

# Sacramento County Employees' Retirement System (SCERS)

## **Governmental Accounting Standards Board Statement 67 (GASBS 67) Actuarial Valuation**

As of June 30, 2020



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

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October 23, 2020

Board of Retirement  
Sacramento County Employees' Retirement System  
980 9th Street, Suite 1900  
Sacramento, CA 95814

Dear Board Members:

We are pleased to submit this Governmental Accounting Standards Board Statement 67 (GASBS 67) Actuarial Valuation as of June 30, 2020. It contains various information that will need to be disclosed in order to comply with GASBS 67.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the Retirement System. The census and financial information on which our calculations were based was provided by the Retirement System. That assistance is gratefully acknowledged.

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

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

Sincerely,

Segal

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

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

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

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

A handwritten signature in blue ink, appearing to read "Molly Calcagno".

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Molly Calcagno, ASA, EA, MAAA  
Actuary

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# Section 1: Actuarial Valuation Summary

## Purpose and basis

This report has been prepared by Segal to present certain disclosure information required by Governmental Accounting Standards Board Statement 67 (GASBS 67) as of June 30, 2020. This valuation is based on:

- The benefit provisions of SCERS, as administered by the Board;
- The characteristics of covered active members, terminated vested members, and retired members and beneficiaries as of June 30, 2020, provided by SCERS;
- The assets of the Plan as of June 30, 2020, provided by SCERS;
- Economic assumptions regarding future salary increases and investment earnings adopted by the Board for the June 30, 2020 valuation; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc. adopted by the Board for the June 30, 2020 valuation.

## General observations on GASBS 67 actuarial valuation

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

## Section 1: Actuarial Valuation Summary

### Highlights of the valuation

1. The NPL was measured as of June 30, 2020 and June 30, 2019 and determined based upon the results of the actuarial valuations as of June 30, 2020 and June 30, 2019, respectively.
2. The NPL increased from \$2,073.8 million as of June 30, 2019 to \$2,714.3 million as of June 30, 2020 primarily as a result of changes in actuarial assumptions (about \$216 million) and unfavorable investment return (about \$389 million<sup>1</sup>). Changes in these values during the last two fiscal years ending June 30, 2019 and June 30, 2020 can be found in *Section 2, Schedule of Changes in Net Pension Liability* on page 16.
3. The discount rate used to determine the TPL and NPL was 6.75% as of June 30, 2020 and 7.00% as of June 30, 2019, following the same assumptions used by SCERS in the actuarial valuations as of June 30, 2020 and June 30, 2019, respectively. The detailed calculations used in this derivation as of June 30, 2020 can be found in *Section 3, Appendix A*. Various other information that is required to be disclosed can be found throughout *Section 2*.
4. The NPL as of June 30, 2020 excludes a liability of \$3.4 million that is attributable to members of North Highlands (an employer that merged with Sacramento Metro Fire District) based on the latest estimate of the asset shortfall for this employer under SCERS' Declining Employer Payroll Policy available as of June 30, 2019 adjusted with interest at the assumed rate of investment return (i.e., 7.00% as of June 30, 2019).
5. The Plan Fiduciary Net Position includes \$14.8 million that is available to offset a portion of the members' future COLA contribution rates. Since the \$14.8 million can only be used in the future to reduce contribution rates for the employees, we have included a liability of the same amount so that the employer's net NPL is unchanged by the availability of this amount.
6. On July 30, 2020, the California Supreme Court issued a decision in the case of Alameda County Deputy Sheriffs' Association et al. v. Alameda County Employees' Retirement Association (ACERA) and Board of Retirement of ACERA. That decision has important implications for SCERS and its members. In particular, the decision requires pension systems like SCERS to exclude certain pay items from a legacy member's compensation earnable. It should be noted that neither the June 30, 2020 assets provided by SCERS nor the liabilities we calculated using the membership data provided by SCERS reflect the financial impact of the California Supreme Court decision.
7. It is important to note that this actuarial valuation is based on plan assets as of June 30, 2020. Due to the COVID-19 pandemic, market conditions have changed significantly during 2020. The Plan's funded status does not reflect short-term fluctuations of the market, but rather is based on the market values on the last day of the Plan Year. While it is impossible to determine how the pandemic will continue to affect market conditions prior to next year's valuation, Segal is available to prepare projections of potential outcomes upon request.

<sup>1</sup> Equal to \$397 million investment loss net of \$8 million in administrative expenses.

## Section 1: Actuarial Valuation Summary

### Summary of key valuation results

Measurement Date		June 30, 2020	June 30, 2019
<b>Disclosure elements for plan year ending June 30:</b>	• Service cost <sup>1</sup>	\$241,474,340	\$238,685,306
	• Total Pension Liability	12,693,655,000	11,895,520,000
	• Plan Fiduciary Net Position	9,979,379,000	9,821,694,000
	• Net Pension Liability	2,714,276,000	2,073,826,000
<b>Schedule of contributions<sup>2</sup> for plan year ending June 30:</b>	• Actuarially determined contributions	\$274,054,940	\$240,237,090
	• Actual contributions	274,054,940	240,237,090
	• Contribution deficiency / (excess)	0	0
<b>Demographic data for plan year ending June 30:</b>	• Number of retired members and beneficiaries	12,732	12,381
	• Number of vested terminated members <sup>3</sup>	3,791	3,602
	• Number of active members	12,650	12,678
<b>Key assumptions as of June 30:</b>	• Investment rate of return	6.75%	7.00%
	• Inflation rate	2.75%	3.00%
	• Projected salary increases <sup>4</sup>	4.25% - 10.50%, varying by service, including inflation	4.50% - 10.75%, varying by service, including inflation

<sup>1</sup> The Service Cost is based on the previous year's valuation, meaning the 2020 and 2019 values are based on the valuations as of June 30, 2019 and June 30, 2018, respectively. The key assumptions in the June 30, 2018 valuation were as follows:

Investment rate of return:	7.00%
Inflation rate:	3.00%
Projected salary increases:	4.50% - 10.75%, varying by service, including inflation

<sup>2</sup> These amounts exclude \$1,911,003 and \$45,201,885 in receivable contributions due by Florin Fire in the 2020 and 2019 valuations, respectively. The amount for the 2020 valuation also excludes \$264,000 in contributions made by UC Davis for outstanding pension liabilities.

The 2019 amount also excludes \$3,141,977 in contributions made by Florin Fire. \$3,141,977 when added to the \$240,237,090 displayed above for the 2019 valuation equal the \$243,379,067 previously included in our GASBS 67 report as of June 30, 2019.

<sup>3</sup> Includes terminated members with member contributions on deposit.

<sup>4</sup> For June 30 2020, includes inflation at 2.75% plus real across the board salary increase of 0.25% plus merit and promotional increases. For June 30 2019, includes inflation at 3.00% plus real across the board salary increase of 0.25% plus merit and promotional increases.

## Section 1: Actuarial Valuation Summary

### Important information about actuarial valuations

An actuarial valuation is a budgeting tool with respect to the financing of future projected obligations of a pension plan. It is an estimated forecast – the actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.

In order to prepare a valuation, Segal relies on a number of input items. These include:

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

## Section 1: Actuarial Valuation Summary

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

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

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

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

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

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



# Section 2: GASBS 67 Information

## General information about the pension plan

### Plan Description

*Plan administration.* The Sacramento County Employees' Retirement System (SCERS) was established by the County of Sacramento in 1941. SCERS is administered by the Board of Retirement and governed by the County Employees' Retirement Law of 1937 (California Government Code Section 31450 et. seq). SCERS is a cost-sharing multiple employer public employee retirement system whose main function is to provide service retirement, disability, death and survivor benefits to the Safety and Miscellaneous members employed by the County of Sacramento. SCERS also provides retirement benefits to the employee members of the Superior Court of California (County of Sacramento) and nine Special Districts.

The management of SCERS is vested with the Sacramento County Board of Retirement. The Board consists of nine members and two alternates. Four members are appointed by the Board of Supervisors, two members are elected by the Miscellaneous membership, one member and one alternate are elected by the Safety membership, one member and one alternate are elected by the retired members of the System; and the County Director of Finance serves as ex officio member. All members of the Board of Retirement serve terms of three years except for the County Director of Finance whose term runs concurrent with his term as Director of Finance.

*Plan membership.* At June 30, 2020, pension plan membership consisted of the following:

Retired members or beneficiaries currently receiving benefits	12,732
Vested terminated members entitled to but not yet receiving benefits	3,791
Active members	<u>12,650</u>
Total	29,173

*Benefits provided.* SCERS provides service retirement, disability, death and survivor benefits to eligible employees. All permanent full-time or part-time employees of the County of Sacramento or contracting district become members of SCERS upon employment. There are separate retirement plans for Safety and Miscellaneous members. Safety membership is extended to those involved in active law enforcement, fire suppression, and certain other classifications. There are four tiers applicable to Safety members. Those entering prior to June 25, 1995 are Tier 1 members. Those entering on or after June 25, 1995 are Tier 2 members. County employees entering on or after January 1, 2012 but prior to January 1, 2013 are members of Tier 3. Any new Safety employee who becomes a member on or after January 1, 2013 is designated PEPRA Safety (Tier 4) and is subject to the provisions of California Public Employees' Pension Reform Act of 2013 (PEPRA), California Government Code 7522 et seq. and Assembly Bill (AB) 197. All

## Section 2: GASBS 67 Information

other employees are classified as Miscellaneous members. There are five tiers applicable to Miscellaneous members. Those entering prior to September 27, 1981 are Tier 1 members. Those hired on or after September 27, 1981 and June 27, 1993 are members of Tier 2 or Tier 3, respectively. County employees entering on or after January 1, 2012 but prior to January 1, 2013 are members of Tier 4. Any new Miscellaneous employee who becomes a member on or after January 1, 2013 is designated as PEPRA Miscellaneous (Tier 5) and are subject to the provisions of California Government Code 7522 et seq. and AB 197.

Safety members hired prior to January 1, 2013, are eligible to retire once they attain the age of 50 and have acquired 10 or more years of retirement service credit. A member with 20 years of service is eligible to retire regardless of age. Safety members who are first hired on or after January 1, 2013, are eligible to retire once they have attained the age of 50, and have acquired five years of retirement service credit.

Miscellaneous members hired prior to January 1, 2013, are eligible to retire once they attain the age of 50 and have acquired 10 or more years of retirement service credit. A member with 30 years of service is eligible to retire regardless of age. Miscellaneous members who are first hired on or after January 1, 2013, are eligible to retire once they have attained the age of 52, and have acquired five years of retirement service credit.

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

Safety member benefits for Tier 1 and Tier 2 are calculated pursuant to the provisions of California Government Code Section 31664.1. Safety member benefits for Tier 3 are calculated pursuant to the provision of California Government Code Section 31664.2. The monthly allowance is equal to 2% of the first \$350 of final compensation, plus 3% of the excess final compensation times years of accrued retirement service credit times age factor from either Section 31664.1 (Tier 1 and 2) or 31664.2 (Tier 3). Safety member benefits for those who are first hired on or after January 1, 2013, are calculated pursuant to the provision of California Government Code Section 7522.25(d). The monthly allowance is equal to the final compensation multiplied by years of accrued retirement credit multiplied by the age factor from Section 7522.25(d).

Miscellaneous member benefits for Tier 1, Tier 2 and Tier 3 are calculated pursuant to the provisions of California Government Code Section 31676.14. Miscellaneous member benefits for Tier 4 are calculated pursuant to the provisions of California Government Code Section 31676.1. The monthly allowance is equal to 1/90th of the first \$350 of final compensation, plus 1/60th of the excess final compensation times years of accrued retirement service credit times age factor from either Section 31676.14 (Tier 1, Tier 2 and Tier 3) or Section 31676.1 (Tier 4). Miscellaneous member benefits for those who are first hired on or after January 1, 2013, are calculated pursuant to the provision of California Government Code Section 7522.20(a). The monthly allowance is equal to the final compensation multiplied by years of accrued retirement credit multiplied by the age factor from Section 7522.20(a).

For members with membership dates before January 1, 2013, the maximum monthly retirement allowance is 100% of final compensation. There is no maximum for members with membership dates on or after January 1, 2013.

Final average compensation consists of the highest 12 consecutive months for a Tier 1 Safety or Tier 1 Miscellaneous member and the highest 36 consecutive months for a Tier 2, Tier 3, Tier 4 or Tier 5 member.

## Section 2: GASBS 67 Information

The member may elect an unmodified retirement allowance, or choose an optional retirement allowance. The unmodified retirement allowance provides the highest monthly benefit and a 60% continuance to an eligible surviving spouse. An eligible surviving spouse is one married to the member one year prior to the effective retirement date. There are four optional retirement allowances the member may choose. Each of the optional retirement allowances requires a reduction in the unmodified retirement allowance in order to allow the member the ability to provide certain benefits to a surviving spouse or named beneficiary having an insurable interest in the life of the member.

SCERS provides an annual cost-of-living benefit to Safety Tier 1, Tier 2, Tier 3 and Tier 4 members and Miscellaneous Tier 1, Tier 3, Tier 4 and Tier 5 members. The cost-of-living adjustment, based upon the Consumer Price Index for the San Francisco-Oakland-Hayward area, is capped at 4.0% for Tier 1 members and 2% for all other members eligible for a cost-of-living adjustment.

The County of Sacramento and contracting districts contribute to the retirement plan based upon actuarially determined contribution rates adopted by the Board of Retirement. Employer contribution rates are adopted annually based upon recommendations received from SCERS' actuary after the completion of the annual actuarial valuation. The average employer contribution rate as of June 30, 2020 for 2019/2020 (based on the June 30, 2018 valuation) was 25.85% of compensation.

All members are required to make contributions to SCERS regardless of the retirement plan or tier in which they are included. The average member contribution rate as of June 30, 2020 for 2019/2020 (based on the June 30, 2018 valuation) was 11.92% of compensation.

## Section 2: GASBS 67 Information

### Net Pension Liability

Measurement Date	June 30, 2020	June 30, 2019
<b>Components of the Net Pension Liability</b>		
Total Pension Liability	\$12,693,655,000	\$11,895,520,000
Plan Fiduciary Net Position	<u>(9,979,379,000)</u>	<u>(9,821,694,000)</u>
Net Pension Liability	\$2,714,276,000	\$2,073,826,000
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	78.62%	82.57%

The Net Pension Liability (NPL) was measured as of June 30, 2020 and 2019 and determined based upon the Total Pension Liability (TPL) from actuarial valuations as of June 30, 2020 and 2019, respectively.

*Plan Provisions.* The plan provisions used in the measurement of the NPL as of June 30, 2020 and 2019 are the same as those used in the SCERS actuarial valuations as of June 30, 2020 and 2019, respectively.

*Actuarial assumptions.* The TPL that was measured by an actuarial valuation as of June 30, 2020 used the following actuarial assumptions, applied to all periods included in the measurement:

<b>Inflation:</b>	2.75%
<b>Salary increases:</b>	4.25% to 10.50%, varying by service, including inflation
<b>Investment rate of return:</b>	6.75%, net of pension plan investment expense, including inflation
<b>Other assumptions:</b>	See the analysis of actuarial experience study for the period July 1, 2016 through June 30, 2019.

The TPL that was measured by an actuarial valuation as of June 30, 2019 used the following actuarial assumptions, applied to all periods included in the measurement:

<b>Inflation:</b>	3.00%
<b>Salary increases:</b>	4.50% to 10.75%, varying by service, including inflation
<b>Investment rate of return:</b>	7.00%, net of pension plan investment expense, including inflation
<b>Other assumptions:</b>	See the analysis of actuarial experience study for the period July 1, 2013 through June 30, 2016.

## Section 2: GASBS 67 Information

### Determination of discount rate and investment rates of return

The long-term expected rate of return on pension plan investments was determined in 2020 using a building-block method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage, adding expected inflation and subtracting expected investment expenses and a risk margin. The target allocation (approved by the Board) and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before deducting investment expenses are shown in the following table. This information was used in the derivation of the long-term expected investment rate of return assumption for the June 30, 2020 actuarial valuations. This information will change every three years in the actuarial experience study.

Asset Class	Target Allocation	Long-Term Expected Arithmetic Real Rate of Return
U.S. Large Cap Equity	18%	5.42%
U.S. Small Cap Equity	2%	6.21%
International Developed Equity	16%	6.50%
Emerging Markets Equity	4%	8.80%
Core Plus Bonds	10%	1.13%
High Yield Bonds	1%	3.40%
Global Bonds	3%	(0.04%)
Bank Loans	1%	3.89%
U.S. Treasury	5%	0.30%
Real Estate	5%	4.57%
Cash	1%	(0.03%)
Liquid Real Return	2%	4.47%
Hedge Fund Growth	3%	2.40%
Hedge Fund Diversifying	7%	2.40%
Value Added Real Estate	2%	8.10%
Private Equity	9%	9.40%
Private Real Assets	7%	8.05%
Private Credit	4%	5.60%
<b>Total</b>	<b>100%</b>	

## Section 2: GASBS 67 Information

*Discount rate.* The discount rate used to measure the TPL was 6.75% for June 30, 2020 and 7.00% for June 30, 2019. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the actuarially determined contribution rates. For this purpose, only employer contributions that are intended to fund benefits for current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs for future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the Plan Fiduciary Net Position was projected to be available to make all projected future benefit payments for current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the TPL as of both June 30, 2020 and June 30, 2019.

## Section 2: GASBS 67 Information

### Discount rate sensitivity

*Sensitivity of the June 30, 2020 NPL to changes in the discount rate.* The following presents the NPL of the SCERS as of June 30, 2020, calculated using the discount rate of 6.75%, as well as what the SCERS' NPL would be if it were calculated using a discount rate that is 1 percentage-point lower (5.75%) or 1 percentage-point higher (7.75%) than the current rate:

	1% Decrease (5.75%)	Current Discount Rate (6.75%)	1% Increase (7.75%)
<b>Net Pension Liability as of June 30, 2020</b>	\$4,448,538,000	\$2,714,276,000	\$1,294,578,000

*Sensitivity of the June 30, 2019 NPL to changes in the discount rate.* The following presents the NPL of the SCERS as of June 30, 2019, calculated using the discount rate of 7.00%, as well as what the SCERS' NPL would be if it were calculated using a discount rate that is 1 percentage-point lower (6.00%) or 1 percentage-point higher (8.00%) than the current rate:

	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
<b>Net Pension Liability as of June 30, 2019</b>	\$3,713,495,000	\$2,073,826,000	\$734,226,000

## Section 2: GASBS 67 Information

### Schedule of changes in Net Pension Liability – Last two fiscal years

Measurement Date	June 30, 2020	June 30, 2019
<b>Total Pension Liability</b>		
• Service cost <sup>1</sup>	\$241,474,340	\$238,685,306
• Interest	830,663,319	783,931,526
• Change of benefit terms	0	0
• Differences between expected and actual experience	50,651,341	165,493,168
• Changes of assumptions	216,097,000	0
• Benefit payments, including refunds of member contributions	(540,751,000)	(505,853,000)
<b>Net change in Total Pension Liability</b>	<b>\$798,135,000</b>	<b>\$682,257,000</b>
<b>Total Pension Liability – beginning</b>	<b><u>11,895,520,000</u></b>	<b><u>11,213,263,000</u></b>
<b>Total Pension Liability – ending</b>	<b><u>\$12,693,655,000</u></b>	<b><u>\$11,895,520,000</u></b>
<b>Plan Fiduciary Net Position</b>		
• Contributions – employer	\$274,055,000	\$240,071,000
• Contributions – employee	126,354,000	121,843,000
• Net investment income	301,373,000 <sup>2</sup>	672,786,000 <sup>3</sup>
• Benefit payments, including refunds of member contributions	(540,751,000)	(505,853,000)
• Administrative expense	(8,460,000)	(7,601,000)
• Other	5,114,000 <sup>4</sup>	48,511,000 <sup>5</sup>
<b>Net change in Plan Fiduciary Net Position</b>	<b>\$157,685,000</b>	<b>\$569,757,000</b>
<b>Plan Fiduciary Net Position – beginning</b>	<b><u>9,821,694,000</u></b>	<b><u>9,251,937,000</u></b>
<b>Plan Fiduciary Net Position – ending</b>	<b><u>\$9,979,379,000</u></b>	<b><u>\$9,821,694,000</u></b>
<b>Net Pension Liability – ending</b>	<b><u>\$2,714,276,000</u></b>	<b><u>\$2,073,826,000</u></b>
<b>Plan Fiduciary Net Position as a percentage of the Total Pension Liability</b>	<b>78.62%</b>	<b>82.57%</b>
<b>Covered payroll<sup>6</sup></b>	<b>\$1,059,984,000</b>	<b>\$1,017,885,000</b>
<b>Net Pension Liability as percentage of covered payroll</b>	<b>256.07%</b>	<b>203.74%</b>

<sup>1</sup> The Service Cost is based on the previous year's valuation, meaning the 2020 and 2019 values are based on the valuations as of June 30, 2019 and June 30, 2018, respectively.

<sup>2</sup> This is different from \$304,312,000 included in the CAFR as of June 30, 2020. In the CAFR, the \$2,939,000 interest portion of the \$3,531,000 contribution made by Florin Fire, as described in footnote 4, was classified as investment income.

<sup>3</sup> This is different from \$675,726,000 included in the CAFR as of June 30, 2019. In the CAFR, the \$2,940,000 interest portion of the \$3,142,000 contribution made by Florin Fire, as described in footnote 5, was classified as investment income.

<sup>4</sup> We have classified the \$2,939,000 interest contribution made by Florin Fire, a non-active employer, during 2019/2020 as well as the \$1,911,000 receivable contributions due from Florin Fire in the "Other" category. We have also classified \$264,000 made by UC Davis in the "Other" Category for contributions made due to outstanding pension liabilities. This is done to anticipate that the NPL for the active employers to be disclosed later in our GASBS 68 actuarial valuation as of June 30, 2021 will be allocated using the employer contributions excluding the total \$5,114,000 contribution made during 2019/2020.



## Section 2: GASBS 67 Information

- <sup>5</sup> We have classified the \$3,142,000 contribution made by Florin Fire, a non-active employer, during 2018/2019 as well as the \$45,202,000 receivable contributions due from Florin Fire in the "Other" category. We have also classified \$167,000 made by SETA in the "Other" category for contributions made due to an enrollment correction. This was done because the NPL for the active employers disclosed in our GASBS 68 actuarial valuation as of June 30, 2020 was allocated using the employer contributions excluding the total \$48,511,000 contribution made during 2018/2019.
- Throughout the rest of this report, the \$167,000 in contributions made by SETA for contributions made due to an enrollment correction are included in the Actuarially Determined Contributions for the System's active employers.
- <sup>6</sup> Covered payroll represents compensation earnable and pensionable compensation. Only compensation earnable and pensionable compensation that would possibly go into the determination of the retirement benefits are included.

### Notes to Schedule:

*Benefit changes:* None

## Section 2: GASBS 67 Information

### Schedule of contributions – Last ten fiscal years

Year Ended June 30	Actuarially Determined Contributions <sup>1</sup>	Contributions in Relation to the Actuarially Determined Contributions	Contribution Deficiency / (Excess)	Covered Payroll <sup>2, 3</sup>	Contributions as a Percentage of Covered Payroll
2011	\$182,920,751	\$182,920,751	0	\$818,804,000	22.34%
2012	179,098,469	179,098,469	0	835,737,000	21.43%
2013 <sup>4</sup>	188,528,426	188,528,426	0	858,551,000	21.96%
2014 <sup>4</sup>	209,367,323	209,367,323	0	858,343,000	24.39%
2015 <sup>4</sup>	221,823,365	221,823,365	0	873,328,000	25.40%
2016 <sup>4</sup>	207,884,162	207,884,162	0	912,421,000	22.78%
2017 <sup>4</sup>	201,928,297	201,928,297	0	958,934,000	21.06%
2018 <sup>4</sup>	198,331,133	198,331,133	0	985,375,000	20.13%
2019 <sup>4</sup>	240,237,090	240,237,090	0	1,017,885,000	23.60%
2020	274,054,940	274,054,940	0	1,059,984,000	25.85%

<sup>1</sup> All "Actuarially Determined Contributions" through June 30, 2015 were determined as the "Annual Required Contribution" under GASBS 25 and 27.

<sup>2</sup> Payroll for the years ending 2011 through 2012 are calculated by dividing the contribution dollar amount by the contribution as a percentage of payroll.

<sup>3</sup> Covered payroll represents compensation earnable and pensionable compensation. Only compensation earnable and pensionable compensation that would possibly go into the determination of the retirement benefits are included.

<sup>4</sup> Since our prior GASBS 67 report, these have been restated to exclude the following contributions from Florin Fire, and include \$167,039 in contributions made by SETA in 2019 due to an enrollment correction:

Year Ended June 30	Contributions Excluded
2013	\$1,135,294
2014	1,136,000
2015	1,136,000
2016	1,136,000
2017	2,000,000
2018	3,300,000
2019	3,141,977

See accompanying notes to this schedule on the next page.

## Section 2: GASBS 67 Information

### Notes to Schedule:

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

<b>Valuation date:</b>	Actuarially determined contribution rates are calculated as of June 30, two years prior to the end of the fiscal year in which contributions are reported
<b>Actuarial cost method:</b>	Entry Age Actuarial Cost Method
<b>Amortization method:</b>	Level percent of payroll (3.25% payroll growth assumed)
<b>Remaining amortization period:</b>	<b><u>June 30, 2018 valuation</u></b> 17 years (declining) as of June 30, 2018 for the outstanding balance of the June 30, 2012 UAAL. The UAAL established as a result of the Early Retirement Incentive Program for LEMA members is amortized over a 10-year period, beginning June 30, 2010. Effective June 30, 2013, any changes in UAAL due to actuarial gains or losses or due to changes in actuarial assumptions or methods will be amortized over a 20-year closed period effective with each valuation. Any change in UAAL that arises due to plan amendments will be amortized over its own declining 15-year period and any change in UAAL due to retirement incentive programs will be amortized over a declining period of up to 5 years.
<b>Asset valuation method:</b>	The market value of assets less unrecognized returns from each of the last six years. Unrecognized return is equal to the difference between actual and expected returns on a market value basis and is recognized over a seven-year period. The deferred return is further adjusted, if necessary, so that the actuarial value of assets will stay within 30% of the market value of assets. Deferred gains and losses as of June 30, 2013 have been combined and will be recognized in equal amounts over a six-year period starting July 1, 2013.
<b>Other information:</b>	All members with membership dates on or after January 1, 2013 enter the new tiers created by the California Public Employees’ Pension Reform Act of 2013 (PEPRA).

## Section 2: GASBS 67 Information

### Actuarial assumptions:

	June 30, 2018 valuation (used for the year ended June 30, 2020 ADC)
<b>Investment rate of return:</b>	7.00%, net of pension plan investment expense, including inflation
<b>Inflation rate:</b>	3.00%
<b>Projected salary increases:</b>	Miscellaneous: 4.50% to 8.25% and Safety: 5.25% to 10.75%, varying by service, including inflation
<b>Cost of living adjustments:</b>	3.00% of Miscellaneous and Safety Tier 1 retirement income, 2.00% of Miscellaneous Tier 3, Tier 4 and Tier 5 and Safety Tier 2, Tier 3 and Tier 4 retirement income, and 0.00% of Miscellaneous Tier 2 retirement income.
<b>Other assumptions:</b>	Same as those used in the June 30, 2018 funding actuarial valuation.

# Section 3: Appendices

## Appendix A: Projection of Plan Fiduciary Net Position for use in the Calculation of Discount Rate as of June 30, 2020 (\$ in millions)

Year Beginning July 1,	Projected Beginning Plan Fiduciary Net Position (a)	Projected Total Contributions (b)	Projected Benefit Payments (c)	Projected Administrative Expenses (d)	Projected Investment Earnings (e)	Projected Ending Plan Fiduciary Net Position (f) = (a) + (b) - (c) - (d) + (e)
2020	\$9,979	\$453	\$609	\$9	\$666	\$10,481
2021	10,481	463	635	9	699	11,000
2022	11,000	468	670	9	733	11,521
2023	11,521	465	706	10	767	12,037
2024	12,037	467	744	10	800	12,550
2025	12,550	471	782	11	834	13,062
2026	13,062	475	821	11	867	13,572
2027	13,572	474	860	12	900	14,075
2028	14,075	474	899	12	932	14,571
2029	14,571	474	939	13	964	15,058
2045	17,938	81	1,387	15	1,162	17,777
2046	17,777	68	1,396	15	1,150	17,584
2047	17,584	64	1,403	15	1,137	17,367
2048	17,367	60	1,408	15	1,122	17,126
2049	17,126	56	1,410	15	1,105	16,862
2104	37,253	33 *	5	32	2,514	39,764
2105	39,764	35 *	3	34	2,684	42,445
2106	42,445	37 *	2	37	2,865	45,308
2107	45,308	39 *	2	39	3,058	48,365
2108	48,365	42 *	1	42	3,265	51,629
2136	301,165	259 *	0	259	20,329	321,494
2137	321,494					
2137	Discounted Value: 154 **					

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

\*\* \$321,494 million when discounted with interest at the rate of 6.75% per annum has a value of \$154 million (or 1.55% of the Plan Fiduciary Net Position) as of June 30, 2020.

## Section 3: Appendices

### Notes:

1. Amounts may not total exactly due to rounding.
2. Various years have been omitted from this table.
3. Column (a): Except for the "discounted value" shown for 2137, none of the projected beginning Plan Fiduciary Net Position amounts shown have been adjusted for the time value of money.
4. Column (b): Projected total contributions include employee and employer Normal Cost contributions based on closed group projections (based on covered active members as of June 30, 2020), plus employer contributions to the Unfunded Actuarial Accrued Liability. Contributions are assumed to occur halfway through the year, on average.
5. Column (c): Projected benefit payments have been determined in accordance with paragraph 39 of GASB Statement No. 67, and are based on the closed group of active, inactive vested, retired members, and beneficiaries as of June 30, 2020. The projected benefit payments reflect the cost of living increase assumptions used in the June 30, 2020 valuation report.
6. Column (d): Projected administrative expenses are calculated as approximately 0.09% of the projected beginning Plan Fiduciary Net Position amount. The 0.09% proportion was based on the actual fiscal year 2019-2020 administrative expenses as a percentage of the beginning Plan Fiduciary Net Position amount as of July 1, 2019. Administrative expenses are assumed to occur halfway through the year, on average.
7. Column (e): Projected investment earnings are based on the assumed investment rate of return of 6.75% per annum.
8. As illustrated in this Appendix, the Plan Fiduciary Net Position was projected to be available to make all projected future benefit payments for current Plan members. In other words, there is no projected "cross-over date" when projected benefits are not covered by projected assets. Therefore, the long-term expected rate of return on Plan investments of 6.75% per annum was applied to all periods of projected benefit payments to determine the Total Pension Liability as of June 30, 2020 shown earlier in this report, pursuant to paragraph 44 of GASB Statement No. 67.

## Section 3: Appendices

### Appendix B: Definition of Terms

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

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

## Section 3: Appendices

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



## Section 3: Appendices

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