, CalPERS

Highlights and Executive Summary

- **Introduction**
- **Purpose of Section 1**
- **Required Employer Contributions**
- **Additional Discretionary Employer Contributions**
- **Plan's Funded Status**
- **Projected Employer Contributions**
- **Other Pooled Miscellaneous Risk Pool Rate Plans**
- **Cost**
- **Changes Since the Prior Year's Valuation**
- **Subsequent Events**

Introduction

This report presents the results of the June 30, 2020 actuarial valuation of the PEPRA Miscellaneous Plan of the Livermore/Amador Valley Transit Authority of the California Public Employees' Retirement System (CalPERS). This actuarial valuation sets the required employer contributions for fiscal year 2022-23.

Purpose of Section 1

This Section 1 report for the PEPRA Miscellaneous Plan of the Livermore/Amador Valley Transit Authority of CalPERS was prepared by the plan actuary in order to:

- Set forth the assets and accrued liabilities of this plan as of June 30, 2020;
- Determine the minimum required employer contribution for this plan for the fiscal year July 1, 2022 through June 30, 2023; and
- Provide actuarial information as of June 30, 2020 to the CalPERS Board of Administration and other interested parties.

The pension funding information presented in this report should not be used in financial reports subject to Governmental Accounting Standards Board (GASB) Statement No. 68 for a Cost Sharing Employer Defined Benefit Pension Plan. A separate accounting valuation report for such purposes is available on the CalPERS website.

The measurements shown in this actuarial valuation may not be applicable for other purposes. The employer should contact their actuary before disseminating any portion of this report for any reason that is not explicitly described above.

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; changes in actuarial policies; and changes in plan provisions or applicable law.

Assessment and Disclosure of Risk

This report includes the following risk disclosures consistent with the recommendations of Actuarial Standards of Practice No. 51 and recommended by the California Actuarial Advisory Panel (CAAP) in the Model Disclosure Elements document:

- A "Scenario Test," projecting future results under different investment income returns.
- A "Sensitivity Analysis," showing the impact on current valuation results using alternative discount rates of 6.0% and 8.0%.
- A "Sensitivity Analysis," showing the impact on current valuation results assuming rates of mortality are 10% lower or 10% higher than our current post- retirement mortality assumptions adopted in 2017.
- Pension Plan maturity measures quantifying the risks the employer bears.

Required Employer Contributions

	Fiscal Year
Required Employer Contributions	**2022-23**
Employer Normal Cost Rate	**7.47%**
Plus	
Required Payment on Amortization Bases[1]	**$4,542**
Paid either as	
1) Monthly Payment	**$378.50**
Or	
2) Annual Prepayment Option*	**$4,391**

The total minimum required employer contribution is the sum of the Plan's Employer Normal Cost Rate (expressed as a percentage of payroll and paid as payroll is reported) plus the Employer Unfunded Accrued Liability (UAL) Contribution Amount (billed monthly (1) or prepaid annually (2) in dollars).

** Only the UAL portion of the employer contribution can be prepaid* ***(which must be received in full no later than July 31)****.*

	Fiscal Year 2021-22	Fiscal Year 2022-23
Development of Normal Cost as a Percentage of Payroll		
Base Total Normal Cost for Formula	14.34%	14.22%
Surcharge for Class 1 Benefits[2]		
None	0.00%	0.00%
Phase out of Normal Cost Difference[3]	0.00%	0.00%
Plan's Total Normal Cost	14.34%	14.22%
Plan's Employee Contribution Rate[4]	6.75%	6.75%
Employer Normal Cost Rate	7.59%	7.47%

[1] The required payment on amortization bases does not take into account any additional discretionary payment made after April 30, 2021.

[2] Section 2 of this report contains a list of Class 1 benefits and corresponding surcharges for each benefit.

[3] The normal cost change is phased out over a five-year period in accordance with the CalPERS contribution allocation policy.

[4] For detail regarding the determination of the required PEPRA employee contribution rate see Section on PEPRA Member Contribution Rates.

Additional Discretionary Employer Contributions

The minimum required employer contribution towards the Unfunded Accrued Liability (UAL) for this rate plan for the 2022-23 fiscal year is $4,542. CalPERS allows employers to make additional discretionary payments (ADPs) at any time and in any amount. These optional payments serve to reduce the UAL and future required contributions and can result in significant long-term savings. Employers can also use ADPs to stabilize annual contributions as a fixed dollar amount, percent of payroll or percent of revenue.

Provided below are select ADP options for consideration. Making such an ADP during fiscal year 2022-23 does not require an ADP be made in any future year, nor does it change the remaining amortization period of any portion of unfunded liability. For information on permanent changes to amortization periods, see the "Amortization Schedule and Alternatives" section of the report.

If you are considering making an ADP, please contact your actuary for additional information.

Minimum Required Employer Contribution for Fiscal Year 2022-23

Estimated Normal Cost	Minimum UAL Payment	ADP	Total UAL Contribution	Estimated Total Contribution
$71,131	$4,542	$0	$4,542	$75,673

The minimum required contribution above is less than interest on the UAL. With no ADP the UAL is projected to increase over the following year. If the minimum UAL payment were split between interest and principal, the principal portion would be negative. This situation is referred to as "negative amortization."

Fiscal Year 2022-23 Employer Contribution Necessary to Avoid Negative Amortization

Estimated Normal Cost	Minimum UAL Payment	ADP[1]	Total UAL Contribution	Estimated Total Contribution
$71,131	$4,542	$468	$5,010	$76,141

Alternative Fiscal Year 2022-23 Employer Contributions for Greater UAL Reduction

Funding Target	Estimated Normal Cost	Minimum UAL Payment	ADP[1]	Total UAL Contribution	Estimated Total Contribution
20 years	$71,131	$4,542	$2,214	$6,756	$77,887
15 years	$71,131	$4,542	$3,316	$7,858	$78,989
10 years	$71,131	$4,542	$5,648	$10,190	$81,321
5 years	$71,131	$4,542	$12,914	$17,456	$88,587

[1] The ADP amounts are assumed to be made in the middle of the fiscal year. A payment made earlier or later in the fiscal year would have to be less or more than the amount shown to have the same effect on the UAL amortization.

Note that the calculations above are based on the projected Unfunded Accrued Liability as of June 30, 2022 as determined in the June 30, 2020 actuarial valuation. New unfunded liabilities can emerge in future years due to assumption or method changes, changes in plan provisions and actuarial experience different than assumed. Making an ADP illustrated above for the indicated number of years will not result in a plan that is exactly 100% funded in the indicated number of years. Valuation results will vary from one year to the next and can diverge significantly from projections over a period of several years.

Plan's Funded Status

	June 30, 2019	June 30, 2020
1. Present Value of Projected Benefits (PVB)	$1,524,296	$1,835,332
2. Entry Age Accrued Liability (AL)	476,497	634,099
3. Plan's Market Value of Assets (MVA)	428,314	563,391
4. Unfunded Accrued Liability (UAL) [(2) - (3)]	48,183	70,708
5. Funded Ratio [(3) / (2)]	89.9%	88.8%

This measure of funded status is an assessment of the need for future employer contributions based on the selected actuarial cost method used to fund the plan. The UAL is the present value of future employer contributions for service that has already been earned and is in addition to future normal cost contributions for active members. For a measure of funded status that is appropriate for assessing the sufficiency of plan assets to cover estimated termination liabilities, please see "Hypothetical Termination Liability" in the "Risk Analysis" section.

Projected Employer Contributions

The table below shows the required and projected employer contributions (before cost sharing) for the next six fiscal years. The projection assumes that all actuarial assumptions will be realized and that no further changes to assumptions, contributions, benefits, or funding will occur during the projection period. Actual contribution rates during this projection period could be significantly higher or lower than the projection shown below.

	Required Contribution	**Projected Future Employer Contributions (Assumes 7.00% Return for Fiscal Year 2020-21)**				
Fiscal Year	**2022-23**	**2023-24**	**2024-25**	**2025-26**	**2026-27**	**2027-28**
	Rate Plan 27069 Results					
Normal Cost %	7.47%	7.5%	7.5%	7.5%	7.5%	7.5%
UAL Payment	$4,542	$5,700	$6,700	$7,200	$7,700	$7,800

For some sources of UAL, the change in UAL is amortized using a 5-year ramp up. For more information, please see "Amortization of the Unfunded Actuarial Accrued Liability" under "Actuarial Methods" in Appendix A of the Section 2 Report. This method phases in the impact of the change in UAL over a 5-year period in order to reduce employer cost volatility from year to year. As a result of this methodology, dramatic changes in the required employer contributions in any one year are less likely. However, required contributions can change gradually and significantly over the next five years. In years when there is a large increase in UAL, the relatively small amortization payments during the ramp up period could result in a funded ratio that is projected to decrease initially while the contribution impact of the increase in the UAL is phased in.

For projected contributions under alternate investment return scenarios, please see the "Future Investment Return Scenarios" in the "Risk Analysis" section.

Our online pension plan modeling and projection tool, Pension Outlook, is available in the Employers section of the CalPERS website. Pension Outlook is a tool to help plan and budget pension costs into the future with results and charts that are easy to understand.

Other Pooled Miscellaneous Risk Pool Rate Plans

All of the results presented in this Section 1 report, except those shown below, correspond to rate plan 27069. In many cases, employers have additional rate plans within the same risk pool. For cost analysis and budgeting it is useful to consider contributions for these rate plans as a whole rather than individually. The estimated contribution amounts and rates for all of the employer's rate plans in the Miscellaneous Risk Pool are shown below and assume that the payroll for each rate plan will grow according to the overall payroll growth assumption of 2.75% per year for three years.

	Fiscal Year 2021-22	Fiscal Year 2022-23
Estimated Combined Employer Contributions for all Pooled Miscellaneous Rate Plans		
Projected Payroll for the Contribution Year	$1,374,626	$1,549,227
Estimated Employer Normal Cost	$123,076	$136,026
Required Payment on Amortization Bases	$100,114	$117,750
Estimated Total Employer Contributions	$223,190	$253,776
Estimated Total Employer Contribution Rate (illustrative only)	16.24%	16.38%

Cost

Actuarial Determination of Pension Plan Cost

Contributions to fund the pension plan are comprised of two components:

- Normal Cost, expressed as a percentage of total active payroll
- Amortization of the Unfunded Accrued Liability (UAL), expressed as a dollar amount

For fiscal years prior to 2016-17, the Amortization of UAL component was expressed as a percentage of total active payroll. Starting with fiscal year 2016-17, the Amortization of UAL component was expressed as a dollar amount and invoiced on a monthly basis. There continues to be an option to prepay this amount during July of each fiscal year.

The Normal Cost component is expressed as a percentage of active payroll with employer and employee contributions payable as part of the regular payroll reporting process.

The determination of both components requires complex actuarial calculations. The calculations are based on a set of actuarial assumptions which can be divided into two categories:

- Demographic assumptions (e.g., mortality rates, retirement rates, employment termination rates, disability rates)
- Economic assumptions (e.g., future investment earnings, inflation, salary growth rates)

These assumptions reflect CalPERS' best estimate of future experience of the plan and are long term in nature. We recognize that all assumptions will not be realized in any given year. For example, the investment earnings at CalPERS have averaged 5.5% over the 20 years ending June 30, 2020, yet individual fiscal year returns have ranged from -23.6% to +20.7%. In addition, CalPERS reviews all actuarial assumptions by conducting in-depth experience studies every four years, with the most recent experience study completed in 2017.

Changes Since the Prior Year's Valuation

Benefits

The standard actuarial practice at CalPERS is to recognize mandated legislative benefit changes in the first annual valuation following the effective date of the legislation. Voluntary benefit changes by plan amendment are generally included in the first valuation that is prepared after the amendment becomes effective, even if the valuation date is prior to the effective date of the amendment.

This valuation generally reflects plan changes by amendments effective before the date of the report. Please refer to the "Plan's Major Benefit Options" and Appendix B of the Section 2 Report for a summary of the plan provisions used in this valuation.

Actuarial Methods and Assumptions

The are no significant changes to the actuarial methods or assumptions for the 2020 actuarial valuation.

Subsequent Events

The contribution requirements determined in this actuarial valuation report are based on demographic and financial information as of June 30, 2020. Changes in the value of assets subsequent to that date are not reflected. Investment returns below the assumed rate of return will increase future required contributions while investment returns above the assumed rate of return will decrease future required contributions.

CalPERS will be completing an Asset Liability Management (ALM) process in November 2021 that will review the capital market assumptions and the strategic asset allocation and ascertain whether a change in the discount rate and other economic assumptions is warranted. As part of the ALM process the Actuarial Office will be completing an Experience Study to review the demographic experience of the retirement system and make recommendations to modify future assumptions where appropriate.

Furthermore, this valuation does not reflect any impacts from the COVID-19 pandemic on your pension plan. The impact of COVID-19 on retirement plans is not yet known and CalPERS actuaries will continue to monitor the effects and where necessary make future adjustments to actuarial assumptions.

The projected employer contributions on Page 6 are calculated under the assumption that the discount rate remains at 7.0% going forward and that the realized rate of return on assets for fiscal year 2020-21 is 7.0%.

This actuarial valuation report reflects statutory changes, regulatory changes and CalPERS Board actions through January 2021. Any subsequent changes or actions are not reflected.

Assets and Liabilities

- **Breakdown of Entry Age Accrued Liability**
- **Allocation of Plan’s Share of Pool’s Experience/Assumption Change**
- **Development of Plan’s Share of Pool’s Market Value of Assets**
- **Schedule of Plan’s Amortization Bases**
- **Amortization Schedule and Alternatives**
- **Employer Contribution History**
- **Funding History**

Breakdown of Entry Age Accrued Liability

Active Members	$501,729
Transferred Members	102,249
Terminated Members	30,121
Members and Beneficiaries Receiving Payments	0
Total	$634,099

Allocation of Plan's Share of Pool's Experience/Assumption Change

It is the policy of CalPERS to ensure equity within the risk pools by allocating the pool's experience gains/losses and assumption changes in a manner that treats each employer equitably and maintains benefit security for the members of the System while minimizing substantial variations in employer contributions. The Pool's experience gains/losses and impact of assumption/method changes is allocated to the plan as follows:

1.	Plan's Accrued Liability	$634,099
2.	Projected UAL balance at 6/30/2020	55,423
3.	Pool's Accrued Liability[1]	19,314,480,060
4.	Sum of Pool's Individual Plan UAL Balances at 6/30/2020[1]	4,306,566,797
5.	Pool's 2019/20 Investment (Gain)/Loss[1]	344,968,792
6.	Pool's 2019/20 Non-Investment (Gain)/Loss[1]	60,428,629
7.	Plan's Share of Pool's Investment (Gain)/Loss: [(1) - (2)] ÷ [(3) - (4)] × (5)	13,301
8.	Plan's Share of Pool's Non-Investment (Gain)/Loss: (1) ÷ (3) × (6)	1,984
9.	Plan's New (Gain)/Loss as of 6/30/2020: (7) + (8)	15,285

[1] Does not include plans that transferred to Pool on the valuation date.

Development of the Plan's Share of Pool's Market Value of Assets

10.	Plan's UAL: (2) + (9)	$70,708
11.	Plan's Share of Pool's MVA: (1) - (10)	$563,391

Schedule of Plan's Amortization Bases

Note that there is a two-year lag between the valuation date and the start of the contribution fiscal year.

- The assets, liabilities, and funded status of the plan are measured as of the valuation date: June 30, 2020.
- The required employer contributions determined by the valuation are for the fiscal year beginning two years after the valuation date: fiscal year 2022-23.

This two-year lag is necessary due to the amount of time needed to extract and test the membership and financial data, and the need to provide public agencies with their required employer contribution well in advance of the start of the fiscal year.

The Unfunded Accrued Liability (UAL) is used to determine the employer contribution and therefore must be rolled forward two years from the valuation date to the first day of the fiscal year for which the contribution is being determined. The UAL is rolled forward each year by subtracting the expected payment on the UAL for the fiscal year and adjusting for interest. The expected payment for the first fiscal year is determined by the actuarial valuation two years ago and the contribution for the second year is from the actuarial valuation one year ago. Additional discretionary payments are reflected in the Expected Payments column in the fiscal year they were made by the agency.

Reason for Base	Date Est.	Ramp Level 2022-23	Ramp Shape	Escala-tion Rate	Amort. Period	Balance 6/30/20	Expected Payment 2020-21	Balance 6/30/21	Expected Payment 2021-22	Balance 6/30/22	Minimum Required Payment 2022-23
Fresh Start	6/30/15	No Ramp		2.75%	0	1,762	930	923	955	0	0
Non-Investment (Gain)/Loss	6/30/16	100%	Up/Down	2.75%	26	(1,239)	(49)	(1,275)	(67)	(1,295)	(86)
Investment (Gain)/Loss	6/30/16	100%	Up/Down	2.75%	26	12,281	483	12,641	661	12,842	849
Assumption Change	6/30/16	100%	Up/Down	2.75%	16	8,956	488	9,078	668	9,022	858
Non-Investment (Gain)/Loss	6/30/17	80%	Up/Down	2.75%	27	(350)	(9)	(365)	(14)	(376)	(20)
Investment (Gain)/Loss	6/30/17	80%	Up/Down	2.75%	27	(8,335)	(222)	(8,689)	(341)	(8,944)	(468)
Assumption Change	6/30/17	80%	Up/Down	2.75%	17	16,070	586	16,589	903	16,816	1,237
Non-Investment (Gain)/Loss	6/30/18	60%	Up/Down	2.75%	28	1,439	20	1,519	40	1,584	62
Investment (Gain)/Loss	6/30/18	60%	Up/Down	2.75%	28	(3,498)	(48)	(3,693)	(98)	(3,850)	(151)
Assumption Change	6/30/18	60%	Up/Down	2.75%	18	20,607	384	21,652	790	22,350	1,217
Method Change	6/30/18	60%	Up/Down	2.75%	18	3,512	65	3,691	135	3,810	207
Non-Investment (Gain)/Loss	6/30/19	No Ramp		0.00%	19	1,968	0	2,106	192	2,055	192
Investment (Gain)/Loss	6/30/19	40%	Up Only	0.00%	19	2,250	0	2,408	53	2,522	105
Non-Investment (Gain)/Loss	6/30/20	No Ramp		0.00%	20	1,984	0	2,123	0	2,272	207
Investment (Gain)/Loss	6/30/20	20%	Up Only	0.00%	20	13,301	0	14,232	0	15,228	333
Total						**70,708**	**2,628**	**72,940**	**3,877**	**74,036**	**4,542**

The (gain)/loss bases are the plan's allocated share of the risk pool's (gain)/loss for the fiscal year as disclosed in "Allocation of Plan's Share of Pool's Experience/Assumption Change" earlier in this section. These (gain)/loss bases will be amortized in accordance with the CalPERS amortization policy in effect at the time the base was established.

Amortization Schedule and Alternatives

The amortization schedule on the previous page shows the minimum contributions required according to the CalPERS amortization policy. Many agencies have expressed a desire for a more stable pattern of payments or have indicated interest in paying off the unfunded accrued liabilities more quickly than required. As such, we have provided alternative amortization schedules to help analyze the current amortization schedule and illustrate the potential savings of accelerating unfunded liability payments.

Shown on the following page are future year amortization payments based on 1) the current amortization schedule reflecting the individual bases and remaining periods shown on the previous page, and 2) alternative "fresh start" amortization schedules using two sample periods that would both result in interest savings relative to the current amortization schedule. To initiate a Fresh Start, please consult with your plan actuary.

The Current Amortization Schedule typically contains both positive and negative bases. Positive bases result from plan changes, assumption changes, method changes or plan experience that increase unfunded liability. Negative bases result from plan changes, assumption changes, method changes, or plan experience that decrease unfunded liability. The combination of positive and negative bases within an amortization schedule can result in unusual or problematic circumstances in future years, such as:

- When a negative payment would be required on a positive unfunded actuarial liability; or
- When the payment would completely amortize the total unfunded liability in a very short time period, and results in a large change in the employer contribution requirement.

In any year when one of the above scenarios occurs, the actuary will consider corrective action such as replacing the existing unfunded liability bases with a single "fresh start" base and amortizing it over a reasonable period.

The Current Amortization Schedule on the following page may appear to show that, based on the current amortization bases, one of the above scenarios will occur at some point in the future. It is impossible to know today whether such a scenario will in fact arise since there will be additional bases added to the amortization schedule in each future year. Should such a scenario arise in any future year, the actuary will take appropriate action based on guidelines in the CalPERS amortization policy.

Amortization Schedule and Alternatives (continued)

	Current Amortization Schedule		Alternate Schedules: 15 Year Amortization		Alternate Schedules: 10 Year Amortization	
Date	**Balance**	**Payment**	**Balance**	**Payment**	**Balance**	**Payment**
6/30/2022	74,036	4,542	74,037	7,858	74,037	10,191
6/30/2023	74,522	5,681	71,091	7,859	68,678	10,191
6/30/2024	73,862	6,662	67,938	7,858	62,944	10,190
6/30/2025	72,140	7,184	64,565	7,858	56,809	10,190
6/30/2026	69,760	7,661	60,956	7,859	50,245	10,191
6/30/2027	66,718	7,808	57,094	7,859	43,220	10,190
6/30/2028	63,311	7,957	52,961	7,858	35,705	10,190
6/30/2029	59,511	8,111	48,540	7,858	27,664	10,191
6/30/2030	55,286	8,272	43,809	7,859	19,059	10,191
6/30/2031	50,600	8,435	38,746	7,858	9,851	10,190
6/30/2032	45,418	8,605	33,330	7,858		
6/30/2033	39,695	8,774	27,535	7,859		
6/30/2034	33,399	8,717	21,333	7,859		
6/30/2035	26,721	8,208	14,697	7,858		
6/30/2036	20,102	6,974	7,597	7,858		
6/30/2037	14,294	5,663				
6/30/2038	9,438	4,280				
6/30/2039	5,671	3,090				
6/30/2040	2,872	2,336				
6/30/2041	657	680				
6/30/2042						
6/30/2043						
6/30/2044						
6/30/2045						
6/30/2046						
6/30/2047						
6/30/2048						
6/30/2049						
6/30/2050						
6/30/2051						
Total		**129,640**		**117,876**		**101,905**
Interest Paid		**55,604**		**43,839**		**27,868**
Estimated Savings				**11,765**		**27,736**

Employer Contribution History

The table below provides a recent history of the required employer contributions for the plan. The amounts are based on the actuarial valuation from two years prior and does not account for prepayments or benefit changes made during a fiscal year. Additional discretionary payments before July 1, 2019 or after June 30, 2020 are not included.

Fiscal Year	Employer Normal Cost	Unfunded Liability Payment ($)	Additional Discretionary Payments
2016 - 17	6.555%	$0	N/A
2017 - 18	6.533%	867	N/A
2018 - 19	6.842%	1,184	N/A
2019 - 20	6.985%	1,693	0
2020 - 21	7.732%	2,628	
2021 - 22	7.59%	3,877	
2022 - 23	7.47%	4,542	

Funding History

The table below shows the recent history of the actuarial accrued liability, share of the pool's market value of assets, unfunded accrued liability, funded ratio, and annual covered payroll.

Valuation Date	Accrued Liability (AL)	Share of Pool's Market Value of Assets (MVA)	Unfunded Accrued Liability (UAL)	Funded Ratio	Annual Covered Payroll
06/30/2013	$1,308	$1,755	($447)	134.2%	$136,000
06/30/2014	22,839	24,378	(1,539)	106.7%	162,000
06/30/2015	68,511	65,975	2,536	96.3%	320,082
06/30/2016	151,777	137,175	14,602	90.4%	576,762
06/30/2017	215,962	201,250	14,712	93.2%	694,231
06/30/2018	330,407	298,169	32,238	90.2%	702,293
06/30/2019	476,497	428,314	48,183	89.9%	742,059
06/30/2020	634,099	563,391	70,708	88.8%	877,789

Risk Analysis

- **Future Investment Return Scenarios**
- **Discount Rate Sensitivity**
- **Mortality Rate Sensitivity**
- **Maturity Measures**
- **Maturity Measures History**
- **Hypothetical Termination Liability**

Future Investment Return Scenarios

Analysis was performed to determine the effects of various future investment returns on required employer contributions. The projections below provide a range of results based on five investment return scenarios assumed to occur during the next four fiscal years (2020-21, 2021-22, 2022-23 and 2023-24). The projections also assume that all other actuarial assumptions will be realized and that no further changes to assumptions, contributions, benefits, or funding will occur.

For fiscal years 2020-21, 2021-22, 2022-23, and 2023-24, each scenario assumes an alternate fixed annual return. The fixed return assumptions for the five scenarios are 1.0%, 4.0%, 7.0%, 9.0% and 12.0%.

These alternate investment returns were chosen based on stochastic analysis of possible future investment returns over the four-year period ending June 30, 2024. Using the expected returns and volatility of the asset classes in which the funds are invested, we produced five thousand stochastic outcomes for this period based on the most recently completed Asset Liability Management process. We then selected annual returns that approximate the 5th, 25th, 50th, 75th, and 95th percentiles for these outcomes. For example, of all the 4-year outcomes generated in the stochastic analysis, approximately 25% had an average annual return of 4.0% or less.

Required contributions outside of this range are also possible. In particular, whereas it is unlikely that investment returns will average less than 1.0% or greater than 12.0% over this four-year period, the likelihood of a single investment return less than 1.0% or greater than 12.0% in any given year is much greater.

Assumed Annual Return From 2020-21 through 2023-24	Projected Employer Contributions			
	2023-24	**2024-25**	**2025-26**	**2026-27**
1.0%				
Normal Cost	7.5%	7.5%	7.5%	7.5%
UAL Contribution	$6,500	$9,200	$12,000	$16,000
4.0%				
Normal Cost	7.5%	7.5%	7.5%	7.5%
UAL Contribution	$6,100	$7,900	$9,800	$12,000
7.0%				
Normal Cost	7.5%	7.5%	7.5%	7.5%
UAL Contribution	$5,700	$6,700	$7,200	$7,700
9.0%				
Normal Cost	7.6%	7.8%	8.0%	7.4%
UAL Contribution	$5,500	$6,100	$6,100	$5,700
12.0%				
Normal Cost	7.6%	7.8%	8.0%	7.4%
UAL Contribution	$5,100	$4,800	$0	$0

Discount Rate Sensitivity

The discount rate assumption is calculated as the sum of the assumed real rate of return and the assumed annual price inflation, currently 4.50% and 2.50%, respectively. Changing either the price inflation assumption or the real rate of return assumption will change the discount rate. The sensitivity of the valuation results to the discount rate assumption depends on which component of the discount rate is changed. Shown below are various valuation results as of June 30, 2020 assuming alternate discount rates by changing the two components independently. Results are shown using the current discount rate of 7.0% as well as alternate discount rates of 6.0% and 8.0%. The rates of 6.0% and 8.0% were selected since they illustrate the impact of a 1.0% increase or decrease to the 7.0% assumption.

Sensitivity to the Real Rate of Return Assumption

As of June 30, 2020	1% Lower Real Return Rate	Current Assumptions	1% Higher Real Return Rate
Discount Rate	**6.0%**	**7.0%**	**8.0%**
Inflation	2.5%	2.5%	2.5%
Real Rate of Return	**3.5%**	**4.5%**	**5.5%**
a) Total Normal Cost	17.65%	14.22%	11.59%
b) Accrued Liability	$761,896	$634,099	$533,333
c) Market Value of Assets	$563,391	$563,391	$563,391
d) Unfunded Liability/(Surplus) [(b) - (c)]	$198,505	$70,708	($30,058)
e) Funded Status	73.9%	88.8%	105.6%

Sensitivity to the Price Inflation Assumption

As of June 30, 2020	1% Lower Inflation Rate	Current Assumptions	1% Higher Inflation Rate
Discount Rate	**6.0%**	**7.0%**	**8.0%**
Inflation	**1.5%**	**2.5%**	**3.5%**
Real Rate of Return	4.5%	4.5%	4.5%
a) Total Normal Cost	15.20%	14.22%	13.05%
b) Accrued Liability	$674,349	$634,099	$584,502
c) Market Value of Assets	$563,391	$563,391	$563,391
d) Unfunded Liability/(Surplus) [(b) - (c)]	$110,958	$70,708	$21,111
e) Funded Status	83.5%	88.8%	96.4%

Mortality Rate Sensitivity

The following table looks at the change in the June 30, 2020 plan costs and funded status under two different longevity scenarios, namely assuming post-retirement rates of mortality are 10% lower or 10% higher than our current mortality assumptions adopted in 2017. This type of analysis highlights the impact on the plan of improving or worsening mortality over the long-term.

As of June 30, 2020	10% Lower Mortality Rates	Current Assumptions	10% Higher Mortality Rates
a) Total Normal Cost	14.49%	14.22%	13.97%
b) Accrued Liability	$647,155	$634,099	$622,080
c) Market Value of Assets	$563,391	$563,391	$563,391
d) Unfunded Liability/(Surplus) [(b) - (c)]	$83,764	$70,708	$58,689
e) Funded Status	87.1%	88.8%	90.6%

Maturity Measures

As pension plans mature they become more sensitive to risks. Understanding plan maturity and how it affects the ability of a pension plan sponsor to tolerate risk is important in understanding how the pension plan is impacted by investment return volatility, other economic variables and changes in longevity or other demographic assumptions. Since it is the employer that bears the risk, it is appropriate to perform this analysis on a pension plan level considering all rate plans. The following measures are for one rate plan only.

One way to look at the maturity level of CalPERS and its plans is to look at the ratio of a plan's retiree liability to its total liability. A pension plan in its infancy will have a very low ratio of retiree liability to total liability. As the plan matures, the ratio starts increasing. A mature plan will often have a ratio above 60%-65%.

Ratio of Retiree Accrued Liability to Total Accrued Liability	**June 30, 2019**	**June 30, 2020**
1. Retired Accrued Liability	0	0
2. Total Accrued Liability	476,497	634,099
3. Ratio of Retiree AL to Total AL [(1) / (2)]	0.00	0.00

Another measure of maturity level of CalPERS and its plans is to look at the ratio of actives to retirees, also called the Support Ratio. A pension plan in its infancy will have a very high ratio of active to retired members. As the plan matures, and members retire, the ratio starts declining. A mature plan will often have a ratio near or below one. The average support ratio for CalPERS public agency plans is 1.25.

Support Ratio	**June 30, 2019**	**June 30, 2020**
1. Number of Actives	8	9
2. Number of Retirees	0	0
3. Support Ratio [(1) / (2)]	N/A	N/A

Maturity Measures (Continued)

The actuarial calculations supplied in this communication are based on various assumptions about long-term demographic and economic behavior. Unless these assumptions (e.g., terminations, deaths, disabilities, retirements, salary growth, and investment return) are exactly realized each year, there will be differences on a year-to-year basis. The year-to-year differences between actual experience and the assumptions are called actuarial gains and losses and serve to lower or raise required employer contributions from one year to the next. Therefore, employer contributions will inevitably fluctuate, especially due to the ups and downs of investment returns.

Asset Volatility Ratio (AVR)

Shown in the table below is the asset volatility ratio (AVR), which is the ratio of market value of assets to payroll. Plans that have higher AVR experience more volatile employer contributions (as a percentage of payroll) due to investment return. For example, a plan with an asset-to-payroll ratio of 8 may experience twice the contribution volatility due to investment return volatility than a plan with an asset-to-payroll ratio of 4. It should be noted that this ratio is a measure of the current situation. It increases over time but generally tends to stabilize as the plan matures.

Liability Volatility Ratio (LVR)

Also shown in the table below is the liability volatility ratio (LVR), which is the ratio of accrued liability to payroll. Plans that have a higher LVR experience more volatile employer contributions (as a percentage of payroll) due to investment return and changes in liability. For example, a plan with LVR ratio of 8 is expected to have twice the contribution volatility of a plan with LVR of 4. It should be noted that this ratio indicates a longer-term potential for contribution volatility. The AVR, described above, will tend to move closer to the LVR as a plan matures.

Contribution Volatility	June 30, 2019	June 30, 2020
1. Market Value of Assets	$428,314	$563,391
2. Payroll	742,059	877,789
3. Asset Volatility Ratio (AVR) [(1) / (2)]	0.6	0.6
4. Accrued Liability	$476,497	$634,099
5. Liability Volatility Ratio (LVR) [(4) / (2)]	0.6	0.7

Maturity Measures History

Valuation Date	Ratio of Retiree Accrued Liability to Total Accrued Liability	Support Ratio	Asset Volatility Ratio	Liability Volatility Ratio
06/30/2017	0.00	N/A	0.3	0.3
06/30/2018	0.00	N/A	0.4	0.5
06/30/2019	0.00	N/A	0.6	0.6
06/30/2020	0.00	N/A	0.6	0.7

Hypothetical Termination Liability

The hypothetical termination liability is an estimate of the financial position of the plan had the contract with CalPERS been terminated as of June 30, 2020. The plan liability on a termination basis is calculated differently compared to the plan's ongoing funding liability. For the hypothetical termination liability calculation, both compensation and service are frozen as of the valuation date and no future pay increases or service accruals are assumed. This measure of funded status is not appropriate for assessing the need for future employer contributions in the case of an ongoing plan, that is, for an employer that continues to provide CalPERS retirement benefits to active employees.

A more conservative investment policy and asset allocation strategy was adopted by the CalPERS Board for the Terminated Agency Pool. The Terminated Agency Pool has limited funding sources since no future employer contributions will be made. Therefore, expected benefit payments are secured by risk-free assets and benefit security for members is increased while limiting the funding risk. However, this asset allocation has a lower expected rate of return than the PERF and consequently, a lower discount rate is assumed. The lower discount rate for the Terminated Agency Pool results in higher liabilities for terminated plans.

The effective termination discount rate will depend on actual market rates of return for risk-free securities on the date of termination. As market discount rates are variable, the table below shows a range for the hypothetical termination liability based on the lowest and highest interest rates observed during an approximate 19-month period from 12 months before the valuation date to 7 months after.

Market Value of Assets (MVA)	Hypothetical Termination Liability[1,2] at 0.75%	Funded Status	Unfunded Termination Liability at 0.75%	Hypothetical Termination Liability[1,2] at 2.50%	Funded Status	Unfunded Termination Liability at 2.50%
$563,391	$1,840,967	30.6%	$1,277,576	$1,182,128	47.7%	$618,737

[1] The hypothetical liabilities calculated above include a 5% mortality contingency load in accordance with Board policy. Other actuarial assumptions can be found in Appendix A of the Section 2 report.

[2] The current discount rate assumption used for termination valuations is a weighted average of the 10-year and 30-year U.S. Treasury yields where the weights are based on matching asset and liability durations as of the termination date. The discount rates used in the table are based on 20-year Treasury bonds, rounded to the nearest quarter percentage point, which is a good proxy for most plans. The 20-year Treasury yield was 1.18% on June 30, 2020, and was 1.68% on January 31, 2021.

In order to terminate the plan, you must first contact our Retirement Services Contract Unit to initiate a Resolution of Intent to Terminate. The completed Resolution will allow the plan actuary to give you a preliminary termination valuation with a more up-to-date estimate of the plan liabilities. CalPERS advises you to consult with the plan actuary before beginning this process.

Participant Data

The table below shows a summary of your plan's member data upon which this valuation is based:

	June 30, 2019	June 30, 2020
Active Members		
Counts	8	9
Average Attained Age	N/A	42.8
Average Entry Age to Rate Plan	N/A	39.8
Average Years of Credited Service	N/A	3.1
Average Annual Covered Pay	$92,757	$97,532
Annual Covered Payroll	$742,059	$877,789
Projected Annual Payroll for Contribution Year	$804,978	$952,216
Present Value of Future Payroll	$7,206,406	$8,136,197
Transferred Members	2	3
Separated Members	4	4
Retired Members and Beneficiaries		
Counts*	0	0
Average Annual Benefits*	N/A	$0

Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double counting of liabilities.

* Values include community property settlements.

List of Class 1 Benefit Provisions

This plan has the additional Class 1 Benefit Provisions:

- None

Plan's Major Benefit Options

Shown below is a summary of the major optional benefits for which your agency has contracted. A description of principal standard and optional plan provisions is in Section 2.

	Benefit Group	
Member Category	Misc	
Demographics		
Actives	Yes	
Transfers/Separated	Yes	
Receiving	No	
Benefit Provision		
Benefit Formula	2% @ 62	
Social Security Coverage	No	
Full/Modified	Full	
Employee Contribution Rate	6.75%	
Final Average Compensation Period	Three Year	
Sick Leave Credit	Yes	
Non-Industrial Disability	Standard	
Industrial Disability	No	
Pre-Retirement Death Benefits		
Optional Settlement 2	Yes	
1959 Survivor Benefit Level	Level 4	
Special	No	
Alternate (firefighters)	No	
Post-Retirement Death Benefits		
Lump Sum	$500	
Survivor Allowance (PRSA)	No	
COLA	2%	

PEPRA Member Contribution Rates

The California Public Employees' Pension Reform Act of 2013 (PEPRA) established new benefit formulas, final compensation period, and contribution requirements for "new" employees (generally those first hired into a CalPERS-covered position on or after January 1, 2013). In accordance with Government Code Section 7522.30(b), "new members … shall have an initial contribution rate of at least 50% of the normal cost rate." The normal cost rate is dependent on the plan of retirement benefits, actuarial assumptions and demographics of the risk pool, particularly members' entry age. Should the total normal cost rate change by more than 1% from the base total normal cost rate, the new member rate shall be 50% of the new normal cost rate rounded to the nearest quarter percent.

The table below shows the determination of the PEPRA member contribution rates effective July 1, 2022, based on 50% of the total normal cost rate as of the June 30, 2020 valuation.

		Basis for Current Rate		Rates Effective July 1, 2022			
Rate Plan Identifier	**Benefit Group Name**	**Total Normal Cost**	**Member Rate**	**Total Normal Cost**	**Change**	**Change Needed**	**Member Rate**
27069	Miscellaneous PEPRA Level	13.735%	6.75%	14.22%	0.485%	No	6.75%

Section 2

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

Risk Pool Actuarial Valuation Information

Section 2 may be found on the CalPERS website (calpers.ca.gov) in the Forms and Publications section

California Public Employees' Retirement System
California Employers' Pension Prefunding Trust (CEPPT)
400 Q Street, Sacramento, CA 95811
www.calpers.ca.gov

California Employers' Pension Prefunding Trust (CEPPT)
CERTIFICATION OF FUNDING POLICY

EMPLOYER NAME: ____

SECTION I: CEPPT Asset Allocation Strategy Selection

As the employer, I certify that my agency chooses the following CEPPT asset allocation strategy (select one):

CEPPT Asset Allocation Strategy	10 Year Expected Rate of Return	Expected Volatility (Standard Deviation)
☐ Strategy 1	5.0%	8.2%
☐ Strategy 2	4.0%	5.2%
☐ Concurrent Enrollment	-	-

SECTION II: Contributions and Reimbursements

As the employer, I certify that we intend to make CEPPT contributions and request eligible reimbursements in the following manner:

Contributions:

We intend to make an initial contribution of $___________________ on or around _____________.
(MM/YYYY)

For fiscal year ending June 30, ______we intend to contribute the estimated following amount(s) in:
(YYYY)

Strategy 1: $_____________________ and/or

Strategy 2: $_____________________

For fiscal year ending June 30, ______ we intend to contribute the estimated following amount(s) in:
(YYYY)

Strategy 1: $_____________________ and/or

Strategy 2: $_____________________

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CERTIFICATION OF FUNDING POLICY

Reimbursements:

During the two years period identified above, do you intend to seek a reimbursement?

☐ Yes

☐ No

If you answered yes:

For fiscal year ending June 30, _______ we intend to seek an approximate reimbursement of $_________________.
(YYYY)

For fiscal year ending June 30, _______ we intend to seek an approximate reimbursement of $_________________.
(YYYY)

COMMENTS:

____

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We understand we will be asked to provide information to CalPERS as required to facilitate compliance with Governmental Accounting Standards Board (GASB) reporting requirements and we agree to provide this information to CalPERS on a timely basis.

We understand that CEPPT will be reported in aggregate as a fiduciary fund for CalPERS reporting. CEPPT assets will not be reported under GASB 67/68.

We understand that the cash flow information provided in Section II are estimated amounts and is being used for CEPPT asset management purposes. There is no implied commitment to contribute or reimburse.

Employer Name

Printed Name of Person Signing the Form

Title of Person Signing the Form

Signature   Date

Designated Employer Contact Name

Title of Designated Employer Contact

Phone #   Email Address

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CERTIFICATION OF FUNDING POLICY

This page provides instructions to complete each section of the Certification of Pension Funding Policy.

SECTION I: CEPPT Asset Allocation Strategy Selection
Your CEPPT assets will be invested using the asset allocation strategy checked here. Each strategy has a different assumed 10 year expected rate of return and risk profile.

SECTION II: Contributions and Reimbursements
Here we ask you to indicate how you expect to make contributions to, and seek reimbursement from, the trust. All contributions are voluntary and never required. This section is for informational purpose. There is no implied commitment to contribute or reimburse. Information provided is intended for investment forecast and asset management purposes.

CALIFORNIA EMPLOYERS' PENSION PREFUNDING TRUST PROGRAM

AGREEMENT AND ELECTION OF

Livermore Amador Valley Transit Authority

(NAME OF EMPLOYER)

to Prefund Employer Contributions to a Defined Benefit Pension Plan

WHEREAS (1) Government Code (GC) Section 21711(a) establishes in the State Treasury the California Employers' Pension Prefunding Trust Fund (CEPPT), a special trust fund for the purpose of allowing eligible employers to prefund their required pension contributions to a defined benefit pension plan (each an Employer Pension Plan) by receiving and holding in the CEPPT amounts that are intended to be contributed to an Employer Pension Plan at a later date; and

WHEREAS (2) GC Section 21711(b) provides that the California Public Employees' Retirement System (CalPERS) Board of Administration (Board) has sole and exclusive control of the administration and investment of the CEPPT, the purposes of which include, but are not limited to (i) receiving contributions from participating employers; (ii) investing contributed amounts and income thereon, if any, in order to receive yield on the funds; and (iii) disbursing contributed amounts and income thereon, if any, to pay for costs of administration of the CEPPT and to deposit employer contributions into Employer Pension Plans in accordance with their terms; and

WHEREAS (3) Livermore Amador Valley Transit Authority

(NAME OF EMPLOYER)

(Employer) desires to participate in the CEPPT upon the terms and conditions set by the Board and as set forth herein; and

WHEREAS (4) Employer may participate in the CEPPT upon (i) approval by the Board and (ii) filing a duly adopted and executed Agreement and Election to Prefund Employer Contributions to a Defined Benefit Pension Plan (Agreement) as provided in the terms and conditions of the Agreement; and

WHEREAS (5) The CEPPT is a trust fund that is intended to perform an essential governmental function (that is, the investment of funds by a State, political subdivision or 115 entity) within the meaning of Internal Revenue Code (Code) Section 115 and Internal Revenue Service Revenue Ruling 77-261, and as an Investment Trust Fund, as defined in Governmental Accounting Standards Board (GASB) Statement No. 84, Paragraph 16, for accounting and financial reporting of fiduciary activities from the external portion of investment pools and individual investment accounts that are held in a trust that meets the criteria in Paragraph 11c(1).

WHEREAS (6) The CEPPT is not a Code Section 401(a) qualified trust and the assets held in the CEPPT are not assets of any Employer Pension Plan or any plan qualified under Code Section 401(a).

NOW, THEREFORE, BE IT RESOLVED THAT EMPLOYER HEREBY MAKES THE FOLLOWING REPRESENTATION AND WARRANTY AND THAT THE BOARD AND EMPLOYER AGREE TO THE FOLLOWING TERMS AND CONDITIONS:

A. Employer Representation and Warranty

Employer hereby represents and warrants that it is the State of California or a political subdivision thereof, or an entity whose income is excluded from gross income under Code Section 115(1).

B. Adoption and Approval of the Agreement; Effective Date; Amendment

(1) Employer's governing body shall elect to participate in the CEPPT by adopting this Agreement and filing with the Board a true and correct original or certified copy of this Agreement as follows:

Filing by mail, send to: CalPERS
CEPPT
P.O. Box 1494
Sacramento, CA 95812-1494

Filing in person, deliver to: CalPERS Mailroom
CEPPT
400 Q Street
Sacramento, CA 95811

(2) Upon receipt of the executed Agreement, and after approval by the Board, the Board shall fix an effective date and shall promptly notify Employer of the effective date of the Agreement. Employer shall provide the Board such other documents as the Board may request, including, but not limited to a certified copy of the resolution(s) of the governing body of Employer authorizing the adoption of the Agreement and documentation naming Employer’s successor entity in the event that Employer ceases to exist prior to termination of this Agreement.

(3) The terms of this Agreement may be amended only in writing upon the agreement of both the Board and Employer, except as otherwise provided herein. Any such amendment or modification to this Agreement shall be adopted and executed in the same manner as required for the Agreement. Upon receipt of the executed amendment or modification, the Board shall fix the effective date of the amendment or modification.

(4) The Board shall institute such procedures and processes as it deems necessary to administer the CEPPT, to carry out the purposes of this Agreement, and to maintain the tax-exempt status of the CEPPT. Employer agrees to follow such procedures and processes.

C. Employer Reports Provided for the Board's Use in Trust Administration and Financial Reporting and Employer Contributions

(1) Employer shall provide to the Board a defined benefit pension plan cost report on the basis of the actuarial assumptions and methods prescribed by Actuarial Standards of Practice (ASOP) or prescribed by GASB. Such report shall be for the Board's use in trust administration and financial reporting and shall be prepared at least as often as the minimum frequency required by applicable GASB Standards. This defined benefit pension plan cost report may be prepared as an actuarial valuation report or as a GASB compliant financial report. Such report shall be:

1) prepared and signed by a Fellow or Associate of the Society of Actuaries who is also a Member of the American Academy of Actuaries or a person with equivalent qualifications acceptable to the Board;

2) prepared in accordance with ASOP or with GASB; and

3) provided to the Board prior to the Board's acceptance of contributions for the reporting period or as otherwise required by the Board.

(2) In the event that the Board determines, in its sole discretion, that Employer's cost report is not suitable for the Board's purposes and use or if Employer fails to provide a required report, the Board may obtain, at Employer's expense, a report that meets the Board's trust administration and financial reporting needs. At the Board's option, the Board may recover the costs of obtaining the report either by billing and collecting such amount from Employer or through a deduction from Employer's Prefunding Account (as defined in Paragraph D(2) below).

(3) Employer shall notify the Board in writing of the amount and timing of contributions to the CEPPT, which contributions shall be made in the manner established by the Board and in accordance with the terms of this Agreement and any procedures adopted by the Board.

(4) The Board may limit Employer's contributions to the CEPPT to the amount necessary to fully fund the actuarial present value of total projected benefit payments not otherwise prefunded through the applicable Employer Pension Plan (Unfunded PVFB), as set forth in Employer's cost report for the applicable period. If Employer's contribution would cause the assets in Employer's Prefunding Account to exceed the Unfunded PVFB, the Board may refuse to accept the contribution. If Employer's cost report for the applicable period does not set forth the Unfunded PVFB, the Board may

refuse to accept a contribution from Employer if the contribution would cause the assets in Employer's Prefunding Account to exceed Employer's total pension liability, as set forth in Employer's cost report.

(5) No contributions are required. Contributions can be made at any time following the effective date of this Agreement if Employer has first complied with the requirements of this Agreement, including Paragraph C.

(6) Employer acknowledges and agrees that assets held in the CEPPT are not assets of any Employer Pension Plan or any plan qualified under Code Section 401(a), and will not become assets of such a plan unless and until such time as they are distributed from the CEPPT and deposited into an Employer Pension Plan.

D. Administration of Accounts; Investments; Allocation of Income

(1) The Board has established the CEPPT as a trust fund consisting of an aggregation of separate single-employer accounts, with pooled administrative and investment functions.

(2) All Employer contributions and assets attributable to Employer contributions shall be separately accounted for in the CEPPT (Employer's Prefunding Account). Assets in Employer's Prefunding Account will be held for the exclusive purpose of funding Employer's contributions to its Employer Pension Plan(s) and defraying the administrative expenses of the CEPPT.

(3) The assets in Employer's Prefunding Account may be aggregated with the assets of other participating employers and may be co-invested by the Board in any asset classes appropriate for a Code Section 115 trust, subject to any additional requirements set forth in applicable law, including, but not limited to, subdivision (d) of GC Section 21711. Employer shall select between available investment strategies in accordance with applicable Board procedures.

(4) The Board may deduct the costs of administration of the CEPPT from the investment income of the CEPPT or from Employer's Prefunding Account in a manner determined by the Board.

(5) Investment income earned shall be allocated among participating employers and posted to Employer's Prefunding Account daily Monday through Friday, except on holidays, when the allocation will be posted the following business day.

(6) If, at the Board's sole discretion and in compliance with accounting and legal requirements applicable to an Investment Trust Fund and to a Code Section 115 compliant trust, the Board determines to its satisfaction that all obligations to pay defined benefit pension plan benefits in accordance with the applicable Employer Pension Plan terms have been satisfied by payment or by defeasance with no remaining risk regarding the amounts to be paid or the value of assets held in the

CEPPT, then the residual Employer assets held in Employer's Prefunding Account may be returned to Employer.

E. Reports and Statements

(1) Employer shall submit with each contribution a contribution report in the form and containing the information prescribed by the Board.

(2) The Board, at its discretion but at least annually, shall prepare and provide a statement of Employer's Prefunding Account reflecting the balance in Employer's Prefunding Account, contributions made during the period covered by the statement, investment income allocated during such period, and such other information as the Board may determine.

F. Disbursements

(1) Employer may receive disbursements from the CEPPT not to exceed, on an annual basis, the amount of the total annual Employer contributions to Employer's Pension Plan for such year.

(2) Employer shall notify the Board in writing in the manner specified by the Board of the persons authorized to request disbursements from the CEPPT on behalf of Employer.

(3) Employer's request for disbursement shall be in writing signed by Employer's authorized representative, in accordance with procedures established by the Board, and the Board may rely conclusively upon such writing. The Board may, but is not required to, require that Employer certify or otherwise demonstrate that amounts disbursed from Employer's Prefunding Account will be used solely for the purposes of the CEPPT. However, in no event shall the Board have any responsibility regarding the application of distributions from Employer's Prefunding Account.

(4) No disbursement shall be made from the CEPPT which exceeds the balance in Employer's Prefunding Account.

(5) Requests for disbursements that satisfy the above requirements will be processed on at least a monthly basis.

(6) The Board shall not be liable for amounts disbursed in error if it has acted upon the written instruction of an individual authorized by Employer to request disbursements, and is under no duty to make any investigation or inquiry about the correctness of such instruction. In the event of any other erroneous disbursement, the extent of the Board's liability shall be the actual dollar amount of the disbursement, plus interest at the actual earnings rate but not less than zero.

G. Costs of Administration

Employer shall pay its share of the costs of administration of the CEPPT, as determined by the Board and in accordance with Paragraph D.

H. Termination of Employer's Participation in the CEPPT

(1) The Board may terminate Employer's participation in the CEPPT if:

(a) Employer's governing body gives written notice to the Board of its election to terminate; or

(b) The Board determines, in its sole discretion, that Employer has failed to satisfy the terms and conditions of applicable law, this Agreement or the Board's rules, regulations or procedures.

(2) If Employer's participation in the CEPPT terminates for either of the foregoing reasons, all assets in Employer's Prefunding Account shall remain in the CEPPT, except as otherwise provided below, and shall continue to be invested and accrue income as provided in Paragraph D, and Employer shall remain subject to the terms of this Agreement with respect to such assets.

(3) After Employer's participation in the CEPPT terminates, Employer may not make further contributions to the CEPPT.

(4) After Employer's participation in the CEPPT terminates, disbursements from Employer's Prefunding Account may continue upon Employer's instruction or otherwise in accordance with the terms of this Agreement.

(5) After Employer's participation in the CEPPT terminates, the governing body of Employer may request either:

(a) A trustee to trustee transfer of the assets in Employer's Prefunding Account to a trust dedicated to prefunding Employer's required pension contributions; provided that the Board shall have no obligation to make such transfer unless the Board determines that the transfer will satisfy applicable requirements of the Code, other law and accounting standards, and the Board's fiduciary duties. If the Board determines that the transfer will satisfy these requirements, the Board shall then have one hundred fifty (150) days from the date of such determination to effect the transfer. The amount to be transferred shall be the amount in Employer's Prefunding Account as of the date of the transfer (the "transfer date") and shall include investment earnings up to an investment earnings allocation date preceding the transfer date. In no event shall the investment earnings allocation date precede the transfer date by more than 150 days.

(b) A disbursement of the assets in Employer's Prefunding Account; provided that the Board shall have no obligation to make such disbursement unless the Board determines that, in compliance with the Code, other law and accounting standards, and the Board's fiduciary duties, all of Employer's obligations for payment of defined benefit pension plan benefits and reasonable administrative costs of the Board have been satisfied. If the Board determines that the disbursement will satisfy these requirements, the Board shall then have one hundred fifty (150) days from the date of such determination to effect the disbursement. The amount to be disbursed shall be the amount in Employer's Prefunding Account as of the date of the disbursement (the "disbursement date") and shall include investment earnings up to an investment earnings allocation date preceding the disbursement date. In no event shall the investment earnings allocation date precede the disbursement date by more than 150 days.

(6) After Employer's participation in the CEPPT terminates and at such time that no assets remain in Employer's Prefunding Account, this Agreement shall terminate. To the extent that assets remain in Employer's Prefunding Account, this Agreement shall remain in full force and effect.

(7) If, for any reason, the Board terminates the CEPPT, the assets in Employer's Prefunding Account shall be paid to Employer to the extent permitted by law and Code Section 115 after retention of (i) an amount sufficient to pay the Unfunded PVFB as set forth in a current defined benefit pension plan(s) cost report prepared in compliance with ASOP and the requirements of Paragraph C(1), and (ii) amounts sufficient to pay reasonable administrative costs of the Board. Amounts retained by the Board to pay the Unfunded PVFB shall be transferred to (i) another Code Section 115 trust dedicated to prefunding Employer's required pension contributions, subject to the Board's determination that such transfer will satisfy applicable requirements of the Code, other law and accounting standards, and the Board's fiduciary duties or (ii) Employer's Pension Plan, subject to acceptance by Employer's Pension Plan.

(8) If Employer ceases to exist but Employer's Prefunding Account continues to exist, and if no provision has been made to the Board's satisfaction by Employer with respect to Employer's Prefunding Account, the Board shall be permitted to identify and appoint a successor to Employer under this Agreement, provided that the Board first determines, in its sole discretion, that there is a reasonable basis upon which to identify and appoint such a successor and provided further that such successor agrees in writing to be bound by the terms of this Agreement. If the Board is unable to identify or appoint a successor as provided in the preceding sentence, then the Board is authorized to appoint a third-party administrator or other successor to act on behalf of Employer under this Agreement and to otherwise carry out the intent of this Agreement with respect to Employer's Prefunding Account. Any and all costs associated with such appointment shall be paid from the assets attributable to Employer's Prefunding Account. At the Board's option, and subject to acceptance by Employer's Pension Plan,

the Board may instead transfer the assets in Employer's Prefunding Account to Employer's Pension Plan and terminate this Agreement.

(9) If the Board determines, in its sole discretion, that Employer has breached the representation and warranty set forth in Paragraph A., the Board shall take whatever action it deems necessary to preserve the tax-exempt status of the CEPPT.

I. Indemnification

Employer shall indemnify, defend, and hold harmless CalPERS, the Board, the CEPPT, and all of the officers, trustees, agents and employees of the foregoing from and against any loss, liability, claims, causes of action, suits, or expense (including reasonable attorneys' fees and defense costs, lien fees, judgments, fines, penalties, expert witness fees, appeals, and claims for damages of any nature whatsoever) not charged to the CEPPT and imposed as a result of, arising out of, related to or in connection with (1) the performance of the Board's duties or responsibilities under this Agreement, except to the extent that such loss, liability, suit or expense results or arises from the Board's own gross negligence, willful misconduct or material breach of this Agreement, or (2) without limiting the scope of Paragraph F(6) of this Agreement, any acts taken or transactions effected in accordance with written directions from Employer or any of its authorized representatives or any failure of the Board to act in the absence of such written directions to the extent the Board is authorized to act only at the direction of Employer.

J. General Provisions

(1) Books and Records

Employer shall keep accurate books and records connected with the performance of this Agreement. Such books and records shall be kept in a secure location at Employer's office(s) and shall be available for inspection and copying by the Board and its representatives.

(2) Notice

(a) Any notice or other written communication pursuant to this Agreement will be deemed effective immediately upon personal delivery, or if mailed, three (3) days after the date of mailing, or if delivered by express mail or e-mail, immediately upon the date of confirmed delivery, to the following:

For the Board:

Filing by mail, send to:
CalPERS
CEPPT
P.O. Box 1494
Sacramento, CA 95812-1494

Filing in person, deliver to:
CalPERS Mailroom
CEPPT
400 Q Street
Sacramento, CA 95811

For Employer:

Livermore Amador Valley Tı
1362 Rutan Ct. Suite 100
Livermore, Ca 94551

(b) Either party to this Agreement may, from time to time by notice in writing served upon the other, designate a different mailing address to which, or a different person to whom, all such notices thereafter are to be addressed.

(3) Survival

All representations, warranties, and covenants contained in this Agreement, or in any instrument, certificate, exhibit, or other writing intended by the parties to be a part of this Agreement shall survive the termination of this Agreement.

(4) Waiver

No waiver of a breach, failure of any condition, or any right or remedy contained in or granted by the provisions of this Agreement shall be effective unless it is in writing and signed by the party waiving the breach, failure, right, or remedy. No waiver of any breach, failure, right, or remedy shall be deemed a waiver of any other breach, failure, right, or remedy, whether or not similar, nor shall any waiver constitute a continuing waiver unless the writing so specifies.

(5) Necessary Acts; Further Assurances

The parties shall at their own cost and expense execute and deliver such further documents and instruments and shall take such other actions as may be reasonably required or appropriate to evidence or carry out the intent and purposes of this Agreement.

(6) Incorporation of Amendments to Applicable Laws and Accounting Standards

Any references to sections of federal or state statutes or regulations or accounting standards shall be deemed to include a reference to any amendments thereof and any successor provisions thereto.

(7) Days

Wherever in this Agreement a set number of days is stated or allowed for a particular event to occur, the days are understood to include all calendar days, including weekends and holidays, unless otherwise stated.

(8) No Third Party Beneficiaries

Except as expressly provided herein, this Agreement is for the sole benefit of the parties hereto and their permitted successors and assignees, and nothing herein, expressed or implied, will give or be construed to give any other person any legal or equitable rights hereunder. Notwithstanding the foregoing, CalPERS, the CEPPT, and all of the officers, trustees, agents and employees of CalPERS, the CEPPT and the Board shall be considered third party beneficiaries of this Agreement with respect to Paragraph I above.

(9) Counterparts

This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

A majority vote of Employer's Governing Body at a public meeting held on the 13th day of the month of September in the year 2021, authorized entering into this Agreement.

Signature of the Presiding Officer: ______________________________

Printed Name of the Presiding Officer: Karla Brown

Name of Governing Body: Board of Directors

Name of Employer: Livermore Amador Valley Transit Authority

Date: ______________________________

BOARD OF ADMINISTRATION
CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

BY_______________________________________
ARNITA PAIGE
DIVISION CHIEF, PENSION CONTRACT AND PREFUNDING PROGRAMS
CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

To be completed by CalPERS The effective date of this Agreement is: ___________________________

California Public Employees' Retirement System
California Employers' Pension Prefunding Trust (CEPPT)
400 Q Street, Sacramento, CA 95811
www.calpers.ca.gov

Delegation of Authority to Request Disbursements

California Employers' Pension Prefunding Trust (CEPPT)

RESOLUTION
OF THE

Board of Directors
(GOVERNING BODY)

OF THE

Livermore Amador Valley Transit Authority
(NAME OF EMPLOYER)

The Board of Directors delegates to the incumbents
(GOVERNING BODY)

in the positions of Executive Director and
(TITLE)

Director of Finance, and/or
(TITLE)

______________________ authority to request on behalf of the
(TITLE)

Employer disbursements from the Pension Prefunding Trust and to certify as to the purpose for which the disbursed funds will be used.

By Karla Brown

Title Chair of the Board

Witness ______________________

Date ______________________