

AGENDA

BOARD OF RETIREMENT

Boardroom

832 12th Street Suite 600 Modesto, CA 95353

January 26, 2021
1:30 p.m.

The Board of Retirement welcomes you to its meetings, which are regularly held on the fourth Tuesday of each month. Your interest is encouraged and appreciated.

CONSENT/ACTION ITEMS: Consent matters include routine administrative actions and are identified under the Consent Items heading. All other items are considered to be action items "Action" means that the Board may dispose of any item by any action, including but not limited to the following acts: approve, disapprove, authorize, modify, defer, table, take no action, or receive and file.

BOARD AGENDAS & MINUTES: Board agendas, minutes and copies of items to be considered by the Board of Retirement are customarily posted on the Internet by Friday afternoon preceding a meeting at the following website: www.stancera.org.

AUDIO/VIDEO: All Board of Retirement regular meetings are audio and visually recorded. Audio/Video recordings of the meetings are available after the meetings at <http://www.stancera.org/agenda>.

NOTICE REGARDING NON-ENGLISH SPEAKERS: Board of Retirement meetings are conducted in English and translation to other languages is not provided. Please make arrangements for an interpreter if necessary.

Pursuant to California Governor Gavin Newsom's Executive Order N-29-20, The Board of Retirement ("StanCERA") is authorized to hold public meetings via teleconference and to make public meetings accessible telephonically or otherwise electronically to all members of the public who wish to participate and to provide public comment to the local legislative body during the current health emergency. We are unable to safely distance ourselves due to the COVID-19 Pandemic guidelines in our own boardroom. StanCERA's offices are currently closed to public access. The StanCERA Boardroom is being utilized for some Trustees and Staff who will be attending in person. All other Trustees, Staff and Consultants unable to attend in person will be attending remotely via teleconference.

If you wish to make either a general public comment or to comment on a specific agenda item in writing, please submit your comment (if your comment pertains to a specific agenda item, please include the agenda item number in the subject line) via email or fax prior to the meeting. Written comments regarding StanCERA's agenda items can be submitted by 4:30 p.m. on the day before the board meetings via email to Gomesk@Stancera.org or via fax to 209-558-4976. Pursuant to Government Code section 54954.3(a), Public Comment or public comment on an Agenda Item are limited to (400 words or less).

The public will not be granted access to Board of Retirement Boardroom to attend StanCERA's meeting. If you wish to join the meeting by teleconference as a member of the public and listen to the meeting, then please dial in using your phone and call **209-689-0007 Access Code: 414752**. When directed to do so please press 5* on your phone to alert the Chair you wish to a public comment. Pursuant to Government Code section 54954.3(a), Public Comment or public comment on an Agenda Item are limited to three (3) minutes StanCERA will provide its best effort to fulfill the request.

In compliance with the Americans with Disabilities Act, a person requiring an accommodation, auxiliary aid, or service to participate in this meeting should contact StanCERA at (209) 525-6393, as far in advance as possible but no later than 48 hours before the scheduled event.

Agendas and Minutes are on our website at www.stancera.org.

1. Call Meeting to Order
2. Pledge of Allegiance
3. Roll Call
4. Announcements
5. Public Comment
6. Consent Items
 - a. Approval of the December 15, 2020 Meeting Minutes [View](#)
 - b. Applications for Service Retirement(s) – **Government Code Sections 31499.14, 31670, 31662.2 & 31810** See attachment for details. [View](#)
 - c. Applications for Deferred Retirement(s) – **Government Code Section 31700**
 1. Bhakta, Jay – Stanislaus County – Effective 12-03-20
 2. Chastain, Joyce – Stanislaus County – Effective 08-31-20
 3. Dyson, Christina – Stanislaus County – Effective 10-09-20
 4. Goulding, Jonathan – City of Ceres – Effective 12/21/20
 5. Grimes, Emily – Stanislaus County – Effective 12/04/20
 6. Lind, Melissa – Stanislaus County – Effective 12/14/20
 - d. Application for Service Connected Disability Retirement – **Government Code Section 31724**
 1. Parker, Jason – Stanislaus County – Effective 02-12-2019
 2. Faus, Kevin – Stanislaus County – Effective 05-12-2019
 - e. 2021 Committee Assignments [View](#)
 - f. 2020 Qtr. 4 Executive Director Goals Update
Agenda Item [View](#) Attachment 1 [View](#)
 - g. Investment Matrix [View](#)
 - h. Private Market Commitment Notice - Gryphon Partners VI fund (Gryphon VI) [View](#)
 - i. Auxiliary Investment Report as of 9/30/20
 1. AB2833 Auxiliary Report
Agenda Item [View](#) Attachment 1 [View](#)
 2. Investment Fee Summary, Value Added Reports
Agenda Item [View](#) Attachment 1 [View](#)

7. NEPC – Investment Consultant

- a. December Flash [View](#)
- b. Real Assets (Real Estate and Infrastructure) Strategic Investment plan [View](#)
- c. Interim 1Q 2021 Plan Policy Recommendation [View](#)

8. Investment

- a. Preliminary Rebalance Plan
Agenda Item [View](#) Attachment 1 [View](#)
- b. Investment Policy Statement Directive #3
Agenda Item [View](#) Attachment 1 [View](#) Attachment 2 [View](#) Attachment 3 [View](#)

9. Administrative

- a. Quarterly Staff Update
- b. Cheiron's Presentation of the June 30, 2020 Actuarial Valuation Final
Agenda Item [View](#) Attachment 1 [View](#)
- c. Executive Director Goals for 2021
Agenda Item [View](#) Attachment 1 [View](#)

10. Closed Session

- a. Government Code Section 54956.9(d)(2) – Anticipated Litigation
Significant Exposure to Litigation
One (1) Case
- b. Executive Director's Annual Review Public Employment
Government Code Section 54957(b) (1)(2)
- c. Conference with Legal Counsel – Pending Litigation – One (1) Case:
O'Neal et al v. Stanislaus County Employees' Retirement Association
Stanislaus County Superior Court Case No. 648469
Government Code Section 54956.9(d)(1)
- d. Conference with Legal Counsel – Pending Litigation – One (1) Case:
Stanislaus County Employees' Retirement Association v. Buck Consultants,
LLC, Mediation Pursuant to Evidence Code Sections 1115, 1119, 1152
Government Code Section 54956.9d)(4)

11. Committee Reports and Recommendations for Action

- a. Performance Review and Compensation Committee (PRCC) recommendation for a 3% salary increase for Executive Director, Rick Santos

12. Members' Forum (Information and Future Agenda Requests Only)

13. Adjournment

**BOARD OF RETIREMENT MINUTES
December 15, 2020**1. Call Meeting to Order

Meeting called to order 1:30 pm by Trustee O'Neal, Chair

2. Pledge of Allegiance3. Roll Call

Trustees Present by Conference Call Michael O'Neal, Jim DeMartini, Darin Gharat, Mike Lynch, Jeff Mangar, Donna Riley Jeff Grover, Mandip Dhillon, , Rhonda Biesemeier, Alternate Retiree Representative,

Trustees Absent: Joshua Clayton

Others Present by Conference Call:

Rick Santos, Executive Director
Stan Conwell, Retirement Investment Officer
Kellie Gomes, Executive Board Assistant
Natalie Davis, Fiscal Services Manager
Lisa Fraser, Benefits Manager
Fred Silva, General Legal Counsel
Daniel Hennessy, NEPC Investment Consultant
Sam Austin, NEPC Investment Consultant

4. Announcements

Trustee O'Neal had the following announcements:

Due to the COVID-19 Pandemic, StanCERA's offices are currently closed to public access. We are meeting today in the Stanislaus County Board of Supervisors Chambers to accommodate 6ft spacing for this meeting. If you are joining the meeting today by teleconference as a member of the public your phone will be muted. If you would like to comment on an item today please email your comments to gomesk@stancera.org or fax them to 209 558-4976. Today's agenda was posted with the same information and allowed for public comments to be sent ahead of today's meeting as well. We will make every effort to read all comments received during our meeting today if we are unable to present your public comment today it will be agenized and presented at our next meeting.

Rick Santos, Director announced he is working with the County of Stanislaus and the City of Modesto regarding a possible creation of a new JPA that is exploring joining StanCERA as a plan sponsor. We expect that a decision will be made in the near future as to the new JPA wanting to join StanCERA.

5. Public Comment

None

6. Consent Items

- a. Approval of the November 24, 2020 Meeting Minutes
- b. Investment Matrix

- c. Applications for Service Retirement(s) – **Government Code Sections 31499.14, 31670, 31662.2 & 31810**
 - 1. Anderson, Tammie – Stanislaus County – Effective 12-19-2020
 - 2. Barajas, David – Stanislaus County – Effective 12-05-2020
 - 3. Demartini, James – Stanislaus County – Effective 12-16-2020
 - 4. Gardner, Tamera – Stanislaus County – Effective 12-09-2020
 - 5. Johnson, Barbara – Stanislaus County – Effective 12-31-2020
 - 6. Kruger, Ana – Stanislaus County – Effective 12-01-2020
 - 7. Krukov, Deana – Stanislaus County – Effective 12-02-2020
 - 8. Looney, Victoria – Stanislaus County – Effective 12-19-2020
 - 9. Louis, Daniel – Stanislaus County – Effective 12-31-2020
 - 10. Mayne, John – Stanislaus County – Effective 12/29/20
 - 11. Oliveira, Elizabeth – City of Ceres – Effective 12-02-2020
 - 12. Peitz, Victoria – Stanislaus County – Effective 12-26-2020
 - 13. Rayonez, David – Stanislaus County – Effective 12-19-2020
 - 14. Roberts, Alan – Stanislaus County – Effective 12-31-2020
 - 15. Streifling, Sharon – Stanislaus County – Effective 12-01-2020
 - 16. Wade, Patricia – Stanislaus County – Effective 12-02-2020
- d. Applications for Deferred Retirement(s) – **Government Code Section 31700**
 - 1. Perez, Marissa – Stanislaus County – Effective 11/17/2020
- e. Application for Non-Service Connected Disability Retirement – **Government Code Section 31724**
 - 1. Zapata, Vanessa – Stanislaus Superior Court – Effective 09-11-20
- f. 2021 StanCERA Board Meeting Calendar
- g. Information Technology Solutions (ITS) Project Update

Motion was made by Trustee Riley and seconded by Trustee Mangar to accept the consent items as presented

Roll Call Vote was as follows:

Michael O'Neal,	YES
Jim DeMartini,	YES
Donna Riley,	YES
Jeff Mangar,	YES
Darin Gharat,	YES
Mike Lynch,	YES
Jeff Grover,	YES
Mandip Dhillon	YES

Motion carried unanimously

7. NEPC – Investment Consultant

- a. November Flash Verbal Report
- b. Work Plan for 2021

8. Investment

None

9. Administrative

- a. Cheiron's Presentation of the June 30, 2020 Preliminary Actuarial Valuation Results
- b. Electronic Signature Policy

Motion was made by Trustee Grover and seconded by Trustee Dhillon to approve the Electronic Signature Policy as presented

Roll Call Vote was as follows:

Michael O'Neal	YES
Jeff Grover,	YES
Jim DeMartini,	YES
Donna Riley,	YES
Jeff Mangar,	YES
Darin Gharat,	YES
Mike Lynch,	YES
Mandip Dhillon	YES

10. Closed Session

- a. Discussion and Action regarding the Executive Director's Annual Review Public Employment Government Code Section 54954.5
- b. Conference with Legal Counsel – Pending Litigation – One Case:
O'Neal et al v. Stanislaus County Employees' Retirement Association
Stanislaus County Superior Court Case No. 648469
Government Code Section 54956.9(d)(1)
- c. Conference with Legal Counsel – Pending Litigation – One Case:
Stanislaus County Employees' Retirement Association v. Buck Consultants,
LLC, Mediation Pursuant to Evidence Code Sections 1115, 1119, 1152
Government Code Section 54956.9d)(4)

No closed session was held today. Kellie Gomes announced item 10a will be brought back to the Board next month in January 2021

11. Members' Forum (Information and Future Agenda Requests Only)

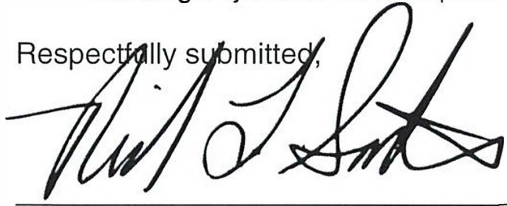
Trustees expressed gratitude to Trustee DeMartini for a job well done for many years of service to Stanislaus County and the StanCERA board. Today is Trustee DeMartini's last day in County Service.

Trustees thanked Jeff Mangar for his service to StanCERA as this is his last meeting before taking his new position as a Superior Court Judge which will make him ineligible to sit on StanCERA's board in his current seat.

13. Adjournment

Meeting adjourned at 3:00 p.m.

Respectfully submitted,



Rick Santos, Executive Director

APPROVED AS TO FORM

By 

Fred A. Silva, GENERAL LEGAL COUNSEL

StanCERA Applications for Service Retirement(s) Government Code Sections 31499.14, 31670, 31662.2 & 31810

Allsop, Linda - Stanislaus County - Effective 01/02/2021
BILYEU, KENNETH - City of Ceres - Effective 11/25/2020
Barnes, Reece - Stanislaus County - Effective 12/30/2020
Benjamin, Mona - Stanislaus County - Effective 01/15/2021
Bulgheroni, John - Stanislaus County - Effective 01/05/2021
Burciaga, Milagros - Stanislaus County - Effective 01/13/2021
Contreras, Maria - Stanislaus County - Effective 01/08/2021
Elsasser, Catalina - Stanislaus County - Effective 01/01/2021
Flores, Rosa - Stanislaus County - Effective 01/05/2021
Garibay, Elvira - Stanislaus County - Effective 01/05/2021
Genest, Timothy - Stanislaus County - Effective 01/01/2021
Gilmore, John - Stanislaus County - Effective 01/05/2021
Hubert, Patricia - Stanislaus County - Effective 01/09/2021
Lagorio, Kathleen - Stanislaus Superior Court - Effective 01/23/2021
Maldonado, Gustavo - Stanislaus County - Effective 01/20/2021
Mangar, Jeffrey - Stanislaus County - Effective 01/01/2021
Nease, Sharon - Stanislaus County - Effective 01/05/2021
Porras, Maria - Stanislaus County - Effective 01/05/2021
Rees, Annette - Stanislaus County - Effective 01/15/2021
Schechter, Jeanne E - Stanislaus County - Effective 01/05/2021
Watson, Steven - Stanislaus County - Effective 07/30/2020
Woods, Theodore - Stanislaus County - Effective 01/23/2021

Standing Committees

Internal Governance Committee

This committee shall consist of three (3) Retirement Board members. The Committee Chair may request administrative staff and/or legal counsel to attend Committee meetings as needed. At least one of the Retirement Board members of the committee shall have sufficient background in accounting, financial or managerial matters to understand, relate to and communicate accounting and organizational matters especially as they relate to audit reports. This committee shall have the responsibility for oversight of all financial audits (both external and internal), compliance audits, Bylaw revisions, Policy revisions, Retirement Board member education and training (including ethics) and other internal governance matters.

2021

Sam Sharpe, Chair
Rhonda Bieseemeier
Terry Withrow
Staff as needed

Due Diligence Committee

This committee may consist of the Vice-Chair as Chair, one (1) other Board member the Executive Director, the Investment Officer and one (1) staff member appointed by the Executive Director (or a designee of the Executive Director), to act as the recorder. This committee shall insure that Due Diligence visits are carried out with Investment managers and other vendor business. These are reviewed on a schedule as determined by the Bylaws and the committee.

2021

Donna Riley - Chair
Joshua Clayton
Executive Director, Rick Santos
Investment Officer, Stan Conwell
Executive Assistant, Kellie Gomes

Strategic Planning Objectives Committee

This Committee shall consist of no less than two (2) Retirement Board members. The committee may request input from administrative staff and attendance for staff at its meetings as the Committee so desires. The committee shall oversee and review staff reports related to the study and recommendations of Retirement Board approved strategic planning objectives. The committee shall have authority to survey, research, request actuarial and other studies as it deems necessary. The committee shall only make "final" reports to the Retirement Board or recommendations to the Retirement Board that require the Board's action. This committee meets at least once every three (3) years, however, may not always have Board members assigned due to the cyclical nature of the needs required of this Committee.

2021

Volunteer Trustee **NOT** Needed for this year
Volunteer Trustee **NOT** Needed for this year

Performance Review and Compensation Committee (PRCC).

This committee shall consist of current Chair, past Chair, and current Vice Chair. As needed, the PRCC will meet to discuss the performance and compensation of the position of Executive Director.

Areas of Responsibility: *Assessment of the performance and compensation recommendation for the positions of Executive Director and Investment Officer*

2021

Jeff Grover, Chair
Donna Riley, Vice Chair
Michael O'Neal, Past Chair
Staff as needed

Ad-Hoc Committees

Pension Administration System Implementation

2021

Michael O'Neal
Darin Gharat

Enhanced PAS Committee Members
Donna Riley
Sam Sharpe

January 26, 2021

Retirement Board Agenda Item

TO: Retirement Board

FROM: Rick Santos, Executive Director

- I. SUBJECT: 2020 4th Quarter Director Goals Update
 - II. ITEM NUMBER: 6.f.
 - III. ITEM TYPE: Information Only
 - IV. STAFF RECOMMENDATION: None
 - V. ANALYSIS: This is the Quarter 4 Executive Director goals update for 2020 (attachment 1). This marks the end of the reporting period for 2020. The year 2020 marked the first-year implementation of StanCERA's 3-year Strategic Plan. When staff was planning the goals/tasks we wished to complete in 2020, the objective was to accomplish a large chunk of the 3-year strategic plan in 2020, given the assumption that 2021 would most likely be a very busy year due to the implementation of the Pension Administration System (PAS). That assumption has turned out to be correct.
Staff is pleased to inform the Board that nearly all tasks slated to be completed in 2020 were realized. The following is a list of the tasks that weren't completed in 2020 and have been incorporated into the Director Goals for 2021. These tasks weren't completed due mainly to the delay in the implementation of the PAS and personnel issues:
 - ✓ Completion of the StanCERA Rebranding Process – while most of the tasks associated of the StanCERA rebranding process were indeed complete, there remains more work to be done. This includes completion of the office upgrades and the conversion of all letterhead, memo and work templates.
 - ✓ Dispensation of retirement information to members – this task was not completed due to the delay in the PAS implementation. For StanCERA to fulfill this goal, our Member Web Portal should be up and running. Staff anticipates the completion of the Portal to be complete sometime in 2021.
 - ✓ Documentation and management of operational and administrative risk controls – while most of the tasks associated with this goal have already been completed in 2020, there is still more to be accomplished. Nine objectives have been identified. The processes under each objective need to be identified and evaluated as to the level of risk and how StanCERA mitigates the risks along with who is responsible for managing the risk.
- As a consequence of design, the goals for 2021 (see Executive Director Goals 2021 agenda item) appear to be completely manageable and will allow staff to focus on PAS completion.
- VI. RISK: NONE
 - VII. STRATEGIC PLAN: N/A
 - VIII. ADMINISTRATIVE BUDGET IMPACT: NONE

Executive Director Goals Q4 2020 Update**(Attachment 1)*****General and/or Ongoing Items***

1. Continued communication, outreach and transparency with major stakeholders such as County, County BOS, Local Governments, Special Districts and Employee Groups
 - Meetings with Labor Representatives regarding proposed JPA
 - Several communications with media outlets regarding the Alameda Decision
 - Meetings with County officials regarding Executive Director salary classification
2. Maintenance of StanCERA's asset allocation targets
 - Targets being monitored on a regular basis and allocations being maintained within targets
3. Continued progress on the System data clean-up project
 - Data clean up continuing using part-time staff; Note that staff is within roughly 500 audits from completion
 - Buyback back-log has been completely alleviated due to the implementation of the new PAS Buyback Workflow
4. Director Professional Development
 - Attendance of the 2020 Virtual Actuarial Annual Conference
5. Facilitate RFP for General Investment Consultant
 - RFP Complete
6. Oversee Information Technology Solutions Project
 - No major issues to report regarding the technological implementation of the current functionality
 - StanCERA staff and Linea consultants are currently in discussions with the Tegrit team to discuss a re-scoping of the project regarding functionality that's already been completed and what's yet to be done
7. Oversee and completion of day to day administrative functions
 - All normal administrative functions completed on time; Outstanding disability cases at 16
 - Buyback log reduced from 176 to 74 during Quarter 4
8. Biennial By-Law Review – All Policies Below Reviewed and Updated (Completed)
 - Education
 - Accounting
 - Compensation Assessment
 - Dissolution of Marriage/Domestic Partner
 - Electronic Data Security
 - Underpayment of Benefits
 - Contributions
 - Overpayment of Benefits
 - Stale Dated Check

- Electronic Signature
- Service Retirement
- Estimate Request
- Refund
- Telephone Communication and Transaction Policy
- 9. Completion of asset liability review
 - Asset liability review complete
 - New asset allocation approved by the Board of Retirement

Items Tied to the Strategic Plan

Strategic Objective #1

Develop an Organizational Structure reflective of our operational capabilities and succession planning needs

Strategic Objective #1, Deliverables

1. Present the new Organizational Structure to StanCERA staff
 - Complete (Q1)
2. Evaluate job descriptions of StanCERA positions to ensure they are still relevant and upholding the Mission, Vision and business practices and processes of the Organization by Fiscal Services and Member and Employer Services Manager
 - Complete (Q1)
3. Develop the Job Description for the Organizational Support Manager position by StanCERA leadership
 - Staff has begun analyzing the roles and responsibilities for this position and should be completed by Q1 of 2021
4. Evaluate StanCERA's internal operational needs as it supports the new Organizational Structure by StanCERA leadership
 - ✓ Define workflow processes in the new Pension Administration System that promote teamworking styles and mentorship
 - In progress; staff has been developing work-flow processes (Q1, Q2, Q3, Q4). This goal necessarily can't be completed until all work-flow processes have been designed and ready for implementation. This goal will be completed sometime in 2021. Note: this goal was slowed down due to the extension of the project implementation in the spring of 2020
5. Phased implementation of the new Organizational Structure by StanCERA leadership
 - ✓ Soft implementation by summer 2020
 - Soft implementation initiated in summer of 2020 (Q3)
 - ✓ Complete implementation by end of 2020
 - Org Structure was fully implemented at System "go-live" (Q3). Note: This does not include the filling of the Organizational Support Manager

position. This position was and is still expected to be filled sometime in late 2021

Strategic Objective # 2

Successful implementation/completion of the Pension Administration System (PAS)

Strategic Plan Objective #2, Deliverables

1. Integrate staff into all aspects of the PAS. Create an atmosphere of “ownership” of the project by employees
 - ✓ Maintain an internal PAS project manager position with at least 75% of the position’s time spent on the project
 - StanCERA staff member dedicated 100% to project. Anticipate that this assignment will last through 2020 (Q1)
 - StanCERA staff member was pulled off this project full-time (Q4). Responsibility for internal management now a responsibility of management
 - ✓ Create and implement a process whereby all line employees participate (within their relevant program area) in documenting current processes, assist in the creation of new processes, test system functionality and ultimately be required to sign off on releases of the new system functionality
 - Processes implemented as designed (Q1)
 - ✓ Require at least one StanCERA manager participate in all process workflow development meetings
 - Currently, StanCERA has at least one program area specialist participate in workflow development sessions (Q1)
 - At least one management staff participating in sessions (Q1)
 - ✓ Require staff redundancy (more than 1) in all phases of the documentation and development of system functionality
 - Currently at least one StanCERA staff participating in system development (Q1)
 - Currently at least one StanCERA manager participating in system development (Q1)
 - Project also employing at least one external consultant participating in system development (Q1)
2. Develop and instill trust in the PAS so that Organizational “buyoff” of the system is achieved, thereby maximizing the potential efficiencies the System can offer
 - ✓ Maximize the number of test cases that are performed and analyzed regarding benefit estimation and calculation (Q3). *Note that StanCERA staff and consultants tested an extraordinarily large number of cases during the third quarter in anticipation of go-live*
 - ✓ Parallel test the Arrivos System (PAS) with the Tyler System (StanCERA’s current system) for at least 2 weeks after “go live” (Q3). *Note that parallel testing*

has been occurring for the past 2 months (August and September), since it was vetted and decided that parallel testing was best performed BEFORE go-live. As a consequence, parallel testing was completed prior to go-live

- ✓ Staff training with live demos, data and actual cases/scenarios prior to “go live”
 - Two staff training sessions completed using actual data and work flow cases (Q1)
 - Project management currently developing “webinars” dedicated to staff training offsite (Q1)
 - ✓ Management to maintain a high degree of transparency amongst staff regarding all aspects of the project
 - All staff are updated regularly on project issues and deadlines (Q1)
 - Staff continues to maintain regular “All-Staff” meetings to discuss issues, concerns and resolutions (Q4)
 - ✓ Maintain communication and encourage involvement by the Steering Committee and the Board regarding new functionality and business process changes inherent in the PAS
 - Monthly Steering Committee meetings (Still Current)
 - Steering Committee kept informed on all ITS issues (Still Current)
 - ✓ Create and maintain a Committee of no less than 2 trustees to oversee the electronic integration of customer service opportunities into the PAS
 - Committee created; 2 meetings held (Q1)
3. Strive to unlock the full value inherent in the PAS for both internal and external constituents
- ✓ 65-70% of all data audits complete by “go live”
 - Complete (Q3); Currently staff has approximately 500 audits left
 - ✓ 85% of all data audits complete by end of 2020
 - Complete (Q4)
 - ✓ Creation of short online webinars members can use to understand their retirement benefits
 - Issue currently being researched; If feasible, will be implemented after Member Web Portal complete
 - ✓ Revamp/revise the way information is dispensed to members at the Pre-Retirement Seminars. Consider more personalized (and less general) information and integrate the capabilities of the PAS at seminars
 - Issue currently being researched; If feasible, will be implemented after Member Web Portal complete
 - ✓ Consider mid-career retirement seminars
 - Issue currently being researched; If feasible, will be implemented after Member Web Portal complete

*Strategic Objective # 3***Development and implementation of a formalized succession plan for StanCERA**

Strategic Plan Objective #3 Deliverables

1. Documentation of all StanCERA business processes and policies
 - ✓ Build training guidelines for each role that supports the Organizational Structure's natural progression
 - Complete (Q4); Training guidelines embedded in the documented work-flow processes
 - ✓ Research and source an appropriate knowledge management system meant to house the documentation of StanCERA's business processes and policies (this task is assigned within Strategic Objective #5)
 - Complete (Q3); See Strategic Objective #5

*Strategic Objective #4***Development of a formalized Operational Risk Management Plan**

Strategic Plan Objective #4 Deliverables

1. Reach out to other pension systems to gain further understanding of the requirements of an Operational Risk Management Plan
 - Complete (Q1)
2. Define StanCERA's operational objectives and objectives for each of the strategies within the strategic plan
 - Complete (Q2)
3. Identify the risks within the Organization and determine the level of risk, cause of risk, effect of the risk the controls in place regarding the risk and ownership of the risk
 - Currently in Progress

*Strategic Objective # 5***Process documentation and standardization of the Investment Governance Process**

Strategic Plan Objective #5 Deliverables

1. Develop and maintain a comprehensive list of critical investment governance processes
 - ✓ Identify and categorize tasks that require documentation
 - Complete (Q1)
 - ✓ Create a master calendar for investment governance
 - Complete (Q2)
2. Research and source an appropriate knowledge management system
 - ✓ Determine the design and scope of the desired system
 - Complete (Q3)

- ✓ Identify and select a system that provides the required functionality while also remaining compatible with the Organization's existing systems and resource constraints
 - Complete (Q3)
- 3. Standardize the documentation process
 - ✓ Research methods to capture implicit knowledge in the documentation process
 - Complete (Q4)
 - ✓ Create a procedure template appropriate for investment governance tasks
 - Complete (Q4)

Executive Director Goals Q4 2020 Update**(Attachment 1)*****General and/or Ongoing Items***

1. Continued communication, outreach and transparency with major stakeholders such as County, County BOS, Local Governments, Special Districts and Employee Groups
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 - Several communications with media outlets regarding the Alameda Decision
 - Meetings with County officials regarding Executive Director salary classification
2. Maintenance of StanCERA's asset allocation targets
 - Targets being monitored on a regular basis and allocations being maintained within targets
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 - Data clean up continuing using part-time staff; Note that staff is within roughly 500 audits from completion
 - Buyback back-log has been completely alleviated due to the implementation of the new PAS Buyback Workflow
4. Director Professional Development
 - Attendance of the 2020 Virtual Actuarial Annual Conference
5. Facilitate RFP for General Investment Consultant
 - RFP Complete
6. Oversee Information Technology Solutions Project
 - No major issues to report regarding the technological implementation of the current functionality
 - StanCERA staff and Linea consultants are currently in discussions with the Tegrit team to discuss a re-scoping of the project regarding functionality that's already been completed and what's yet to be done
7. Oversee and completion of day to day administrative functions
 - All normal administrative functions completed on time; Outstanding disability cases at 16
 - Buyback log reduced from 176 to 74 during Quarter 4
8. Biennial By-Law Review – All Policies Below Reviewed and Updated (Completed)
 - Education
 - Accounting
 - Compensation Assessment
 - Dissolution of Marriage/Domestic Partner
 - Electronic Data Security
 - Underpayment of Benefits
 - Contributions
 - Overpayment of Benefits
 - Stale Dated Check

- Electronic Signature
- Service Retirement
- Estimate Request
- Refund
- Telephone Communication and Transaction Policy
- 9. Completion of asset liability review
 - Asset liability review complete
 - New asset allocation approved by the Board of Retirement

Items Tied to the Strategic Plan

Strategic Objective #1

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1. Present the new Organizational Structure to StanCERA staff
 - Complete (Q1)
2. Evaluate job descriptions of StanCERA positions to ensure they are still relevant and upholding the Mission, Vision and business practices and processes of the Organization by Fiscal Services and Member and Employer Services Manager
 - Complete (Q1)
3. Develop the Job Description for the Organizational Support Manager position by StanCERA leadership
 - Staff has begun analyzing the roles and responsibilities for this position and should be completed by Q1 of 2021
4. Evaluate StanCERA's internal operational needs as it supports the new Organizational Structure by StanCERA leadership
 - ✓ Define workflow processes in the new Pension Administration System that promote teamworking styles and mentorship
 - In progress; staff has been developing work-flow processes (Q1, Q2, Q3, Q4). This goal necessarily can't be completed until all work-flow processes have been designed and ready for implementation. This goal will be completed sometime in 2021. Note: this goal was slowed down due to the extension of the project implementation in the spring of 2020
5. Phased implementation of the new Organizational Structure by StanCERA leadership
 - ✓ Soft implementation by summer 2020
 - Soft implementation initiated in summer of 2020 (Q3)
 - ✓ Complete implementation by end of 2020
 - Org Structure was fully implemented at System "go-live" (Q3). Note: This does not include the filling of the Organizational Support Manager

position. This position was and is still expected to be filled sometime in late 2021

Strategic Objective # 2

Successful implementation/completion of the Pension Administration System (PAS)

Strategic Plan Objective #2, Deliverables

1. Integrate staff into all aspects of the PAS. Create an atmosphere of “ownership” of the project by employees
 - ✓ Maintain an internal PAS project manager position with at least 75% of the position’s time spent on the project
 - StanCERA staff member dedicated 100% to project. Anticipate that this assignment will last through 2020 (Q1)
 - StanCERA staff member was pulled off this project full-time (Q4). Responsibility for internal management now a responsibility of management
 - ✓ Create and implement a process whereby all line employees participate (within their relevant program area) in documenting current processes, assist in the creation of new processes, test system functionality and ultimately be required to sign off on releases of the new system functionality
 - Processes implemented as designed (Q1)
 - ✓ Require at least one StanCERA manager participate in all process workflow development meetings
 - Currently, StanCERA has at least one program area specialist participate in workflow development sessions (Q1)
 - At least one management staff participating in sessions (Q1)
 - ✓ Require staff redundancy (more than 1) in all phases of the documentation and development of system functionality
 - Currently at least one StanCERA staff participating in system development (Q1)
 - Currently at least one StanCERA manager participating in system development (Q1)
 - Project also employing at least one external consultant participating in system development (Q1)
2. Develop and instill trust in the PAS so that Organizational “buyoff” of the system is achieved, thereby maximizing the potential efficiencies the System can offer
 - ✓ Maximize the number of test cases that are performed and analyzed regarding benefit estimation and calculation (Q3). *Note that StanCERA staff and consultants tested an extraordinarily large number of cases during the third quarter in anticipation of go-live*
 - ✓ Parallel test the Arrivos System (PAS) with the Tyler System (StanCERA’s current system) for at least 2 weeks after “go live” (Q3). *Note that parallel testing*

has been occurring for the past 2 months (August and September), since it was vetted and decided that parallel testing was best performed BEFORE go-live. As a consequence, parallel testing was completed prior to go-live

- ✓ Staff training with live demos, data and actual cases/scenarios prior to “go live”
 - Two staff training sessions completed using actual data and work flow cases (Q1)
 - Project management currently developing “webinars” dedicated to staff training offsite (Q1)
- ✓ Management to maintain a high degree of transparency amongst staff regarding all aspects of the project
 - All staff are updated regularly on project issues and deadlines (Q1)
 - Staff continues to maintain regular “All-Staff” meetings to discuss issues, concerns and resolutions (Q4)
- ✓ Maintain communication and encourage involvement by the Steering Committee and the Board regarding new functionality and business process changes inherent in the PAS
 - Monthly Steering Committee meetings (Still Current)
 - Steering Committee kept informed on all ITS issues (Still Current)
- ✓ Create and maintain a Committee of no less than 2 trustees to oversee the electronic integration of customer service opportunities into the PAS
 - Committee created; 2 meetings held (Q1)
- 3. Strive to unlock the full value inherent in the PAS for both internal and external constituents
 - ✓ 65-70% of all data audits complete by “go live”
 - Complete (Q3); Currently staff has approximately 500 audits left
 - ✓ 85% of all data audits complete by end of 2020
 - Complete (Q4)
 - ✓ Creation of short online webinars members can use to understand their retirement benefits
 - Issue currently being researched; If feasible, will be implemented after Member Web Portal complete
 - ✓ Revamp/revise the way information is dispensed to members at the Pre-Retirement Seminars. Consider more personalized (and less general) information and integrate the capabilities of the PAS at seminars
 - Issue currently being researched; If feasible, will be implemented after Member Web Portal complete
 - ✓ Consider mid-career retirement seminars
 - Issue currently being researched; If feasible, will be implemented after Member Web Portal complete

*Strategic Objective # 3***Development and implementation of a formalized succession plan for StanCERA**

Strategic Plan Objective #3 Deliverables

1. Documentation of all StanCERA business processes and policies
 - ✓ Build training guidelines for each role that supports the Organizational Structure's natural progression
 - Complete (Q4); Training guidelines embedded in the documented work-flow processes
 - ✓ Research and source an appropriate knowledge management system meant to house the documentation of StanCERA's business processes and policies (this task is assigned within Strategic Objective #5)
 - Complete (Q3); See Strategic Objective #5

*Strategic Objective #4***Development of a formalized Operational Risk Management Plan**

Strategic Plan Objective #4 Deliverables

1. Reach out to other pension systems to gain further understanding of the requirements of an Operational Risk Management Plan
 - Complete (Q1)
2. Define StanCERA's operational objectives and objectives for each of the strategies within the strategic plan
 - Complete (Q2)
3. Identify the risks within the Organization and determine the level of risk, cause of risk, effect of the risk the controls in place regarding the risk and ownership of the risk
 - Currently in Progress

*Strategic Objective # 5***Process documentation and standardization of the Investment Governance Process**

Strategic Plan Objective #5 Deliverables

1. Develop and maintain a comprehensive list of critical investment governance processes
 - ✓ Identify and categorize tasks that require documentation
 - Complete (Q1)
 - ✓ Create a master calendar for investment governance
 - Complete (Q2)
2. Research and source an appropriate knowledge management system
 - ✓ Determine the design and scope of the desired system
 - Complete (Q3)

- ✓ Identify and select a system that provides the required functionality while also remaining compatible with the Organization's existing systems and resource constraints
 - Complete (Q3)
- 3. Standardize the documentation process
 - ✓ Research methods to capture implicit knowledge in the documentation process
 - Complete (Q4)
 - ✓ Create a procedure template appropriate for investment governance tasks
 - Complete (Q4)

January 26, 2021

Retirement Board Agenda Item

TO: Retirement Board

FROM: Stan Conwell, Retirement Investment Officer

- I. SUBJECT: Investment Matrix
- II. ITEM NUMBER:6.g.
- III. ITEM TYPE: Information Only
- IV. STAFF RECOMMENDATION: N/A
- V. ANALYSIS:

a) Investment Program Activities & Governance:

Much of Staff's time in December was spent on private market investments including the legal due diligence and compliance review of the Gryphon VI buyout fund. Staff also worked to complete any remaining strategic plan items due in 2020. Multiple meetings were held with Verus and NEPC to review the 2021 work plan and refine the proposed phased rebalancing plan. The investment database was updated, and staff was able to fit in some critical thinking trainings during final week of the year.

b) Money Transfer Report:

December:

From			To		
Manager	Asset Class	Amount	Manager	Asset Class	Amount
StanCERA Cash	Cash	\$-593,433	Raven Opportunity Fund III, LP	Private Credit	\$593,433
StanCERA Cash	Cash	\$-1,050,000	Insight Partners XI, LP	Private Equity	\$1,050,000
Northern Trust Russell 3000 Fund	Public Equity	\$-1,980,000	Insight Partners XI, LP	Private Equity	\$1,980,000

c) *Manager Meeting Notes:*

Medley Annual Meeting

In mid-December, Staff attended the Medley Opportunity II fund's (MOF II) Annual investor meeting and the Limited Partner Advisory Committee (LPAC) meeting. MOF II is a direct lender in the private credit space and is currently in the harvest phase of the fund's life. The investor meeting covered many different topics including a fund overview, current portfolio summary and update, the portfolio's maturity profile, as well as general remarks regarding the direct lending market. As you would expect for fund in the harvest phase, most of the portfolio investments are realized, but a number of assets still remain unrealized. The majority of the remaining assets are expected to mature by the end of the life of the fund in June, 2021, but some are currently scheduled to mature after that date. Given that, MOF II may in the months to come submit a proposal, for approval by the Limited Partners, to extend the life of the fund. In that case, staff will work with our consultant, the fund, and other LPAC members to take appropriate action in the best interest of investors.

d) *Trainings/Conferences:*

N/A

- VI. RISK: None
- VII. STRATEGIC PLAN: N/A
- VIII. ADMINISTRATIVE BUDGET IMPACT: NONE

January 26, 2021

Retirement Board Agenda Item

TO: Retirement Board

FROM: Stan Conwell, Retirement Investment Officer

- I. SUBJECT: Private Markets Commitment Notice
- II. ITEM NUMBER: 6.h.
- III. ITEM TYPE: Information Only
- IV. STAFF RECOMMENDATION: N/A
- V. EXECUTIVE SUMMARY:

On January 4, 2021 StanCERA committed \$20 million to the Gryphon Partners VI fund (Gryphon VI). Gryphon Partners is a private equity firm focusing on lower middle market buyouts across five primary sectors: business services, consumer, healthcare, industrial growth, and software. The fund generally targets stable businesses with dominate market share that demonstrate a high potential for operational improvements and strategic enhancement or repositioning. Since its founding in 1995, Gryphon has developed a fully integrated operationally focused strategy to effectively drive portfolio company value creation. Gryphon operates from a single San Francisco office to promote a collaborative culture across the organization. The firm has \$5+ Billion in aggregate commitments.

StanCERA has a 5.0% target allocation to the private equity asset class with a sub-asset class target allocation of 3.5% to buyouts and 1.5% to venture capital. The commitment to Gryphon VI will be allocated to the buyouts sub-asset class and is in compliance with StanCERA's Private Markets Investment Policy Statement. For each private market investment, several due diligence reports are completed by the investment consultant and staff. These reports contain confidential information and are available to Trustees for review upon request.

Gryphon VI Due Diligence Reports:

- 1 - Executive Summary (Staff)
- 2 - Compliance Checklist (Staff)
- 3 - Executive Summary and Comprehensive Due Diligence Report (Consultant)
- 4 - Recommendation/Approval Memo (Consultant)
- 5 - Manager Pitchbook

- VI. RISK: None
- VII. STRATEGIC PLAN: N/A
- VIII. ADMINISTRATIVE BUDGET IMPACT: NONE

January 26, 2021

Retirement Board Agenda Item

TO: Retirement Board

FROM: Stan Conwell, Retirement Investment Officer

- I. SUBJECT: AB2833 Auxiliary Report
- II. ITEM NUMBER: 6.i.1.
- III. ITEM TYPE: Information Only
- IV. STAFF RECOMMENDATION: N/A
- V. ANALYSIS:

Attachment 1 contains information regarding StanCERA's alternative type investments. In StanCERA's context, "alternative" type investments are defined as the private credit, infrastructure and private real estate asset classes. This information is required to be published at least annually and is a result of Assembly Bill 2833 that went into effect January 1, 2017. The bill requires various information mostly related to performance, cash flows and their classification. Internal staff has been producing most of this information since October of 2014 and enhance and update the report periodically to response to changing investment program and reporting requirements.

The report presents information about individual funds including general fund information, performance measures, fund balance reconciliation, performance decomposition, and fund expense information. A visual exhibit is also provided for each fund that describes the changes in the investment's fund value over the past 8 periods. With this information, one can quickly see recent trends in the general partner's performance and its attribution.

In addition, the report presents performance and expense information for funds grouped by asset class. Provided in this report are the real estate, private credit and alternative type program grouping. The alternative type program includes the private credit, infrastructure, and private real estate asset classes.

This report is as of September 30, 2020, which is the most recent quarter with complete data on the alternative type managers. The aggregate performance since inception of the private market alternative manager's for September 30, 2020 was 5.12%. The private credit group returned 1.48% and the real estate group returned 8.69% as of September 30, 2020. As a group, the performance of the alternative type managers was flat versus the prior quarter. This quarter, the individual report for PGIM US Real Estate Debt was added given there is now 8 periods of history to populate the visual exhibit.

Below are the metrics and their definitions used in the report:

- Performance measures
 - **Net internal rate of return (IRR)** – The return on the investment since inception after fees. This measure includes all cash flows into and out of the

- investment, their timing and the ending fund value as of the measurement date. This measure is generally the most accurate, however, is highly dependent on the ending fund value as approximated by the general partner.
- **Realization multiple or distributions to paid-in-capital (DPI)** – This is a measure of the cash received by StanCERA relative to cash contributed. For instance, if this measure is \$0.75, then for every dollar StanCERA has contributed, it has received back 75 cents.
 - **Residual value to paid-in-capital multiple (RVPI)** – This is a measure of the current fund value relative to cash contributed. For instance, if this measure is \$0.50, then for every dollar StanCERA has contributed, it holds an investment dollar valued at 50 cents. Like IRR, this measure is highly dependent on the ending fund value approximated by the general partner.
 - **Investment multiple or total value to paid-in-capital (TVPI)** – This measure is simply the sum of the DPI and RVPI and is a widely quoted number in the investment world in a general sense.
- **Return decomposition** – The return decomposition allows the investor to see the decomposition of the net internal rate of return from the following sources:
 - **Return from income and cash flow** – Generally, this is the return from interest, principal maturation and the timing of the cash flows from the investment. If this number is relatively high, then it can be said that the general partner is generating a good portion of its returns from income and the timely return of contributions to the investor
 - **Return from expenses** – This is the drag on return from expenses incurred by the fund. If this number is relatively high, then the return on investment is lower because of the high expense ratio
 - **Return from gain/loss** – This is the return due to gains and losses on the actual investments since purchase. This number is the sum of both realized and unrealized gains and losses. If this number is relatively high, then it can be considered that the general partner has made good investment choices
 - **Interaction effect** – This is the return due to the interaction between all of the sources mentioned above. In other words, the return from the other sources are not completely independent of one another
 - **Expense matrix** – This is simply all the expenses/fees broken out by all sources reported to StanCERA by the general partner

VI. RISK: None

VII. STRATEGIC PLAN: N/A

VIII. ADMINISTRATIVE BUDGET IMPACT: NONE

Alternative Type Program Performance

Analysis Date:	9/30/2020	Expense Matrix Since Inception		
Program Name:	Alternative Type	<u>Expense Type</u>	<u>Expense</u>	<u>% of Total</u>
Program Inception Date:	5/16/2013	Management Fee	\$26,510,384	69.1%
Total Commitment:	\$451,231,797	Partnership Operations	\$1,678,710	4.7%
Unfunded Commitment as of Analysis Date:	\$78,890,698	Organizational Expense	\$227,021	0.6%
% Funded as of Analysis Date:	82.52%	Incentive Allocation	\$3,084,634	8.6%
Program Fund Balance:	\$345,258,712	Offering Costs	\$54	0.0%
		Service Fee	\$339,601	0.9%
		Syndication Costs	\$65,354	0.2%
		Professional Fee	\$3,307,006	9.2%
		Other Expense	\$151,132	0.4%
		Management Fee Reimbursement	-\$1,611,862	-
		General/Administrative Expense	\$798,518	2.2%
		Broken Deal Expense	\$267,706	0.7%
		Interest Expense	\$1,100,797	3.1%
		Custody Fee	\$113,288	0.3%
		Dividend Expense	\$0	0.0%
		Performance Fee	\$0	0.0%
		Total	\$36,032,343	100.0%
Performance Measures				
Net IRR Since Inception:	5.12%			
Realization Multiple (DPI):	\$0.35			
Residual Value to Paid in Multiple (RVPI):	\$0.73			
Investment Multiple (TVPI):	\$1.07			
Net IRR Decomposition				
Return from Income & Cash Flow:	6.50%			
Return from Expenses:	-2.51%			
Return from Gain/Loss:	1.02%			
Interaction Effect:	0.11%			
Net IRR Since Inception:	5.12%			

Real Estate Program Performance

Analysis Date:	9/30/2020	Expense Matrix Since Inception		
Program Name:	Real Estate	<u>Expense Type</u>	<u>Expense</u>	<u>% of Total</u>
Program Inception Date:	7/8/2014	Management Fee	\$11,791,776	70.9%
Total Commitment:	\$267,000,000	Partnership Operations	\$294,159	1.8%
Unfunded Commitment as of Analysis Date:	\$52,911,752	Organizational Expense	\$52,991	0.3%
% Funded as of Analysis Date:	80.18%	Incentive Allocation	\$3,084,635	18.6%
Program Fund Balance:	\$259,965,055	Offering Costs	\$54	0.0%
		Service Fee	\$0	0.0%
		Syndication Costs	\$65,354	0.4%
		Professional Fee	\$104,548	0.6%
		Other Expense	\$0	0.0%
		Management Fee Reimbursement	\$0	-
		General/Administrative Expense	\$302,031	1.8%
		Broken Deal Expense	\$267,706	1.6%
		Interest Expense	\$601,284	3.6%
		Custody Fee	\$56,747	0.3%
		Dividend Expense	\$0	0.0%
		Performance Fee	\$0	0.0%
		Total	\$16,621,285	100.0%
Performance Measures				
Net IRR Since Inception:	8.69%			
Realization Multiple (DPI):	\$0.20			
Residual Value to Paid in Multiple (RVPI):	\$0.94			
Investment Multiple (TVPI):	\$1.14			
Net IRR Decomposition				
Return from Income & Cash Flow:	4.69%			
Return from Expenses:	-2.60%			
Return from Gain/Loss:	6.21%			
Interaction Effect:	0.40%			
Net IRR Since Inception:	8.69%			

Private Credit Program Performance

Analysis Date:	9/30/2020	Expense Matrix Since Inception		
Program Name:	Private Credit	<u>Expense Type</u>	<u>Expense</u>	<u>% of Total</u>
Program Inception Date:	5/16/2013	Management Fee	\$14,718,607	67.5%
Total Commitment:	\$184,231,797	Partnership Operations	\$1,384,551	7.1%
Unfunded Commitment as of Analysis Date:	\$25,978,945	Organizational Expense	\$174,030	0.9%
% Funded as of Analysis Date:	85.90%	Incentive Allocation	-\$1	0.0%
Program Fund Balance:	\$85,293,656	Offering Costs	\$0	0.0%
		Service Fee	\$339,601	1.7%
		Syndication Costs	\$0	0.0%
		Professional Fee	\$3,202,458	16.5%
		Other Expense	\$151,132	0.8%
		Management Fee Reimbursement	-\$1,611,862	-
		General/Administrative Expense	\$496,487	2.6%
		Broken Deal Expense	\$0	0.0%
		Interest Expense	\$499,513	2.6%
		Custody Fee	\$56,542	0.3%
		Dividend Expense	\$0	0.0%
		Performance Fee	\$0	0.0%
		Total	\$19,411,057	100.0%
Performance Measures				
Net IRR Since Inception:	1.48%			
Realization Multiple (DPI):	\$0.55			
Residual Value to Paid in Multiple (RVPI):	\$0.43			
Investment Multiple (TVPI):	\$0.97			
Net IRR Decomposition				
Return from Income & Cash Flow:	7.93%			
Return from Expenses:	-2.32%			
Return from Gain/Loss:	-3.55%			
Interaction Effect:	-0.58%			
Net IRR Since Inception:	1.48%			

Fund Information

Manager Name:	Morgan Stanley Prime Property Fund, L.L.C
Analysis Date:	9/30/2020
Reporting Frequency:	Quarterly
Latest Data Date:	9/30/2020
Manager Investment Style:	Core Real Estate
Fund Vintage Year:	1973
StanCERA Investment Start Date:	10/1/2015
Initial Commitment:	\$15,000,000
Additional Commitments:	\$35,000,000
Total Commitment Funded:	\$50,000,000
Total Commitment Unfunded:	\$0
Fund Balance:	\$58,818,289

Fund Performance Measures Since Inception

Net Internal Rate of Return (IRR):	5.64%
Investment Multiple (TVPI):	\$1.18
Realization Multiple (DPI):	\$0.00
Residual Value to Paid in Multiple (RVPI):	\$1.18
Paid in Capital Multiple (PIC):	100.0%

Fund Balance Reconciliation Since Inception

Beginning Fund Balance	\$0
Capital Contributions	\$50,000,000
Distributions	\$0
Expenses	-\$1,718,834
Income	\$6,235,317
Gain/(Loss)	<u>\$4,301,805</u>
Ending Fund Balance	\$58,818,289

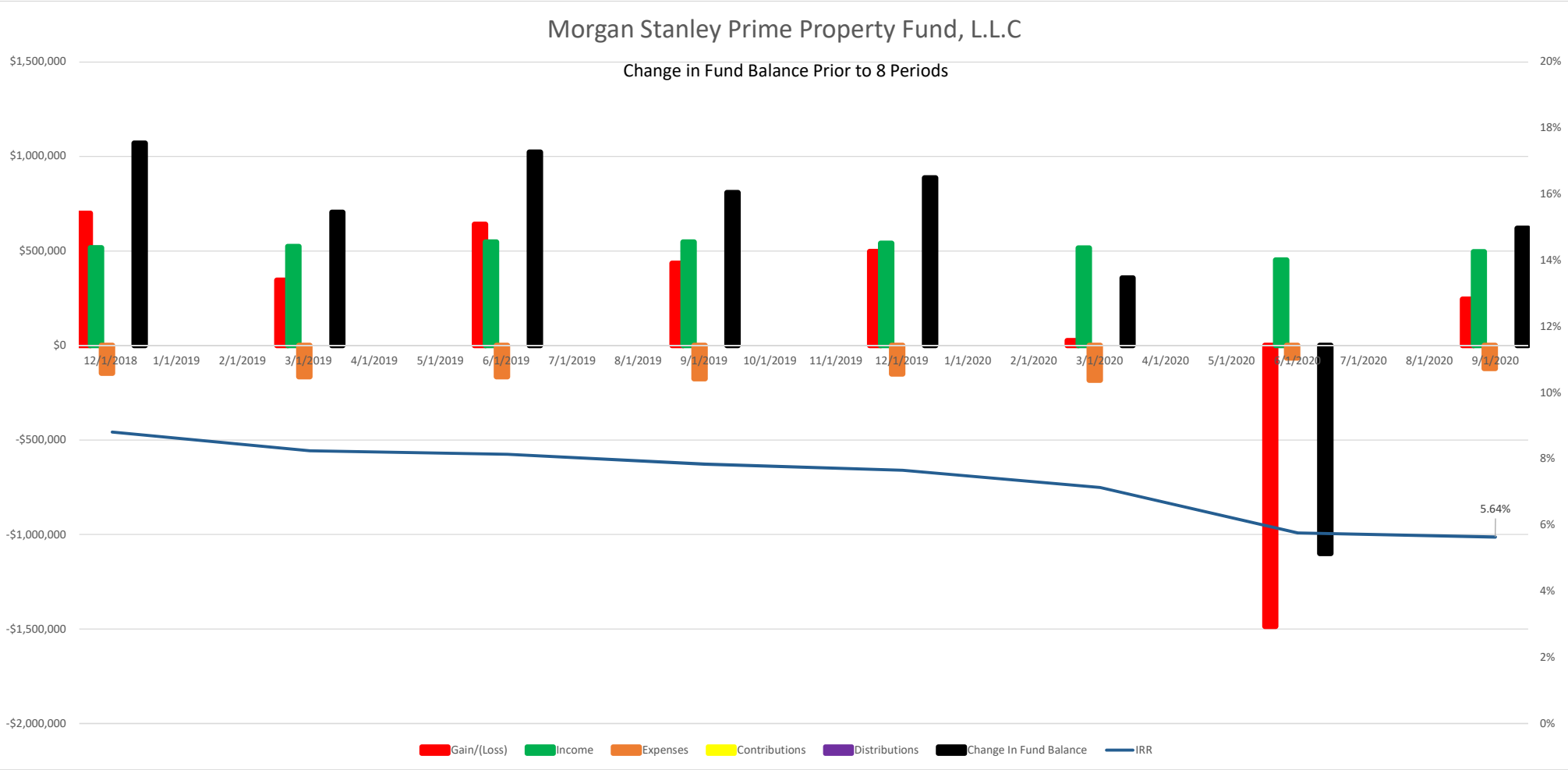
Internal Rate of Return Decomposition

Return from Income and Cash Flow	4.07%
Return from Expenses	-1.01%
Return from Gain/Loss	2.65%
Interaction/Timing Effect:	<u>-0.07%</u>
Net IRR Since Inception:	5.64%

Expense Matrix

Management Fee	\$1,391,572
Incentive Allocation	<u>\$327,262</u>
Total	\$1,718,834

* Performance and return measures have not been reviewed, calculated or verified by the general partner or any of its affiliates



Fund Information

Manager Name:	PGIM Real Estate U.S. Debt Fund, L.P.
Analysis Date:	9/30/2020
Reporting Frequency:	Quarterly
Latest Data Date:	9/30/2020
Manager Investment Style:	Real Estate Debt
Fund Vintage Year:	0
StanCERA Investment Start Date:	9/28/2018
Initial Commitment:	\$54,000,000
Additional Commitments:	\$0
Total Commitment Funded:	\$54,000,000
Total Commitment Unfunded:	\$0
Fund Balance:	\$59,592,143

Fund Performance Measures Since Inception

Net Internal Rate of Return (IRR):	5.36%
Investment Multiple (TVPI):	\$1.10
Realization Multiple (DPI):	\$0.00
Residual Value to Paid in Multiple (RVPI):	\$1.10
Paid in Capital Multiple (PIC):	100.0%

Fund Balance Reconciliation Since Inception

Beginning Fund Balance	\$0
Capital Contributions	\$54,000,000
Distributions	\$0
Expenses	-\$840,145
Income	\$6,933,151
Gain/(Loss)	<u>-\$500,861</u>
Ending Fund Balance	\$59,592,145

Internal Rate of Return Decomposition

Return from Income and Cash Flow	6.62%
Return from Expenses	-0.78%
Return from Gain/Loss	-0.47%
Interaction/Timing Effect:	<u>0.00%</u>
Net IRR Since Inception:	5.36%

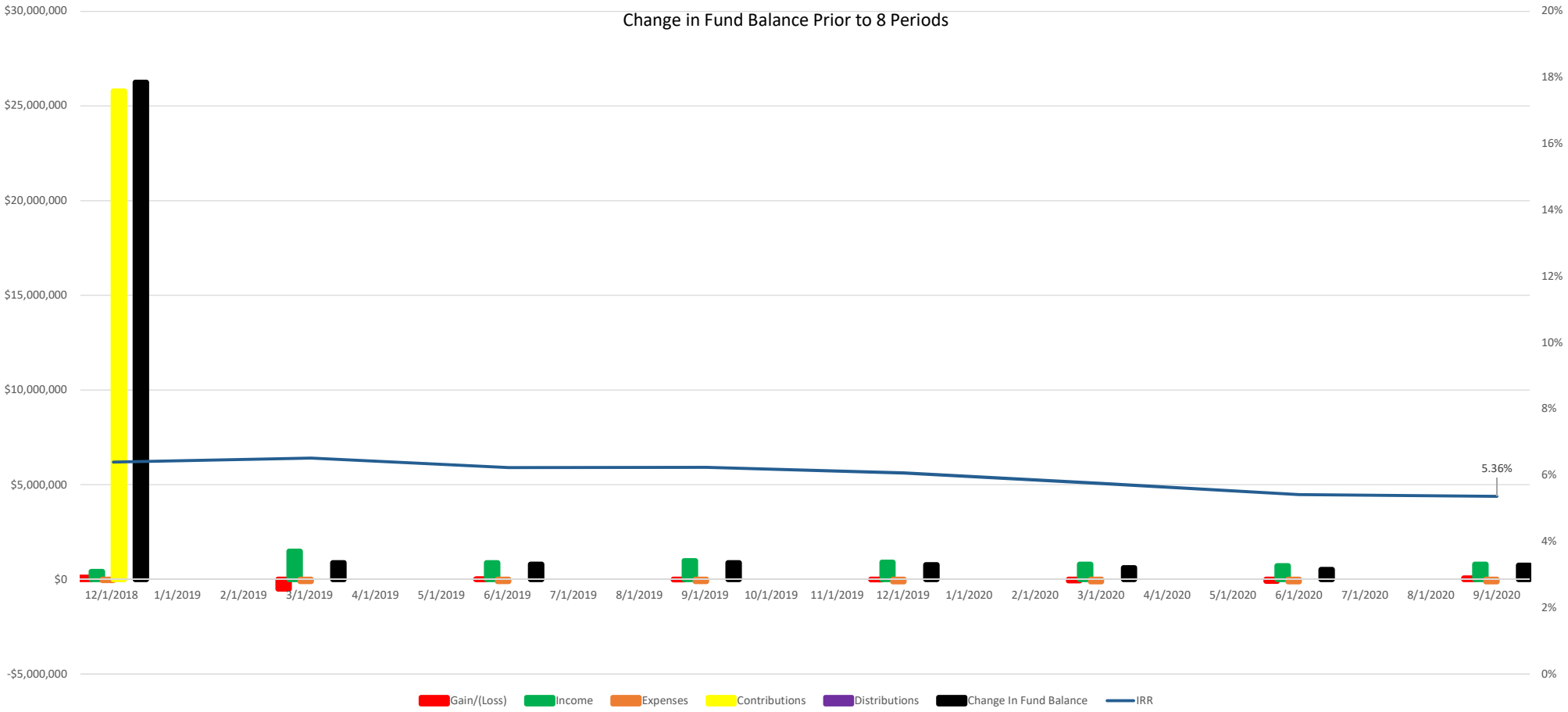
Expense Matrix

Management Fee	\$840,146
Incentive Allocation	<u>\$0</u>
Total	\$840,145

* Performance and return measures have not been reviewed, calculated or verified by the general partner or any of its affiliates

PGIM Real Estate U.S. Debt Fund, L.P.

Change in Fund Balance Prior to 8 Periods



Fund Information

Manager Name:	American Realty Advisors Fund
Analysis Date:	9/30/2020
Reporting Frequency:	Quarterly
Latest Data Date:	9/30/2020
Manager Investment Style:	Value Added Real Estate
Fund Vintage Year:	2009
StanCERA Investment Start Date:	12/15/2014
Initial Commitment:	\$30,000,000
Additional Commitments:	\$28,000,000
Total Commitment Funded:	\$58,000,000
Total Commitment Unfunded:	\$0
Fund Balance:	\$68,668,379

Fund Performance Measures Since Inception

Net Internal Rate of Return (IRR):	7.95%
Investment Multiple (TVPI):	\$1.22
Realization Multiple (DPI):	\$0.04
Residual Value to Paid in Multiple (RVPI):	\$1.18
Paid in Capital Multiple (PIC):	100.0%

Fund Balance Reconciliation Since Inception

Beginning Fund Balance	\$0
Capital Contributions	\$58,000,000
Distributions	-\$2,031,680
Expenses	-\$2,340,777
Income	\$7,912,729
Gain/(Loss)	<u>\$7,128,107</u>
Ending Fund Balance	\$68,668,379

Internal Rate of Return Decomposition

Return from Income and Cash Flow	5.15%
Return from Expenses	-1.30%
Return from Gain/Loss	4.26%
Interaction/Timing Effect:	<u>-0.15%</u>
Net IRR Since Inception:	7.95%

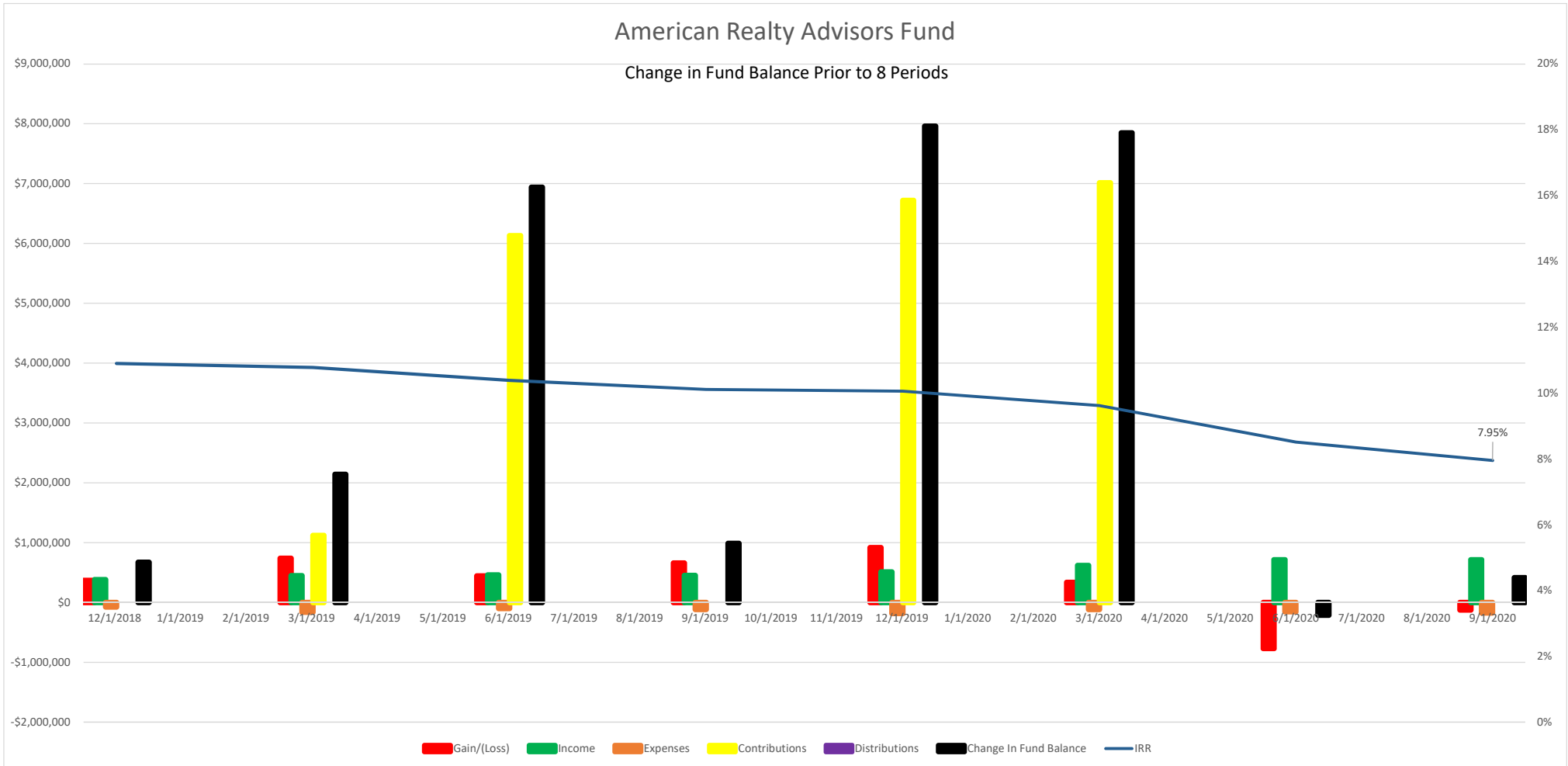
Expense Matrix

Management Fee	\$2,104,391
Incentive Allocation	\$252,145
Offering Costs	\$54
General/Administrative Expense	<u>-\$15,813</u>
Total	\$2,340,777

* Performance and return measures have not been reviewed, calculated or verified by the general partner or any of its affiliates

American Realty Advisors Fund

Change in Fund Balance Prior to 8 Periods



Fund Information

Manager Name:	Greenfield GAP VII Management Fund, L.L.C
Analysis Date:	9/30/2020
Reporting Frequency:	Quarterly
Latest Data Date:	9/30/2020
Manager Investment Style:	Value Added Real Estate
Fund Vintage Year:	2011
StanCERA Investment Start Date:	7/8/2014
Initial Commitment:	\$15,000,000
Additional Commitments:	\$0
Total Commitment Funded:	\$9,194,476
Total Commitment Unfunded:	\$5,805,524
Fund Balance:	\$10,433,816

Fund Performance Measures Since Inception

Net Internal Rate of Return (IRR):	12.15%
Investment Multiple (TVPI):	\$1.44
Realization Multiple (DPI):	\$0.86
Residual Value to Paid in Multiple (RVPI):	\$0.58
Paid in Capital Multiple (PIC):	61.3%

Fund Balance Reconciliation Since Inception

Beginning Fund Balance	\$0
Capital Contributions	\$18,013,692
Distributions	-\$15,491,481
Expenses	-\$2,548,696
Income	\$2,712,476
Gain/(Loss)	<u>\$7,747,825</u>
Ending Fund Balance	\$10,433,816

Internal Rate of Return Decomposition

Return from Income and Cash Flow	5.27%
Return from Expenses	-2.67%
Return from Gain/Loss	11.48%
Interaction/Timing Effect:	<u>-1.93%</u>
Net IRR Since Inception:	12.15%

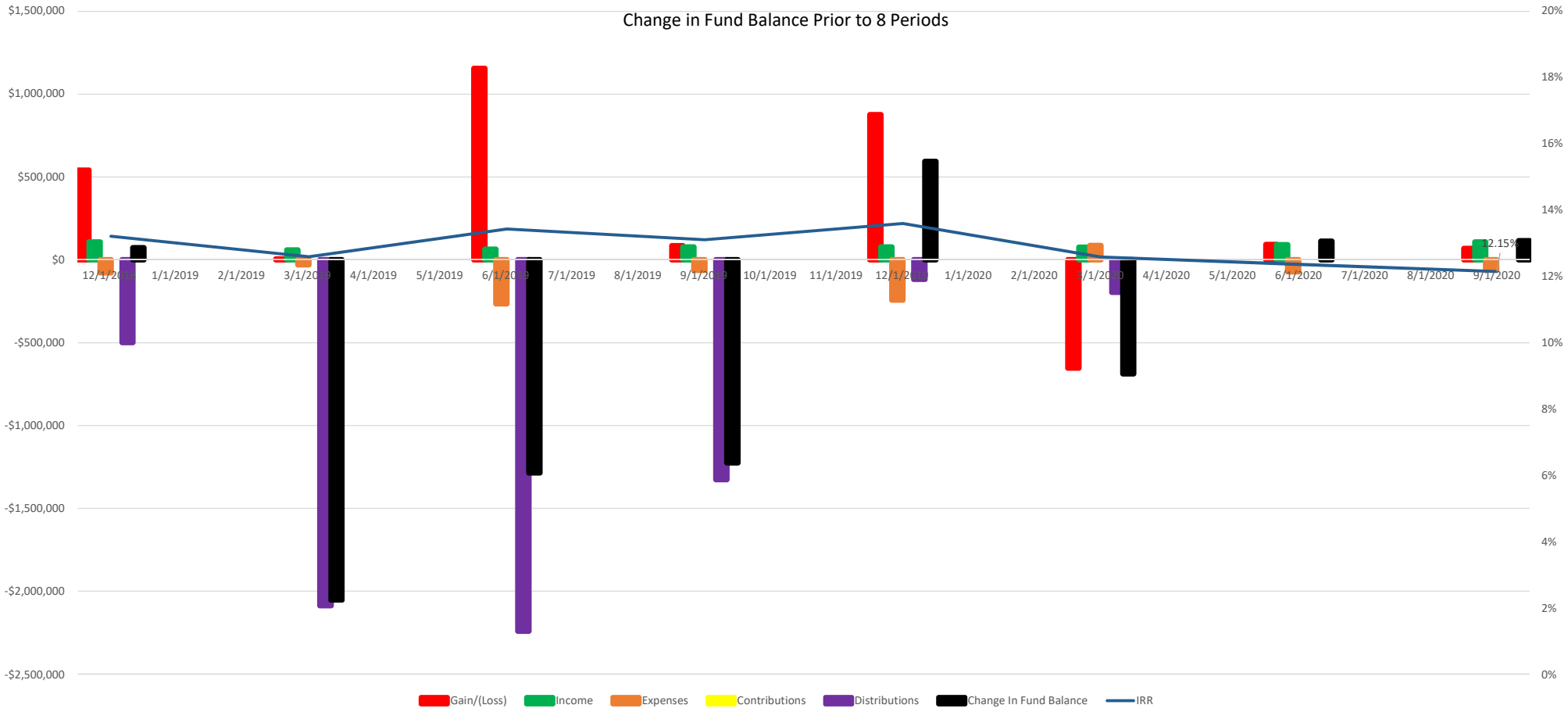
Expense Matrix

Management Fee	\$1,501,344
Partnership Operations	\$107,054
Incentive Allocation	\$937,429
Interest Expense	<u>\$2,869</u>
Total	\$2,548,696

* Performance and return measures have not been reviewed, calculated or verified by the general partner or any of its affiliates

Greenfield GAP VII Management Fund, L.L.C

Change in Fund Balance Prior to 8 Periods



Fund Information

Manager Name:	Grandview Partners I, L.P.
Analysis Date:	9/30/2020
Reporting Frequency:	Quarterly
Latest Data Date:	9/30/2020
Manager Investment Style:	Value Added Real Estate
Fund Vintage Year:	2017
StanCERA Investment Start Date:	4/27/2018
Initial Commitment:	\$40,000,000
Additional Commitments:	\$0
Total Commitment Funded:	\$18,366,208
Total Commitment Unfunded:	\$21,633,792
Fund Balance:	\$26,550,018

Fund Performance Measures Since Inception

Net Internal Rate of Return (IRR):	24.77%
Investment Multiple (TVPI):	\$1.49
Realization Multiple (DPI):	\$0.10
Residual Value to Paid in Multiple (RVPI):	\$1.39
Paid in Capital Multiple (PIC):	45.9%

Fund Balance Reconciliation Since Inception

Beginning Fund Balance	\$0
Capital Contributions	\$19,130,897
Distributions	-\$1,939,034
Expenses	-\$4,197,239
Income	\$1,077,050
Gain/(Loss)	<u>\$12,478,344</u>
Ending Fund Balance	\$26,550,018

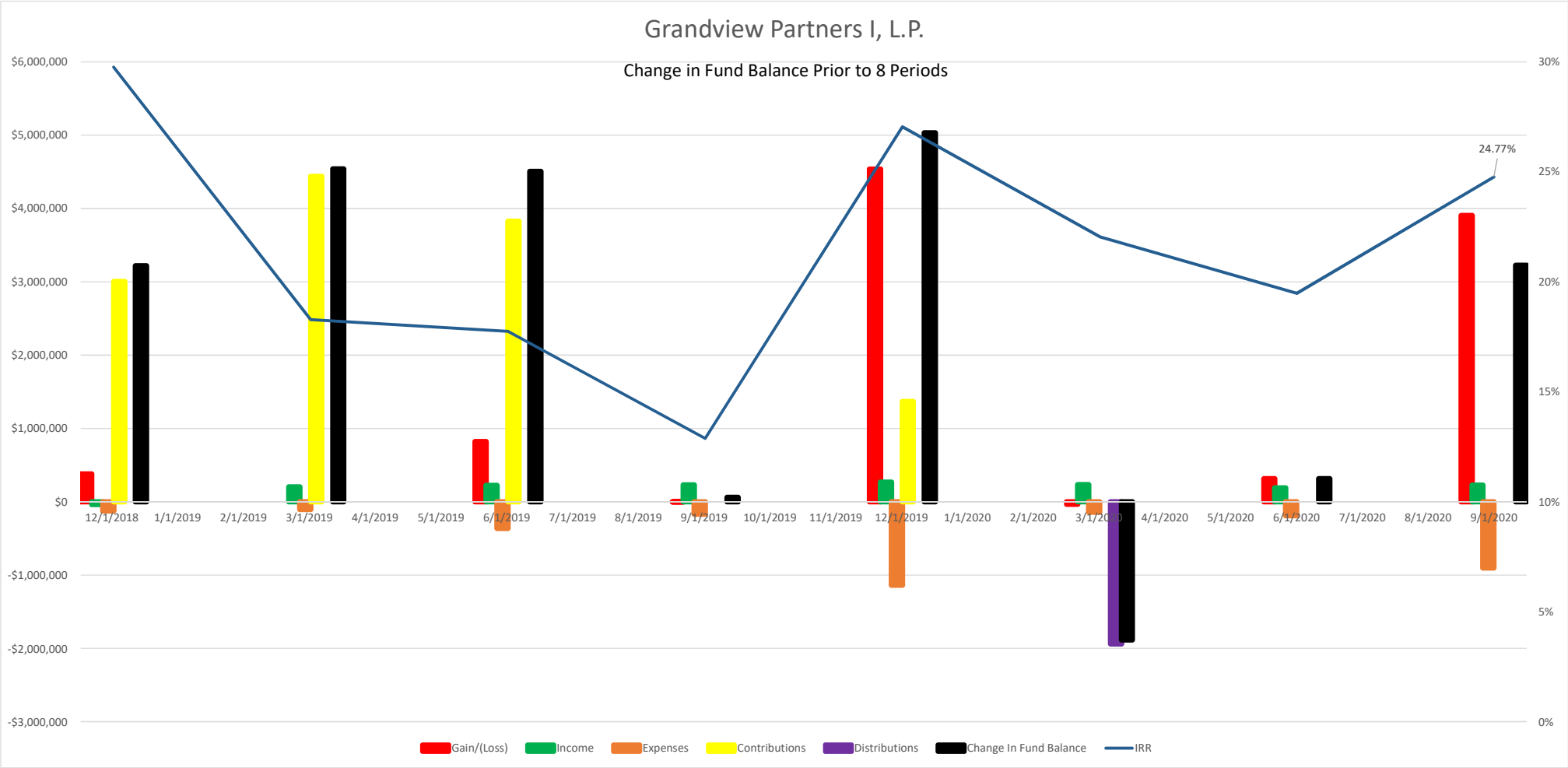
Internal Rate of Return Decomposition

Return from Income and Cash Flow	2.97%
Return from Expenses	-9.70%
Return from Gain/Loss	34.81%
Interaction/Timing Effect:	<u>-3.32%</u>
Net IRR Since Inception:	24.77%

Expense Matrix

Management Fee	\$2,067,118
Partnership Operations	\$149,468
Incentive Allocation	\$1,567,800
Professional Fee	\$20,386
Interest Expense	<u>\$392,467</u>
Total	\$4,197,239

* Performance and return measures have not been reviewed, calculated or verified by the general partner or any of its affiliates



Fund Information

Manager Name:	North Haven Infrastructure II GP LP
Analysis Date:	9/30/2020
Reporting Frequency:	Quarterly
Latest Data Date:	9/30/2020
Manager Investment Style:	Infrastructure
Fund Vintage Year:	2015
StanCERA Investment Start Date:	5/19/2015
Initial Commitment:	\$50,000,000
Additional Commitments:	\$0
Total Commitment Funded:	\$24,527,564
Total Commitment Unfunded:	\$25,472,436
Fund Balance:	\$35,902,410

Fund Performance Measures Since Inception

Net Internal Rate of Return (IRR):	9.47%
Investment Multiple (TVPI):	\$1.19
Realization Multiple (DPI):	\$0.60
Residual Value to Paid in Multiple (RVPI):	\$0.59
Paid in Capital Multiple (PIC):	49.1%

Fund Balance Reconciliation Since Inception

Beginning Fund Balance	\$0
Capital Contributions	\$60,550,306
Distributions	-\$36,313,738
Expenses	-\$4,918,848
Income	\$4,110,460
Gain/(Loss)	<u>\$13,170,933</u>
Ending Fund Balance	\$36,599,113

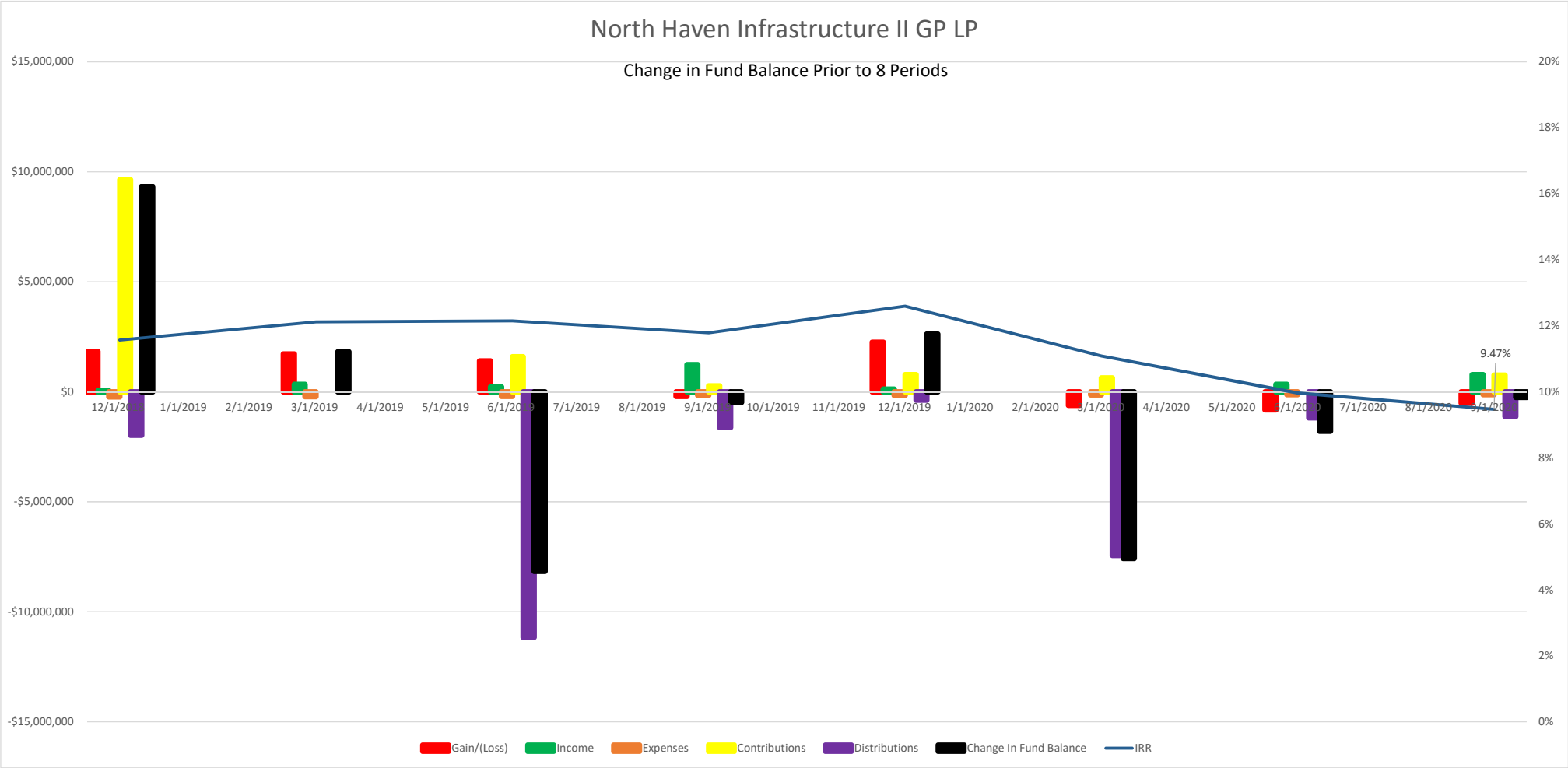
Internal Rate of Return Decomposition

Return from Income and Cash Flow	3.45%
Return from Expenses	-3.13%
Return from Gain/Loss	10.20%
Interaction/Timing Effect:	<u>-1.06%</u>
Net IRR Since Inception:	9.47%

Expense Matrix

Management Fee	\$3,887,206
Partnership Operations	\$37,637
Organizational Expense	\$52,991
Syndication Costs	\$65,354
Professional Fee	\$84,162
General/Administrative Expense	\$317,844
Broken Deal Expense	\$267,706
Interest Expense	\$205,948

* Performance and return measures have not been reviewed, calculated or verified by the general partner or any of its affiliates



Fund Information

Manager Name:	Raven Asset-Based Opportunity Fund I L.P.
Analysis Date:	9/30/2020
Reporting Frequency:	Quarterly
Latest Data Date:	9/30/2020
Manager Investment Style:	Private Credit
Fund Vintage Year:	2012
StanCERA Investment Start Date:	5/22/2013
Initial Commitment:	\$40,000,000
Additional Commitments:	\$0
Total Commitment Funded:	\$34,505,763
Total Commitment Unfunded:	\$5,494,237
Fund Balance:	\$4,577,966

Fund Performance Measures Since Inception

Net Internal Rate of Return (IRR):	-7.11%
Investment Multiple (TVPI):	\$0.82
Realization Multiple (DPI):	\$0.68
Residual Value to Paid in Multiple (RVPI):	\$0.13
Paid in Capital Multiple (PIC):	86.3%

Fund Balance Reconciliation Since Inception

Beginning Fund Balance	\$0
Capital Contributions	\$34,505,763
Distributions	-\$23,582,991
Expenses	-\$5,438,894
Income	\$11,999,640
Gain/(Loss)	<u>-\$12,905,553</u>
Ending Fund Balance	\$4,577,965

Internal Rate of Return Decomposition

Return from Income and Cash Flow	6.68%
Return from Expenses	-5.71%
Return from Gain/Loss	-10.92%
Interaction/Timing Effect:	<u>2.84%</u>
Net IRR Since Inception:	-7.11%

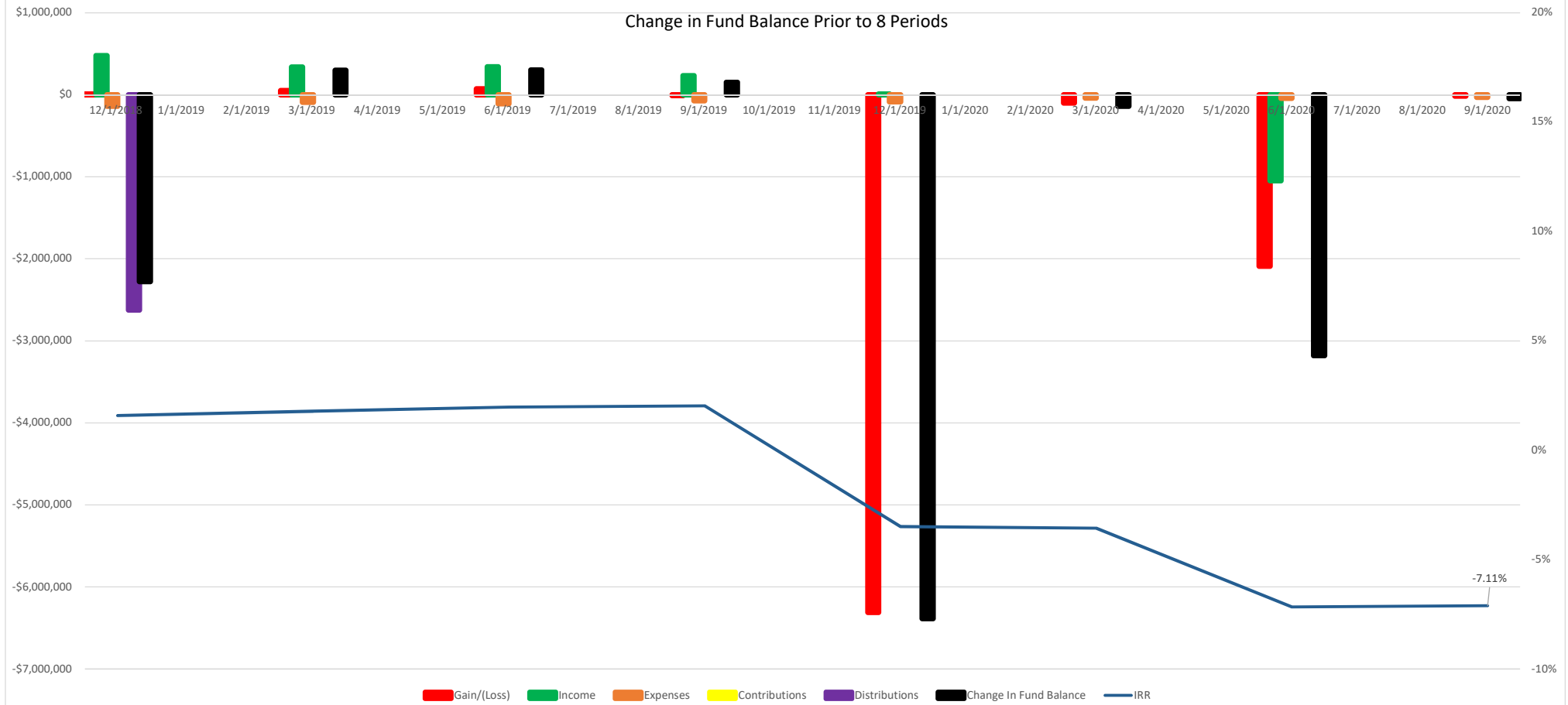
Expense Matrix

Management Fee	\$3,381,252
Organizational Expense	\$92,275
Service Fee	\$339,601
Professional Fee	<u>\$1,625,766</u>
Total	\$5,438,894

* Performance and return measures have not been reviewed, calculated or verified by the general partner or any of its affiliates

Raven Asset-Based Opportunity Fund I L.P.

Change in Fund Balance Prior to 8 Periods



Fund Information

Manager Name:	Raven Asset-Based Opportunity Fund III L.P.
Analysis Date:	9/30/2020
Reporting Frequency:	Quarterly
Latest Data Date:	9/30/2020
Manager Investment Style:	Private Credit
Fund Vintage Year:	2015
StanCERA Investment Start Date:	7/6/2015
Initial Commitment:	\$15,000,000
Additional Commitments:	\$49,231,798
Total Commitment Funded:	\$55,988,511
Total Commitment Unfunded:	\$8,243,286
Fund Balance:	\$43,949,730

Fund Performance Measures Since Inception

Net Internal Rate of Return (IRR):	4.69%
Investment Multiple (TVPI):	\$1.12
Realization Multiple (DPI):	\$0.28
Residual Value to Paid in Multiple (RVPI):	\$0.83
Paid in Capital Multiple (PIC):	87.2%

Fund Balance Reconciliation Since Inception

Beginning Fund Balance	\$0
Capital Contributions	\$52,729,892
Distributions	-\$14,926,304
Expenses	-\$5,921,714
Income	\$9,436,991
Gain/(Loss)	<u>\$2,630,863</u>
Ending Fund Balance	\$43,949,729

Internal Rate of Return Decomposition

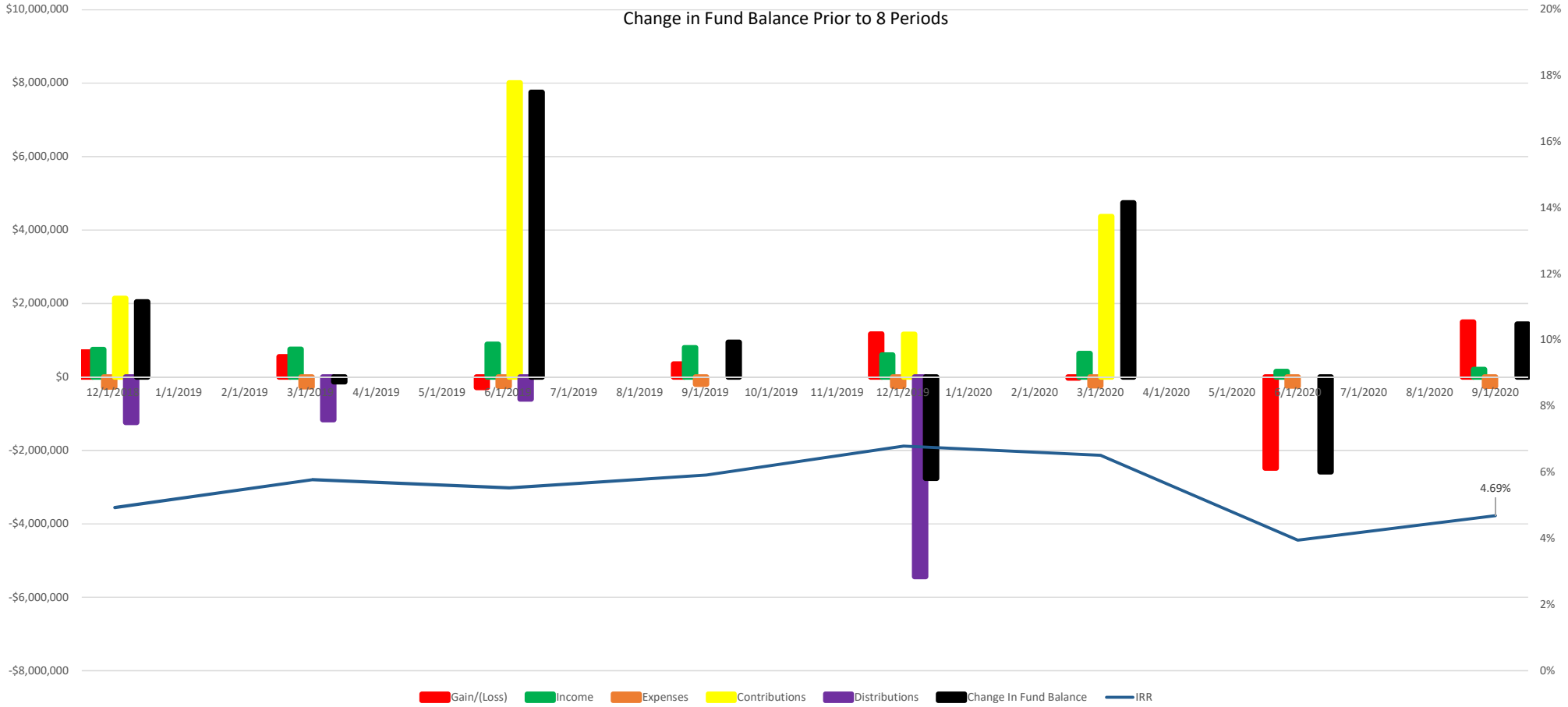
Return from Income and Cash Flow	6.99%
Return from Expenses	-4.04%
Return from Gain/Loss	1.94%
Interaction/Timing Effect:	<u>-0.20%</u>
Net IRR Since Inception:	4.69%

Expense Matrix

Management Fee	\$4,160,411
Partnership Operations	\$102,856
Organizational Expense	\$81,755
Professional Fee	<u>\$1,576,692</u>
Total	\$5,921,714

* Performance and return measures have not been reviewed, calculated or verified by the general partner or any of its affiliates

Raven Asset-Based Opportunity Fund III L.P.



Fund Information

Manager Name:	Medley Opportunity Fund II L.P.
Analysis Date:	9/30/2020
Reporting Frequency:	Quarterly
Latest Data Date:	9/30/2020
Manager Investment Style:	Private Credit
Fund Vintage Year:	2011
StanCERA Investment Start Date:	5/16/2013
Initial Commitment:	\$30,000,000
Additional Commitments:	\$0
Total Commitment Funded:	\$29,000,453
Total Commitment Unfunded:	\$999,547
Fund Balance:	\$7,050,098

Fund Performance Measures Since Inception

Net Internal Rate of Return (IRR):	-0.78%
Investment Multiple (TVPI):	\$1.06
Realization Multiple (DPI):	\$0.83
Residual Value to Paid in Multiple (RVPI):	\$0.23
Paid in Capital Multiple (PIC):	96.7%

Fund Balance Reconciliation Since Inception

Beginning Fund Balance	\$0
Capital Contributions	\$31,086,716
Distributions	-\$25,938,614
Expenses	-\$3,728,042
Income	\$17,605,888
Gain/(Loss)	<u>-\$11,975,850</u>
Ending Fund Balance	\$7,050,098

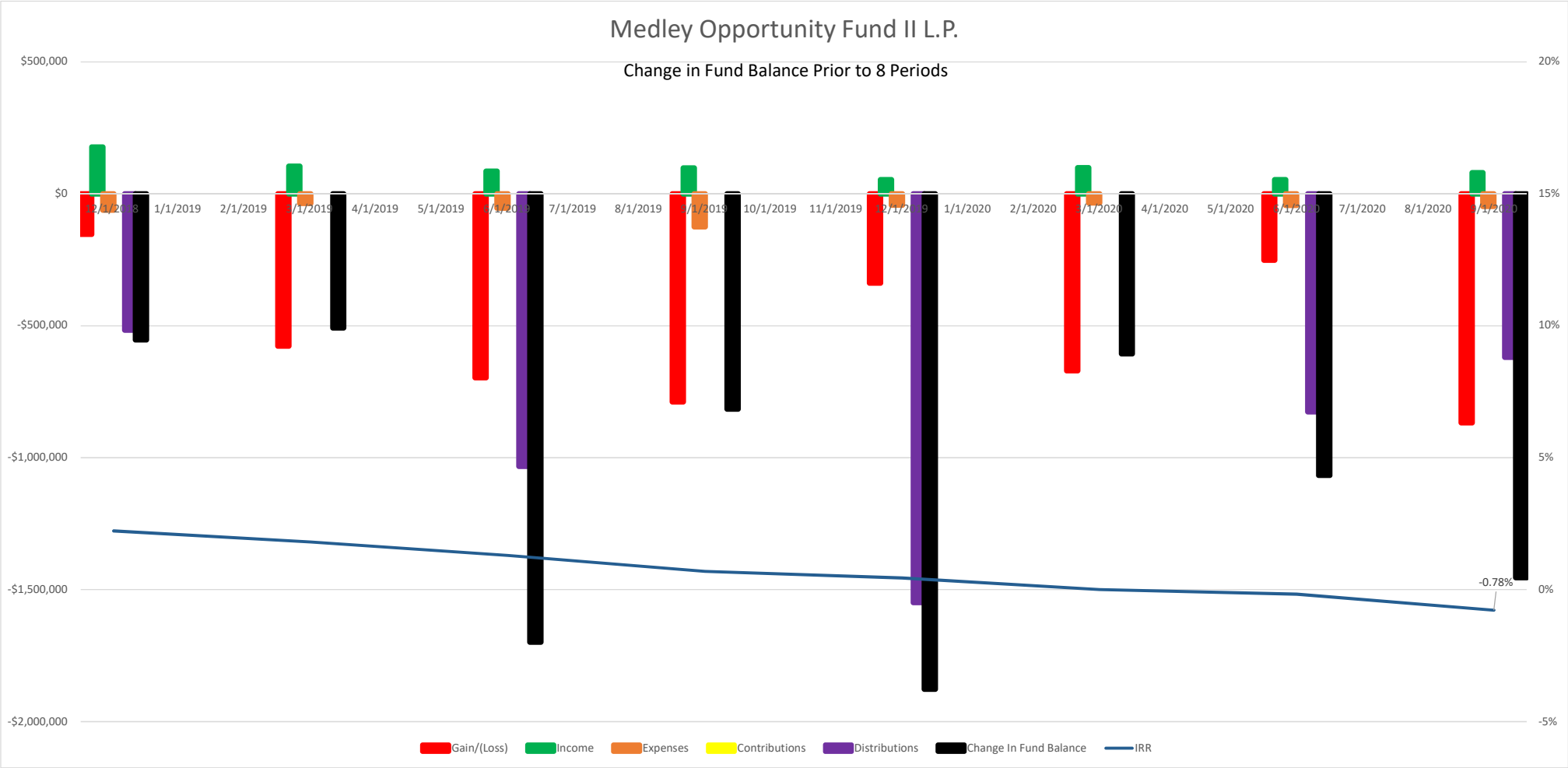
Internal Rate of Return Decomposition

Return from Income and Cash Flow	7.67%
Return from Expenses	-2.52%
Return from Gain/Loss	-6.85%
Interaction/Timing Effect:	<u>0.93%</u>
Net IRR Since Inception:	-0.78%

Expense Matrix

Management Fee	\$2,532,140
Partnership Operations	\$1,195,903
Incentive Allocation	<u>-\$1</u>
Total	\$3,728,042

* Performance and return measures have not been reviewed, calculated or verified by the general partner or any of its affiliates



Fund Information

Manager Name:	White Oak Pinnacle Fund L.P.
Analysis Date:	9/30/2020
Reporting Frequency:	Quarterly
Latest Data Date:	9/30/2020
Manager Investment Style:	Private Credit
Fund Vintage Year:	2012
StanCERA Investment Start Date:	8/2/2013
Initial Commitment:	\$40,000,000
Additional Commitments:	\$0
Total Commitment Funded:	\$32,758,125
Total Commitment Unfunded:	\$7,241,875
Fund Balance:	\$23,669,684

Fund Performance Measures Since Inception

Net Internal Rate of Return (IRR):	5.54%
Investment Multiple (TVPI):	\$1.22
Realization Multiple (DPI):	\$0.79
Residual Value to Paid in Multiple (RVPI):	\$0.43
Paid in Capital Multiple (PIC):	81.9%

Fund Balance Reconciliation Since Inception

Beginning Fund Balance	\$0
Capital Contributions	\$55,047,161
Distributions	-\$43,683,941
Expenses	-\$3,425,690
Income	\$22,018,092
Gain/(Loss)	<u>-\$6,285,938</u>
Ending Fund Balance	\$23,669,684

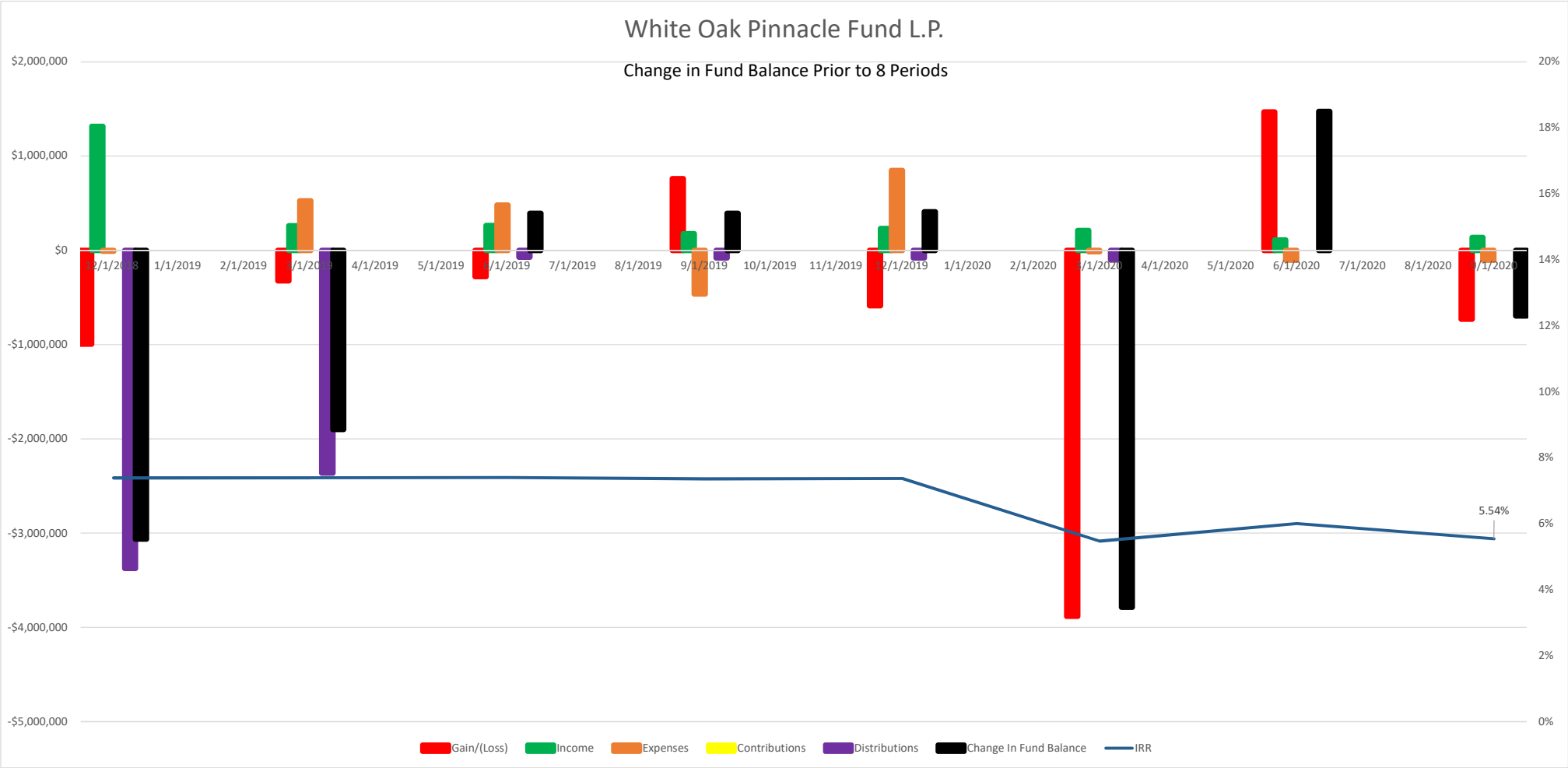
Internal Rate of Return Decomposition

Return from Income and Cash Flow	9.36%
Return from Expenses	-1.45%
Return from Gain/Loss	-2.57%
Interaction/Timing Effect:	<u>0.20%</u>
Net IRR Since Inception:	5.54%

Expense Matrix

Management Fee	\$4,419,647
Incentive Allocation	\$0
Other Expense	\$121,418
Management Fee Reimbursement	-\$1,611,862
General/Administrative Expense	<u>\$496,487</u>
Total	\$3,425,690

* Performance and return measures have not been reviewed, calculated or verified by the general partner or any of its affiliates



January 26, 2021

Retirement Board Agenda Item

TO: Retirement Board

FROM: Stan Conwell, Retirement Investment Officer

- I. SUBJECT: Investment Fee Summary, Value Added, and Cash Flow Reports – September 30, 2020
- II. ITEM NUMBER: 6.i.2.
- III. ITEM TYPE: Information Only
- IV. STAFF RECOMMENDATION: None
- V. ANALYSIS:

Attachment 1 contains the investment fee summary, value added and cash flow reports.

Investment Fee Summary – This report details StanCERA's investment management fees by asset class, manager discretion, investment style and individual manager. Fee data for this report began in July 2014 and is updated on at least a quarterly basis. For the period, 7/01/2014 to 9/30/2020, total investment fees were approximately \$60.7 Million or roughly 48 bps (0.48%) when annualized. There was a slight increase in the annualized fee rate compared to the prior quarter and the prior year. This small increase was driven by an increase in performance and other fees.

Value Added Report – For the quarter ending 9/30/2020, together the managers on this report finished ahead of the primary benchmark and below the secondary benchmark. The reason for the difference is due to the underperformance of LSV International given its value style has continued to be out of favor through 9/30/2020. Last quarter, staff added a secondary benchmark column to enhance the report. LSV is currently the only manager on this report with a secondary benchmark. The primary benchmark for LSV is the ACWI ex-US value index and the secondary benchmark is the ACWI ex-US Core index.

Cash Flow Report – The process to produce this report is currently being updated and was not available in time for this reporting period.

- VI. RISK: None
- VII. STRATEGIC PLAN: N/A
- VIII. ADMINISTRATIVE BUDGET IMPACT: NONE



StanCERA Investment Fee Summary - By Asset Class

Fiscal Year to Date

7/1/2014

thru

9/30/2020

	Fees In Dollars						Annualized Fees in Basis Points				
	Average AUM	Managerial	Performance*	Other	Custodial	Total	Managerial	Performance	Other	Custodial	Total
Total StanCERA Portfolio	\$1,918,178,676	\$47,567,226	\$4,333,462	\$6,697,495	\$2,113,640	\$60,711,823	36.9	3.4	5.3	1.7	47.7

Fees By Asset Class

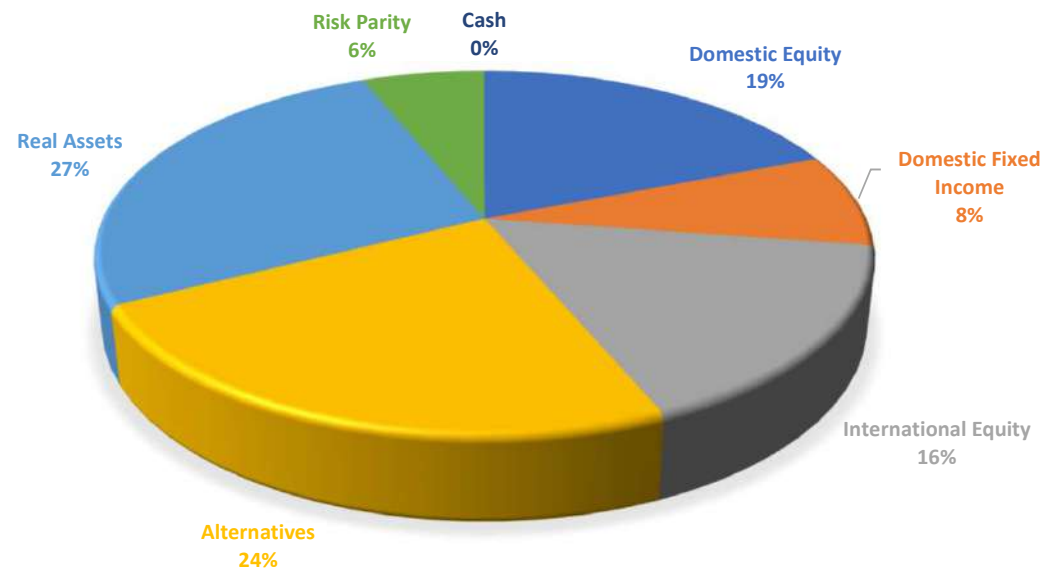
	Average AUM	Managerial	Performance	Other	Custodial	Total	Managerial	Performance	Other	Custodial	Total
Domestic Equity	\$660,467,133	\$10,904,003	\$0	\$0	\$662,891	\$11,566,894	8.6	0.0	0.0	0.5	9.1
Domestic Fixed Income	\$465,325,013	\$4,849,308	\$0	\$0	\$189,740	\$5,039,047	3.8	0.0	0.0	0.1	4.0
International Equity	\$420,611,635	\$6,715,916	\$2,054,421	\$0	\$1,125,124	\$9,895,461	5.3	1.6	0.0	0.9	7.8
Alternatives	\$92,782,686	\$11,018,404	-\$805,595	\$4,206,073	\$54,117	\$14,473,000	8.1	-0.6	3.3	0.0	11.4
Real Assets	\$138,977,994	\$11,184,840	\$3,084,635	\$1,688,127	\$67,544	\$16,025,147	8.8	2.4	1.3	0.1	12.6
Risk Parity	\$129,697,027	\$2,894,755	\$0	\$803,295	\$13,475	\$3,711,525	2.3	0.0	0.6	0.0	2.9
Cash	\$10,317,188	\$0	\$0	\$0	\$750	\$750	0.0	0.0	0.0	0.0	0.0

* Performance fees can be negative due to the clawback of incentive fees

Asset Class	Fees
Domestic Equity	\$11,566,894
Domestic Fixed Income	\$5,039,047
International Equity	\$9,895,461
Alternatives	\$14,473,000
Real Assets	\$16,025,147
Risk Parity	\$3,711,525
Cash	\$750

Total \$60,711,823

Fees By Asset Class





StanCERA Investment Fee Summary - By Investment Discretion

Fiscal Year to Date

7/1/2014

thru

9/30/2020

	Fees In Dollars						Annualized Fees in Basis Points				
	<u>Average AUM</u>	<u>Managerial</u>	<u>Performance*</u>	<u>Other</u>	<u>Custodial</u>	<u>Total</u>	<u>Managerial</u>	<u>Performance</u>	<u>Other</u>	<u>Custodial</u>	<u>Total</u>
Total StanCERA Portfolio	\$1,918,178,676	\$47,567,226	\$4,333,462	\$6,697,495	\$2,113,640	\$60,711,823	36.9	3.4	5.3	1.7	47.7

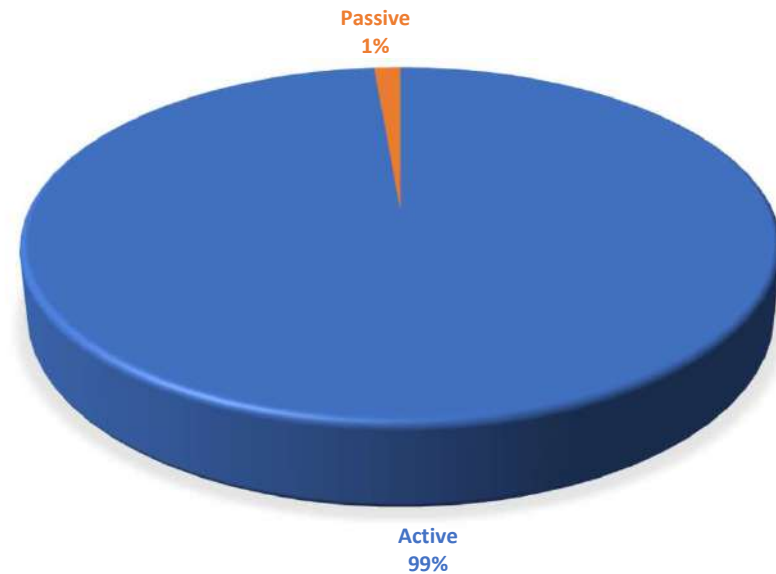
Fees By Investment Discretion

	<u>Average AUM</u>	<u>Managerial</u>	<u>Performance</u>	<u>Other</u>	<u>Custodial</u>	<u>Total</u>	<u>Managerial</u>	<u>Performance</u>	<u>Other</u>	<u>Custodial</u>	<u>Total</u>
Active	\$1,517,830,262	\$46,808,775	\$4,333,462	\$6,697,495	\$2,055,344	\$59,895,076	36.3	3.4	5.3	1.6	47.1
Passive	\$400,348,414	\$758,450	\$0	\$0	\$58,297	\$816,747	0.6	0.0	0.0	0.0	0.6

* Performance fees can be negative due to the clawback of incentive fees

Fees By Investment Discretion

Investment Discretion	<u>Fees</u>
Active	\$59,895,076
Passive	\$816,747
Total	\$60,711,823





StanCERA Investment Fee Summary - By Investment Style

Fiscal Year to Date

7/1/2014

thru

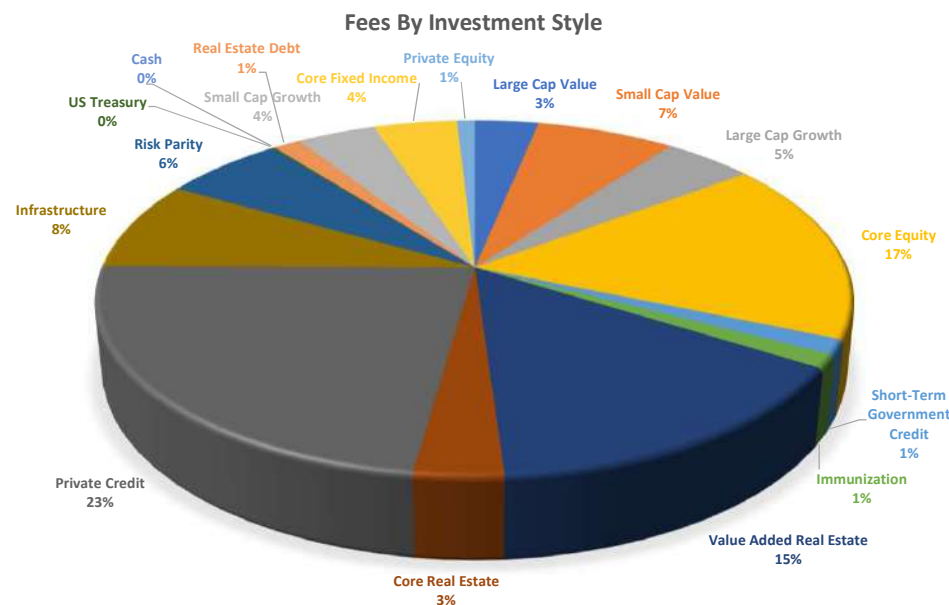
9/30/2020

	Fees In Dollars						Annualized Fees in Basis Points				
	Average AUM	Managerial	Performance*	Other	Custodial	Total	Managerial	Performance	Other	Custodial	Total
Total StanCERA Portfolio	\$1,918,178,676	\$47,567,226	\$4,333,462	\$6,697,495	\$2,113,640	\$60,711,823	36.9	3.4	5.3	1.7	47.7

	Fees By Investment Style										
	Average AUM	Managerial	Performance	Other	Custodial	Total	Managerial	Performance	Other	Custodial	Total
Large Cap Value	\$232,553,856	\$1,855,072	\$0	\$0	\$93,977	\$1,949,049	1.5	0.0	0.0	0.1	1.5
Small Cap Value	\$89,024,763	\$3,984,281	\$0	\$0	\$263,261	\$4,247,542	3.1	0.0	0.0	0.2	3.3
Large Cap Growth	\$191,227,958	\$2,707,387	\$0	\$0	\$73,238	\$2,780,625	2.1	0.0	0.0	0.1	2.2
Core Equity	\$531,710,478	\$6,886,388	\$2,054,421	\$0	\$1,134,991	\$10,075,800	5.4	1.6	0.0	0.9	7.9
Short-Term Government Credit	\$110,471,139	\$779,672	\$0	\$0	\$32,355	\$812,028	0.6	0.0	0.0	0.0	0.6
Immunization	\$92,467,017	\$709,716	\$0	\$0	\$28,255	\$737,970	0.6	0.0	0.0	0.0	0.6
Value Added Real Estate	\$47,231,592	\$5,672,853	\$2,757,374	\$656,485	\$29,956	\$9,116,668	4.5	2.2	0.5	0.0	7.2
Core Real Estate	\$69,486,297	\$1,624,781	\$327,262	\$0	\$26,028	\$1,978,071	1.3	0.3	0.0	0.0	1.6
Private Credit	\$92,651,837	\$10,557,888	-\$805,595	\$4,115,881	\$54,117	\$13,922,291	8.1	-0.6	3.2	0.0	10.9
Infrastructure	\$22,260,105	\$3,887,206	\$0	\$1,031,642	\$11,560	\$4,930,408	3.1	0.0	0.8	0.0	3.9
Risk Parity	\$129,697,027	\$2,894,755	\$0	\$803,295	\$13,475	\$3,711,525	2.3	0.0	0.6	0.0	2.9
US Treasury	\$32,204,592	\$87,004	\$0	\$0	\$0	\$87,004	0.1	0.0	0.0	0.0	0.1
Cash	\$10,317,188	\$0	\$0	\$0	\$750	\$750	0.0	0.0	0.0	0.0	0.0
Real Estate Debt	\$17,960,614	\$840,146	\$0	\$0	\$4,669	\$844,814	0.7	0.0	0.0	0.0	0.7
Small Cap Growth	\$36,561,712	\$2,186,791	\$0	\$0	\$222,547	\$2,409,338	1.7	0.0	0.0	0.2	1.9
Core Fixed Income	\$212,221,651	\$2,432,770	\$0	\$0	\$124,461	\$2,557,231	1.9	0.0	0.0	0.1	2.0
Private Equity	\$130,850	\$460,517	\$0	\$90,192	\$0	\$550,709	0.0	0.0	0.1	0.0	0.4

* Performance fees can be negative due to the clawback of incentive fees

By Investment Style	Fees
Large Cap Value	\$1,949,049
Small Cap Value	\$4,247,542
Large Cap Growth	\$2,780,625
Core Equity	\$10,075,800
Short-Term Government Credit	\$812,028
Immunization	\$737,970
Value Added Real Estate	\$9,116,668
Core Real Estate	\$1,978,071
Private Credit	\$13,922,291
Infrastructure	\$4,930,408
Risk Parity	\$3,711,525
US Treasury	\$87,004
Cash	\$750
Real Estate Debt	\$844,814
Small Cap Growth	\$2,409,338
Core Fixed Income	\$2,557,231
Private Equity	\$550,709
Total	\$60,711,823





Stanislaus County Employees' Retirement Association - Investment Fee Summary

7/1/2014

thru

9/30/2020

Manager Name	Fees in Dollars						Fees in Annualized Basis Points				
	Average AUM	Management	Performance	Other	Custodial	Total	Management	Performance	Other	Custodial	Total
Dodge Cox Equity	\$139,393,922	\$1,739,222	\$0	\$0	\$77,370	\$1,816,592	20.0	0.0	0.0	0.9	20.8
PIMCO	\$97,042,656	\$1,155,601	\$0	\$0	\$46,241	\$1,201,841	37.6	0.0	0.0	1.5	39.1
Bernzott	\$12,358,009	\$538,030	\$0	\$0	\$34,210	\$572,240	69.7	0.0	0.0	4.4	74.1
Eudaimonia	\$9,386,528	\$207,171	\$0	\$0	\$56,109	\$263,280	105.9	0.0	0.0	28.7	134.6
Jackson Square	\$118,621,045	\$2,555,472	\$0	\$0	\$56,883	\$2,612,354	58.8	0.0	0.0	1.3	60.1
LSV	\$209,318,954	\$3,242,677	\$1,125,002	\$0	\$680,872	\$5,048,551	24.8	8.6	0.0	5.2	38.6
Dodge Cox Fixed Income	\$321,714,499	\$1,277,170	\$0	\$0	\$78,220	\$1,355,390	12.5	0.0	0.0	0.8	13.3
Fidelity	\$211,292,682	\$3,473,239	\$929,419	\$0	\$444,252	\$4,846,910	26.3	7.0	0.0	3.4	36.7
Blackrock Value	\$93,159,934	\$115,850	\$0	\$0	\$16,607	\$132,457	2.0	0.0	0.0	0.3	2.3
Blackrock Growth	\$121,707,609	\$151,915	\$0	\$0	\$16,355	\$168,271	2.0	0.0	0.0	0.2	2.2
Raven Asset-Based Opportunity Fund I L.P.	\$17,900,633	\$1,851,526	\$0	\$1,378,149	\$14,183	\$3,243,858	165.5	0.0	123.2	1.3	289.9
BNYM S&P	\$85,219,782	\$94,682	\$0	\$0	\$9,867	\$104,549	3.5	0.0	0.0	0.4	3.9
White Oak Pinnacle Fund L.P.	\$31,711,981	\$3,049,981	\$0	-\$516,724	\$14,081	\$2,547,338	153.9	0.0	-26.1	0.7	128.5
Medley Opportunity Fund II L.P.	\$21,295,803	\$1,270,812	-\$805,595	\$878,135	\$13,697	\$1,357,049	95.5	-60.5	66.0	1.0	101.9
Blackrock US Real Estate	\$42,177,436	\$233,209	\$0	\$0	\$15,467	\$248,676	8.8	0.0	0.0	0.6	9.4
Greenfield GAP VII Management Fund, L.L.C	\$11,578,871	\$1,501,344	\$937,429	\$109,923	\$12,787	\$2,561,483	213.2	133.1	15.6	1.8	363.8
AMI	\$18,361,932	\$488,104	\$0	\$0	\$19,097	\$507,201	91.2	0.0	0.0	3.6	94.7
CastleArk	\$12,772,750	\$337,737	\$0	\$0	\$58,705	\$396,443	99.3	0.0	0.0	17.3	116.5
Lee Munder	\$14,535,949	\$385,832	\$0	\$0	\$49,140	\$434,972	99.6	0.0	0.0	12.7	112.3
Rice Hall	\$21,637,341	\$567,780	\$0	\$0	\$21,359	\$589,139	90.0	0.0	0.0	3.4	93.4
Riverbridge	\$9,352,194	\$7	\$0	\$0	\$5,937	\$5,945	0.0	0.0	0.0	25.5	25.5
Stephens	\$9,768,049	\$3	\$0	\$0	\$8,259	\$8,262	0.0	0.0	0.0	33.9	33.9
Channing	\$19,244,903	\$839,564	\$0	\$0	\$59,730	\$899,295	69.8	0.0	0.0	5.0	74.8
Inview	\$19,066,735	\$819,800	\$0	\$0	\$34,656	\$854,456	68.8	0.0	0.0	2.9	71.7
Keeley	\$11,207,356	\$487,924	\$0	\$0	\$35,070	\$522,994	69.7	0.0	0.0	5.0	74.7
Pacific Ridge	\$15,299,936	\$783,595	\$0	\$0	\$51,369	\$834,964	81.9	0.0	0.0	5.4	87.3
Walhausen	\$11,847,824	\$515,367	\$0	\$0	\$48,226	\$563,593	69.6	0.0	0.0	6.5	76.1
Morgan Stanley Prime Property Fund, L.L.C	\$35,323,585	\$1,391,572	\$327,262	\$0	\$10,561	\$1,729,395	81.5	19.2	0.0	0.6	101.3
American Realty Advisors Fund	\$30,947,869	\$2,104,391	\$252,145	-\$15,759	\$12,424	\$2,353,201	116.6	14.0	-0.9	0.7	130.4
North Haven Infrastructure II GP LP	\$26,088,204	\$3,887,206	\$0	\$1,031,642	\$11,560	\$4,930,408	279.4	0.0	74.1	0.8	354.4
Raven Asset-Based Opportunity Fund III L.P.	\$25,946,523	\$4,160,411	\$0	\$1,761,303	\$10,687	\$5,932,401	315.6	0.0	133.6	0.8	449.9
Insight Investment	\$177,845,155	\$709,716	\$0	\$0	\$28,255	\$737,970	12.3	0.0	0.0	0.5	12.8
Dimensional Fund Advisors	\$218,170,944	\$779,672	\$0	\$0	\$32,355	\$812,028	11.3	0.0	0.0	0.5	11.8
Essex	\$13,775,561	\$77,144	\$0	\$0	\$519	\$77,664	111.8	0.0	0.0	0.8	112.5
Redwood	\$15,823,940	\$123,012	\$0	\$0	\$3,420	\$126,432	155.2	0.0	0.0	4.3	159.5
Northern Trust Cash Account	\$20,375,555	\$0	\$0	\$0	\$750	\$750	0.0	0.0	0.0	0.1	0.1
Northern Trust Long Term Bond Fund	\$16,551,154	\$23,077	\$0	\$0	\$0	\$23,077	4.3	0.0	0.0	0.0	4.3
Northern Trust Intermediate Term Bond Fund	\$45,389,102	\$63,926	\$0	\$0	\$0	\$63,926	4.3	0.0	0.0	0.0	4.3
Northern Trust Russell 1000 Fund	\$138,105,067	\$30,438	\$0	\$0	\$0	\$30,438	1.7	0.0	0.0	0.0	1.7
PanAgora Diversified Risk Multi-Asset Fund, Ltd.	\$148,246,204	\$1,470,522	\$0	\$336,478	\$7,237	\$1,814,237	35.0	0.0	8.0	0.2	43.2
PGIM Real Estate U.S. Debt Fund, L.P.	\$53,952,738	\$840,146	\$0	\$0	\$4,669	\$844,814	74.8	0.0	0.0	0.4	75.3
AQR Capital Management	\$151,283,620	\$1,424,233	\$0	\$466,817	\$6,238	\$1,897,288	36.4	0.0	11.9	0.2	48.5
Grandview Partners I, L.P.	\$17,737,229	\$2,067,118	\$1,567,800	\$562,321	\$4,745	\$4,201,984	466.2	353.6	126.8	1.1	947.7
Northern Trust Russell 3000 Fund	\$131,420,491	\$45,352	\$0	\$0	\$0	\$45,352	1.9	0.0	0.0	0.0	1.9
Owl Rock First Lien Fund	\$4,879,872	\$225,158	\$0	\$615,018	\$1,469	\$841,645	N/A	N/A	N/A	N/A	N/A
Insight Partners XI	\$2,481,423	\$216,561	\$0	\$63,556	\$0	\$280,117	N/A	N/A	N/A	N/A	N/A
Vista Foundation Fund IV	-\$52,501	\$243,956	\$0	\$26,636	\$0	\$270,592	N/A	N/A	N/A	N/A	N/A



StanCERA Value Added Report

7/1/2020

through

9/30/2020

Manager	Average AUM	Manager Returns	Manager Fees	Custodial Fees	Primary Benchmark Returns	Secondary Benchmark Returns	Benchmark Fees*	Value Added Primary Benchmark	Value Added Secondary Benchmark
Dodge Cox Equity	\$ 82,160,316	\$ 3,617,926	\$ (46,381)	\$ (2,665)	\$ 4,595,058	None	\$ (5,117)	\$ (1,021,061)	\$ (1,021,061)
Bernzott	\$ 11,016,174	\$ 934,459	\$ (20,411)	\$ (1,443)	\$ 281,567	None	\$ (6,587)	\$ 637,624	\$ 637,624
Dimensional Fund Advisors	\$ 188,194,573	\$ 654,116	\$ (53,605)	\$ (2,824)	\$ 985,112	None	\$ (23,444)	\$ (363,982)	\$ (363,982)
LSV	\$ 234,441,234	\$ 4,915,830	\$ (147,823)	\$ (29,126)	\$ 3,468,265	\$ 14,911,192	\$ (181,070)	\$ 1,451,686	\$ (9,991,241)
Fidelity	\$ 262,294,883	\$ 21,630,323	\$ (261,838)	\$ (17,386)	\$ 16,682,771	None	\$ (202,583)	\$ 4,870,911	\$ 4,870,911
Channing	\$ 14,204,666	\$ 494,313	\$ (26,047)	\$ (2,597)	\$ 363,063	None	\$ (8,494)	\$ 111,100	\$ 111,100
Inview	\$ 12,073,391	\$ 264,228	\$ (22,067)	\$ (1,300)	\$ 308,589	None	\$ (7,219)	\$ (60,508)	\$ (60,508)
Keeley	\$ 8,388,068	\$ 215,583	\$ (15,346)	\$ (1,343)	\$ 214,394	None	\$ (5,016)	\$ (10,485)	\$ (10,485)
Pacific Ridge	\$ 11,743,346	\$ 140,161	\$ (25,652)	\$ (1,686)	\$ 229,612	None	\$ (7,022)	\$ (109,767)	\$ (109,767)
Walhausen	\$ 8,828,116	\$ 4,742	\$ (16,073)	\$ (1,724)	\$ 225,641	None	\$ (5,279)	\$ (233,417)	\$ (233,417)
Totals	\$ 833,344,765	\$ 32,871,682	\$ (635,243)	\$ (62,095)	\$ 27,354,072	\$ 14,911,192	\$ (451,830)	\$ 5,272,101	\$ (6,170,826)

* Benchmark fees are approximated based on a hypothetical investment in a passive fund/ETF

MONTHLY PERFORMANCE REPORT

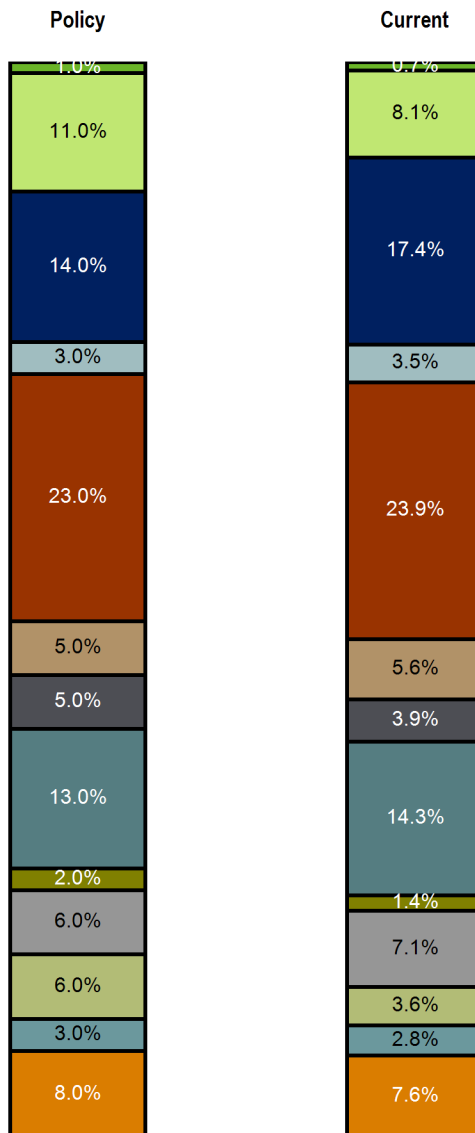
Stanislaus County ERA

December 31, 2020



BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | PORTLAND | SAN FRANCISCO

TOTAL FUND ASSET ALLOCATION VS. POLICY



Asset Allocation vs. Target						
	Current	Policy	Current	Policy Range	Within Range	
Total	\$2,483,689,234	100.0%	100.0%			
Cash	\$18,614,266	1.0%	0.7%	0.0% - 4.0%	Yes	
Cashflow-Matched Bonds	\$201,685,083	11.0%	8.1%	5.0% - 12.0%	Yes	
US Large Equity	\$431,136,229	14.0%	17.4%	10.0% - 18.0%	Yes	
US Small Equity	\$87,160,433	3.0%	3.5%	0.0% - 6.0%	Yes	
International Equity	\$593,999,533	23.0%	23.9%	14.0% - 32.0%	Yes	
Core Real Estate	\$139,667,858	5.0%	5.6%	0.0% - 10.0%	Yes	
Value-Add Real Estate	\$96,527,550	5.0%	3.9%	0.0% - 10.0%	Yes	
Risk Parity	\$355,374,870	13.0%	14.3%	8.0% - 18.0%	Yes	
Infrastructure	\$35,902,426	2.0%	1.4%	0.0% - 5.0%	Yes	
Private Equity	\$176,648,543	6.0%	7.1%	0.0% - 10.0%	Yes	
Private Credit	\$88,476,564	6.0%	3.6%	0.0% - 10.0%	Yes	
US Treasury Bonds	\$69,196,371	3.0%	2.8%	1.0% - 6.0%	Yes	
Short-Term Bonds	\$189,299,507	8.0%	7.6%	4.0% - 12.0%	Yes	

- The Private Equity allocation includes the Private Equity Proxy account value.

Stanislaus County ERA

TOTAL FUND NET PERFORMANCE DETAIL

	Market Value (\$)	% of Portfolio	1 Mo (%)	3 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund	2,483,689,234	100.0	3.2	9.9	9.3	14.3	9.3	7.0	8.8	8.1	9.0	Jan-95
Policy Index			2.9	9.3	11.6	14.6	11.6	7.9	9.2	8.2	8.2	Jan-95
Liquidity Sub-Portfolio	220,299,350	8.9	0.2	0.6	6.5	1.8	6.5	5.0	3.3	--	--	Apr-11
StanCERA Liquidity Blended BM			0.4	1.4	10.6	2.6	10.6	5.3	3.6	2.2	2.3	Apr-11
Cash	18,614,266	0.7	0.1	0.5	1.3	0.5	1.3	1.5	1.4	--	--	Apr-11
FTSE T-Bill 1 Month TR			0.0	0.0	0.5	0.0	0.5	1.5	1.1	0.6	0.6	Apr-11
Cashflow-Matched Bonds	201,685,083	8.1	0.2	0.6	6.8	1.9	6.8	5.3	--	--	4.7	Jun-17
BBgBarc US Govt/Credit Int TR			0.2	0.5	6.4	1.1	6.4	4.7	3.6	3.1	4.1	Jun-17
Insight	201,685,083	8.1	0.2	0.6	6.8	1.9	6.8	5.3	--	--	4.7	Jun-17
BBgBarc US Govt/Credit Int TR			0.2	0.5	6.4	1.1	6.4	4.7	3.6	3.1	4.1	Jun-17
Growth Sub-Portfolio	2,004,894,007	80.7	4.0	12.4	9.9	18.0	9.9	7.7	10.1	9.6	8.3	Dec-03
StanCERA Growth Blended BM			3.7	11.7	12.0	17.7	12.0	8.7	10.6	--	--	Dec-03
US Equities	518,296,662	20.9	4.8	17.0	17.8	26.9	17.8	12.3	13.6	12.9	9.9	Dec-03
Russell 3000			4.5	14.7	20.9	25.2	20.9	14.5	15.4	13.8	9.9	Dec-03
US Large Equity	431,136,229	17.4	4.3	14.3	21.1	25.2	21.1	14.9	15.3	14.1	12.9	Dec-94
Russell 1000			4.2	13.7	21.0	24.5	21.0	14.8	15.6	14.0	10.7	Dec-94
BlackRock Russell 1000 Growth	237,295,423	9.6	4.6	11.4	38.5	26.1	38.5	23.0	21.0	17.2	18.4	Jul-10
Russell 1000 Growth			4.6	11.4	38.5	26.1	38.5	23.0	21.0	17.2	18.3	Jul-10
BlackRock Russell 1000 Value	94,451,659	3.8	3.8	16.2	3.0	22.8	3.0	6.2	9.8	10.6	11.9	Jul-09
Russell 1000 Value			3.8	16.3	2.8	22.8	2.8	6.1	9.7	10.5	11.8	Jul-09
Dodge & Cox-Equity	99,389,147	4.0	4.1	20.0	5.6	25.3	5.6	7.0	11.7	11.7	11.8	Dec-94
Russell 1000 Value			3.8	16.3	2.8	22.8	2.8	6.1	9.7	10.5	9.8	Dec-94
US Small Equity	87,160,433	3.5	7.4	32.2	4.5	36.2	4.5	2.9	7.7	8.9	12.0	Dec-08
Russell 2000			8.7	31.4	20.0	37.9	20.0	10.2	13.3	11.2	13.7	Dec-08
Attucks Small Cap	87,160,433	3.5	7.4	32.2	4.5	36.2	4.5	2.9	9.7	9.3	12.2	Dec-08
Russell 2000 Value			7.9	33.4	4.6	36.8	4.6	3.7	9.7	8.7	10.9	Dec-08
International Equity	593,999,533	23.9	5.9	18.7	9.2	24.9	9.2	3.9	8.5	5.3	6.7	Sep-04
MSCI ACWI ex USA			5.4	17.0	10.7	24.3	10.7	4.9	8.9	4.9	6.4	Sep-04
LSV Int'l Large Cap Value	276,703,455	11.1	5.6	19.0	0.8	21.4	0.8	0.4	6.9	4.4	6.0	Sep-04
MSCI ACWI ex USA			5.4	17.0	10.7	24.3	10.7	4.9	8.9	4.9	6.4	Sep-04
Fidelity Int'l Growth	317,296,078	12.8	6.2	18.5	17.7	28.2	17.7	7.2	9.8	6.1	4.9	Apr-06
MSCI ACWI ex USA			5.4	17.0	10.7	24.3	10.7	4.9	8.9	4.9	4.0	Apr-06



TOTAL FUND NET PERFORMANCE DETAIL

	Market Value (\$)	% of Portfolio	1 Mo (%)	3 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Core Real Estate	139,667,858	5.6	1.1	2.3	-1.2	3.5	-1.2	3.4	4.1	3.7	2.2	Mar-08
NCREIF Property Index			0.0	0.0	0.5	0.7	0.5	4.5	5.7	8.9	5.7	Mar-08
Prime Property Fund	59,685,560	2.4	1.5	1.5	1.3	2.6	1.3	5.1	6.6	--	6.9	Sep-15
NCREIF ODCE			1.3	1.3	1.2	1.8	1.2	4.9	6.2	9.9	6.6	Sep-15
BlackRock Real Estate Securities	20,390,153	0.8	3.2	12.8	-11.3	13.7	-11.3	1.5	2.9	--	6.2	Sep-12
DJ US Select RESI TR USD			3.2	12.9	-11.2	13.9	-11.2	1.5	3.0	7.5	6.3	Sep-12
PGIM Real Estate US Debt Fund	59,592,145	2.4	0.0	0.0	3.2	1.2	3.2	--	--	--	4.7	Sep-18
BBgBarc US CMBS Investment Grade			0.8	1.2	7.6	3.2	7.6	5.6	4.7	4.5	7.3	Sep-18
Value-Add Real Estate	96,527,550	3.9	0.0	0.0	6.0	0.9	6.0	8.9	9.5	--	9.7	Jul-14
NCREIF Property Index +2%			0.2	0.5	2.5	1.7	2.5	6.6	7.8	11.0	9.5	Jul-14
American Strategic Value Realty	68,668,380	2.8	0.0	0.0	1.7	0.6	1.7	6.4	8.2	--	9.8	Dec-14
NCREIF Property Index			0.0	0.0	0.5	0.7	0.5	4.5	5.7	8.9	6.9	Dec-14
Greenfield Acquisition Partners VII	6,596,029	0.3	0.0	0.0	4.4	2.2	4.4	10.8	10.6	--	10.6	Jul-14
NCREIF-ODCE +1%			1.4	1.5	2.2	2.3	2.2	6.0	7.3	11.0	9.3	Jul-14
Greenfield Acquisition Partners VIII	21,263,141	0.9	0.0	0.0	19.9	1.4	19.9	--	--	--	16.5	Apr-18
NCREIF-ODCE +1%			1.4	1.5	2.2	2.3	2.2	6.0	7.3	11.0	5.6	Apr-18
Risk Parity	355,374,870	14.3	3.3	8.5	9.5	13.3	9.5	7.5	--	--	7.7	Nov-17
60% MSCI ACWI (Net)/ 40% BBgBarc Global Agg			3.3	10.1	14.0	16.7	14.0	8.3	9.5	6.8	8.5	Nov-17
AQR Global Risk Premium - EL	173,775,599	7.0	3.1	7.3	5.6	11.5	5.6	--	--	--	7.9	Apr-18
60% MSCI ACWI (Net)/ 40% BBgBarc Global Agg			3.3	10.1	14.0	16.7	14.0	8.3	9.5	6.8	9.1	Apr-18
PanAgora Risk Parity Multi Asset	181,599,271	7.3	3.5	9.6	13.6	15.0	13.6	8.6	--	--	8.8	Nov-17
60% MSCI ACWI (Net)/ 40% BBgBarc Global Agg			3.3	10.1	14.0	16.7	14.0	8.3	9.5	6.8	8.5	Nov-17
Infrastructure	35,902,426	1.4	0.0	0.0	1.8	-1.4	1.8	7.7	9.4	--	6.5	May-15
CPI + 5% (Unadjusted)			0.5	1.3	6.4	3.5	6.4	6.9	7.0	6.8	6.7	May-15
MS Infrastructure Partners II	35,902,426	1.4	0.0	0.0	1.8	-1.4	1.8	7.7	9.4	--	6.4	May-15
CPI + 5% (Unadjusted)			0.5	1.3	6.4	3.5	6.4	6.9	7.0	6.8	6.7	May-15
Private Equity	7,849,376	0.3	0.0	0.0	--	6.6	--	--	--	--	6.6	Apr-20
Russell 3000 + 3%			4.7	15.5	24.5	27.0	24.5	17.9	18.9	17.2	56.1	Apr-20
Private Equity Proxy	168,799,167	6.8	4.5	14.7	20.8	25.2	20.8	16.4	16.4	14.5	10.3	Nov-03
Russell 3000			4.5	14.7	20.9	25.2	20.9	14.5	15.4	13.8	10.1	Nov-03
Private Credit	88,476,564	3.6	0.0	0.0	-13.7	-4.5	-13.7	-2.0	-0.9	--	1.6	May-13
S&P/LSTA Leveraged Loan Index +2%			1.5	4.3	5.2	9.2	5.2	6.1	7.3	6.4	5.9	May-13



Stanislaus County ERA

TOTAL FUND NET PERFORMANCE DETAIL

	Market Value (\$)	% of Portfolio	1 Mo (%)	3 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Risk-Diversifying Sub-Portfolio	258,495,878	10.4	0.0	0.0	4.6	0.4	4.6	3.9	4.1	4.0	4.8	Nov-03
StanCERA Risk-Diversifying Blended BM			0.0	-0.2	5.1	0.0	5.1	3.9	2.9	2.4	--	Nov-03
US Treasury Bonds	69,196,371	2.8	-0.3	-1.1	8.8	-0.9	8.8	5.6	5.4	4.7	5.2	Nov-03
BBgBarc US Treasury 7-10 Yr TR			-0.3	-1.3	10.0	-1.0	10.0	6.4	4.5	4.6	--	Nov-03
Northern Trust Intermediate Gov't Bond	49,138,100	2.0	0.0	-0.2	5.7	-0.1	5.7	4.1	--	--	3.5	Jul-17
BBgBarc US Govt Int TR			0.0	-0.2	5.7	0.0	5.7	4.1	2.9	2.5	3.5	Jul-17
Northern Trust Long Term Gov't Bond	20,058,271	0.8	-1.2	-3.0	17.3	-2.9	17.3	9.8	--	--	9.6	Jul-17
BBgBarc US Govt Long TR			-1.2	-3.0	17.6	-2.8	17.6	9.8	7.8	7.7	9.7	Jul-17
Short-Term Bonds	189,299,507	7.6	0.1	0.4	3.2	0.9	3.2	3.2	--	--	2.8	Jul-17
BBgBarc US Govt/Credit 1-3 Yr. TR			0.1	0.2	3.3	0.4	3.3	3.0	2.2	1.6	2.6	Jul-17
DFA	189,299,507	7.6	0.1	0.4	3.2	0.9	3.2	3.2	--	--	2.8	Jul-17
BBgBarc US Govt/Credit 1-3 Yr. TR			0.1	0.2	3.3	0.4	3.3	3.0	2.2	1.6	2.6	Jul-17

- Investment data is estimated as of 12/31/2020 and is subject to change.



Stanislaus County ERA

NOTES

- All performance is shown net of investment management fees.

- Performance history is provided by Verus through June 2020. As of July 1, 2020 performance is calculated and reported by NEPC. Policy Index History:

- **Policy Index makeup history:**

- **Inception - 6/30/2017:** 14.4% Russell 1000 Value, 11.3% Russell 1000 Growth, 4.8% S&P 500, 4% Russell 2000 Value, 3.7% Russell 2000 Growth, 18% MSCI ACWI ex USA Gross, 29.8% BBgBarc US Aggregate TR, 3.5% DJ US Select RESI TR USD, 7.5% 9% Annual, 3% CPI + 4%
- **7/1/2017 - 8/31/2018:** 18.5% Russell 1000, 5.5% Russell 2000, 24% MSCI ACWI ex USA Gross, 19% BBgBarc US Govt/Credit 1-3 Yr. TR, 1% FTSE T-Bill 1 Month TR, 3%BBgBarc US Treasury 7-10 Yr TR, 7.7% NCREIF Property Index, 1.7% NCREIF Property Index +2%, 0.6% CPI + 5%, 5% BBgBarc US High Yield + 2%, 14% 60% MSCI ACWI Net/40% BBgBarc Global Aggregate
- **9/1/2018 - 5/30/2019:** 10% Russell 1000, 3% Russell 2000, 6% Russell 3000 +3%, 27% MSCI ACWI ex USA Gross, 20% BBgBarc US Govt/Credit 1-3 Yr. TR, 1% FTSE T-Bill 1 Month TR, 3% BBgBarc US Treasury 7-10 Yr TR, 5% NCREIF Property Index, 5% NCREIF Property Index +2%, 1% CPI + 5%, 6% S&P/LSTA Leveraged Loan Index+2%, 13% 60% MSCI ACWI Net/40% BBgBarc Global Aggregate
- **6/1/2019 - 6/30/2020:** 14% Russell 1000, 3% Russell 2000, 6% Russell 3000 + 3%, 23% MSCI ACWI ex-USA, 19% BBgBarc US Gov't/Credit 1-3 Yr, 1% Citi 1 Month T-Bills, 3% BBgBarc US Treasury 7-10 Yr, 5% NCREIF Property, 5% NCREIF Property +2%, 2% CPI +5%, 6% S&P/LSTA Leveraged Loan Index + 2%, 13% 60% MSCI ACWI / 40%BBgBarc Global Aggregate
- **7/1/2020 - Present:** 14% Russell 1000, 3% Russell 2000, 6% Russell 3000 + 3%, 23% MSCI ACWI ex-USA, 8% BBgBarc US Gov't/Credit 1-3 Yr, 1% Citi 1 Month T-Bills, 3% BBgBarc US Treasury 7-10 Yr, 5% NCREIF Property, 5% NCREIF Property +2%, 2% CPI +5%, 6% S&P/LSTA Leveraged Loan Index + 2%, 13% 60% MSCI ACWI / 40%BBgBarc Global Aggregate, 11% BBgBarc US Intermediate.

- Starting July 1, 2020, the small Capital Prospects transition cash balance is moved from the Cash composite to the Capital Prospects account. Historical performance for Capital Prospects, US Small, US Equities, Growth Sub-Portfolio, Cash, and Liquidity Sub-Portfolio prior to July 1, 2020 reflects performance of these composites before this change.

- Private Equity investments are valued one quarter lagged and adjusted for capital calls and distributions between quarter-end months.

- Value-Add Real Estate managers are valued quarterly adjusted for current cashflows.



Stanislaus County ERA

FUND ASSET GROWTH SUMMARY BY MANAGER

	Month Ending December 31, 2020					
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	Ending Market Value
American Strategic Value Realty	\$68,668,380	\$0	\$0	\$0	\$0	\$68,668,380
AQR Global Risk Premium - EL	\$168,459,358	\$0	\$0	\$0	\$5,316,241	\$173,775,599
Bernzott	\$12,958,036	\$0	\$0	\$0	\$936,760	\$13,894,796
BlackRock Real Estate Securities	\$19,750,464	\$0	\$0	\$0	\$639,689	\$20,390,153
BlackRock Russell 1000 Growth	\$226,867,115	\$0	\$0	\$0	\$10,428,308	\$237,295,423
BlackRock Russell 1000 Value	\$90,967,086	\$0	\$0	\$0	\$3,484,573	\$94,451,659
Capital Prospects Transition	\$58	\$0	\$0	\$0	\$0	\$58
Cash Account	\$16,395,306	\$3,838,109	-\$1,643,433	\$2,194,676	\$24,285	\$18,614,266
Channing	\$17,684,184	\$0	\$0	\$0	\$1,480,283	\$19,164,467
DFA	\$189,027,946	\$0	\$0	\$0	\$271,561	\$189,299,507
Dodge & Cox-Equity	\$95,492,527	\$0	\$0	\$0	\$3,896,620	\$99,389,147
Fidelity Int'l Growth	\$298,669,749	\$1,311	\$0	\$1,311	\$18,625,018	\$317,296,078
Greenfield Acquisition Partners VII	\$10,433,818	\$0	-\$3,837,789	-\$3,837,789	\$0	\$6,596,029
Greenfield Acquisition Partners VIII	\$21,263,141	\$0	\$0	\$0	\$0	\$21,263,141
Insight	\$201,362,591	\$0	\$0	\$0	\$322,492	\$201,685,083
Insight Partners XI	\$4,475,420	\$3,030,000	\$0	\$3,030,000	\$0	\$7,505,420
InView	\$15,227,278	\$0	\$0	\$0	\$1,339,904	\$16,567,182
Keeley	\$10,415,537	\$0	\$0	\$0	\$844,178	\$11,259,715
LSV Int'l Large Cap Value	\$261,951,098	\$0	\$0	\$0	\$14,752,357	\$276,703,455
Medley Capital	\$7,265,468	\$0	-\$2	-\$2	\$0	\$7,265,467
MS Infrastructure Partners II	\$35,902,426	\$0	\$0	\$0	\$0	\$35,902,426
Northern Trust Intermediate Gov't Bond	\$49,117,832	\$0	\$0	\$0	\$20,268	\$49,138,100
Northern Trust Long Term Gov't Bond	\$20,303,082	\$0	\$0	\$0	-\$244,811	\$20,058,271
Northern Trust Russell 3000	\$163,506,580	\$0	-\$1,980,000	-\$1,980,000	\$7,272,588	\$168,799,167
Owl Rock First Lien Fund	\$6,961,927	\$0	\$0	\$0	\$0	\$6,961,927



Stanislaus County ERA

FUND ASSET GROWTH SUMMARY BY MANAGER

	Month Ending December 31, 2020					
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	Ending Market Value
Pacific Ridge	\$14,557,208	\$0	\$0	\$0	\$717,170	\$15,274,379
PanAgora Risk Parity Multi Asset	\$175,492,989	\$0	\$0	\$0	\$6,106,282	\$181,599,271
PGIM Real Estate US Debt Fund	\$59,592,145	\$0	\$0	\$0	\$0	\$59,592,145
Prime Property Fund	\$58,818,289	\$0	\$0	\$0	\$867,271	\$59,685,560
Raven Opportunity I	\$4,625,223	\$0	\$0	\$0	\$0	\$4,625,223
Raven Opportunity III	\$44,664,576	\$593,433	\$0	\$593,433	\$0	\$45,258,009
Vista Foundation Fund IV	\$343,956	\$0	\$0	\$0	\$0	\$343,956
Waltheusen	\$10,240,210	\$0	\$0	\$0	\$759,627	\$10,999,837
White Oak Pinnacle	\$24,365,938	\$0	\$0	\$0	\$0	\$24,365,938
Total	\$2,405,826,940	\$7,462,852	-\$7,461,224	\$1,629	\$77,860,666	\$2,483,689,234



Information Disclaimer

- Past performance is no guarantee of future results.
- All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.
- NEPC's source for portfolio pricing, calculation of accruals, and transaction information is the plan's custodian bank. Information on market indices and security characteristics is received from other sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.
- Some index returns displayed in this report or used in calculation of a policy, allocation or custom benchmark may be preliminary and subject to change.
- This report is provided as a management aid for the client's internal use only. Information contained in this report does not constitute a recommendation by NEPC.
- This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.

Reporting Methodology

- The client's custodian bank is NEPC's preferred data source unless otherwise directed. NEPC generally reconciles custodian data to manager data. If the custodian cannot provide accurate data, manager data may be used.
- Trailing time period returns are determined by geometrically linking the holding period returns, from the first full month after inception to the report date. Rates of return are annualized when the time period is longer than a year. Performance is presented gross and/or net of manager fees as indicated on each page.
- For managers funded in the middle of a month, the "since inception" return will start with the first full month, although actual inception dates and cash flows are taken into account in all Composite calculations.
- This report may contain forward-looking statements that are based on NEPC's estimates, opinions and beliefs, but NEPC cannot guarantee that any plan will achieve its targeted return or meet other goals.



REAL ASSETS (REAL ESTATE AND INFRASTRUCTURE) STRATEGIC INVESTMENT PLAN

STANISLAUS COUNTY EMPLOYEES' RETIREMENT SYSTEM

January 2021



BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | PORTLAND | SAN FRANCISCO

REAL ASSETS

NEPC, LLC

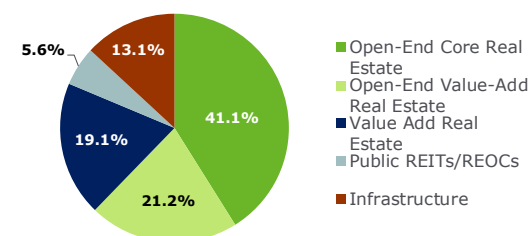
SEPT 2020

STRATEGY AND VINTAGE YEAR EXPOSURES

Real Assets NAVs and Exposures

Investment Strategy	Current Valuation (NAV)	Capital to be Funded	Total Current Exposure	% of Total Exposure
Open-End Core Real Estate	\$118	\$15	\$133	41%
Open-End Value-Add Real Estate	\$69	\$0	\$69	21%
Value Add Real Estate	\$37	\$25	\$62	19%
Public REITs/REOCs	\$18	\$0	\$18	6%
Infrastructure	\$36	\$7	\$43	13%
Total / Wtd. Avg.	\$278	\$47	\$325	100.0%

Portfolio Exposure



Investments by Vintage Year

Vintage Year	Commitment	Paid In Capital	Capital to be Funded	Cumulative Distributed	Current Valuation (NAV)	Total Value	Net Benefit	Call Ratio	DPI Ratio	TVPI Ratio
2014	\$85	\$82	\$2	\$12	\$79	\$91	\$7	97%	0.15x	1.11x
2015	\$50	\$43	\$7	\$33	\$36	\$69	\$21	87%	0.76x	1.58x
2018	\$42	\$19	\$23	\$2	\$27	\$28	\$7	46%	0.10x	1.49x
2020	\$137	\$122	\$15	\$1	\$136	\$137	\$15	89%	0.01x	1.12x
Total	\$313	\$267	\$47	\$47	\$278	\$325	\$51	85%	0.18x	1.22x

EXISTING COMMITMENTS

Existing Real Assets Investments

Open-End Core Real Estate

Fund Name	Vintage Year	Committed	Paid In Capital	Capital to be Funded	Cumulative Distributed	Current Valuation (NAV)	Total Value	Net benefit	DPI Ratio	TVPI Ratio
Prime Property Fund	2020	\$59.0	\$50.0	\$9.0	\$0.0	\$58.8	\$58.8	\$8.8	0.00x	1.18x
PGIM Real Estate US Debt	2020	\$60.0	\$54.0	\$6.0	\$0.1	\$59.6	\$59.7	\$5.6	0.00x	1.11x
Total Open-End Core Real Estate		\$119.0	\$104.0	\$15.0	\$0.1	\$118.4	\$118.5	\$14.5	0.00x	1.14x

Open-End Value-Add Real Estate

Fund Name	Vintage Year	Committed	Paid In Capital	Capital to be Funded	Cumulative Distributed	Current Valuation (NAV)	Total Value	% of Dividends Reinvested	Current Redemption Requests	Redemption Request Year
American Strategic Value Realty	2014	\$68.0	\$68.0	\$0.0	\$0.2	\$68.7	\$68.9	100%	\$0.0	NA
Total Open-End Value-Add Real Estate		\$68.0	\$68.0	\$0.0	\$0.2	\$68.7	\$68.9	NA	\$0.0	NA

Value Add Real Estate

Fund Name	Vintage Year	Committed	Paid In Capital	Capital to be Funded	Cumulative Distributed	Current Valuation (NAV)	Total Value	Net benefit	DPI Ratio	TVPI Ratio
Greenfield Gap VII	2014	\$16.5	\$14.3	\$2.2	\$11.8	\$10.4	\$22.2	\$6.4	0.82x	1.55x
Greenfield Gap VIII	2018	\$41.9	\$19.1	\$22.8	\$1.9	\$26.6	\$28.5	\$7.3	0.10x	1.49x
Total Value Add Real Estate		\$58.4	\$33.4	\$25.0	\$13.8	\$37.0	\$50.7	\$13.7	0.41x	1.52x

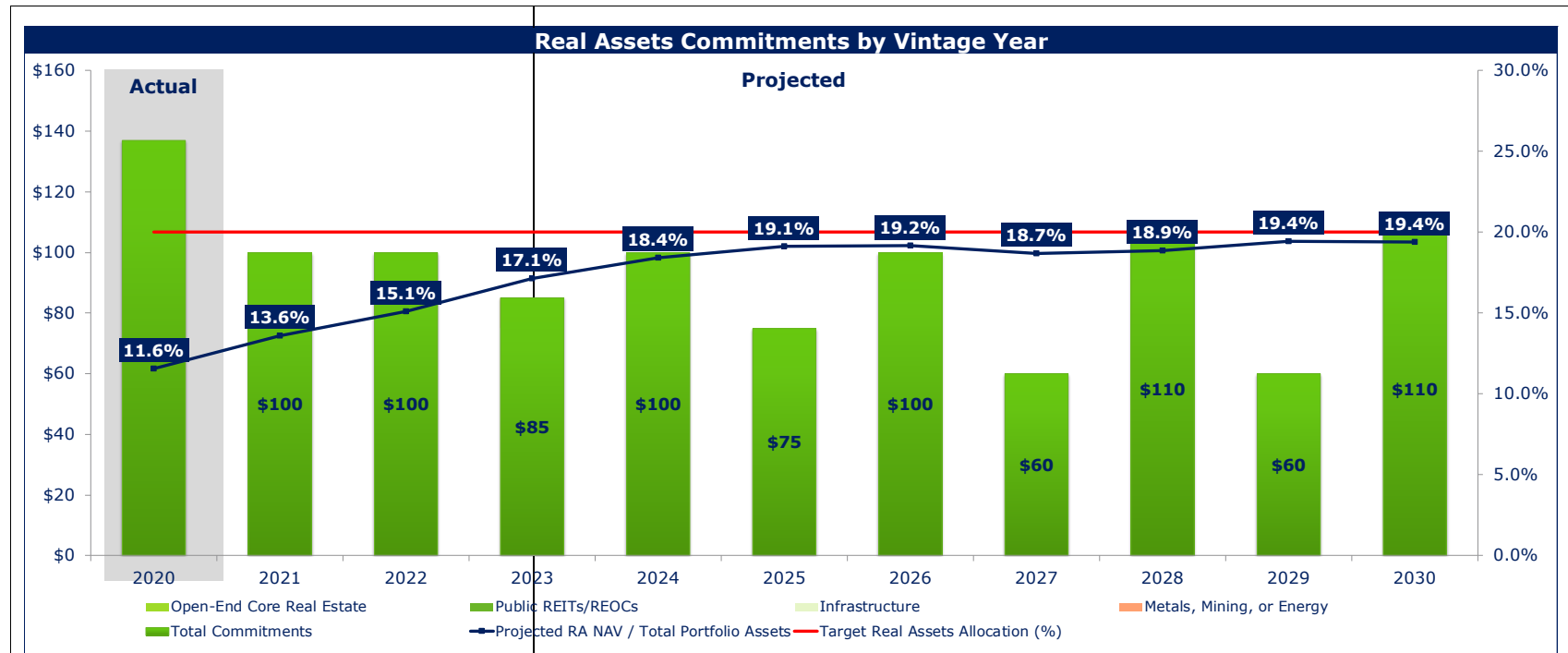
Public REITs/REOCs

Fund Name	Vintage Year	Committed	Paid In Capital	Capital to be Funded	Cumulative Distributed	Current Valuation (NAV)	Total Value	Net benefit	% of Dividends Reinvested	Current Redemption Requests
BlackRock US Real Estate	2020	\$18.0	\$18.0	\$0.0	\$0.6	\$18.1	\$18.6	\$0.6	100%	NA
Total Public REITs/REOCs		\$18.0	\$18.0	\$0.0	\$0.6	\$18.1	\$18.6	\$0.6	NA	NA

Infrastructure

Fund Name	Vintage Year	Committed	Paid In Capital	Capital to be Funded	Cumulative Distributed	Current Valuation (NAV)	Total Value	Net benefit	DPI Ratio	TVPI Ratio
MS Infrastructure Partners II	2015	\$50.0	\$43.3	\$6.7	\$32.7	\$35.9	\$68.6	\$21.4	0.76x	1.58x
Total Infrastructure		\$50.0	\$43.3	\$6.7	\$32.7	\$35.9	\$68.6	\$21.4	0.76x	1.58x

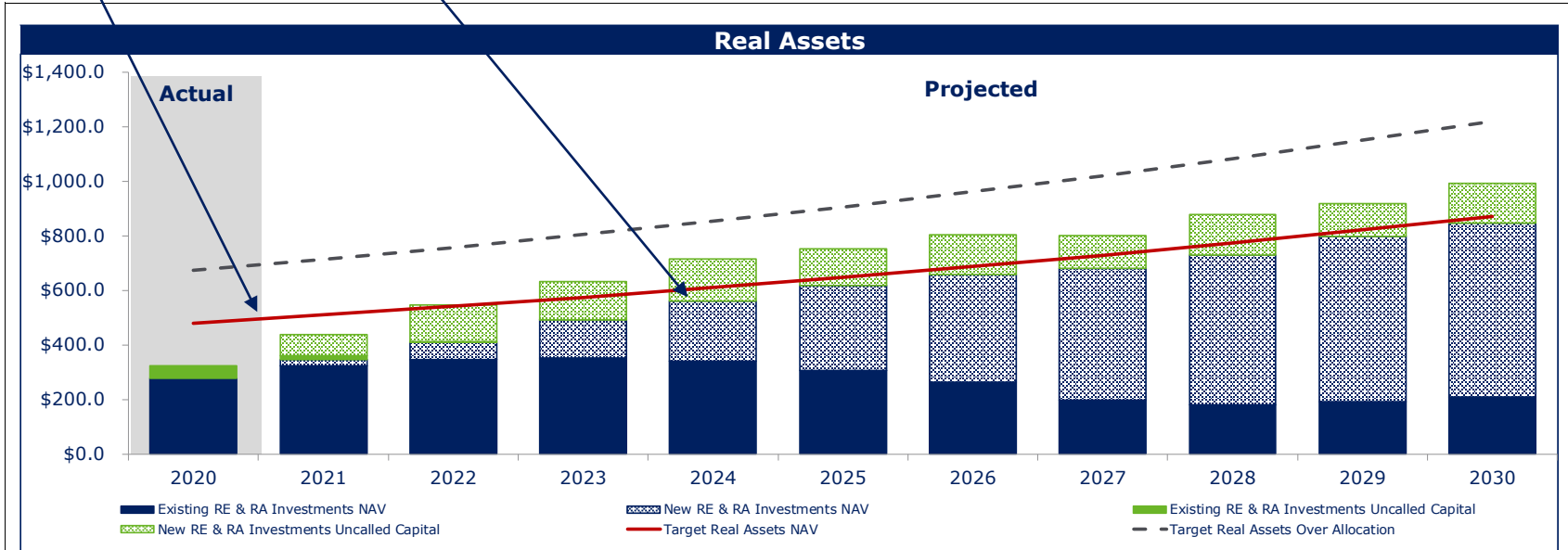
COMMITMENTS & PROJECTIONS



		Real Assets Commitments by Vintage Year										
Commitments		Actual	More Certain				Less Certain					
		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
	Open-End Core Real Estate	\$119	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Value Add Real Estate	\$0	\$0	\$100	\$0	\$100	\$0	\$100	\$0	\$110	\$0	\$110
	Public REITs/REOCs	\$18	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Infrastructure	\$0	\$90	\$0	\$75	\$0	\$75	\$0	\$60	\$0	\$60	\$0
	Metals, Mining, or Energy	\$0	\$10	\$0	\$10	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Total Commitments	\$137	\$100	\$100	\$85	\$100	\$75	\$100	\$60	\$110	\$60	\$110
	Projected RA NAV / Total Portfolio Assets	11.6%	13.6%	15.1%	17.1%	18.4%	19.1%	19.2%	18.7%	18.9%	19.4%	19.4%
	Target Real Assets Allocation (%)	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%

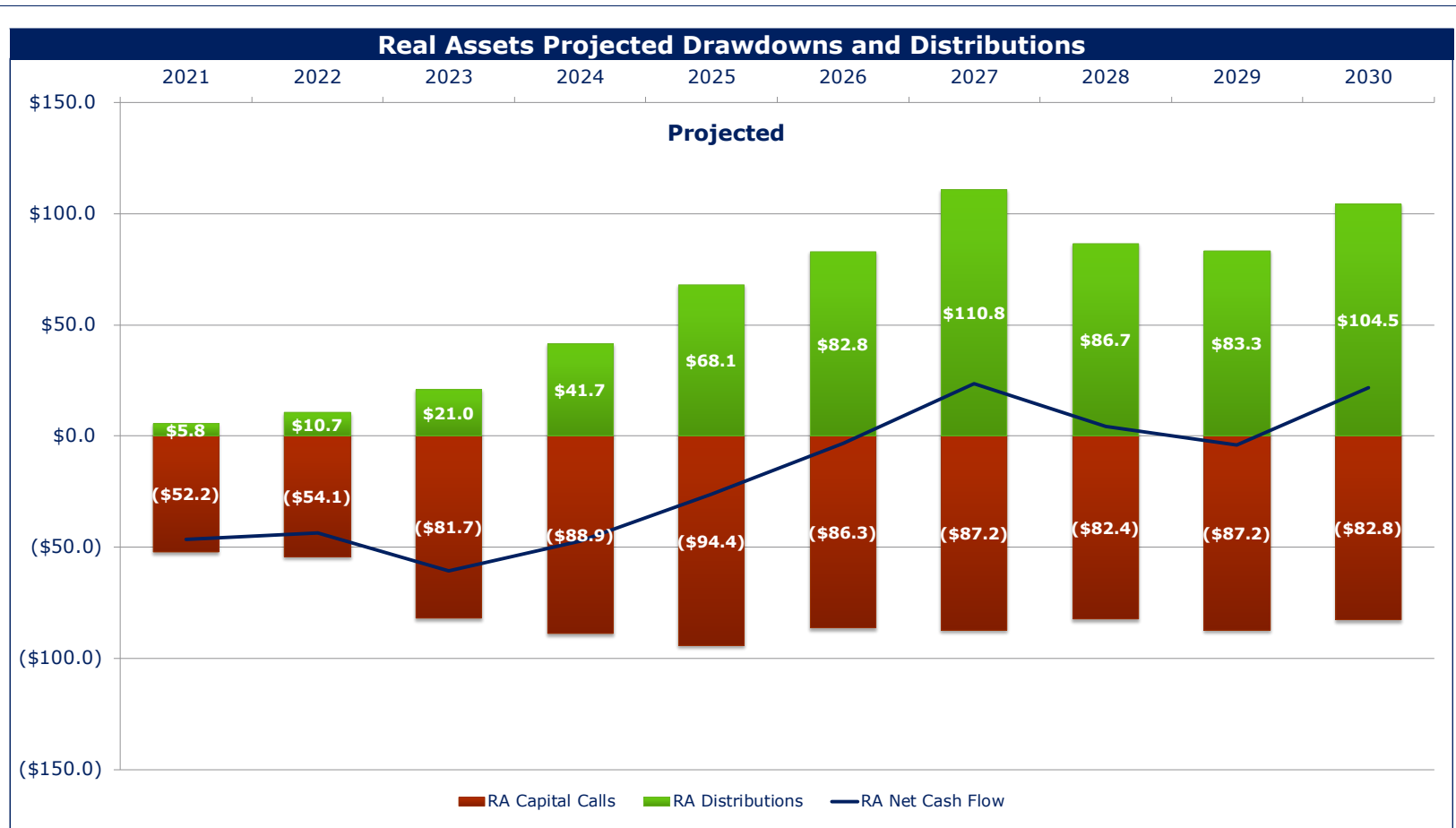
ASSET LEVEL PROJECTIONS

- **Red line** is the **20.0%** target real assets allocation based on projected plan total NAV; **Black dashed line** is the 1.4x over-commitment pace.
- Goal is to keep the real estate NAV (**blue bar**) plus uncalled capital commitments (**green bar**), between red line and black dashed line while aligning the blue bar with the red target line.



Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Real Assets NAV	\$278	\$346	\$409	\$492	\$562	\$619	\$658	\$681	\$730	\$798	\$845
Uncalled Capital Commitments	\$47	\$92	\$138	\$141	\$152	\$133	\$147	\$120	\$147	\$120	\$147
RA NAV + Uncalled Capital Commitments	\$325	\$439	\$547	\$633	\$715	\$752	\$805	\$801	\$877	\$918	\$993
Target Real Assets NAV	\$480	\$510	\$541	\$574	\$610	\$647	\$687	\$729	\$774	\$821	\$872
Weighted Over-Commitment Pace	1.4x	1.4x	1.4x	1.4x	1.4x	1.4x	1.4x	1.4x	1.4x	1.4x	1.4x
Target Real Assets Over Allocation	\$672	\$714	\$758	\$804	\$853	\$906	\$961	\$1,020	\$1,083	\$1,150	\$1,220
Percent of Total Plan Assets											
Real Assets NAV (%)	11.6%	13.6%	15.1%	17.1%	18.4%	19.1%	19.2%	18.7%	18.9%	19.4%	19.4%
RA Uncalled Capital Commitments (%)	1.9%	3.6%	5.1%	4.9%	5.0%	4.1%	4.3%	3.3%	3.8%	2.9%	3.4%
NAV + Uncalled Capital Commitments (%)	13.5%	17.2%	20.2%	22.1%	23.4%	23.2%	23.4%	22.0%	22.7%	22.4%	22.8%
Target Real Assets Allocation (%)	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%

PROJECTED CASH FLOWS



Year	Projected									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
RA Capital Calls	(\$52.2)	(\$54.1)	(\$81.7)	(\$88.9)	(\$94.4)	(\$86.3)	(\$87.2)	(\$82.4)	(\$87.2)	(\$82.8)
RA Distributions	\$5.8	\$10.7	\$21.0	\$41.7	\$68.1	\$82.8	\$110.8	\$86.7	\$83.3	\$104.5
RA Net Cash Flow	(\$46.4)	(\$43.5)	(\$60.8)	(\$47.3)	(\$26.3)	(\$3.5)	\$23.6	\$4.4	(\$3.9)	\$21.7

PRIVATE MARKETS APPENDIX

MODEL INPUTS AND ASSUMPTIONS

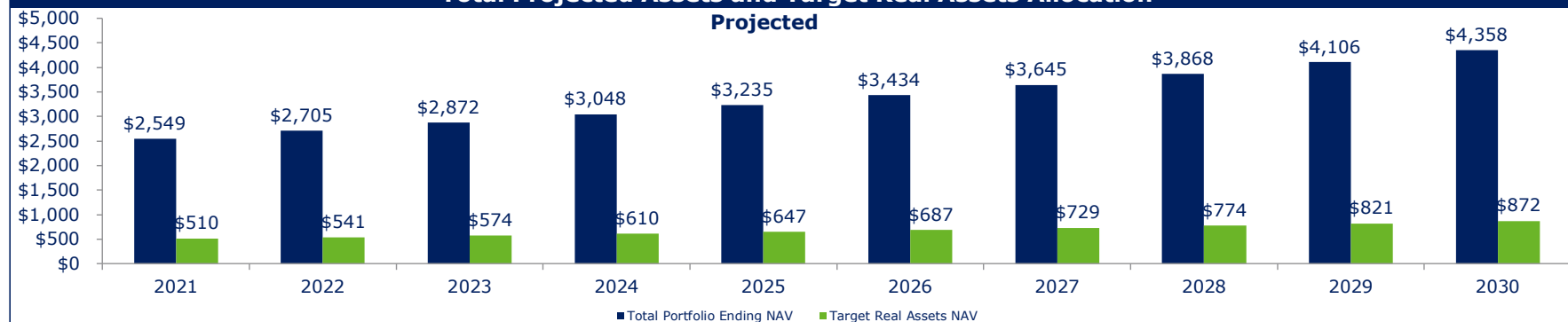
General Assumptions

Total Portfolio Assets	\$2,402	Portfolio Return Assumptions	2021	2022	2023
Total Real Assets NAV	\$278	Target Investment Return	6.1%	6.1%	6.1%
Total Real Assets Capital to be Funded	\$47	Contributions	0.0%	0.0%	0.0%
Total Real Assets Exposure	\$325	Payouts	0.0%	0.0%	0.0%
		Expenses	0.0%	0.0%	0.0%
Total Real Assets NAV / Total Portfolio Assets	11.6%	Reserve for Expenses	0.0%	0.0%	0.0%
Total Real Assets Exposure / Total Portfolio Assets	13.5%	Net Growth Rate	6.1%	6.1%	6.1%
Target Real Assets Allocation % (Current Target)	20.0%	Portfolio-Level data as of	11/30/20		
		Fund-Level data as of	06/30/20		

Total Projected Assets

	Projected									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total Portfolio Net Growth Rate	6.1%	6.1%	6.1%	6.1%	6.1%	6.1%	6.1%	6.1%	6.1%	6.1%
Total Portfolio Beginning NAV	\$2,402	\$2,549	\$2,705	\$2,872	\$3,048	\$3,235	\$3,434	\$3,645	\$3,868	\$4,106
Yearly Net Growth	\$147	\$157	\$166	\$176	\$187	\$199	\$211	\$224	\$238	\$252
Total Portfolio Ending NAV	\$2,549	\$2,705	\$2,872	\$3,048	\$3,235	\$3,434	\$3,645	\$3,868	\$4,106	\$4,358
Target Real Assets Allocation	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Target Real Assets NAV	\$510	\$541	\$574	\$610	\$647	\$687	\$729	\$774	\$821	\$872

Total Projected Assets and Target Real Assets Allocation



NEPC'S CURRENT REAL ESTATE OUTLOOK

Real Estate Market Observations

- **Divergence among winners and losers will continue**
- **We do not believe that “office is dead”, though there are likely to be some headwinds, and the recovery will be uneven**
- **Real estate capital markets are functioning properly**
- **Anticipate some distressed opportunities, though size of opportunity remains to be seen (substantial dry powder exists)**

Actions & Client Positioning

- **Focus on managers with a proven ability to adapt to changing market conditions**
- **Identify targeted strategies that emphasize property types with strong demand tailwinds**
- **For clients with largely core exposures, look to augment with value-add, debt strategies, and/or REITs**

NEPC'S CURRENT INFRASTRUCTURE OUTLOOK

Infrastructure Market Observations

- Existing structural trends accelerated in 2020 due to COVID and lockdowns
- The demand for data growth is leading to increased investment in digital infrastructure
- Energy markets are transitioning, but complexities to production, consumption, and adoption of new technologies still exist

Actions & Client Positioning

- Focus on managers with demonstrated experience of investing across business cycles
- Maintain pacing plan allocations – vintage year diversification is very important
- Niche sectors may offer differentiated exposure to positive macroeconomic tailwinds

PACING PLAN DISCLAIMERS

- **NEPC's private markets pacing analysis projects a potential level of future assets and cash flows for a single scenario based on a series of assumptions. This analysis is intended to help estimate future exposure levels. It is not a guarantee of future cash flows, appreciation or returns.**
- **The timing and amounts of projected future cash flows and market values of investments could vary significantly from the amounts projected in this pacing analysis due to manager-specific and industry-wide macroeconomic factors.**
- **Estimates of projected cash flows and market values for existing private markets commitments were made at the Fund level and do not incorporate any underlying portfolio company projections or analysis.**
- **The opinions presented herein represent the good faith views of NEPC as of the date of this report and are subject to change at any time.**
- **Data used to prepare this report was obtained directly from the investment managers and other third parties. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.**
- **This report may contain confidential or proprietary information and is intended only for the designated recipient(s). If you are not a designated recipient, you may not copy or distribute this document.**

ALTERNATIVE INVESTMENT DISCLOSURES

It is important that investors understand the following characteristics of non-traditional investment strategies including hedge funds and private equity:

- 1. Performance can be volatile and investors could lose all or a substantial portion of their investment**
- 2. Leverage and other speculative practices may increase the risk of loss**
- 3. Past performance may be revised due to the revaluation of investments**
- 4. These investments can be illiquid, and investors may be subject to lock-ups or lengthy redemption terms**
- 5. A secondary market may not be available for all funds, and any sales that occur may take place at a discount to value**
- 6. These funds are not subject to the same regulatory requirements as registered investment vehicles**
- 7. Managers may not be required to provide periodic pricing or valuation information to investors**
- 8. These funds may have complex tax structures and delays in distributing important tax information**
- 9. These funds often charge high fees**
- 10. Investment agreements often give the manager authority to trade in securities, markets or currencies that are not within the manager's realm of expertise or contemplated investment strategy**



To: Stanislaus County Employees' Retirement Association
From: Daniel Hennessy and Kiley Fischer
Date: January 19, 2021
Subject: Interim 1Q 2021 Plan Policy Recommendation

The new asset allocation that StanCERA approved in November 2020 includes increased private markets allocations and the introduction of a new asset class. In both cases it will take some time to approve and fund new managers. For this reason we plan to adjust the policy allocation that is used to help evaluate investment performance in several steps instead of all at once.

Based on the current rebalance plan proposed by StanCERA staff, we propose an initial adjustment for the March 2021 quarter's performance report as follows:

Asset Class	Previous Policy	Proposed 1Q21 Interim Policy	Long-Term Policy
Cash	1.0%	1.0%	1.0%
Cashflow-Matched Bonds	11.0%	7.0%	7.0%
US Large Equity	14.0%	16.0%	16.0%
US Small Equity	3.0%	3.5%	4.0%
Private Equity	6.0%	6.5%	5.0%
International Equity	23.0%	23.0%	20.0%
Core Real Estate	5.0%	6.0%	6.5%
Value-Add Real Estate	5.0%	5.0%	6.0%
Infrastructure	2.0%	2.0%	7.5%
Private Credit	6.0%	6.0%	8.0%
US Treasury Bonds	3.0%	5.0%	6.0%
Short-Term Bonds	8.0%	6.0%	
Risk Parity	13.0%	13.0%	10.0%
Liquid Absolute Return	0.0%	0.0%	3.0%
	100.0%	100.0%	100.0%

January 26, 2021

Retirement Board Agenda Item

TO: Retirement Board

FROM: Stan Conwell, Retirement Investment Officer

- I. SUBJECT: Preliminary Rebalance Plan
- II. ITEM NUMBER: 8.a.
- III. ITEM TYPE: Information Only
- IV. STAFF RECOMMENDATION: None
- V. ANALYSIS:

Attachment 1 provides an overview of the preliminary rebalance plan from an asset class level.

Phased Rebalance

With the adoption of the new strategic asset allocation, the process of moving the portfolio toward the new long-term target allocation is underway. Broadly speaking, the new strategic allocation increases the growth sub-portfolio, while reducing and differentiating the risk-diversifying sub-portfolio. The liquidity sub-portfolio was also reduced in size. The allocation to private markets increased and given the illiquid nature of the private asset classes and the need follow pacing plans, it's expected that becoming fully invested in private markets will take years. However, the investment policy statement (IPS) allows for the use of public market proxies which can be added to the portfolio as a placeholder of sorts to achieve a similar risk and return profile intended by the strategic asset allocation. The rebalance will take place across three phases and many transactions so only a small fraction of the portfolio is in motion at any one time to reduce out of market risk.

Below is an overview of each phase:

Phase 1:

The rebalance begins by focusing on transactions between existing managers. The bulk of the transactions will be from the liquidity sub-portfolio into the risk diversifying sub-portfolio. A modest rebalance within the growth sub-portfolio is planned to average the cost basis of the REIT investments across multiple transactions.

Phase 2:

This phase will increase and reshape the growth sub-portfolio toward the new long-term target allocations and utilize public market proxies where appropriate.

Phase 3:

The final phase will coincide with the search for the liquid absolute return manager. The use of proxies may not be needed as the underlying securities in this phase of the

rebalance exhibit good liquidity and the time to become fully invested is expected to take less time.

Transition Manager

Given the size and range of transactions across asset classes needed to rebalance, the use of a transition manager may make sense for all or part of the portfolio rebalance. Since the movement of assets within the portfolio incurs both explicit and implicit costs, a transition manager can add value by helping to reduce those costs through skilled project management of the transition that avoids unnecessary costs, minimizes time out of the market, and manages risks. Many transition managers do not charge an explicit fee but earn revenue for their services through commissions they receive by managing the transactions. The market for qualified transition managers is relatively small given the deep resources, experience, and trading capabilities needed. StanCERA staff will work closely with NEPC to review and engage with a transition manager if sufficient benefit to StanCERA is demonstrated.

- VI. RISK: None
- VII. STRATEGIC PLAN: N/A
- VIII. ADMINISTRATIVE BUDGET IMPACT: NONE

Preliminary StanCERA Rebalance Plan
Attachment #1

Asset Class	Current Allocation (Estimate)	Phase 1: Rebalance Among Existing Managers	Phase 1 Target	Phase 2: Rebalance Using Proxies Where Appropriate	Phase 2 Target	Phase 3: Rebalance Risk Diversifying Sub-Portfolio	Long Term Target Allocation
Liquidity Sub-Portfolio	8.9%	-\$50,000,000	6.8%	\$1,000,000	6.9%	\$5,000,000	8%
Cash	0.7%		0.7%	\$1,000,000	0.8%	\$5,000,000	1%
Short-Term Gov't/Credit	8.1%	-\$50,000,000	6.1%		6.1%		7%
Growth Sub-Portfolio	66.5%	\$0	66.5%	\$178,000,000	73.6%	\$0	73%
US Large	17.3%	-\$15,000,000	16.7%		16.7%		16%
US Small	3.5%		3.5%	\$10,000,000	3.9%		4%
Private Equity	7.1%	-\$15,000,000	6.5%	-\$37,000,000	5.0%		5%
International Developed	23.9%		23.9%	-\$96,000,000	20.0%		20%
Core Real Estate	4.8%	\$30,000,000	6.0%	\$14,000,000	6.6%		6.5%
Value Add Real Estate	4.8%		4.8%	\$27,000,000	5.9%		6%
Infrastructure	1.4%		1.4%	\$150,000,000	7.5%		7.5%
Private Credit	3.6%		3.6%	\$110,000,000	8.0%		8%
Risk-Diversifying Sub-Portfolio	24.7%	\$50,000,000	26.7%	-\$179,000,000	19.5%	-\$5,000,000	19%
US Treasury	2.8%	\$50,000,000	4.8%	\$10,000,000	5.2%	\$20,000,000	6%
Short-Term Gov't/Credit	7.6%		7.6%	-\$189,000,000	0.0%		0%
Risky Parity	14.3%		14.3%		14.3%	-\$100,000,000	10%
Liquid Absolute Return	0.0%		0.0%		0.0%	\$75,000,000	3%
Total	100.0%	\$0	100.0%	\$0	100.0%	\$0	100%

January 26, 2021

Retirement Board Agenda Item

TO: Retirement Board

FROM: Stan Conwell, Retirement Investment Officer

- I. SUBJECT: Investment Policy Statement Directive #3 Update
- II. ITEM NUMBER: 8.b.
- III. ITEM TYPE: Discussion and Action
- IV. STAFF RECOMMENDATION: Approve changing the private credit proxy to the BofA ML US High Yield Master II Constrained Index and the infrastructure proxy to a 67%/33% mix of publicly traded infrastructure equities and Treasury Inflation Protected Securities (TIPS).
- V. ANALYSIS:

Attachment 1: Redline version of Directive #3. No changes are proposed for any other part of the investment policy statement.

Attachment 2: NEPC Private Credit proxy recommendation memo

Attachment 3: NEPC Infrastructure proxy recommendation memo

Directive #3 of the investment policy statement identifies appropriate public market proxies for illiquid strategies for use in the portfolio to achieve the strategic asset allocation. Proxies provide a way to closely match the target allocation while the portfolio follows a multi-year pacing plan to become fully invested.

The new strategic asset allocation for StanCERA increases the target allocations to private markets and given this increased exposure, staff and NEPC reviewed the current proxies in directive #3. As a result of the review, investment staff and NEPC are recommending changes to the private credit and infrastructure proxies.

Private Credit Proxy:

Currently the private credit proxy is the Bloomberg Barclays US High Yield 2% Cap Index. A very similar alternative is the BofA ML US High Yield Master II Constrained Index. The main difference between the indexes is that the BofA ML index has a greater issue size limit, reducing the number of bonds in the index. Further analysis reveals a similar historical performance and a high R squared indicating the indexes generally move in tandem.

Another important factor is the availability of funds that track each index. Here we find a greater opportunity set of funds that follow the BofA ML index and more importantly a greater selection of low-fee passive funds. Currently, there are no passive funds that follow Bloomberg Barclays index that are suitable for StanCERA. Outperformance by active high-yield managers is also less common with the median active manager underperforming its benchmark net of fees.

Because of its high degree of similarity and greater selection of funds, including suitable low-fee passive strategies, staff and NEPC recommend changing the private credit proxy to the BofA ML US High Yield Master II Constrained Index.

Infrastructure Proxy:

The target allocation to Infrastructure increased from 2% to 7.5% with the new strategic asset allocation. With a relatively small 2% allocation the use of US REITs as a proxy has been adequate, particularly since it was primarily utilized to maintain a target allocation to strategies that were fully funded. However, at larger allocations the increased volatility inherent in public REITs can adversely impact the broader portfolio.

To reduce that risk staff and NEPC are recommending changing the infrastructure proxy from US REITs to a mix of publicly traded infrastructure equities and Treasury Inflation Protected Securities (TIPS). In scenario testing conducted by NEPC, the most optimal mix was a two-thirds allocation to passive infrastructure equity funds and a one-third allocation to TIPS. By incorporating more stable TIPS, the overall volatility of the proxy is reduced and by swapping REITs for an index of public infrastructure companies, the proxy is expected to be a better match of the private infrastructure asset class. Staff and NEPC recommend changing the infrastructure proxy to a 67%/33% mix of publicly traded infrastructure equities and TIPS.

- VI. RISK: None
- VII. STRATEGIC PLAN: N/A
- VIII. ADMINISTRATIVE BUDGET IMPACT: NONE

Investment Policy Statement – Directive # 3

Proxies for Illiquid Strategies

Background

Because real estate, infrastructure, private equity and private credit (collectively private market) strategies typically require years to draw committed capital and because they typically begin returning capital before ever being fully funded, it is necessary to identify proxy strategies so that the Plan achieves its desired asset allocation. The identified proxy strategies work in concert with the private markets strategies to fulfill capital calls, absorb distributions, and contribute the desired risk and return characteristics to the investment program.

The Executive Director and any other Investment Staff shall have discretion to select the specific investment vehicle based on available options, market conditions and the expected time horizon that the proxy is expected to be in use.

Directive

This investment strategies identified in this Directive are to serve as proxy strategies listed in the following table:

Private Market

Strategy

Public Market Proxy

Private Equity

Russell 3000 Index

Private Credit

~~BofA ML High Yield Master II Constrained Index Bloomberg Barclays
US High Yield 2% Cap Index~~

Real Estate

US REITs

Infrastructure

~~67%/33% mix of public infrastructure equity and Treasury Inflation-
Protected Securities (TIPS)US REITs~~

Review

This Board shall review this policy / directive at least every three years.

History

Adopted by the Retirement Board on 02/28/17

Revised 5/28/2019

Stanislaus County Employees' Retirement Association Investment Policy Statement
Directive #3 Proxies for Illiquid Strategies

A handwritten signature in black ink, appearing to read 'Richard Santos', written over a horizontal line.

Richard Santos, Executive Director

POLICY/DIRECTIVE APPROVAL DATE: _____



NEPC, LLC

To: Stanislaus County Employees' Retirement Association
From: Daniel Hennessy, CFA, CAIA
Date: December 4, 2020
Subject: Private Credit Proxy Recommendation

StanCERA uses public market proxies of private market asset classes to help achieve and maintain the desired asset allocation. The current proxy for private credit is the Bloomberg Barclays US High Yield 2% Cap Index, but there are very few commingled index fund options that follow that specific benchmark. We recommend changing the private credit proxy to a very similar benchmark, the BofA ML High Yield Master II Constrained Index. We also recommend that StanCERA use the BlackRock U.S. High Yield Bond Index Fund strategy, which seeks to mirror the proposed benchmark, as its private credit proxy.

The Bloomberg and BofA benchmarks are very similar in nature, and the tracking error between the two is smaller than what index providers can typically achieve seeking to match either index. The main difference between the two is the minimum issuer size for inclusion: the Bloomberg index tracks issuers as small as \$150M while the BoA index uses a \$250M minimum issue size. This leads to the Bloomberg index having ~50 more issuers and ~100 more actual bonds, relative to the BofA index.

The primary reason that we are recommending the change is that there are no good commingled fund options seeking to mirror the Bloomberg index – the best available lacks sufficient assets to match an index with 1,000+ different securities closely. The BlackRock U.S. High Yield Bond Index Fund, on the other hand, is large enough to successfully track the BofA benchmark. NEPC views BlackRock as a reliable index fund provider given their stability, track-record, and research capabilities.

We believe that using an index fund as the Private Credit Proxy, instead of an active high yield bond strategy, is beneficial for StanCERA. Active management would increase tracking error and fees. It could also introduce potential liquidity issues. We further note that the performance dispersion across active U.S. High Yield strategies tracked in eVestment has been relatively narrow, and more often than not the median active strategy has underperformed its benchmark after fees, indicating that this sector lends itself to low-cost index fund approaches.



NEPC, LLC

To: Stanislaus County Employees' Retirement Association

From: Daniel Hennessy, CFA, CAIA

Date: January 19, 2021

Subject: Infrastructure Proxy Recommendation

StanCERA uses public market proxies of private market asset classes to help achieve and maintain the desired asset allocation. The current proxy for infrastructure is U.S. REITs, but that proxy is much more appropriate for private real estate than it is for private infrastructure. REITs primarily own real estate assets such as apartments, office buildings, and shopping centers. Private infrastructure is defined as physical assets that provide essential services to society. Examples can include railroads, regulated utilities, ports, private toll roads and telecommunication networks. Infrastructure assets are sometimes owned by REITs, but are more commonly owned by corporations or private partnerships.

There are many public infrastructure equity indices available to choose from, including offerings from Brookfield, FTSE, S&P, and STOXX. The various indices differ greatly in terms of industry exposures, with some investing in more volatile infrastructure service companies like construction or cement. Some even invest in arguably non-infrastructure companies involved with retail or mining. Considered as a group these indices only partially match private infrastructure's best characteristics – uncorrelated returns, low risk, and inflation protection. For this reason we believe that the best public market proxy of private infrastructure for StanCERA would be a 67%/33% combination of public infrastructure equity and Treasury Inflation Preferred Securities (TIPS). Private infrastructure investments often have fixed income-like characteristics and income streams that are tied to inflation rates, which is why we recommend using TIPS as a portion of the private infrastructure proxy.

We evaluated the largest and most liquid public infrastructure equity and TIPS index strategies available. We focused on index strategies because they are lower-cost and are often more liquid than comparable active strategies. After reviewing the options carefully we recommend that StanCERA use the following two strategies as its private infrastructure proxy:

- Two-thirds invested in the FlexShares STOXX Global Broad Infrastructure Index ETF because of its broad diversification and lower historical volatility than most other public infrastructure options
- One-third invested in the Northern Trust Collective TIPS Index Fund because of its extremely low cost, daily liquidity, and low tracking error



StanCERA's custodian bank, Northern Trust, will assist with rebalancing these two strategies monthly to maintain their 2:1 ratio as the private infrastructure proxy. Although the combined fee is higher than the cost of StanCERA's other private market proxies, the combination is cheaper than most of the plan's active strategies, and we believe that the combination is the best available option.

January 26, 2021

Retirement Board Agenda Item

TO: Retirement Board

FROM: Rick Santos, Executive Director

- I. SUBJECT: 2020 Actuarial Valuation
- II. ITEM NUMBER: 9.b.
- III. ITEM TYPE: Discussion and Action
- IV. STAFF RECOMMENDATION: Accept the 2020 Actuarial Valuation as presented
- V. EXECUTIVE SUMMARY

This agenda item seeks approval for the 2020 Actuarial Valuation which sets funded status for the System as of June 30, 2020 and employer and employee rates for fiscal year 2021-2022. Some notable statistics from this and the prior year valuation follows (all figures except percentages in millions):

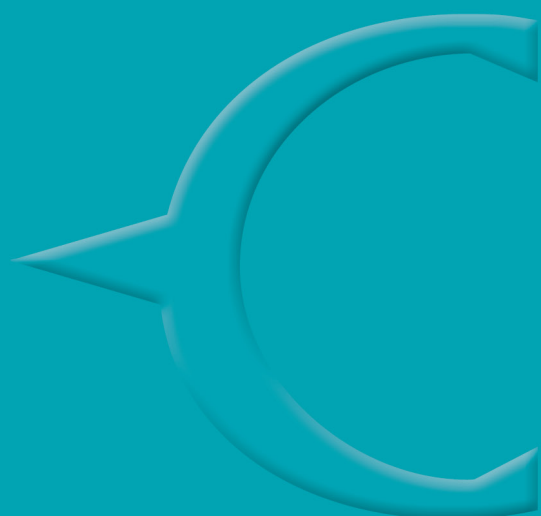
	<u>2019 Valuation</u>	<u>2020 Valuation</u>
Market Value Unfunded Liability	\$712.4	\$846.5
Funded Status	75.90%	75.60%
Aggregate Employer Rate	31.45%	33.20%
Asset Gain/(Loss)	(\$28.7)	(\$42.1)
Liability Gain/(Loss)	(\$30.8)	(\$7.4)
Aggregate Employer Payroll	\$298.9	\$300.6

As of the fiscal year 2020-2021, the unfunded amortization period for the System is at 15 years. Most likely, staff and the StanCERA system actuary will be coming to the Board in a couple years to discuss a revised amortization schedule which would be designed to reduce rate volatility as we move forward.

Additionally, the Inactive to Active ratio continues to increase upwards, however, at a lower pace than what the System experienced roughly 10 years ago. The Inactive to Active ratio can be considered a "support ratio" in that it is a theoretical measure of the financial support from contributing active members to help fund current beneficiaries. It is entirely natural for a mature system to move into a state where benefit payments exceed current contributions.

This measure does not have the same connotations as our Social Security System, since all proceeds from those active members are being used to support benefits paid to Social Security recipients. StanCERA mitigates the support risk by maintaining a large pool of asset reserves and insures short-term retiree benefit payments through current contributions and safe fixed income investments designed to throw off cash at just the right time to pay the shortfalls (benefits less contributions).

- VI. RISK: None
- VII. STRATEGIC PLAN: N/A
- VIII. ADMINISTRATIVE BUDGET IMPACT: None



Stanislaus County Employees' Retirement Association

**Actuarial Valuation as of
June 30, 2020**

Produced by Cheiron

January 2021

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
Letter of Transmittal	i
Foreword	ii
Section I Executive Summary	1
Section II Disclosures Related to Risk	11
Section III Assets	23
Section IV Liabilities	31
Section V Contributions.....	35
Section VI Required CAFR Exhibits	42
 <u>Appendices</u>	
Appendix A Membership Information	45
Appendix B Statement of Current Actuarial Assumptions and Methods	64
Appendix C Summary of Plan Provisions.....	77
Appendix D Glossary	87
Appendix E Member Contribution Rates.....	89

January 21, 2021

Board of Retirement
Stanislaus County Employees' Retirement Association
832 12th Street, Suite 600
Modesto, CA 95353

Dear Members of the Board:

At your request, we have conducted an actuarial valuation of the Stanislaus County Employees' Retirement Association (StanCERA, the Fund, the Plan) as of June 30, 2020. This report contains information on the Plan's assets and liabilities. This report also discloses employer contribution levels and required disclosures for the Plan's CAFR. Your attention is called to the Foreword in which we refer to the general approach employed in the preparation of this report.

The purpose of this report is to present the results of the annual actuarial valuation of StanCERA. This report is for the use of StanCERA and its auditors in preparing financial reports in accordance with applicable law and accounting requirements. Any other user of this report is not an intended user and is considered a third party.

Cheiron's report was prepared solely for StanCERA for the purposes described herein, except that the Plan auditor may rely on this report solely for completing an audit related to the matters herein. It is not intended to benefit any third party, and Cheiron assumes no duty or liability to any such party.

This report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys and our firm does not provide any legal services or advice.

Sincerely,
Cheiron

A handwritten signature in blue ink, appearing to read "Graham Schmidt".

Graham A. Schmidt, ASA, FCA, MAAA, EA
Consulting Actuary

A handwritten signature in blue ink, appearing to read "Jonathan B. Chipko".

Jonathan B. Chipko, FSA, MAAA, EA
Consulting Actuary

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

FOREWORD

Cheiron has performed the actuarial valuation of the Stanislaus County Employees' Retirement Association as of June 30, 2020. The valuation is organized as follows:

- In Section I, the **Executive Summary**, we describe the purpose of an actuarial valuation, summarize the key results found in this valuation, and disclose important trends;
- The **Main Body** of the report presents details on the Plan's
 - Section II – Identification and Assessment of Risks
 - Section III - Assets
 - Section IV - Liabilities
 - Section V - Contributions
 - Section VI - Required CAFR Exhibits
- In the **Appendices** we conclude our report with detailed information describing Plan membership (Appendix A), actuarial assumptions and methods employed in the valuation (Appendix B), a summary of pertinent Plan provisions (Appendix C), a glossary of key actuarial terms (Appendix D), and tables containing member contribution rates (Appendix E).

Future results may differ significantly from the current projections presented in this report due to such factors as the following: plan experience differing from that anticipated by the assumptions; changes in assumptions; and changes in plan provisions or applicable law. Subsequent to the valuation date, the California State Supreme Court issued a decision that may affect benefits paid to some current and future retirees. The impact of this decision is not yet known, and therefore will be reflected in a future valuation report.

In preparing our report, we relied on information (some oral and some written) supplied by the StanCERA staff. This information includes, but is not limited to, Plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

Cheiron utilizes ProVal, an actuarial valuation application leased from Winklevoss Technologies (WinTech), to calculate liabilities and project benefit payments. We have relied on WinTech as the developer of ProVal. We have reviewed ProVal, have a basic understanding of it, and have used it in accordance with its original intended purpose. We have not identified any material inconsistencies in assumptions or output of ProVal that would affect this report. The deterministic and stochastic projections shown in this report were developed using R-scan, our proprietary stochastic projection tool for assessing probabilities of different outcomes. We have relied on Cheiron colleagues who developed the tool, and we have used the tool in accordance with its purpose.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION I – EXECUTIVE SUMMARY

The primary purpose of the actuarial valuation and this report is to measure, describe, and identify the following as of the valuation date:

- The funded status of the Plan,
- Past and expected trends in the funding progress of the Plan,
- Employer and employee contribution rates for Plan Year 2021-2022, and
- An assessment and disclosure of key risks.

In the balance of this Executive Summary, we present (A) the basis upon which this year's valuation was completed, (B) the key findings of this valuation including a summary of all key results, (C) an examination of the historical trends, and (D) the projected outlook for the Plan.

A. Valuation Basis

This valuation determines the employer contributions required for the employers' fiscal years beginning July 1, 2021. The employers include the County of Stanislaus and related employers, the City of Ceres, and other participating Special Districts.

The Plan's funding policy is to collect contributions from the employers and employees equal to the sum of:

- The Normal Cost under the Entry Age Normal Cost Method,
- Amortization of the Unfunded Actuarial Liability (UAL), and
- The Fund's expected administrative expenses.

The UAL payment is determined as the amount needed to fund the outstanding UAL as of June 30, 2020 over a period of 16 years as a level percentage of pay.

This valuation was prepared based on the Plan provisions shown in Appendix C.

Actuarial experience studies are performed every three years. This valuation was performed based on the economic and demographic assumptions that were determined in the Actuarial Experience Study performed by Cheiron as of June 30, 2018 and reviewed by the Board on January 22, 2019. This valuation is the third to use the assumptions determined in the above experience study. A summary of the assumptions and methods used in the current valuation is shown in Appendix B.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION I – EXECUTIVE SUMMARY

B. Key Findings of this Valuation

The key results of the June 30, 2020 actuarial valuation are as follows:

- The actuarially determined employer contribution rate increased from 31.45% of payroll to 33.20% of payroll for the current valuation.
- The Plan's funded ratio, the ratio of Actuarial Assets over Actuarial Liability, decreased from 75.9% to 75.6%. Likewise, the Plan's funded ratio on a market value basis decreased from 75.4% to 72.1%.
- The Unfunded Actuarial Liability (UAL) is the excess of the Plan's Actuarial Liability over the Actuarial Value of Assets. The Plan experienced an increase in the UAL from \$697.3 million to \$738.4 million as of June 30, 2020. This increase in UAL was largely due to investment and demographic experience losses.
- During the year ending June 30, 2020, the return on Plan assets was 0.84% on a market value basis net of investment (but not administrative) expenses, as compared to the 7.00% assumption. The Actuarial Value of Assets recognizes 20% of the difference between the expected and actual return on the Market Value of Assets (MVA). This method of smoothing the asset gains and losses returned 5.04% on the smoothed value of assets, an actuarial asset loss of \$42.1 million. The loss in the Actuarial Value of Assets reflects the continued recognition of past investment gains and losses, with past investment gains offsetting the impact of the loss for the current year and leading to a higher actuarial value return than market value return.
- During the 2019-20 Plan Year, the actuarial liabilities of the Plan increased more than expected, with key factors being losses associated with new retirements and larger Cost of Living Adjustments (COLAs) than expected for members in pay status, offset by lower pay increases than expected for continuing actives. These and other unexpected changes resulted in a liability loss of \$7.4 million.
- Overall participant membership increased from 9,627 to 9,793 total members compared to last year. There were 435 new hires and rehires during 2019-2020 but the total active population decreased 1.02%, from 4,504 to 4,458. Total projected payroll increased from \$298,900,309 to \$300,575,911, or 0.56%.

In Tables I-1 and I-2 on the next page, we summarize the key results of the valuation with respect to assets and liabilities, contributions and membership. The results are presented and compared for both the current and prior Plan year.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION I – EXECUTIVE SUMMARY

Table I-1 Stanislaus County Employees' Retirement Association Summary of Key Valuation Results (in millions)			
Valuation Date	June 30, 2019	June 30, 2020	Absolute
Fiscal Year End	2021	2022	Change
Actuarial Liability	\$ 2,897.2	\$ 3,028.6	\$ 131.4
Actuarial Value of Assets ¹	2,200.0	2,290.3	90.3
Unfunded Actuarial Liability (Actuarial Value)	\$ 697.3	\$ 738.4	\$ 41.1
Funding Ratio (Actuarial Value)	75.9%	75.6%	-0.3%
Market Value of Assets ¹	2,184.8	2,182.2	(2.6)
Unfunded Actuarial Liability (Market Value)	\$ 712.4	\$ 846.5	\$ 134.1
Funding Ratio (Market Value)	75.4%	72.1%	-3.3%
Net Employer Contribution Rate	31.45%	33.20%	1.75%

¹ Net of non-valuation reserves.

Table I-2 Membership Total			
Item	June 30, 2019	June 30, 2020	% Change
Actives	4,504	4,458	-1.0%
Deferred Members	1,122	1,158	3.2%
Retired Members	4,001	4,177	4.4%
Total Members	9,627	9,793	1.7%
Ratio of Inactive Members to Active Members	113.7%	119.7%	
Active Member Payroll (FYE 2020/2021)	\$ 298,900,309	\$ 300,575,911	0.6%
Average Pay per Active	\$ 66,363	\$ 67,424	1.6%

The ratio of inactive members (i.e. those receiving benefits or those entitled to a deferred benefit) to active members is a measure of the maturity of the plan. It shows how many inactive members are supported by each active member. A higher ratio indicates a more mature plan and potentially higher risk since the retiree benefits are larger relative to the contribution base, i.e. the active member payroll. Table I-2 shows that the ratio of inactive members to active members increased this year due to an increase in inactive members and a decrease in the active workforce, indicating the ongoing maturation of the Plan.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION I – EXECUTIVE SUMMARY

Changes in UAL

The Unfunded Actuarial Liability (UAL) for StanCERA increased by \$41.1 million, from \$697.3 million to \$738.4 million. Table I-3 below presents the specific components of the change in the UAL.

As noted above, the return on the actuarial assets used to compute the UAL and the employer contribution rate was 5.04% during the 2019-20 Plan Year. Investment returns less than the assumed rate of 7.00% increased the UAL by \$42.1 million.

Liability losses increased the UAL by \$7.4 million, driven by losses associated with new retirements and larger Cost of Living Adjustments (COLAs) than expected for members in pay status offset by lower pay increases than expected for continuing actives.

The UAL also increased by \$1.3 million due to contributions smaller than the actuarially determined cost. This is primarily a result of the 12-month lag in the implementation of contribution rates and lower than expected payroll growth.

The expected change in the UAL due to the yearly amortization of the UAL balance – a decrease of \$9.7 million, as a result of the amortization schedule for the current year – combined with the above UAL changes to produce an overall increase of \$41.1 million.

Table I-3 Change in Unfunded Actuarial Liability	
Experience	in millions
1. Unfunded actuarial liability, 6/30/2019	\$ 697.3
2. Expected change in unfunded actuarial liability	\$ (9.7)
3. Unfunded increase due to investment loss	42.1
4. Unfunded increase due to contribution deficit	1.3
5. Unfunded increase due to liability loss	7.4
6. Unfunded decrease due to assumption changes	0
7. Total change in unfunded actuarial liability	\$ 41.1
8. Unfunded actuarial liability, 6/30/2020	\$ 738.4

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION I – EXECUTIVE SUMMARY

Changes in Employer Contributions

Thus far, the experience of the 2019-20 Plan year has been presented in terms of the UAL and funded ratio. Table I-4 below summarizes the impact of actuarial experience and changes in assumptions on the employer contribution rate.

Table I-4 Employer Contribution Reconciliation				
Item	Total	Normal Cost	Amortization	Admin Expense
<i>FYE 2021 Net Employer Contribution Rate</i>	<i>31.45%</i>	<i>11.56%</i>	<i>18.92%</i>	<i>0.97%</i>
Change Due to Asset Loss	1.16%	0.00%	1.16%	0.00%
Change Due to Contribution Deficit	0.04%	0.00%	0.04%	0.00%
Change Due to Demographic Changes	0.04%	-0.16%	0.20%	0.00%
Change Due to Effect of Payroll on Amortization	0.51%	0.00%	0.49%	0.02%
Change Due to Assumption Changes	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>
Total Change	1.75%	-0.16%	1.89%	0.02%
<i>FYE 2022 Net Employer Contribution Rate</i>	<i>33.20%</i>	<i>11.40%</i>	<i>20.81%</i>	<i>0.99%</i>

- Asset experience produced an investment loss on a smoothed basis, as described earlier. The smoothed loss increased the contribution rate by 1.16% of pay.

The ratio of Actuarial to Market Value of Assets is 104.9%. There are now \$108.2 million in net deferred losses as of June 30, 2020. However, there is also \$21.8 million in a non-valuation Contingency Reserve.

- The Plan received a smaller contribution than the actuarially determined cost for the prior plan year. The net impact of the deficit was an increase in the employer contribution rate by 0.04% of pay.
- The demographic experience of the Plan – rates of retirement, death, disability, and termination, as well as salary and COLA changes – caused an increase in employer contribution rate of 0.04% of pay. Losses associated with new retirees and COLA increases were the largest factor contributing to an increase in the Unfunded Actuarial Liability and the associated amortization payment. The increase in the amortization payment was offset by lower than expected pay increases for continuing active members, and also by a reduction in the employer-paid Normal Cost as a result of the continued transition of the active workforce to membership in the new PEPPRA tiers, which reflect lower benefit levels for new hires.
- Overall payroll was lower than expected by about \$7.3 million, increasing 0.56% compared to the 3.00% assumption. As a result, the unfunded liability amortization payment and administrative expenses were spread over a smaller payroll base than expected, and the employer contribution rate increased by 0.51% of pay.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

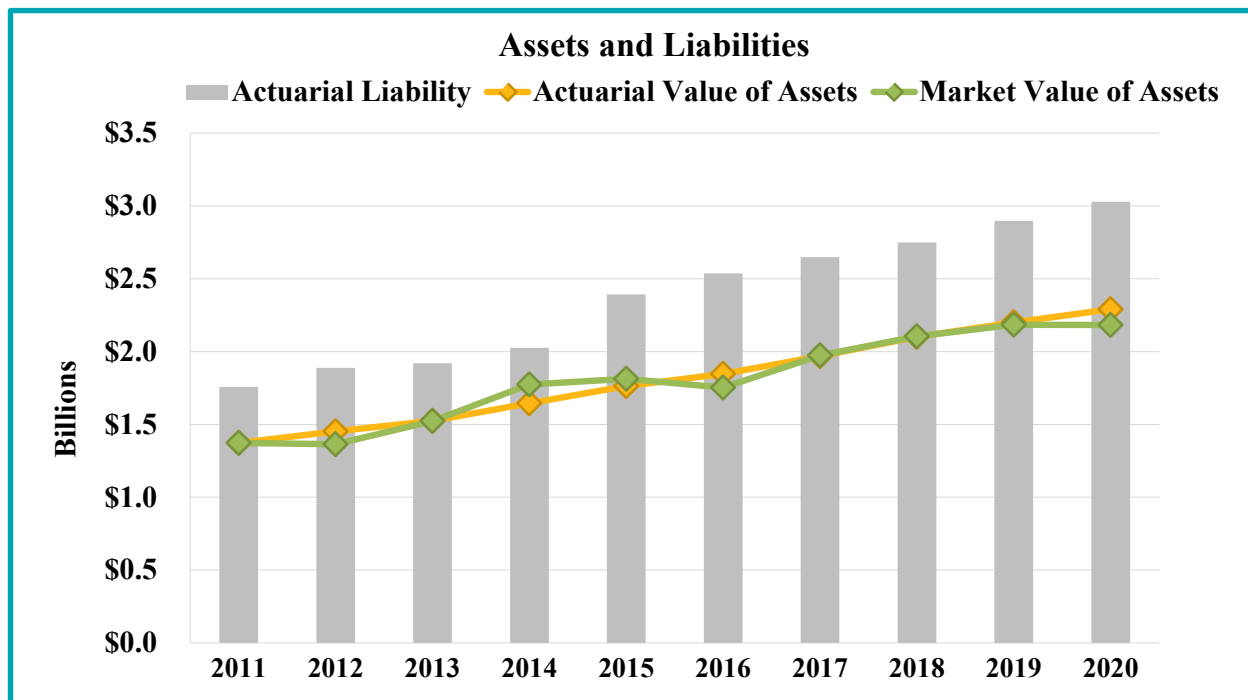
SECTION I – EXECUTIVE SUMMARY

C. Historical Trends

Despite the fact that for most retirement plans the greatest attention is given to the current valuation results and in particular, the size of the current Unfunded Actuarial Liability and the employer contribution, it is important to remember that each valuation is merely a snapshot in the long-term progress of a pension fund. It is more important to judge a current year's valuation result relative to historical trends, as well as trends expected into the future.

Assets and Liabilities

The chart below compares the Market Value of Assets (MVA) and Actuarial Value of Assets (AVA) to the Actuarial Liabilities. The percentage shown in the table below the graph is the ratio of the Actuarial Value of Assets to the Actuarial Liability (the funded ratio). The funded ratio has decreased from 78.1% in 2011 to 75.6% as of June 30, 2020. The large drop in the funded ratio in 2015 was primarily due to changes in assumptions. The drop in the funded ratio from last year to this year was a result of investment and liability losses.



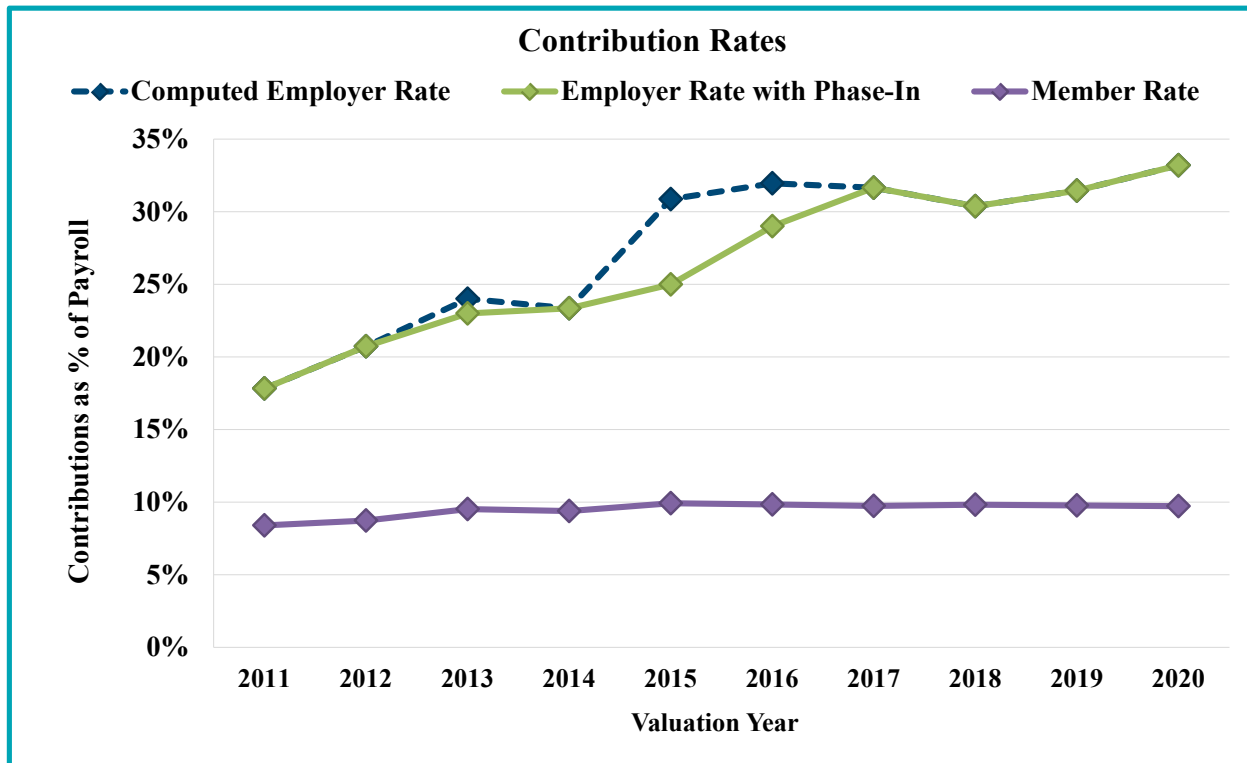
Valuation Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Funded Ratio	78.1%	76.9%	79.4%	81.1%	73.7%	72.8%	74.3%	76.4%	75.9%	75.6%
UAL (Billions)	\$ 0.39	\$ 0.44	\$ 0.40	\$ 0.38	\$ 0.63	\$ 0.69	\$ 0.68	\$ 0.65	\$ 0.70	\$ 0.74

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020

SECTION I – EXECUTIVE SUMMARY

Contribution Trends

In the chart below, we present the historical trends for the StanCERA contribution rates. The employer contribution rates have risen since 2011, primarily as a result of the investment losses from 2008-2009 as well as changes to the actuarial assumptions and methods. The average employee contribution rates have also increased as the Plan's economic and demographic assumptions have changed. The phase-in recognizes significant changes in the computed employer rate over a set period to help manage the financial impact for the Plan sponsors.



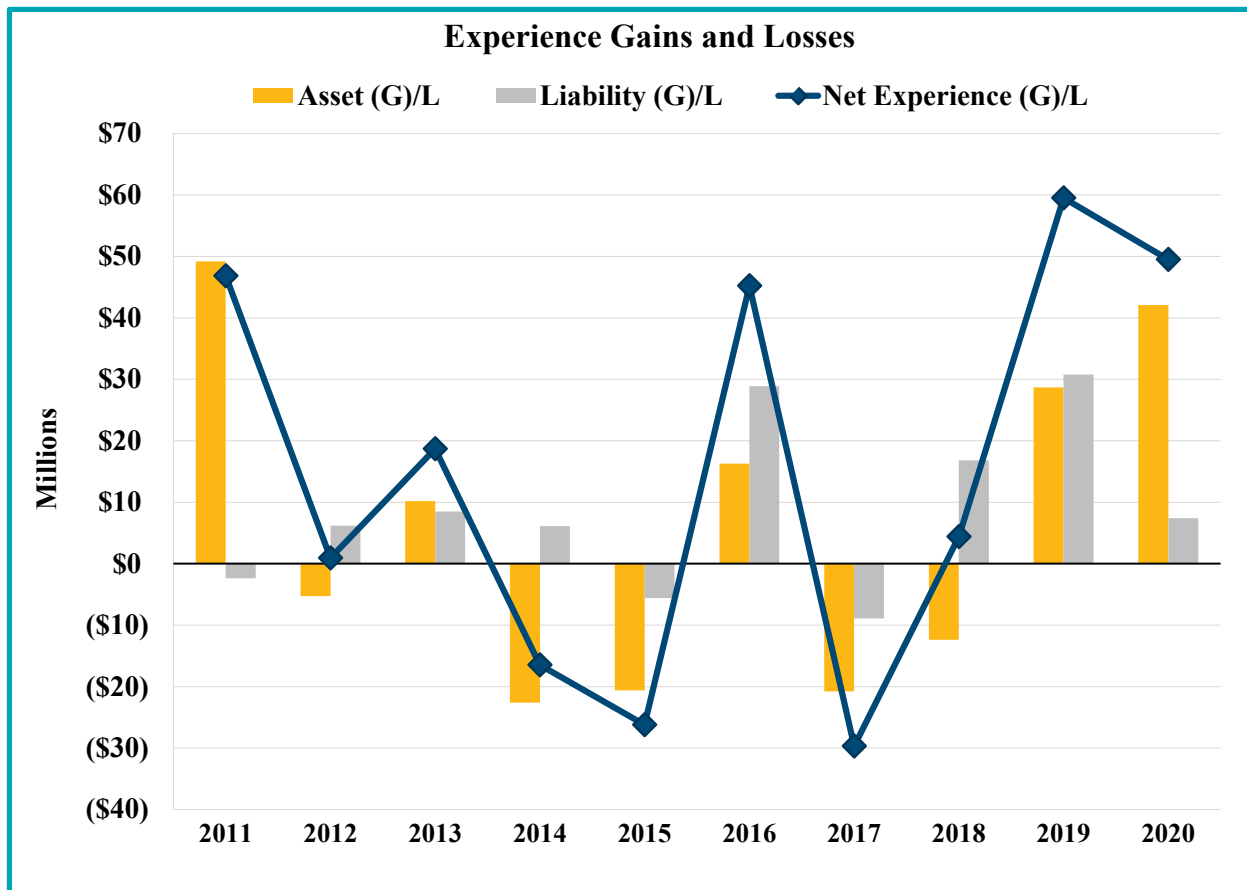
STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020

SECTION I – EXECUTIVE SUMMARY

Gains and Losses

The following chart for StanCERA presents the pattern of annual gains and losses, broken into the investment and liability components. The investment gains and losses represent the changes on a smoothed basis (i.e. based on the Actuarial Value of Assets). The chart does not include any changes in StanCERA's assets and liabilities attributable to changes to actuarial methods, procedures, or assumptions.

From July 1, 2011 through the current valuation, the plan has experienced both net gains and losses in individual years, with the prior and current valuation years experiencing both an asset and liability loss.



STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020

SECTION I – EXECUTIVE SUMMARY

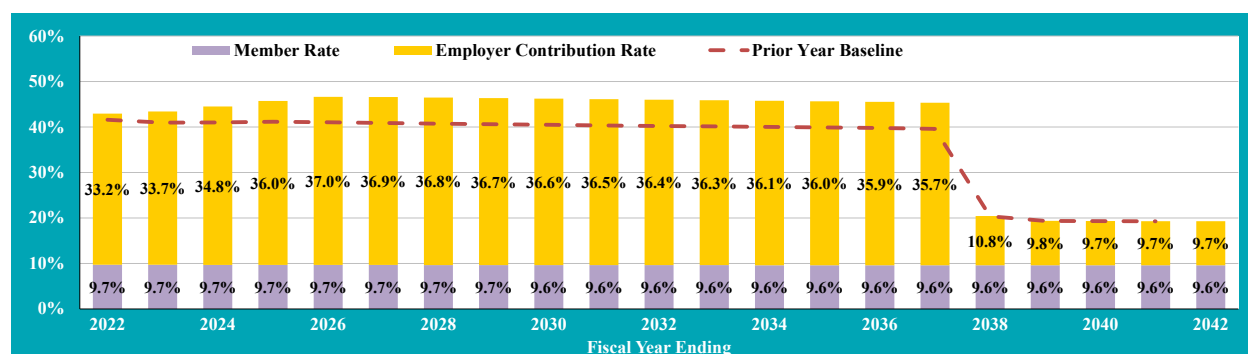
D. Future Expected Financial Trends

The analysis of projected financial trends is an important component of this valuation. In this Section, we present our assessment of the implications of the June 30, 2020 valuation results in terms of benefit security (assets compared to liabilities). All the projections in this section are based on the current investment return assumption of 7.00%. We have assumed future total payroll increases of 3.00% per year.

The graph below shows the expected employer and employee contribution rates based on achieving the 7.00% assumption **each year** for the next 20 years. This scenario is highly unlikely: even if the Plan does achieve an **average** return of 7.00% over this period, the returns in each given year will certainly vary. The expected total contribution rates based on the prior year valuation as of June 30, 2019 are shown (in the dashed line) for comparison.

The contribution rate graph shows that employer contribution rates are expected to increase gradually for the next four years as deferred investment losses are recognized in the actuarial value of assets and then stay relatively stable until the current unfunded liability amortization period (16 years) ends.

Projection of Contributions, 7.00% Return Each Year



The total contribution rate (employer plus employee) is approximately 43% of member payroll for the June 30, 2020 valuation. It is expected to gradually increase to approximately 47% through FYE 2026 if all actuarial assumptions are met, as recent market value asset losses are recognized in the actuarial value of assets. The total contribution rate (employer plus member) is expected to gradually decline after FYE 2026 as PEPRA members replace legacy members, lowering the average normal cost of the Plan.

After 16 years, the total contribution rate is expected to drop due to the end of the current unfunded liability amortization period, to a level around 20% of pay in FYE 2038, representing the expected Normal Cost plus administrative expenses. The end of the amortization period only affects the employer contribution rate. It has no impact on the employee contribution rate.

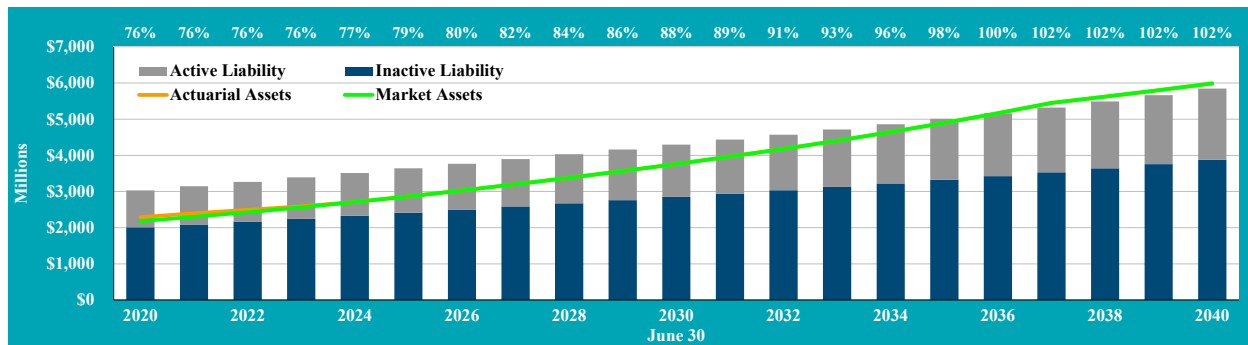
STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020

SECTION I – EXECUTIVE SUMMARY

Asset and Liability Projections:

The following graph shows the projection of assets and liabilities assuming that assets will earn the 7.00% assumption each year during the projection period. The funded ratio shown is based on the Actuarial Value of Assets. The Actuarial Value of Assets is greater than the Market Value of Assets as of June 30, 2020; under the five-year smoothing policy, the two are assumed to be equal past 2023 if there are no additional asset gains/losses.

Projection of Assets and Liabilities, 7.00% Return Each Year
(\$ millions)



The graph above shows that the projected funded status increases over the next 16 years to gradually reach 100%, as can be expected based on the amortization policy, assuming the actuarial assumptions are achieved. However, it is the **actual** return on Plan assets that will determine the future funding status and contribution rate to the Fund.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION II – DISCLOSURES RELATED TO RISK

Actuarial valuations are based on a set of assumptions about future economic and demographic experience. These assumptions represent a reasonable estimate of future experience, but actual future experience will undoubtedly be different and may vary significantly.

Actuarial Standard of Practice (ASOP 51) requires actuaries to identify and assess risks that “may reasonably be anticipated to significantly affect the plan’s future financial condition.” This section of the report is intended to identify the primary risks to the Plan, provide some background information about those risks, and provide an assessment of those risks.

Identification of Risks

A fundamental risk to a pension plan is that the contributions needed to pay the benefits become unaffordable. Even in the case that the Plan remains affordable, the contributions needed to support the Plan may differ significantly from expectations. While there are a number of factors that could lead to contribution amounts deviating from expectations, we believe the primary risks are:

- Investment risk,
- Assumption change risk, and
- Contribution risk.

Other risks that we have not identified may also turn out to be important.

Investment Risk is the potential for investment returns to be different than expected. Lower investment returns than anticipated will increase the unfunded actuarial liability necessitating higher contributions in the future unless there are other gains that offset these investment losses. The potential volatility of future investment returns is determined by the Plan’s asset allocation and the affordability of the investment risk is determined by the amount of assets invested relative to the size of the plan sponsors or other contribution base.

Assumption change risk is the potential for the environment to change such that future valuation assumptions are different than the current assumptions. For example, declines in interest rates over the last three decades resulted in higher investment returns for fixed income investments but lower expected future returns, necessitating either a change in investment policy, a reduction in discount rate, or some combination of the two. Assumption change risk is an extension of the other risks identified, but rather than capturing the risk as it is experienced, it captures the cost of recognizing a change in environment when the current assumption is no longer reasonable.

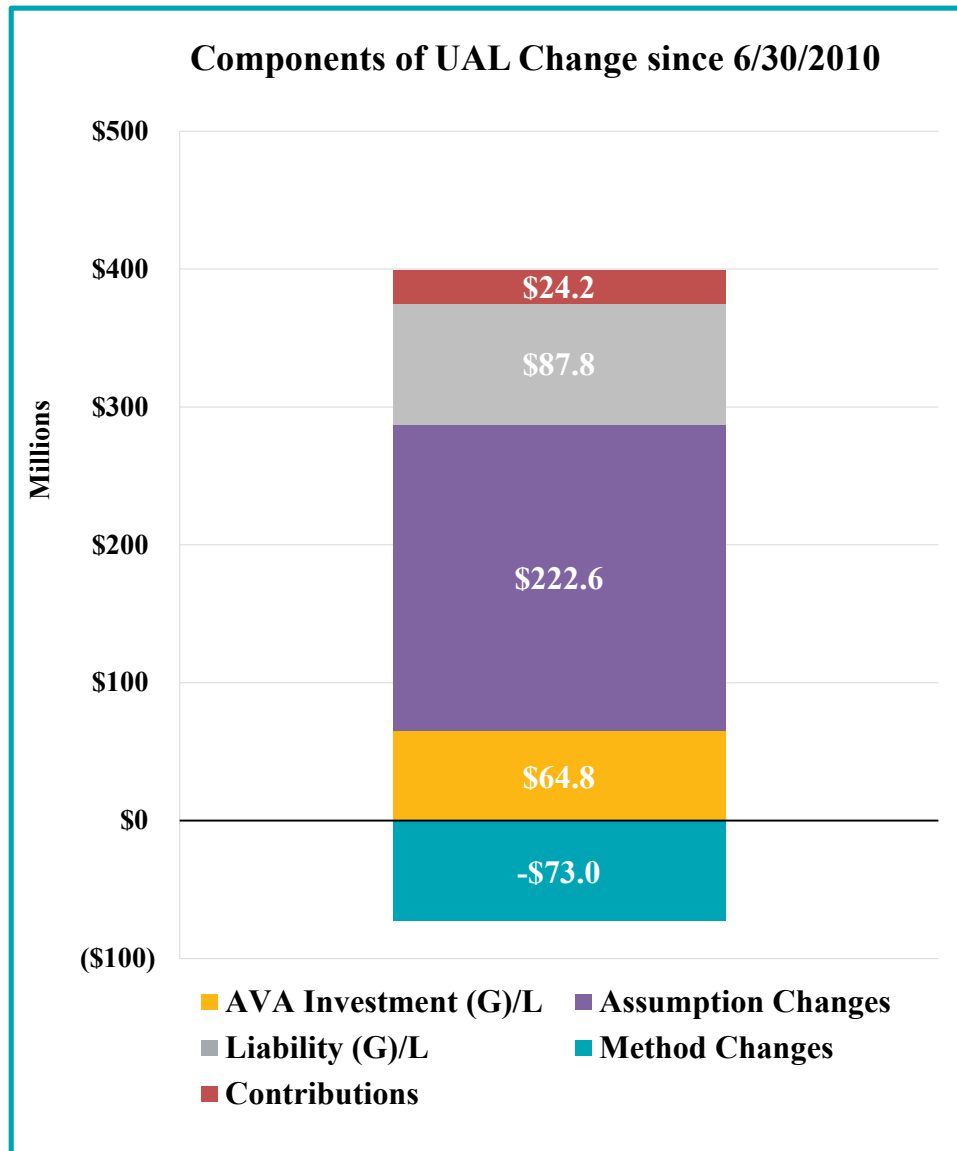
Contribution risk is the potential for actual future contributions to deviate from expected future contributions. There are different sources of contribution risk such as the sponsor failing to make contributions in accordance with the funding policy or the contribution requirement becoming such a financial strain on the sponsor as a result of material changes in the contribution base (e.g., covered employees, covered payroll) that it affects the amount of contributions the Plan can collect.

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020

SECTION II – DISCLOSURES RELATED TO RISK

The chart below shows the aggregated components contributing to the change in Unfunded Actuarial Liability (UAL) from June 30, 2010 through June 30, 2020. Over the last 10 years, the UAL has increased by approximately \$326.3 million. The net liability losses (gray bar) of \$87.8 million, assumption changes (purple bar) of \$222.6 million, contributions below the “tread water” level (red bar) of \$24.2 million, and investment losses (gold bar) of \$64.8 million resulting in a total UAL increase of \$399.4 million are the sources of the UAL growth. Method changes (teal bar) of \$73 million have decreased the UAL since June 30, 2010.

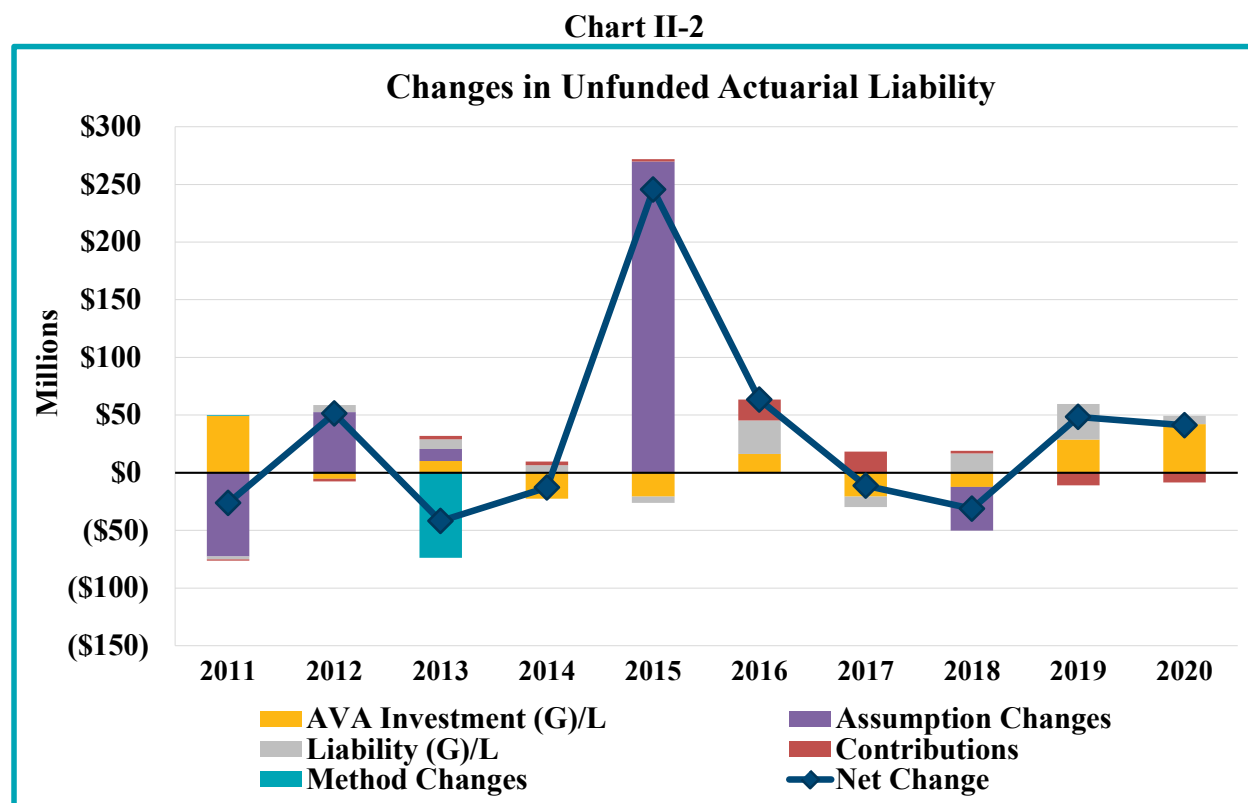
Chart II-1



**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION II – DISCLOSURES RELATED TO RISK

Chart II-2 below details the annual sources of the UAL change (colored bars) for the plan years ending June 30. The net UAL change for each year is represented by the blue diamonds.



Effective with the June 30, 2013, the actuarial cost method was modified from the Entry Age Normal-to-Decrement method to the Entry Age Normal-to-Final-Decrement method to comply with the accounting standards issued by the Government Accounting Standards Board. The impact of this was to shift some of the liability from past service to future, thereby decreasing the actuarial accrued liability (by approximately \$74 million) and increasing the normal cost. This is represented by the teal bar.

On a market value basis, the average annual geometric return over the 10-year period has been 8.1% with investment gains on the AVA in five years of those years decreasing the UAL, but investment losses in the other five years of the last decade. As of July 1, 2020, there are approximately \$108.2 million of deferred losses that will be recognized over the next four years.

Over the same time period, the assumed rate of return decreased from 8.00% to 7.00%. It is important to note that these changes simply reflect a downward revision to the estimate of future investment earnings and ultimately costs will be determined by actual investment earnings. Future expectations of investment returns may continue to decline necessitating further reductions in the discount rate.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION II – DISCLOSURES RELATED TO RISK

The impact of all assumption changes is represented by the purple bars and also includes decreases in mortality rates projected in the future, as well as changes in pay growth assumptions to anticipate the wage freezes that occurred after the Great Recession. The assumption changes effective with the July 1, 2018 valuation changed the expected rate of return from 7.25% to 7.00%, but also contained demographic changes, which reduced the UAL.

Each year the UAL is expected to increase for benefits earned in the current year (the normal cost), administrative expenses, and interest on the UAL. This expected increase is referred to as the tread water level. If contributions are greater than the tread water level, the UAL is expected to decrease. Conversely, if contributions are less than the tread water level, the UAL is expected to increase. The amortization policy (as well as the contribution-timing lag) can impact whether or not the contributions exceed the tread water level. The contribution shortfalls in 2016 and 2017 were due to the phase-in of the 2015 assumption change impact.

For StanCERA, the liability for each valuation group is amortized as a level percentage of payroll over a closed period, 16 years as of the current valuation. Contributions have not met the tread water level in 6 of 10 years, resulting in \$24.2 million of increases to the UAL over the last decade. Table II-1 below numerically summarizes the changes in the UAL for each year by source over the last 10 years.

Table II-1

Table II-1 Unfunded Actuarial Liability (UAL) Change by Source						
June 30,	Investment Experience	Liability Experience	Assumption Changes	Method Changes	Contributions	Total UAL Change
2011	\$49,205,000	(\$2,387,000)	(\$72,739,000)	\$653,000	(\$1,083,000)	(\$26,351,000)
2012	(5,284,000)	6,191,000	52,606,000	0	(2,235,000)	51,278,000
2013	10,200,000	8,500,000	10,300,000	(73,700,000)	2,901,000	(41,799,000)
2014	(22,600,000)	6,100,000	400,000	0	3,243,000	(12,857,000)
2015	(20,600,000)	(5,600,000)	269,800,000	0	1,999,000	245,599,000
2016	16,300,000	28,900,000	0	0	18,210,000	63,410,000
2017	(20,800,000)	(8,900,000)	0	0	18,328,000	(11,372,000)
2018	(12,400,000)	16,800,000	(37,800,000)	0	2,260,000	(31,140,000)
2019	28,700,000	30,800,000	0	0	(11,023,000)	48,477,000
2020	42,100,000	7,400,000	0	0	(8,407,000)	41,093,000
Total	\$64,821,000	\$87,804,000	\$222,567,000	(\$73,047,000)	\$24,193,000	\$326,338,000

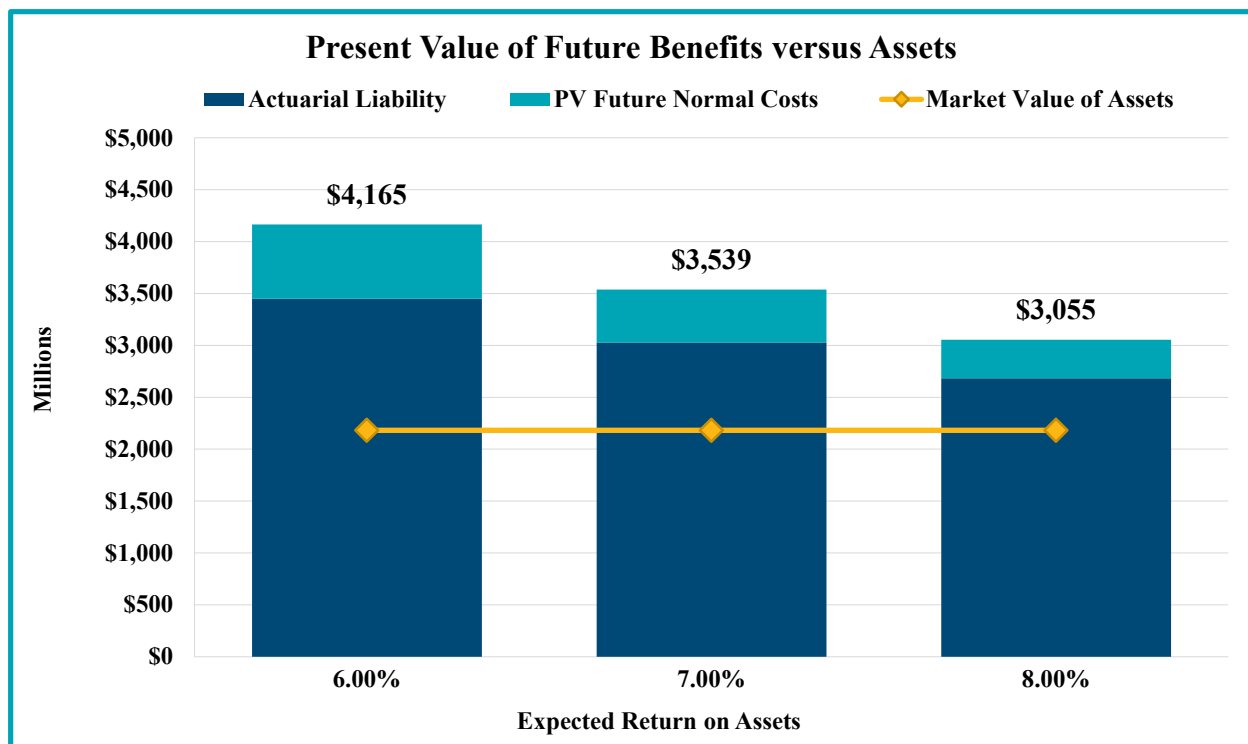
STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020

SECTION II – DISCLOSURES RELATED TO RISK

Assessing Costs and Risks

Sensitivity to Investment Returns

The chart below compares assets to the present value of all projected future benefits discounted at the current expected rate of return and at discount rates 100 basis points above and below the expected rate of return. The present value of future benefits is shown as a bar with the portion attributable to past service in dark blue (Actuarial Liability) and the portion attributable to future service in teal (Present Value of Future Normal Costs). The Market Value of Assets is shown by the gold line.



If investments return 7.00% annually, the Plan will need approximately \$3.5 billion in assets today to pay all projected benefits compared to current assets of \$2.2 billion. If investment returns are only 6.00%, the Plan would need approximately \$4.2 billion in assets today, and if investment returns are 8.00%, the Plan would need approximately \$3.1 billion in assets today.

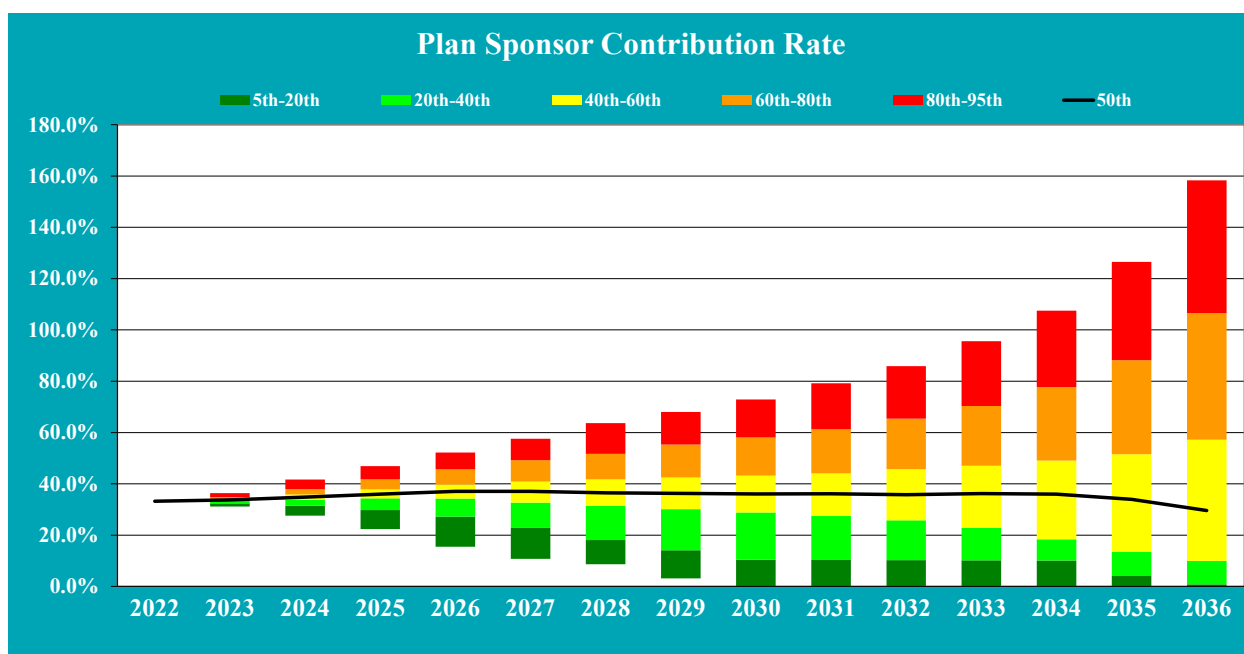
STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020

SECTION II – DISCLOSURES RELATED TO RISK

Sensitivity to Investment Returns - Stochastic Projections

Stochastic projections serve to show the range of probable outcomes of various measurements. The graphs below and on the following page show the projected range of the employer contribution rate and of the funded ratio on an actuarial value of assets basis. The range in both scenarios is driven by the volatility of investment returns (assumed to be based on a 11.7% standard deviation of annual returns, as indicated in NEPC's September 30, 2020 capital market assumptions). The stochastic projections of investment returns are based on an assumption that each future year's investment return is independent from all other years and is identically distributed according to a lognormal distribution. This assumption may result in an unrealistically wide range of compound investment returns over longer periods.

Stochastic Projection of Employer Contributions as a Percent of Pay



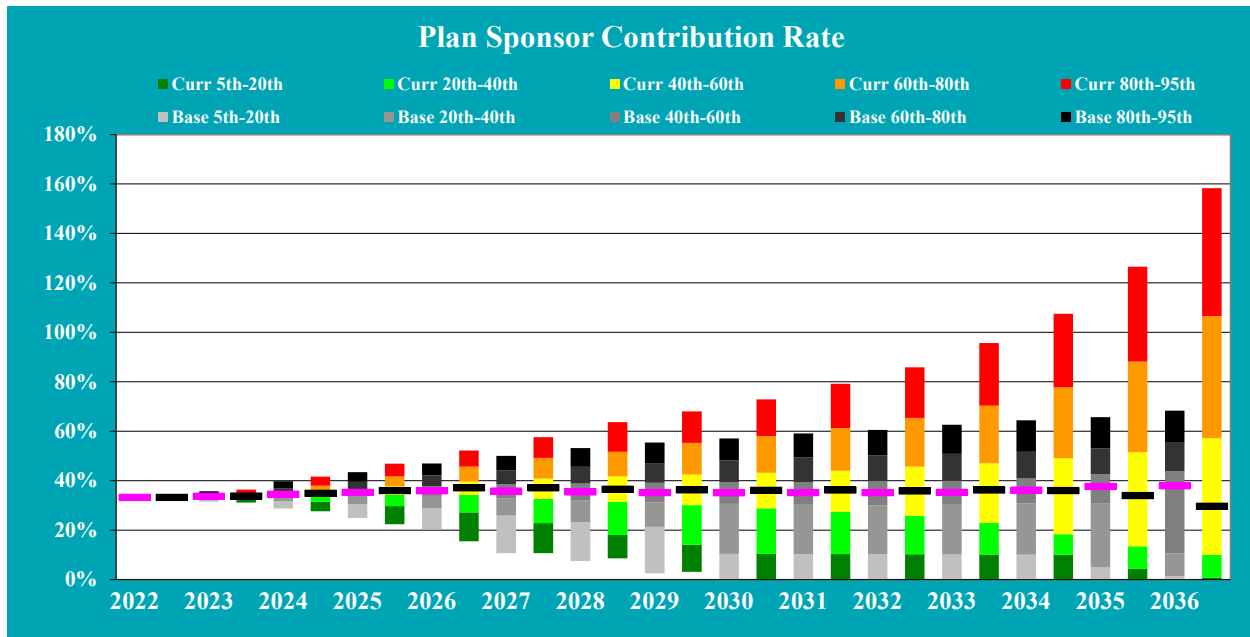
The stochastic projection of employer contributions as a percent of pay shows the probable range of future contribution rates. The baseline contribution rate (black line), which is based on the median of the simulations using an average return of 7.00%, aligns closely with the projections discussed in subsection D. of the Executive Summary of this report. In the most pessimistic scenario shown, the 95th percentile, the projected employer contribution rate nears 160% of pay in 2036. Conversely, the most optimistic scenario shown, the 5th percentile, the projected employer contribution rate declines to 0% by 2030. These projections allow the employer contribution to drop below the normal cost only if the Plan becomes extremely over-funded (above 120%), as required under PEPR.

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020

SECTION II – DISCLOSURES RELATED TO RISK

The extreme level of volatility in the contribution rates towards the end of the projection period is driven by the declining amortization period. If the Board takes action to modify the amortization period – either by freezing/restarting the amortization schedule, or moving towards a layered amortization policy wherein changes in the UAL are amortized over individual fixed/closed periods based on when the change occurs – the volatility in rates could be reduced significantly.

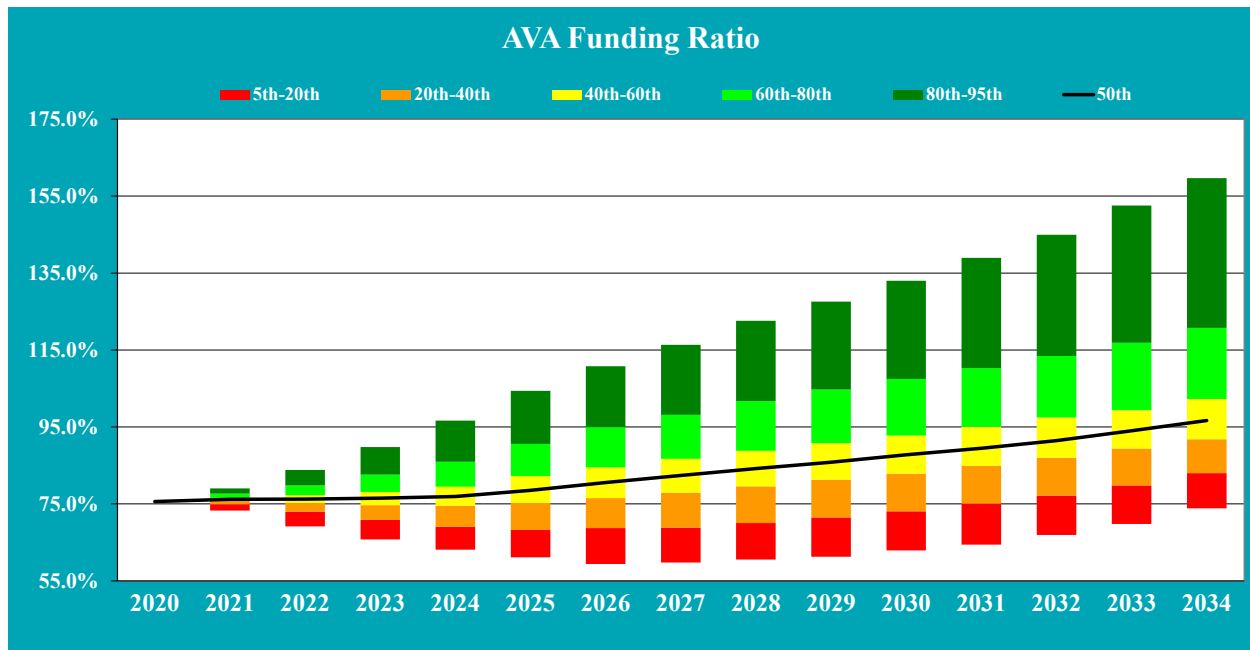
For example, the chart below shows the projected contributions rates under two different amortization policies: the black/gray bars represent a layered amortization policy, where each future year's gain or loss is amortized over a closed 20-year period. The colored bars represent the projected costs under the current closed 16-year amortization policy (matching the projections shown in the chart on the prior page). As can clearly be seen, the expected impact of the change in amortization policy is a significant reduction in the volatility of contribution rates in future years. We encourage the Board to consider modifications to the funding policy within the next few years.



STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020

SECTION II – DISCLOSURES RELATED TO RISK

Stochastic Projection of Funded Ratio on an Actuarial Value of Assets Basis



The graph above shows the projection of the funded ratio based on the actuarial value of assets. It is based on the current amortization policy. While the baseline-funded ratio (black line) is projected to be approximately 95% at the end of the 15-year period shown here, there is a wide range of potential outcomes. Good investment returns have the likelihood of bringing the funded ratio well over 100%.

Due to the current funding policy of the Plan, even in scenarios with unfavorable investment returns, the Plan is projected to remain over 60% funded on an actuarial value of assets basis, as long as the actuarially determined contributions continue to be made. As with the contribution projection, the declining amortization policy also drives the funded ratio higher, as any unfunded liability that develops toward the end of the projection period would be amortized over a very short period (forcing the contribution rates to increase significantly).

Contribution Risk

While investment returns are typically the dominant factor in volatility, contribution rates can also be sensitive to future salary increases and the hiring of new members. When member payroll growth stagnates or even declines, the dollar level of contributions made to the Plan also stagnates or declines since contributions are based on payroll levels, though this will generally only present a funding issue if there is an extended period of payroll reductions.

There is also a risk of the contribution rate increasing even higher when payroll decreases since the Plan's funding policy amortizes the UAL as a level percentage of pay. This means that the UAL payments increase at the assumed payroll growth rate of 3.00%, so that the payment is

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION II – DISCLOSURES RELATED TO RISK

expected to remain constant as a percentage of payroll. If payroll growth is less than the expected 3.00% or there is a decline in payroll, the UAL payments are spread over a smaller payroll base and the contribution rate as a percentage of pay increases, making the Plan less affordable for those sponsors with declining payroll bases.

For example, the UAL Amortization rate as of June 30, 2020 for the FYE 2021 is 20.81%. If the projected payroll for FYE 2021 were 3.00% lower, all else being equal, the UAL Amortization rate would increase to 21.44%.

Plan Maturity Measures

The future financial condition of a mature pension plan is more sensitive to each of the risks identified above than a less mature plan. It is important to understand how the maturity has changed over time.

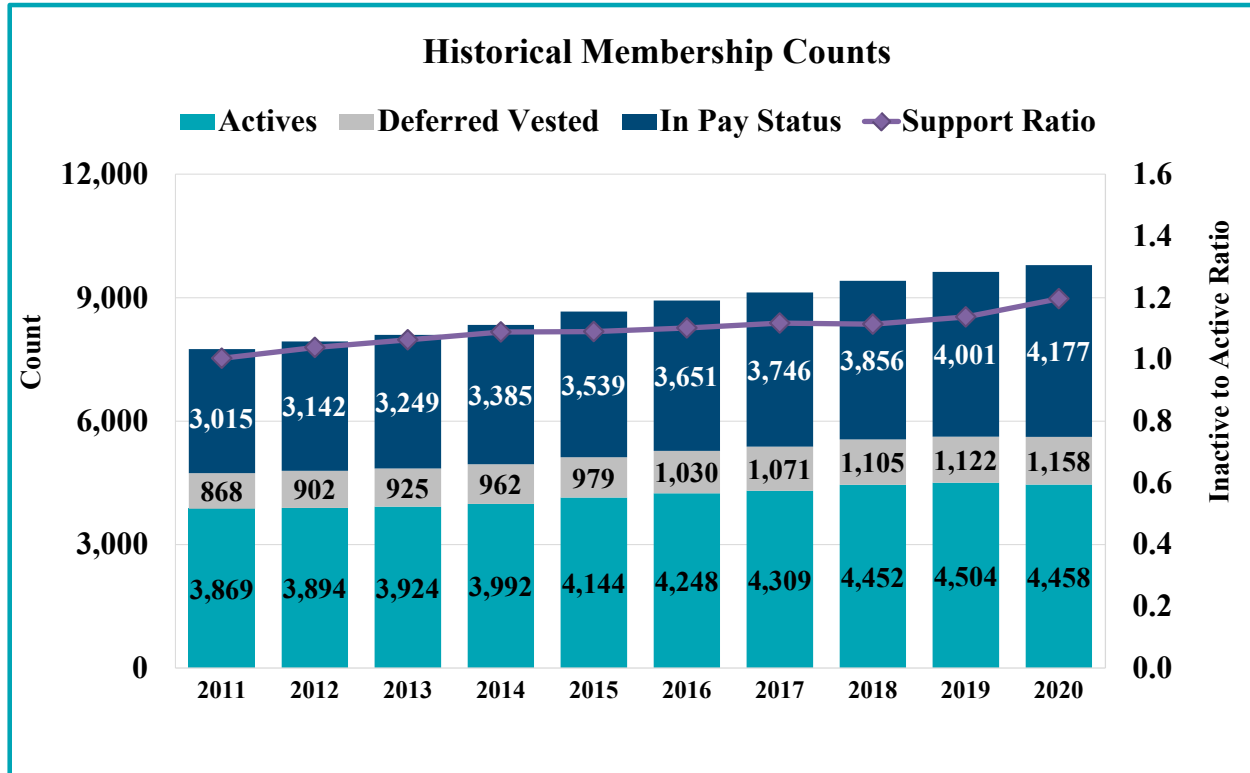
Plan maturity can be measured in a variety of ways, but they all get at one basic dynamic - the larger the plan is compared to the contribution or revenue base that supports it, the more sensitive the plan will be to risk. The measures below have been selected as the most important in understanding the primary risks identified for the Plan.

Inactives per Active (Support Ratio)

One simple measure of plan maturity is the ratio of the number of inactive members to the number of active members. The Support Ratio is expected to increase gradually as a plan matures. The chart below shows the growth in the Support Ratio from 2011 to 2020 as the number of active members declined and then increased slower than the number of retirees and deferred members.

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020

SECTION II – DISCLOSURES RELATED TO RISK



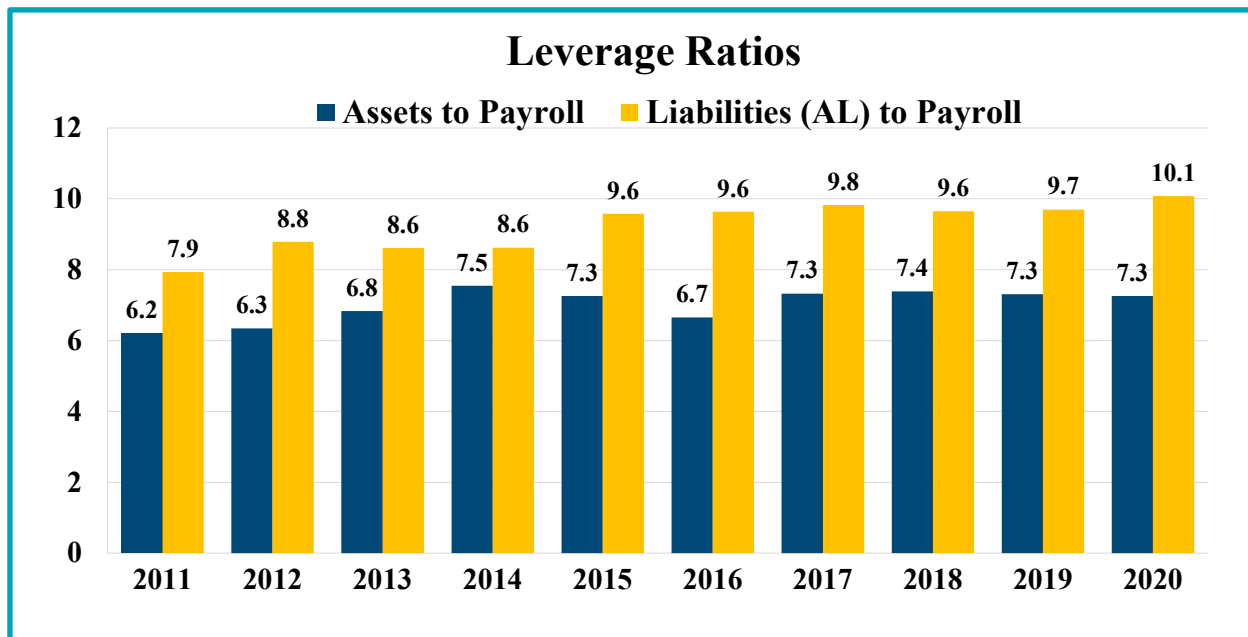
STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020

SECTION II – DISCLOSURES RELATED TO RISK

Leverage Ratios

Leverage or volatility ratios measure the size of the plan compared to its revenue base more directly. The asset leverage ratio is simply the market value of assets to active member payroll and indicates the sensitivity of the Plan to investment returns. The liability leverage ratio is the plan's actuarial liability to active member payroll and indicates the sensitivity of the Plan to assumption changes or demographic experience.

The chart below shows the historical leverage ratios of the Plan. Both leverage ratios have increased since 2011, and the asset to payroll ratio has remained at or above 7.0 - assets are seven times member payroll - for all but one of the last seven years.



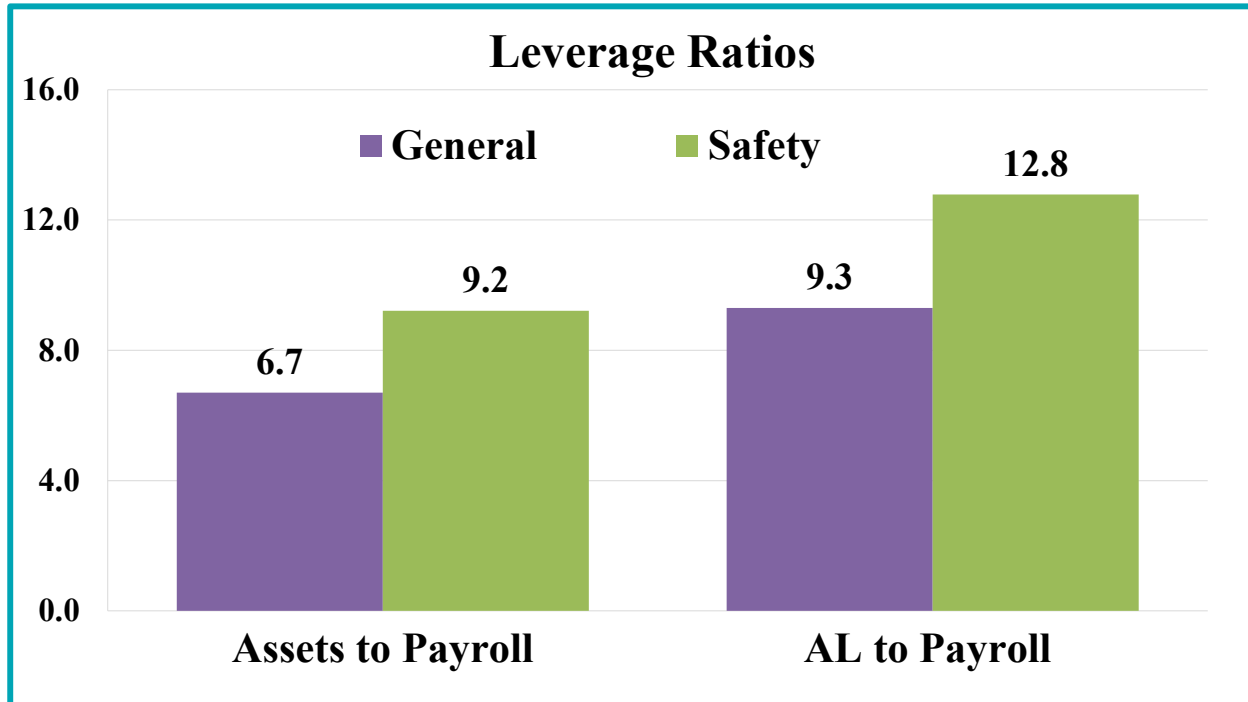
To appreciate the impact of the ratio of assets to payroll on plan cost, consider the situation for a new plan with almost no assets. Even if the assets suffer a bad year of investment returns, the impact on the plan cost is nil, because the asset level is so small.

As the Plan becomes better funded, the asset leverage ratio will increase, and if it were 100% funded, the asset leverage ratio would be about 10 times payroll, or the Actuarial Liability (AL) leverage ratio.

We note that the ratio of both assets and liabilities to payroll, and therefore the sensitivity to investment returns, is higher for the Safety members compared to the General members, because of the higher benefit amounts and the earlier average retirement ages for Safety.

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020

SECTION II – DISCLOSURES RELATED TO RISK



The General asset leverage ratio of 6.7 means that if the Plan's assets lose 10% of their value, which is a 17.00% actuarial loss compared to the expected return of 7.00%, the loss would be equivalent to 114% of payroll (17.00% times 6.7). The same investment loss for the Safety group with an asset ratio of 9.2 would be equivalent to approximately 156% of payroll. There is only one source of funding to make up for these investment losses: contributions. Consequently, barring future offsetting investment gains, the employer has to make up the asset loss in additional future contributions. In this example of a one-year loss of 10%, the shortfall will eventually require an additional annual amortization payment of approximately 10% and 13% of payroll for General and Safety, respectively, if amortized over 16 years. Contribution rates for the Safety members will generally be more volatile compared to General members.

If the Plan were fully funded, the 10% loss discussed above would translate to a loss of 158% of payroll for General and 218% of payroll for Safety. When amortized over 16 years, employer contributions would increase approximately 13% and 18% of payroll, respectively. Therefore, the Plan may become significantly more sensitive to market variations in the future than it is today.

More Detailed Assessment

While a more detailed assessment is always valuable to enhance the understanding of the risks identified above, we believe the scenarios illustrated above cover the primary risks facing the Plan at this time. We would be happy to provide the Board with a more in-depth analysis at their request.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION III – ASSETS

Pension Plan assets play a key role in the financial operation of the Plan and in the decisions the Board may make with respect to future deployment of those assets. The level of assets, the allocation of assets among asset classes, and the methodology used to measure assets will likely impact benefit levels, employer contributions, and the ultimate security of participants' benefits.

In this section, we present detailed information on Plan assets including:

- **Disclosure** of Plan assets as of June 30, 2019 and June 30, 2020,
- Statement of the **changes** in market values during the year,
- Development of the **Actuarial Value of Assets**,
- An assessment of historical **investment performance versus inflation**, and
- An allocation of the unfunded liability between the **valuation subgroups**.

Disclosure

There are two types of asset values disclosed in the valuation, the Market Value of Assets, and the Actuarial Value of Assets. The market value represents “snap-shot” or “cash-out” values, which provide the principal basis for measuring financial performance from one year to the next. Market values, however, can fluctuate widely with corresponding swings in the marketplace. As a result, market values are usually not as suitable for long-range planning as are the Actuarial Value of Assets, which reflects smoothing of annual investment returns.

Table III-1 on the next page discloses and compares each asset class as of June 30, 2019 and June 30, 2020.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION III – ASSETS

Table III-1 Statement of Assets at Market Value		
Assets	Fiscal Year ending June 30, 2019	Fiscal Year ending June 30, 2020
Cash and Cash Equivalents	\$ 56,243,082	\$ 73,474,225
Total Cash and Cash Equivalents	\$ 56,243,082	\$ 73,474,225
Receivables		
Interest and Dividends	\$ 6,791,291	\$ 6,367,746
Contributions	6,666,983	7,270,478
Securities Transactions	966,581	438,668
Total Receivables	\$ 14,424,855	\$ 14,076,892
Fixed Assets		
Capitalized Software	\$ 0	\$ 0
Real Estate Occupied	1,630,546	1,611,569
Real Estate Leased	1,087,753	1,075,100
Other	3,891,574	5,076,949
Total Fixed Assets	\$ 6,609,873	\$ 7,763,618
Investments at Market Value		
Fixed Income	\$ 479,716,064	\$ 444,479,600
Equities	1,020,306,300	1,024,590,262
Collateral on Loaned Securities	144,376,536	96,382,659
Other	646,075,887	655,951,548
Total Investments	\$ 2,290,474,787	\$ 2,221,404,069
Liabilities		
Accounts Payable	\$ (12,596,100)	\$ (13,167,410)
Security Transactions Payable	(2,143,529)	(907,496)
Collateral Held for Loaned Securities	(144,376,536)	(96,382,659)
Other	(395,000)	(395,000)
Total Liabilities	\$ (159,511,165)	\$ (110,852,565)
Market Value of Assets	\$ 2,208,241,432	\$ 2,205,866,239

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION III – ASSETS

Changes in Market Value

The components of asset change are:

- Contributions (employers and employee)
- Benefit payments
- Expenses (investment and administrative)
- Investment income (realized and unrealized)

Table III-2 on the next page shows the components of change in the Market Value of Assets during the fiscal years ending June 30, 2019 and June 30, 2020.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION III – ASSETS

Table III-2 Changes in Market Values		
<u>Additions</u>	Fiscal Year ending <u>June 30, 2019</u>	Fiscal Year ending <u>June 30, 2020</u>
Contributions		
Employer's Contribution	\$ 88,589,381	\$ 92,684,609
Members' Contributions	27,742,863	29,645,645
Total Contributions	<u>\$ 116,332,244</u>	<u>\$ 122,330,254</u>
Net Investment Income		
Net Appreciation/(Depreciation) in		
Fair Value of Investments	\$ 54,084,769	\$ (15,166,254)
Interest and Dividends	53,382,923	44,752,966
Commission Recapture	22,395	25,624
Other Investment Income	324,140	231,423
Total Investment Income	<u>\$ 107,814,227</u>	<u>\$ 29,843,759</u>
Investment Expense	(9,008,420)	(11,703,204)
Net Investment Income	<u>\$ 98,805,807</u>	<u>\$ 18,140,555</u>
Securities Lending Activities		
Securities Lending Income	\$ 677,888	\$ 508,646
Expenses from Securities Lending Activities	(203,170)	(152,428)
Net Securities Lending Income	<u>474,718</u>	<u>356,218</u>
Total Net Investment Income	<u>\$ 99,280,525</u>	<u>\$ 18,496,773</u>
Total Additions	\$ 215,612,769	\$ 140,827,027
<u>Deductions</u>		
Benefits	\$ 129,100,668	\$ 138,223,922
Refunds	2,674,023	1,761,673
Administrative Costs	2,557,391	3,216,625
Total Deductions	<u>\$ 134,332,082</u>	<u>\$ 143,202,220</u>
Net Increase/(Decrease)	\$ 81,280,687	\$ (2,375,193)
Net Assets Beginning of Year	\$ 2,126,960,745	\$ 2,208,241,432
Net Assets End of Year	\$ 2,208,241,432	\$ 2,205,866,239
Approximate Return	4.69%	0.84%

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION III – ASSETS

Actuarial Value of Assets (AVA)

The Actuarial Value of Assets represents a “smoothed” value developed by the actuary to reduce the volatile results that could develop due to short-term fluctuations in the Market Value of Assets. For this Plan, the Actuarial Value of Assets is calculated on a modified market-related value. The Market Value of Assets is adjusted to recognize, over a five-year period, investment earnings which are greater than (or less than) the assumed investment return. However, in no event will the Actuarial Value of Assets be less than 80% or more than 120% of market value on the valuation date.

The Valuation Assets are the portion of the Actuarial Assets dedicated to funding the basic pension benefits. The Valuation Assets exclude the value of any non-valuation reserves, such as reserves established for legal contingencies. The Valuation Assets also exclude the value of any non-valuation contingency reserves, which have been established according to the Board's funding policy. In valuations prior to the June 30, 2014 valuation, a reserve associated with the Burial Allowance was excluded from the Valuation Assets; both the assets and liabilities associated with this benefit are included in this valuation.

The table on the following page shows the development of the Actuarial Asset and Valuation Assets values.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION III – ASSETS

Table III-3 Development of Actuarial Value of Assets for 6/30/2020	
Item	Total
1. Market Value as of 6/30/2019	\$ 2,208,241,432
2. Non-Investment Cash Flow for 2019-2020	(20,871,966)
3. Expected Return in 2019-2020	153,858,737
4. Expected Market Value as of 6/30/2020: (1 + 2 + 3)	\$ 2,341,228,203
5. Actual Return in 2019-2020	18,496,773
6. Actual Return Above Expected in 2019-2020: (5 - 3)	(135,361,964)
7. Market Value as of 6/30/2020	\$ 2,205,866,239
8. Deferred Recognition of Returns Above Expected	
A. 2019-2020 (80% of -\$135,361,964)	(108,289,571)
B. 2018-2019 (60% of -\$48,987,388)	(29,392,433)
C. 2017-2018 (40% of \$11,199,487)	4,479,795
D. 2016-2017 (20% of \$124,877,553)	24,975,511
E. Total	\$ (108,226,698)
9. Preliminary Actuarial Value of Assets: (7 - 8E)	\$ 2,314,092,937
10. Corridor Limit	
A. 80% of Net Market Value	1,764,692,991
B. 120% of Net Market Value	2,647,039,487
11. Actuarial Value after Corridor as of 6/30/2020	\$ 2,314,092,937
12. Rate of Return on Actuarial Value of Assets	5.04%
13. Ratio of Actuarial Value to Market Value: (11 ÷ 7)	104.9%
14. Special (Non Valuation) Reserves:	
A. Health Insurance Reserves	0
B. Special COL Reserve	0
C. Legal Contingency Reserve	1,897,499
D. Tier 3 Disability Reserve	1,560
E. Contingency Reserve	21,813,486
F. Total Special Reserves (Market Value)	\$ 23,712,545
15. Adjusted Total Special Reserves (104.9% of Market, Except Contingency)	\$ 23,805,719
16. Pension Reserves at Actuarial Value (Valuation Assets): (11 - 15)	\$ 2,290,287,218

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION III – ASSETS

Historical Investment Performance

The table shows the historical annual asset returns on a Market Value, Actuarial Value, and Valuation Asset basis, as well as the increase in the Consumer Price Index (CPI) since 1997. Note that the returns prior to 2013 are expressed net of investment and administrative expenses; the returns for 2013 and all following years are expressed net of investment expenses only.

Table III-4 Net Return on Assets vs. Increase in Consumer Price Index				
Year Ended June 30	Net Return at Market Value	Net Return at Actuarial Value	Net Return at Valuation Assets	Increase in Consumer Price Index¹
1997	20.4%			2.3%
1998	13.4%			1.7%
1999	10.6%			2.0%
2000	6.3%			3.7%
2001	7.0%			3.2%
2002	-4.5%			1.1%
2003	5.2%		4.9%	2.1%
2004	6.1%		6.3%	3.3%
2005	8.2%		5.5%	2.5%
2006	9.9%		10.8%	4.3%
2007	16.0%	10.8%	0.6%	2.7%
2008	-8.5%	8.0%	16.7%	5.0%
2009	-17.2%	-9.6%	-9.4%	-1.4%
2010	15.6%	13.0%	14.7%	1.1%
2011	22.1%	3.5%	4.2%	3.6%
2012	0.1%	6.4%	6.5%	1.7%
2013	13.9%	7.0%	7.2%	1.8%
2014	18.0%	9.4%	9.5%	2.1%
2015	3.9%	9.1%	9.0%	0.1%
2016	-1.7%	6.3%	6.3%	1.0%
2017	14.4%	8.3%	8.4%	1.6%
2018	7.8%	7.9%	7.9%	2.9%
2019	4.7%	5.6%	5.6%	1.6%
2020	0.8%	5.0%	5.1%	0.6%
20-Year Compound Average	5.7%	N/A	N/A	2.0%
15-Year Compound Average	6.1%	N/A	6.7%	1.9%
10-Year Compound Average	8.1%	6.8%	7.0%	1.7%
5-Year Compound Average	5.0%	6.6%	6.7%	1.6%

¹ Based on All Urban Consumers - U.S. City Average, June indices.

**TANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION III – ASSETS

Allocation of Unfunded Actuarial Liability by Valuation Subgroup

The following table shows the allocation of the Unfunded Actuarial Liability between the two valuation subgroups (County / Former County Members and City of Ceres / Special District Members). The Valuation Assets are reduced by the liability associated with the inactive members and the refundable contribution balances for active members, and the remaining assets are allocated to each subgroup based on their share of the active liability. These UAL balances are used to calculate each subgroup's amortization payment.

Table III-5 Allocation of 6/30/2020 Unfunded Liability (in thousands)				
	County and Former County	Ceres and Other Districts		Total
1. Actuarial Value of Assets			\$	2,290,287
2. Accumulated Employee Contributions	209,124	13,266		222,390
3. Inactive Actuarial Liability	1,911,667	97,484		2,009,151
4. Net Assets for Distribution [1 - 2 - 3]			\$	58,746
5. Active Actuarial Liability	\$ 959,268	\$ 60,228	\$	1,019,496
6. Allocation of Remaining Assets	94.09%	5.91%		100.00%
7. Remaining Assets	55,276	3,471		58,746
8. Total Assets for Actives [2 + 7]	264,400	16,737		281,137
9. Active Funded Ratio [8 ÷ 5]	27.6%	27.8%		27.6%
10. Actuarial Value of Assets [3 + 8]	\$ 2,176,067	\$ 114,220	\$	2,290,287
11. AVA Funded Ratio [10 ÷ (3 + 5)]	75.79646%	72.42331%		75.6%
12. Unfunded Actuarial Liability [5 - 8]	\$ 694,868	\$ 43,492	\$	738,360

Within the two valuation subgroups (County / Former County Members and City of Ceres / Special District Members), the Actuarial Value of Assets and the Unfunded Actuarial Liability are allocated between Safety and General based on each groups' share of the Actuarial Liability, as show in Table IV-1.

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020

SECTION IV – LIABILITIES

In this section, we present detailed information on Plan liabilities including:

- **Disclosure** of Plan liabilities on June 30, 2019 and June 30, 2020,
- Statement of **changes** in these liabilities during the year.

Disclosure

Several types of liabilities are calculated and presented in this report. Each type is distinguished by the people ultimately using the figures and the purpose for which they are using them. Note that these liabilities are not applicable for settlement purposes, including the purchase of annuities and the payment of lump sums.

- **Present Value of Future Benefits:** Used for measuring all future Plan obligations, represents the amount of money needed today to fully fund all benefits of the Plan both earned as of the valuation date and those to be earned in the future by current Plan participants, under the current Plan provisions.
- **Actuarial Liability:** Used for funding calculations, this liability is calculated taking the Present Value of Future Benefits and subtracting the present value of future Member Contributions and future Employer Normal Costs under an acceptable actuarial funding method. The method used for this Plan is called the **Entry Age Normal** (EAN) funding method.
- **Unfunded Actuarial Liability:** The excess of the Actuarial Liability over the Valuation Assets.

Table IV-1 on the following page discloses each of these liabilities for the current and prior valuations. With respect to each disclosure, a subtraction of the appropriate value of Plan assets yields, for each respective type, a **net surplus**, or an **Unfunded Actuarial Liability**.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION IV – LIABILITIES

Table IV-1 Present Value of Future Benefits and Actuarial Liability (in thousands)						
	General		Safety		June 30, 2020	June 30, 2019
	County and Former County	Ceres and Other Districts	County and Former County	Ceres and Other Districts	Total	Total
Present Value of Future Benefits						
Actives	\$ 1,057,792	\$ 36,882	\$ 381,612	\$ 53,146	\$ 1,529,432	\$ 1,540,330
Terminated Vested	123,143	7,392	36,416	8,811	175,763	165,253
Retirees	1,152,289	34,877	371,155	30,901	1,589,222	1,466,042
Disabled	46,253	2,252	81,539	9,681	139,725	134,260
Beneficiaries	68,954	1,331	31,918	2,239	104,441	95,183
Total StanCERA	\$ 2,448,431	\$ 82,735	\$ 902,639	\$ 104,777	\$ 3,538,583	\$ 3,401,067
Actuarial Liability						
Total Present Value of Benefits	\$ 2,448,431	\$ 82,735	\$ 902,639	\$ 104,777	\$ 3,538,583	\$ 3,401,067
Present Value of Future Normal Costs						
Employer Portion	186,958	7,681	73,046	9,409	277,093	274,944
Employee Portion	158,736	5,815	61,397	6,895	232,843	228,901
Actuarial Liability	\$ 2,102,738	\$ 69,239	\$ 768,197	\$ 88,473	\$ 3,028,647	\$ 2,897,223
Actuarial Value of Assets	\$ 1,593,801	\$ 50,145	\$ 582,266	\$ 64,075	\$ 2,290,287	\$ 2,199,956
Funded Ratio	75.8%	72.4%	75.8%	72.4%	75.6%	75.9%
Unfunded Actuarial Liability/(Surplus)	\$ 508,937	\$ 19,094	\$ 185,931	\$ 24,398	\$ 738,360	\$ 697,267

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION IV – LIABILITIES

The table shows the Actuarial Liabilities for each of the valuation subgroups (General and Safety), split by members' status.

Table IV-2 Liabilities by Group as of June 30, 2020 (in thousands)					
	General		Safety		Total
	County and Former County	Ceres and Other Districts	County and Former County	Ceres and Other Districts	
Actuarial Liability					
Actives	\$ 712,099	\$ 23,387	\$ 247,169	\$ 36,842	\$ 1,019,496
Terminated Vested	123,143	7,392	36,416	8,811	175,763
Retirees	1,152,289	34,877	371,155	30,901	1,589,222
Disabled	46,253	2,252	81,539	9,681	139,725
Beneficiaries	68,954	1,331	31,918	2,239	104,441
Total	\$ 2,102,738	\$ 69,239	\$ 768,197	\$ 88,473	\$ 3,028,647

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION IV – LIABILITIES

Changes in Liabilities

Each of the Liabilities disclosed in the prior tables are expected to change at each valuation. The components of that change, depending upon which liability is analyzed, can include:

- New hires since the last valuation
- Benefits accrued since the last valuation
- Plan amendments increasing benefits
- Passage of time which adds interest to the prior liability
- Benefits paid to retirees since the last valuation
- Participants retiring, terminating, or dying at rates different than expected
- A change in actuarial or investment assumptions
- A change in the actuarial funding method

Unfunded liabilities will change because of all of the above, and also due to changes in Plan assets resulting from:

- Employer contributions different than expected
- Investment earnings different than expected
- A change in the method used to measure Plan assets

**Table IV-3
Development of 2020 Experience Gain/(Loss)
(in millions)**

Item	Cost
1. Unfunded Actuarial Liability at June 30, 2019	\$ 697.3
2. Middle of year actuarial liability payment	(56.6)
3. Interest to end of year on 1 and 2	<u>46.9</u>
4. Expected Unfunded Actuarial Liability at June 30, 2020 (1+2+3)	\$ 687.6
5. Actual Unfunded Liability at June 30, 2020	<u>738.4</u>
6. Difference: (4 - 5)	\$ (50.8)
7. Portion of difference due to:	
A. Investment experience	\$ (42.1)
B. Contribution (shortfall)/excess	(1.3)
C. Assumption changes	0
D. Other experience	<u>(7.4)</u>
E. Total	(50.8)

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION V – CONTRIBUTIONS

In the process of evaluating the financial condition of any pension plan, the actuary analyzes the assets and liabilities to determine what level of contributions is needed to properly maintain the funding status of the Plan. Typically, the actuarial process will use a funding technique that will result in a pattern of contributions that are both stable and predictable.

For this Plan, the actuarial funding method used to determine the Normal Cost and the Unfunded Actuarial Liability is the **Entry Age Normal (EAN)** cost method. There are three components to the total contribution: the **Normal Cost rate** (employee and employer), the **Unfunded Actuarial Liability rate** (UAL rate), and the **Administrative Expense** contribution.

The Normal Cost rate is determined in the following steps. First, an individual Normal Cost rate is determined by taking the value, as of entry age into the Plan, of each member's projected future benefits. This value is then divided by the value, also at entry age, of the member's expected future salary producing a Normal Cost rate that should remain relatively constant over a member's career.

The total Normal Cost is computed by adding the expected dollar amount of each active member's Normal Cost for the current year – known as the Individual Entry Age Method. The total Normal Cost is adjusted with interest to the middle of the year, to reflect the fact that the Normal Cost contributions are paid throughout the year as member payroll payments are made. Finally, the total Normal Cost rate is reduced by the member contribution rate to produce the employer Normal Cost rate. The member contribution rate for each subgroup is determined by adding the expected contributions for each member and dividing by the projected pay for each subgroup.

The EAN Actuarial Liability is calculated by subtracting the present value of future total Normal Cost from the Present Value of Future Benefits (as described at the beginning of Section IV).

The Unfunded Actuarial Liability (UAL) is the difference between the EAN Actuarial Liability and the Actuarial Value of Assets. The UAL payment is determined as the amount needed to fund the UAL over a closed 16-year period as a level percentage of payroll.

Beginning with the June 30, 2012 actuarial valuation, the Board adopted a policy of adding an amount equal to the expected annual administrative expense to the employer's required contribution. Prior to the June 30, 2012 actuarial valuation, the administrative expenses were included as an offset to the assumed earnings rate and were shared between the employees and employers. For the June 30, 2020 valuation, this amount is estimated to be \$2.98 million.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION V – CONTRIBUTIONS

The table below presents the calculation of the contribution rates for the Plan for this valuation and compares the total contribution rate with the prior year rate. The tables on the following pages contain more details on the calculation of the UAL amortization payments, as well as details on the calculation of the contribution rates for each group and tier.

**Table V-1
Development of the Net Employer Contribution Rate as of June 30, 2020 for FYE 2022**

	General		June 30, 2020 Safety		COMPOSITE	June 30, 2019 COMPOSITE
	County and Former County	Ceres and Other Districts	County and Former County	Ceres and Other Districts		
1. Total Normal Cost Rate	18.99%	20.97%	27.99%	30.69%	21.12%	21.34%
2. Member Contribution Rate	<u>8.87%</u>	<u>9.07%</u>	<u>12.60%</u>	<u>13.00%</u>	<u>9.72%</u>	<u>9.78%</u>
3. Employer Normal Cost Rate (1-2)	10.12%	11.90%	15.39%	17.69%	11.40%	11.56%
4. UAL Amortization	19.13%	19.75%	26.33%	28.73%	20.81%	18.92%
5. Administrative Expense Rate	<u>0.90%</u>	<u>0.97%</u>	<u>1.29%</u>	<u>1.43%</u>	<u>0.99%</u>	<u>0.97%</u>
6. Net Employer Contribution Rate (3+4+5)	30.15%	32.62%	43.01%	47.85%	33.20%	31.45%

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION V – CONTRIBUTIONS

Table V-2 contains the details of the calculations of the UAL rates for the Plan and its subgroups.

Table V-2 Development of UAL Amortization Rates					
	General		Safety		TOTAL
	County and Former County	Ceres and Other Districts	County and Former County	Ceres and Other Districts	
Salary Scale:					
2021+	3.00%	3.00%	3.00%	3.00%	N/A
Amortization Factor	11.8034	11.8034	11.8034	11.8034	N/A
Payroll	\$ 225,356,873	\$ 8,190,024	\$ 59,833,954	\$ 7,195,060	\$ 300,575,911
Unfunded Actuarial Liability (AVA)	\$ 508,937,024	\$ 19,093,769	\$ 185,930,897	\$ 24,398,046	\$ 738,359,737
UAL Amortization	\$ 43,117,898	\$ 1,617,652	\$ 15,752,341	\$ 2,067,039	\$ 62,554,929
UAL Amortization Rate	19.13%	19.75%	26.33%	28.73%	20.81%

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION V – CONTRIBUTIONS

Tables V-3 and V-4 contain the calculations of the employer contribution rates for each group and tier.

Table V-3 Development of the General Member Contribution Rate as of June 30, 2020 for FYE 2022						
	Tier 2	Tier 3	Tier 4	Tier 5	PEPRA	TOTAL
<u>County and Former County</u>						
A. Total Normal Cost Rate	18.98%	2.97%	16.68%	20.55%	17.49%	18.99%
B. Member Contribution Rate	<u>8.31%</u>	<u>0.00%</u>	<u>1.19%</u>	<u>9.14%</u>	<u>8.74%</u>	<u>8.87%</u>
C. Employer Normal Cost Rate (A-B)	10.67%	2.97%	15.49%	11.41%	8.75%	10.12%
D. UAL Amortization Rate	19.13%	19.13%	19.13%	19.13%	19.13%	19.13%
E. Administrative Expense Rate	<u>0.92%</u>	<u>0.68%</u>	<u>1.07%</u>	<u>0.94%</u>	<u>0.86%</u>	<u>0.90%</u>
F. Net June 30, 2020 Contribution Rate (C+D+E)	30.72%	22.78%	35.69%	31.48%	28.74%	30.15%
<u>Ceres and Other Districts</u>						
A. Total Normal Cost Rate	16.97%		0.00%	23.20%	18.33%	20.97%
B. Member Contribution Rate	<u>8.09%</u>		<u>0.00%</u>	<u>9.06%</u>	<u>9.16%</u>	<u>9.07%</u>
C. Employer Normal Cost Rate (A-B)	8.88%		0.00%	14.14%	9.17%	11.90%
D. UAL Amortization Rate	19.75%		19.75%	19.75%	19.75%	19.75%
E. Administrative Expense Rate	<u>0.88%</u>		<u>0.61%</u>	<u>1.04%</u>	<u>0.89%</u>	<u>0.97%</u>
F. Net June 30, 2020 Contribution Rate (C+D+E)	29.51%		20.36%	34.93%	29.81%	32.62%

Administrative expenses allocated based on projected Employer Normal Cost and UAL Amortization contributions. See Table V-5.

For Ceres and the other Districts, the remaining Tier 4 General member is assumed to retire immediately, therefore there is no Normal Cost for this member; only a UAL payment is calculated for this tier.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION V – CONTRIBUTIONS

Table V-4 Development of the Safety Member Contribution Rate as of June 30, 2020 for FYE 2022				
	Tier 2	Tier 5	PEPRA	TOTAL
<u>County and Former County</u>				
A. Total Normal Cost Rate	26.17%	31.61%	24.73%	27.99%
B. Member Contribution Rate	<u>12.03%</u>	<u>12.91%</u>	<u>12.36%</u>	<u>12.60%</u>
C. Employer Normal Cost Rate (A-B)	14.14%	18.70%	12.37%	15.39%
D. UAL Amortization Rate	26.33%	26.33%	26.33%	26.33%
E. Administrative Expense Rate	<u>1.25%</u>	<u>1.39%</u>	<u>1.19%</u>	<u>1.29%</u>
F. Net June 30, 2020 Contribution Rate (C+D+E)	41.72%	46.42%	39.89%	43.01%
<u>Ceres and Other Districts</u>				
A. Total Normal Cost Rate		31.93%	27.44%	30.69%
B. Member Contribution Rate		<u>12.73%</u>	<u>13.72%</u>	<u>13.00%</u>
C. Employer Normal Cost Rate (A-B)		19.20%	13.72%	17.69%
D. UAL Amortization Rate		28.73%	28.73%	28.73%
E. Administrative Expense Rate		<u>1.48%</u>	<u>1.31%</u>	<u>1.43%</u>
F. Net June 30, 2020 Contribution Rate (C+D+E)		49.41%	43.76%	47.85%

Administrative expenses allocated based on projected Employer Normal Cost and UAL Amortization contributions. See Table V-6.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION V – CONTRIBUTIONS

Tables V-5 and V-6 show the allocation of the administrative expense for each group and tier. The administrative expense is allocated to each group and tier based on their share of the projected employer contributions prior to inclusion of the administrative expense.

Table V-5 Development of the General Member Administrative Expense Rate as of June 30, 2020 for FYE 2022						
	Tier 2	Tier 3	Tier 4	Tier 5	PEPRA	TOTAL
<u>County and Former County</u>						
A. Projected Payroll for FYE 2021	\$ 15,449,409	\$ 451,823	\$ 417,105	\$ 106,005,788	\$ 103,032,748	\$ 225,356,873
B. Employer Normal Cost Rate	10.67%	2.97%	15.49%	11.41%	8.75%	
C. UAL Amortization Rate	<u>19.13%</u>	<u>19.13%</u>	<u>19.13%</u>	<u>19.13%</u>	<u>19.13%</u>	
D. Employer Contribution Rate						
Prior to Administrative Expense (B+C)	29.80%	22.10%	34.62%	30.54%	27.88%	
E. Projected Employer Contribution for FYE 2021						
Prior to Administrative Expense						
1. Normal Cost (A*B)	\$ 1,648,452	\$ 13,419	\$ 64,610	\$ 12,095,261	\$ 9,015,365	\$ 22,837,107
2. UAL Amortization (A*C)	<u>2,955,472</u>	<u>86,434</u>	<u>79,792</u>	<u>20,278,907</u>	<u>19,710,165</u>	<u>43,110,770</u>
3. Total Prior to Administrative Expense (A*D)	\$ 4,603,924	\$ 99,853	\$ 144,402	\$ 32,374,168	\$ 28,725,530	\$ 65,947,877
F. Allocated Administrative Expense	\$ 141,802	\$ 3,076	\$ 4,448	\$ 997,136	\$ 884,756	\$ 2,031,217
G. Administrative Expense Rate (F÷A)	0.92%	0.68%	1.07%	0.94%	0.86%	
H. Projected Employer Contribution for FYE 2021						
Due to Administrative Expense (A*G)	\$ 142,135	\$ 3,072	\$ 4,463	\$ 996,454	\$ 886,082	\$ 2,032,206
<u>Ceres and Other Districts</u>						
A. Projected Payroll for FYE 2021	\$ 249,939		\$ 60,084	\$ 4,467,077	\$ 3,412,924	\$ 8,190,024
B. Employer Normal Cost Rate	8.88%		0.00%	14.14%	9.17%	
C. UAL Amortization Rate	<u>19.75%</u>		<u>19.75%</u>	<u>19.75%</u>	<u>19.75%</u>	
D. Employer Contribution Rate						
Prior to Administrative Expense (B+C)	28.63%		19.75%	33.89%	28.92%	
E. Projected Employer Contribution for FYE 2021						
Prior to Administrative Expense						
1. Normal Cost (A*B)	\$ 22,195		\$ 0	\$ 631,644	\$ 312,966	\$ 966,805
2. UAL Amortization (A*C)	<u>49,363</u>		<u>11,867</u>	<u>882,248</u>	<u>674,052</u>	<u>1,617,530</u>
3. Total Prior to Administrative Expense (A*D)	\$ 71,558		\$ 11,867	\$ 1,513,892	\$ 987,018	\$ 2,584,335
F. Allocated Administrative Expense	\$ 2,204		\$ 365	\$ 46,628	\$ 30,400	\$ 79,598
G. Administrative Expense Rate (F÷A)	0.88%		0.61%	1.04%	0.89%	
H. Projected Employer Contribution for FYE 2021						
Due to Administrative Expense (A*G)	\$ 2,199		\$ 367	\$ 46,458	\$ 30,375	\$ 79,399

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION V – CONTRIBUTIONS

Table V-6 Development of the Safety Member Administrative Expense Rate as of June 30, 2020 for FYE 2022				
	Tier 2	Tier 5	PEPRA	TOTAL
<u>County and Former County</u>				
A. Projected Payroll for FYE 2021	\$ 3,074,200	\$ 28,017,925	\$ 28,741,829	\$ 59,833,954
B. Employer Normal Cost Rate	14.14%	18.70%	12.37%	
C. UAL Amortization Rate	<u>26.33%</u>	<u>26.33%</u>	<u>26.33%</u>	
D. Employer Contribution Rate				
Prior to Administrative Expense (B+C)	40.47%	45.03%	38.70%	
E. Projected Employer Contribution for FYE 2021				
Prior to Administrative Expense				
1. Normal Cost (A*B)	\$ 434,692	\$ 5,239,352	\$ 3,555,364	\$ 9,229,408
2. UAL Amortization (A*C)	<u>809,437</u>	<u>7,377,120</u>	<u>7,567,724</u>	<u>15,754,281</u>
3. Total Prior to Administrative Expense (A*D)	\$ 1,244,129	\$ 12,616,472	\$ 11,123,088	\$ 24,983,689
F. Allocated Administrative Expense	\$ 38,320	\$ 388,592	\$ 342,595	\$ 769,506
G. Administrative Expense Rate (F÷A)	1.25%	1.39%	1.19%	
H. Projected Employer Contribution for FYE 2021				
Due to Administrative Expense (A*G)	\$ 38,428	\$ 389,449	\$ 342,028	\$ 769,905
<u>Ceres and Other Districts</u>				
A. Projected Payroll for FYE 2021		\$ 5,199,380	\$ 1,995,680	\$ 7,195,060
B. Employer Normal Cost Rate		19.20%	13.72%	
C. UAL Amortization Rate		<u>28.73%</u>	<u>28.73%</u>	
D. Employer Contribution Rate				
Prior to Administrative Expense (B+C)		47.93%	42.45%	
E. Projected Employer Contribution for FYE 2021				
Prior to Administrative Expense				
1. Normal Cost (A*B)		\$ 998,281	\$ 273,807	\$ 1,272,088
2. UAL Amortization (A*C)		<u>1,493,782</u>	<u>573,359</u>	<u>2,067,141</u>
3. Total Prior to Administrative Expense (A*D)		\$ 2,492,063	\$ 847,166	\$ 3,339,229
F. Allocated Administrative Expense		\$ 76,756	\$ 26,093	\$ 102,849
G. Administrative Expense Rate (F÷A)		1.48%	1.31%	
H. Projected Employer Contribution for FYE 2021				
Due to Administrative Expense (A*G)		\$ 76,951	\$ 26,143	\$ 103,094

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION VI – REQUIRED CAFR EXHIBITS

The GASB adopted Statement Nos. 67 and 68, which replaced GASB Statement Nos. 25, and 27. The disclosures needed to satisfy GASB requirements can be found in the StanCERA GASB 67/68 Report as of June 30, 2020.

In accordance with Government Finance Officers Association (GFOA) and their recommended checklist for Comprehensive Annual Financial Reports (CAFRs), we continue to prepare several schedules for the Plan that are not included in the GASB report.

The Schedule of Funded Liabilities by Type (Table VI-1, formerly referred to as the Solvency Test) shows the portion of actuarial liabilities for active member contributions, inactive members, and the employer-financed portion of the active members covered by the Actuarial Value of Assets. The accrued liability is determined assuming that the Plan is ongoing and participants continue to terminate employment, retire, etc., in accordance with the actuarial assumptions, including a 7.00% discount rate for the most recent valuation.

The information needed to prepare the Actuarial Gain/Loss exhibit can now be found in Table II-1 (Unfunded Actuarial Liability Change by Source) in the Disclosures Related to Risk section. Each year there will be a gain or loss due to both assets and liabilities. In addition, there can be gains or losses due to changes in plan provisions or due to the adoption of new assumptions or methods. Finally, the unfunded liability will change based on whether the contributions exceed the interest on the unfunded liability plus the normal cost. A negative number in this column (“Contributions”) indicates that the contributions in the given year are greater than the interest on the unfunded liability plus the normal cost, and thus reduce the unfunded liability.

We have also included a Schedule of Funding Progress (Table VI-2), showing the historical assets, liabilities, and funded ratios for the Plan, along with the covered payroll and the unfunded actuarial liability as a percent of payroll.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION VI – REQUIRED CAFR EXHIBITS

<p style="text-align: center;">Table VI-1 SCHEDULE OF FUNDED LIABILITIES BY TYPE (dollars in thousands)</p>									
Valuation Date June 30,	(1)	(2)	(3)	Actuarial Accrued Liabilities	Valuation Assets	Portion of Actuarial Liabilities Covered by Reported Assets			
	Active Member Contributions	Retirees And Beneficiaries	Active And Terminated Members			(1)	(2)	(3)	
2003	\$ 176,622	\$ 455,784	\$ 325,689	\$ 958,095	\$ 928,022	100%	100%	91%	
2004	166,806	518,922	349,617	1,035,345	993,180	100%	100%	88%	
2005	205,556	551,810	358,994	1,116,310	1,049,691	100%	100%	81%	
2006 ¹	219,907	619,109	355,888	1,194,904	1,154,048	100%	100%	89%	
2008 ²	272,657	739,838	536,329	1,548,824	1,317,167	100%	100%	57%	
2009	298,342	781,082	574,292	1,653,716	1,171,767	100%	100%	16%	
2010	323,940	829,323	584,561	1,737,824	1,325,801	100%	100%	30%	
2011	337,201	897,384	523,133	1,757,718	1,372,046	100%	100%	26%	
2012	351,569	987,546	549,598	1,888,713	1,451,764	100%	100%	20%	
2013 ³	191,968	1,065,792	661,466	1,919,227	1,524,076	100%	100%	40%	
2014	193,301	1,144,734	688,335	2,026,371	1,644,077	100%	100%	44%	
2015	196,074	1,337,781	857,667	2,391,522	1,763,629	100%	100%	27%	
2016	200,960	1,427,166	908,941	2,537,067	1,845,764	100%	100%	24%	
2017	206,386	1,510,151	931,625	2,648,162	1,968,231	100%	100%	27%	
2018	213,223	1,590,078	945,767	2,749,068	2,100,278	100%	100%	31%	
2019	219,369	1,695,484	982,369	2,897,223	2,199,956	100%	100%	29%	
2020	222,390	1,833,388	972,868	3,028,647	2,290,287	100%	100%	24%	

¹ Results recalculated, reflecting Level 1 assumption changes (new retirement, termination and withdrawal decrements) & new EFI EAN methodology.

² Reflects transfer as of June 30, 2008 of \$50 million from Non-Valuation to Valuation Reserves.

³ Reflects change to include only refundable contribution balance.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

SECTION VI – REQUIRED CAFR EXHIBITS

Table VI-2 Schedule of Funding Progress							
Actuarial Valuation Date ¹	Valuation Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL	Funded Ratio	Covered Payroll	Unfunded AAL as a % of Covered Payroll	
2008 ²	\$ 1,317,167,000	\$ 1,548,824,000	\$ 231,657,000	85.0%	\$ 275,580,000	84.1%	
2009	1,171,767,000	1,653,716,000	481,949,000	70.9%	248,316,000	194.1%	
2010	1,325,801,000	1,737,824,000	412,023,000	76.3%	248,830,473	165.6%	
2011	1,372,046,000	1,757,718,000	385,672,000	78.1%	226,706,796	170.1%	
2012	1,451,764,000	1,888,713,000	436,949,000	76.9%	220,918,009	197.8%	
2013	1,524,076,000	1,919,227,000	395,151,000	79.4%	219,028,318	180.4%	
2014	1,644,077,000	2,026,371,000	382,294,000	81.1%	223,028,288	171.4%	
2015	1,763,629,000	2,391,522,000	627,893,000	73.7%	237,717,727	264.1%	
2016	1,845,764,000	2,537,067,000	691,303,000	72.8%	250,447,580	276.0%	
2017	1,968,231,000	2,648,162,000	679,931,000	74.3%	256,143,684	265.4%	
2018	2,100,278,000	2,749,068,000	648,790,000	76.4%	270,755,220	239.6%	
2019	2,199,956,000	2,897,223,000	697,267,000	75.9%	284,008,303	245.5%	
2020	2,290,287,000	3,028,647,000	738,360,000	75.6%	285,326,282	258.8%	

¹ Excludes value of Non-Valuation Reserves.

² Includes \$50 million transferred from Non-Valuation Reserves as of June 30, 2008.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX A – MEMBERSHIP INFORMATION

The data for this valuation was provided by StanCERA as of June 30, 2020. Cheiron did not audit any of the data. However, we performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

	<u>General Members</u>		<u>Safety Members</u>		<u>Total</u>	
	7/1/2019	7/1/2020	7/1/2019	7/1/2020	7/1/2019	7/1/2020
Active Participants						
Number	3,690	3,652	814	806	4,504	4,458
Average Age	44.72	44.73	37.42	37.13	43.40	43.36
Average Service	10.30	10.37	9.87	9.75	10.22	10.26
Average Pay (does not reflect impact of furloughs)	\$ 59,727	\$ 60,693	\$ 78,151	\$ 79,000	\$ 63,057	\$ 64,003
Service Retired						
Number	2,797	2,900	434	473	3,231	3,373
Average Age	70.27	70.36	64.75	64.25	69.53	69.51
Average Annual Total Benefit	\$ 31,900	\$ 32,902	\$ 57,721	\$ 59,785	\$ 35,368	\$ 36,672
Beneficiaries						
Number	368	386	101	112	469	498
Average Age	72.79	73.15	67.16	67.15	71.58	71.80
Average Annual Total Benefit	\$ 19,160	\$ 20,816	\$ 31,349	\$ 31,102	\$ 21,785	\$ 23,129
Duty Disabled						
Number	89	89	130	138	219	227
Average Age	69.24	69.53	58.98	59.51	63.15	63.44
Average Annual Total Benefit	\$ 26,767	\$ 26,952	\$ 39,697	\$ 40,467	\$ 34,442	\$ 35,169
Ordinary Disabled						
Number	75	72	7	7	82	79
Average Age	64.23	65.36	61.00	62.00	63.95	65.06
Average Annual Total Benefit	\$ 18,551	\$ 19,005	\$ 25,147	\$ 25,901	\$ 19,114	\$ 19,616
Total In Pay						
Number	3,329	3,447	672	730	4,001	4,177
Average Age	70.39	70.55	63.96	63.78	69.31	69.37
Average Annual Total Benefit	\$ 30,054	\$ 31,105	\$ 49,931	\$ 51,407	\$ 33,392	\$ 34,653
Terminated Vested						
Number	381	398	66	67	447	465
Average Age	50.35	49.76	43.06	43.16	49.27	48.81
Average Service	10.73	10.54	9.74	9.87	10.58	10.44
Transfers						
Number	502	523	173	170	675	693
Average Age	46.10	46.14	41.75	41.75	44.98	45.06
Average Service	7.26	7.35	7.39	7.51	7.29	7.39
Total Deferred						
Number	883	921	239	237	1,122	1,158
Average Age	47.93	47.70	42.11	42.15	46.69	46.57
Average Service	8.76	8.73	8.04	8.18	8.60	8.62

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX A – MEMBERSHIP INFORMATION

Plan Year Ending	Added During Year	Allowance Added	Removed During Year	Allowance Removed	At End of Year	Annual Allowance	% Increase in Retiree Allowance	Average Annual Allowance
2008	369	\$ 9,084,777	(148)	\$ (1,731,738)	2,666	\$ 63,296,000	19.18%	\$ 23,742
2009	156	\$ 2,168,425	(71)	\$ (647,870)	2,751	\$ 66,720,003	5.41%	\$ 24,253
2010	159	\$ 3,349,900	(80)	\$ (751,427)	2,830	\$ 71,464,735	7.11%	\$ 25,334
2011	263	\$ 4,724,416	(78)	\$ (1,194,042)	3,015	\$ 74,826,404	4.70%	\$ 25,732
2012	226	\$ 3,565,634	(99)	\$ (978,729)	3,142	\$ 80,157,222	7.12%	\$ 26,737
2013	198	\$ 6,036,138	(91)	\$ (1,144,584)	3,249	\$ 89,975,736	12.25%	\$ 27,694
2014	222	\$ 6,703,273	(86)	\$ (1,725,066)	3,385	\$ 96,405,454	7.15%	\$ 28,480
2015	237	\$ 7,778,716	(83)	\$ (2,043,313)	3,539	\$ 104,052,097	7.93%	\$ 29,402
2016	211	\$ 7,066,750	(99)	\$ (2,160,689)	3,651	\$ 111,260,240	6.93%	\$ 30,474
2017	202	\$ 6,749,973	(107)	\$ (2,471,229)	3,746	\$ 117,901,627	5.97%	\$ 31,474
2018	233	\$ 7,555,825	(123)	\$ (3,109,178)	3,856	\$ 124,995,337	6.02%	\$ 32,416
2019	242	\$ 8,421,538	(97)	\$ (2,580,158)	4,001	\$ 133,601,799	6.89%	\$ 33,392
2020	283	\$ 11,277,136	(107)	\$ (3,164,436)	4,177	\$ 144,745,530	8.34%	\$ 34,653

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX A – MEMBERSHIP INFORMATION

Active and Vested Participant Data as of July 1, 2020

	County and Former County						Ceres and Other Districts						Total County and Former County, Ceres and Other Districts	
	General Members		Safety Members		Total		General Members		Safety Members		Total			
	7/1/2019	7/1/2020	7/1/2019	7/1/2020	7/1/2019	7/1/2020	7/1/2019	7/1/2020	7/1/2019	7/1/2020	7/1/2019	7/1/2020	7/1/2019	7/1/2020
Active Participants														
Number	3,557	3,520	735	726	4,292	4,246	133	132	79	80	212	212	4,504	4,458
Average Age	44.68	44.73	37.23	36.90	43.41	43.39	45.74	44.95	39.22	39.23	43.31	42.79	43.40	43.36
Average Service	10.26	10.36	9.67	9.58	10.16	10.22	11.37	10.59	11.70	11.52	11.49	10.94	10.22	10.26
Average Pay ¹	\$ 59,610	\$ 60,760	\$ 77,442	\$ 78,241	\$ 62,664	\$ 63,749	\$ 62,846	\$ 58,908	\$ 84,750	\$ 85,887	\$ 71,008	\$ 69,089	\$ 63,057	\$ 64,003
Terminated Vested														
Number	369	383	59	62	428	445	12	15	7	5	19	20	447	465
Average Age	50.27	49.68	43.00	43.18	49.26	48.78	52.83	51.67	43.57	43.00	49.42	49.50	49.27	48.81
Average Service	10.70	10.44	9.67	9.76	10.56	10.35	11.69	13.13	10.32	11.21	11.19	12.65	10.58	10.44
Transfers														
Number	460	479	139	138	599	617	42	44	34	32	76	76	675	693
Average Age	46.43	46.39	41.30	41.17	45.24	45.23	42.43	43.32	43.62	44.28	42.96	43.72	44.98	45.06
Average Service	7.20	7.30	7.07	7.36	7.17	7.31	7.86	7.96	8.70	8.17	8.24	8.05	7.29	7.39
Total Deferred														
Number	829	862	198	200	1,027	1,062	54	59	41	37	95	96	1,122	1,158
Average Age	48.14	47.86	41.80	41.79	46.92	46.71	44.74	45.44	43.61	44.11	44.25	44.93	46.69	46.57
Average Service	8.76	8.69	7.85	8.10	8.58	8.58	8.71	9.28	8.98	8.58	8.83	9.01	8.60	8.62

¹ All payroll figures shown are annual.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX A – MEMBERSHIP INFORMATION

County and Former County Members

	General Members												Safety Members					
	Tier 1		Tier 2		Tier 3		Tier 4		Tier 5		PEPRA		Tier 2		Tier 5		PEPRA	
	7/1/2019	7/1/2020	7/1/2019	7/1/2020	7/1/2019	7/1/2020	7/1/2019	7/1/2020	7/1/2019	7/1/2020	7/1/2019	7/1/2020	7/1/2019	7/1/2020	7/1/2019	7/1/2020	7/1/2019	7/1/2020
Active Participants																		
Number	1	0	227	211	8	8	7	4	1,614	1,467	1,700	1,830	43	36	329	292	363	398
Average Age	60.00	0.00	42.76	44.10	51.25	52.25	62.14	62.00	51.29	51.60	38.55	39.22	38.35	38.39	44.81	44.91	30.22	30.89
Average Service	20.74	0.00	8.71	9.95	19.65	20.62	37.25	35.47	18.03	18.85	2.92	3.50	8.75	9.71	17.11	17.67	3.04	3.63
Average Pay ¹	\$ 51,948	\$ 0	\$ 66,711	\$ 70,176	\$ 54,617	\$ 54,560	\$ 119,774	\$ 100,735	\$ 67,946	\$ 69,796	\$ 50,529	\$ 52,371	\$ 79,153	\$ 81,868	\$ 90,951	\$ 92,680	\$ 64,996	\$ 67,318
Terminated Vested																		
Number	4	4	53	60	17	15	0	0	287	278	8	26	10	11	46	45	3	6
Average Age	65.75	66.75	53.47	51.30	58.94	60.53	0.00	0.00	49.17	49.25	42.13	41.69	48.60	47.55	42.65	43.76	29.67	30.83
Average Service	8.87	8.87	7.74	7.93	14.15	13.89	0.00	0.00	11.21	11.23	5.49	6.08	6.56	7.42	10.61	10.88	5.60	5.62
Transfers																		
Number	1	1	125	124	12	11	0	0	237	236	85	107	22	20	94	91	23	27
Average Age	64.00	65.00	48.68	48.81	52.33	51.18	0.00	0.00	48.09	48.94	37.46	37.31	44.41	43.90	42.67	43.35	32.70	31.78
Average Service	5.95	5.95	3.56	3.98	17.67	15.00	0.00	0.00	10.42	10.88	2.12	2.46	4.07	4.21	8.87	9.33	2.61	3.05
Total Deferred																		
Number	5	5	178	184	29	26	0	0	524	514	93	133	32	31	140	136	26	33
Average Age	65.40	66.40	50.11	49.62	56.21	56.58	0.00	0.00	48.68	49.11	37.86	38.17	45.72	45.19	42.66	43.49	32.35	31.61
Average Service	8.29	8.29	4.81	5.27	15.61	14.36	0.00	0.00	10.85	11.07	2.41	3.17	4.85	5.35	9.44	9.85	2.96	3.52

¹ All payroll figures shown are annual.

CERES and Other District Members

	General Members												Safety Members					
	Tier 1		Tier 2		Tier 3		Tier 4		Tier 5		PEPRA		Tier 2		Tier 5		PEPRA	
	7/1/2019	7/1/2020	7/1/2019	7/1/2020	7/1/2019	7/1/2020	7/1/2019	7/1/2020	7/1/2019	7/1/2020	7/1/2019	7/1/2020	7/1/2019	7/1/2020	7/1/2019	7/1/2020	7/1/2019	7/1/2020
Active Participants																		
Number	0	0	4	4	0	0	1	1	69	60	59	67	0	0	54	51	25	29
Average Age	0.00	0.00	48.00	49.00	0.00	0.00	72.00	73.00	50.68	51.22	39.37	38.69	0.00	0.00	41.67	42.02	33.92	34.31
Average Service	0.00	0.00	13.54	14.58	0.00	0.00	50.87	51.87	18.11	18.00	2.67	3.10	0.00	0.00	15.55	15.87	3.37	3.86
Average Pay ¹	\$ 0	\$ 0	\$ 60,682	\$ 60,363	\$ 0	\$ 0	\$ 58,451	\$ 58,044	\$ 76,458	\$ 71,805	\$ 47,149	\$ 47,285	\$ 0	\$ 0	\$ 95,583	\$ 98,354	\$ 61,350	\$ 63,963
Terminated Vested																		
Number	0	0	4	4	0	0	0	0	6	8	2	3	2	0	5	4	0	1
Average Age	0.00	0.00	59.25	60.25	0.00	0.00	0.00	0.00	52.00	50.75	42.50	42.67	51.50	0.00	40.40	42.00	0.00	47.00
Average Service	0.00	0.00	7.59	7.59	0.00	0.00	0.00	0.00	14.03	16.89	12.90	10.49	7.64	0.00	11.40	12.69	0.00	5.30
Transfers																		
Number	1	0	5	5	0	0	0	0	28	29	8	10	12	11	20	19	2	2
Average Age	65.00	0.00	53.00	54.00	0.00	0.00	0.00	0.00	41.79	43.14	35.25	38.50	50.00	51.09	41.20	41.79	29.50	30.50
Average Service	19.81	0.00	2.11	2.11	0.00	0.00	0.00	0.00	9.76	10.17	3.31	4.48	8.74	7.56	9.33	9.15	2.18	2.18
Total Deferred																		
Number	1	0	9	9	0	0	0	0	34	37	10	13	14	11	25	23	2	3
Average Age	65.00	0.00	55.78	56.78	0.00	0.00	0.00	0.00	43.59	44.78	36.70	39.46	50.21	51.09	41.04	41.83	29.50	36.00
Average Service	19.81	0.00	4.55	4.55	0.00	0.00	0.00	0.00	10.52	11.62	5.23	5.87	8.59	7.56	9.74	9.77	2.18	3.22

¹ All payroll figures shown are annual.



**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX A – MEMBERSHIP INFORMATION

Valuation Date	Plan Type	Number	Annual Payroll	Average Annual Salary	Increase in Average Pay
June 30, 2003	General	3,626	\$163,505,000	\$45,092	6.76%
	Safety	637	\$34,159,000	\$53,625	3.98%
	Total	4,263	\$197,664,000	\$46,367	5.23%
June 30, 2004	General	3,618	\$164,462,000	\$45,457	0.81%
	Safety	630	\$35,501,000	\$56,351	5.08%
	Total	4,248	\$199,963,000	\$47,072	1.52%
June 30, 2005	General	3,651	\$173,399,000	\$47,494	4.48%
	Safety	687	\$38,282,000	\$55,723	-1.11%
	Total	4,338	\$211,681,000	\$48,797	3.66%
June 30, 2006	General	3,702	\$179,767,000	\$48,559	2.24%
	Safety	689	\$40,001,000	\$58,057	4.19%
	Total	4,391	\$219,768,000	\$50,050	2.57%
June 30, 2008	General	3,719	\$230,942,000	\$62,098	27.88%
	Safety	731	\$44,638,000	\$61,064	5.18%
	Total	4,450	\$275,580,000	\$61,928	23.73%
June 30, 2009	General	3,627	\$201,144,000	\$55,457	-10.69%
	Safety	739	\$47,172,000	\$63,832	4.53%
	Total	4,366	\$248,316,000	\$56,875	-8.16%
June 30, 2010	General	3,464	\$202,200,198	\$58,372	5.26%
	Safety	685	\$46,630,275	\$68,073	6.64%
	Total	4,149	\$248,830,473	\$59,974	5.45%
June 30, 2011	General	3,232	\$184,906,498	\$57,211	-1.99%
	Safety	637	\$41,800,298	\$65,621	-3.60%
	Total	3,869	\$226,706,796	\$58,596	-2.30%
June 30, 2012	General	3,233	\$179,260,736	\$55,447	-3.08%
	Safety	661	\$41,657,273	\$63,022	-3.96%
	Total	3,894	\$220,918,009	\$56,733	-3.18%
June 30, 2013	General	3,230	\$176,437,755	\$54,625	-1.48%
	Safety	694	\$42,590,563	\$61,370	-2.62%
	Total	3,924	\$219,028,318	\$55,818	-1.61%
June 30, 2014	General	3,303	\$179,606,090	\$54,377	-0.45%
	Safety	689	\$43,422,198	\$63,022	2.69%
	Total	3,992	\$223,028,288	\$55,869	0.09%
June 30, 2015	General	3,421	\$188,550,804	\$55,116	1.36%
	Safety	723	\$49,166,923	\$68,004	7.91%
	Total	4,144	\$237,717,727	\$57,364	2.68%
June 30, 2016	General	3,521	\$198,457,059	\$56,364	2.26%
	Safety	727	\$52,020,521	\$71,555	5.22%
	Total	4,248	\$250,477,580	\$58,964	2.79%
June 30, 2017	General	3,552	\$201,758,423	\$56,801	0.78%
	Safety	757	\$54,385,261	\$71,843	0.40%
	Total	4,309	\$256,143,684	\$59,444	0.81%
June 30, 2018	General	3,658	\$211,919,963	\$57,933	1.99%
	Safety	794	\$58,835,257	\$74,100	3.14%
	Total	4,452	\$270,755,220	\$60,817	2.31%
June 30, 2019	General	3,690	\$220,393,008	\$59,727	3.10%
	Safety	814	\$63,615,295	\$78,151	5.47%
	Total	4,504	\$284,008,303	\$63,057	3.68%
June 30, 2020	General	3,652	\$221,652,587	\$60,693	1.62%
	Safety	806	\$63,673,695	\$79,000	1.09%
	Total	4,458	\$285,326,282	\$64,003	1.50%

Actuarial valuation was not performed for fiscal year ending June 30, 2007.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX A – MEMBERSHIP INFORMATION

StanCERA Membership – Retired Members as of June 30, 2020

Age	County and Former County				Ceres and Other Districts				Total	
	<u>General Members</u>		<u>Safety Members</u>		<u>General Members</u>		<u>Safety Members</u>		Number	Annual Average Benefit
	Number	Annual Average Benefit	Number	Annual Average Benefit	Number	Annual Average Benefit	Number	Annual Average Benefit		
35-39	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0
40-44	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0
45-49	0	\$ 0	6	\$ 71,277	0	\$ 0	0	\$ 0	6	\$ 71,277
50-54	58	\$ 19,886	76	\$ 59,337	2	\$ 56,857	10	\$ 62,173	146	\$ 43,824
55-59	194	\$ 29,182	79	\$ 71,900	5	\$ 46,382	8	\$ 46,787	286	\$ 41,775
60-64	418	\$ 33,395	67	\$ 47,384	13	\$ 36,856	4	\$ 144,532	502	\$ 36,237
65-69	686	\$ 34,779	76	\$ 54,112	22	\$ 26,318	4	\$ 82,846	788	\$ 36,651
70-74	692	\$ 36,552	70	\$ 61,725	23	\$ 32,302	1	\$ 82,036	786	\$ 38,727
75-79	394	\$ 33,394	39	\$ 54,925	8	\$ 32,012	0	\$ 0	441	\$ 35,273
80-84	201	\$ 25,379	22	\$ 65,669	4	\$ 47,181	0	\$ 0	227	\$ 29,668
85-89	110	\$ 27,062	7	\$ 53,305	1	\$ 121,725	0	\$ 0	118	\$ 29,421
90-94	53	\$ 21,495	2	\$ 27,698	0	\$ 0	0	\$ 0	55	\$ 21,721
95+	16	\$ 25,155	2	\$ 24,999	0	\$ 0	0	\$ 0	18	\$ 25,138
All Ages	2,822	\$ 32,850	446	\$ 58,948	78	\$ 34,785	27	\$ 73,614	3,373	\$ 36,672

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX A – MEMBERSHIP INFORMATION

StanCERA Membership – Service-Connected Disabled Members as of June 30, 2020

Age	County and Former County				Ceres and Other Districts				Total	
	<u>General Members</u>		<u>Safety Members</u>		<u>General Members</u>		<u>Safety Members</u>		Number	Annual Average Benefit
	Number	Annual Average Benefit	Number	Annual Average Benefit	Number	Annual Average Benefit	Number	Annual Average Benefit		
25-29	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0
30-34	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0
35-39	0	\$ 0	7	\$ 28,606	0	\$ 0	1	\$ 41,500	8	\$ 30,218
40-44	0	\$ 0	6	\$ 21,409	0	\$ 0	2	\$ 30,540	8	\$ 23,691
45-49	1	\$ 16,891	15	\$ 33,621	0	\$ 0	0	\$ 0	16	\$ 32,576
50-54	2	\$ 25,413	14	\$ 38,617	0	\$ 0	1	\$ 33,447	17	\$ 36,760
55-59	4	\$ 30,764	16	\$ 36,881	1	\$ 33,076	2	\$ 70,027	23	\$ 38,534
60-64	12	\$ 23,658	21	\$ 36,414	1	\$ 18,152	1	\$ 117,451	35	\$ 33,834
65-69	24	\$ 25,378	20	\$ 48,226	1	\$ 25,911	3	\$ 44,355	48	\$ 36,095
70-74	24	\$ 28,477	18	\$ 50,732	2	\$ 23,281	0	\$ 0	44	\$ 37,345
75-79	3	\$ 30,364	8	\$ 41,649	0	\$ 0	0	\$ 0	11	\$ 38,571
80-84	11	\$ 31,881	1	\$ 36,930	0	\$ 0	0	\$ 0	12	\$ 32,301
85-89	2	\$ 23,266	2	\$ 40,806	0	\$ 0	0	\$ 0	4	\$ 32,036
90-94	1	\$ 19,565	0	\$ 0	0	\$ 0	0	\$ 0	1	\$ 19,565
95+	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0
All Ages	84	\$ 27,084	128	\$ 39,515	5	\$ 24,740	10	\$ 52,660	227	\$ 35,169

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX A – MEMBERSHIP INFORMATION

StanCERA Membership – Nonservice-Connected Disabled Members as of June 30, 2020

Age	County and Former County				Ceres and Other Districts				Total	
	<u>General Members</u>		<u>Safety Members</u>		<u>General Members</u>		<u>Safety Members</u>		Number	Annual Average Benefit
	Number	Annual Average Benefit	Number	Annual Average Benefit	Number	Annual Average Benefit	Number	Annual Average Benefit		
35-39	0	\$ 0	0	\$ 0	1	\$ 24,318	0	\$ 0	1	\$ 24,318
40-44	2	\$ 16,785	0	\$ 0	0	\$ 0	0	\$ 0	2	\$ 16,785
45-49	5	\$ 19,573	1	\$ 25,049	0	\$ 0	1	\$ 39,363	7	\$ 23,182
50-54	7	\$ 18,833	0	\$ 0	0	\$ 0	0	\$ 0	7	\$ 18,833
55-59	8	\$ 18,429	0	\$ 0	0	\$ 0	0	\$ 0	8	\$ 18,429
60-64	7	\$ 21,589	2	\$ 25,926	0	\$ 0	0	\$ 0	9	\$ 22,553
65-69	7	\$ 20,995	2	\$ 21,210	0	\$ 0	0	\$ 0	9	\$ 21,042
70-74	17	\$ 18,083	0	\$ 0	0	\$ 0	0	\$ 0	17	\$ 18,083
75-79	11	\$ 19,261	1	\$ 22,623	0	\$ 0	0	\$ 0	12	\$ 19,542
80-84	5	\$ 15,972	0	\$ 0	0	\$ 0	0	\$ 0	5	\$ 15,972
85-89	1	\$ 13,326	0	\$ 0	0	\$ 0	0	\$ 0	1	\$ 13,326
90-94	1	\$ 22,815	0	\$ 0	0	\$ 0	0	\$ 0	1	\$ 22,815
95+	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0
All Ages	71	\$ 18,931	6	\$ 23,657	1	\$ 24,318	1	\$ 39,363	79	\$ 19,616

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX A – MEMBERSHIP INFORMATION

StanCERA Membership – Beneficiaries as of June 30, 2020

Age	County and Former County				Ceres and Other Districts				Total	
	<u>General Members</u>		<u>Safety Members</u>		<u>General Members</u>		<u>Safety Members</u>		Number	Annual Average Benefit
	Number	Annual Average Benefit	Number	Annual Average Benefit	Number	Annual Average Benefit	Number	Annual Average Benefit		
0-24	0	\$ 0	2	\$ 20,016	0	\$ 0	0	\$ 0	2	\$ 20,016
25-29	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0
30-34	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0
35-39	1	\$ 41,147	0	\$ 0	0	\$ 0	0	\$ 0	1	\$ 41,147
40-44	4	\$ 10,167	2	\$ 21,107	0	\$ 0	0	\$ 0	6	\$ 13,814
45-49	11	\$ 11,612	9	\$ 18,412	0	\$ 0	0	\$ 0	20	\$ 14,672
50-54	18	\$ 14,173	8	\$ 24,996	1	\$ 162,410	0	\$ 0	27	\$ 22,870
55-59	19	\$ 15,454	9	\$ 22,911	1	\$ 24,474	0	\$ 0	29	\$ 18,079
60-64	23	\$ 16,528	12	\$ 30,523	0	\$ 0	2	\$ 34,702	37	\$ 22,049
65-69	53	\$ 20,540	15	\$ 29,234	2	\$ 24,420	1	\$ 49,677	71	\$ 22,897
70-74	85	\$ 21,038	17	\$ 41,158	1	\$ 12,583	1	\$ 89,561	104	\$ 24,904
75-79	49	\$ 25,426	10	\$ 33,882	1	\$ 12,876	0	\$ 0	60	\$ 26,626
80-84	39	\$ 21,098	15	\$ 33,417	1	\$ 19,585	0	\$ 0	55	\$ 24,430
85-89	38	\$ 23,043	7	\$ 32,359	0	\$ 0	0	\$ 0	45	\$ 24,492
90-94	27	\$ 21,213	2	\$ 24,806	0	\$ 0	0	\$ 0	29	\$ 21,461
95+	12	\$ 18,475	0	\$ 0	0	\$ 0	0	\$ 0	12	\$ 18,475
All Ages	379	\$ 20,459	108	\$ 30,322	7	\$ 40,110	4	\$ 52,161	498	\$ 23,129

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX A – MEMBERSHIP INFORMATION

StanCERA Membership – Benefit Form Elections as of June 30, 2020

	County and Former County		Ceres and Other Districts		Total
	General	Safety	General	Safety	
Service Retired					
Option #0 (Unmodified 60% to Spouse)	2,331	397	61	24	2,813
Option #1 (Cash Refund)	231	11	7	1	250
Option #2 (100% Continuance)	224	33	10	1	268
Option #3 (50% Continuance)	34	4	0	1	39
Option #4 (Other)	2	1	0	0	3
Total Service Retired	2,822	446	78	27	3,373
Ordinary Disability					
Option #0 (Unmodified 60% to Spouse)	63	4	1	1	69
Option #1 (Cash Refund)	4	2	0	0	6
Option #2 (100% Continuance)	4	0	0	0	4
Option #3 (50% Continuance)	0	0	0	0	0
Total Ordinary Disability	71	6	1	1	79
Duty Disability					
Option #0 (Unmodified 60% to Spouse)	74	115	5	9	203
Option #1 (Cash Refund)	1	1	0	0	2
Option #2 (100% Continuance)	6	10	0	1	17
Option #3 (50% Continuance)	3	2	0	0	5
Total Duty Disability	84	128	5	10	227
Total	2,977	580	84	38	3,679

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX A – MEMBERSHIP INFORMATION

**Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2020
General Members (County and Former County)**

Count

Age	Years of Service												Total Count
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	0
20-24	9	11	3	1	0	0	0	0	0	0	0	0	24
25-29	78	71	70	37	19	19	0	0	0	0	0	0	294
30-34	58	70	76	51	78	120	8	1	0	0	0	0	462
35-39	48	52	39	45	56	171	68	16	0	0	0	0	495
40-44	32	38	40	28	28	117	107	106	19	0	0	0	515
45-49	20	28	17	22	20	79	87	99	70	9	0	0	451
50-54	25	23	16	15	26	64	73	81	96	37	8	0	464
55-59	16	14	17	17	18	50	63	63	84	50	37	3	432
60-64	8	16	10	9	16	25	44	61	45	26	15	8	283
65-69	3	2	1	2	5	9	19	16	14	5	4	0	80
70 & Over	0	0	0	0	1	0	4	6	5	2	2	0	20
Total Count	297	325	289	227	267	654	473	449	333	129	66	11	3,520

Compensation (\$)

Age	Years of Service												Avg. Comp.
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	0
20-24	36,194	36,670	35,594	37,215	0	0	0	0	0	0	0	0	36,380
25-29	45,017	42,462	44,792	48,969	50,305	53,940	0	0	0	0	0	0	45,762
30-34	51,730	47,946	48,803	53,687	56,369	58,852	51,384	67,800	0	0	0	0	53,553
35-39	52,736	49,344	56,957	50,169	53,671	61,905	65,790	57,280	0	0	0	0	57,692
40-44	46,348	49,007	54,062	53,505	59,075	58,609	65,865	66,601	69,434	0	0	0	60,085
45-49	47,654	53,403	52,470	57,666	59,739	60,869	69,665	63,878	83,409	63,389	0	0	65,203
50-54	52,288	61,764	48,871	57,813	58,022	55,988	70,028	71,966	72,932	76,042	94,369	0	66,767
55-59	56,133	52,797	47,985	69,545	56,527	67,909	74,129	66,601	69,767	72,405	77,265	56,082	68,106
60-64	74,574	52,868	61,028	62,098	56,813	52,590	59,115	66,771	68,581	86,340	91,956	81,166	66,675
65-69	66,123	94,816	52,402	49,735	67,119	68,491	55,365	73,173	57,206	83,945	61,992	0	64,790
70 & Over	0	0	0	0	118,952	0	122,425	51,042	57,484	69,518	52,328	0	72,301
Average	49,849	48,902	50,130	54,270	56,542	60,013	67,480	66,688	72,655	76,030	80,996	74,325	60,760

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX A – MEMBERSHIP INFORMATION

**Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2020
General Members (Ceres and Other Districts)**

Count

Age	Years of Service												Total Count
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	0
20-24	4	0	0	0	0	0	0	0	0	0	0	0	4
25-29	7	3	3	2	1	2	0	0	0	0	0	0	18
30-34	1	1	1	1	1	3	0	0	0	0	0	0	8
35-39	1	2	2	1	2	4	3	0	0	0	0	0	15
40-44	0	5	2	0	1	2	1	4	1	0	0	0	16
45-49	2	1	2	0	2	2	4	4	1	1	0	0	19
50-54	2	2	2	1	0	2	4	3	3	0	0	0	19
55-59	0	2	2	1	0	2	3	2	2	3	1	0	18
60-64	0	0	0	0	0	2	3	1	3	0	1	0	10
65-69	0	1	0	0	0	2	0	0	0	1	0	0	4
70 & Over	0	0	0	0	0	0	0	0	0	0	0	1	1
Total Count	17	17	14	6	7	21	18	14	10	5	2	1	132

Compensation (\$)

Age	Years of Service												Avg. Comp.
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	0
20-24	35,737	0	0	0	0	0	0	0	0	0	0	0	35,737
25-29	41,274	38,529	43,480	48,839	42,993	52,948	0	0	0	0	0	0	43,417
30-34	33,088	37,923	48,585	38,900	43,812	49,203	0	0	0	0	0	0	43,739
35-39	44,915	39,694	39,114	45,307	57,070	59,636	65,711	0	0	0	0	0	53,177
40-44	0	89,434	46,655	0	41,088	43,721	62,684	69,882	63,987	0	0	0	67,201
45-49	60,112	52,121	70,715	0	94,337	62,883	55,470	81,025	62,641	73,411	0	0	68,960
50-54	37,333	89,776	46,935	109,534	0	48,561	88,140	56,437	92,086	0	0	0	71,204
55-59	0	77,354	49,601	88,330	0	54,862	55,832	62,358	54,784	72,770	53,576	0	62,535
60-64	0	0	0	0	0	45,369	59,844	54,758	67,944	0	52,380	0	58,124
65-69	0	45,583	0	0	0	52,468	0	0	0	50,072	0	0	50,148
70 & Over	0	0	0	0	0	0	0	0	0	0	0	58,044	58,044
Average	41,456	65,414	48,933	63,291	61,529	52,751	65,627	68,030	71,629	68,359	52,978	58,044	58,908

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX A – MEMBERSHIP INFORMATION

**Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2020
Safety Members (County and Former County)**

Count

Age	Years of Service												Total Count
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	0
20-24	14	8	9	1	0	0	0	0	0	0	0	0	32
25-29	20	32	36	34	18	28	0	0	0	0	0	0	168
30-34	7	9	13	22	22	58	5	0	0	0	0	0	136
35-39	6	7	8	6	7	32	45	12	0	0	0	0	123
40-44	1	0	1	1	2	17	17	51	12	0	0	0	102
45-49	0	0	1	1	0	3	21	25	34	7	0	0	92
50-54	3	1	2	2	0	1	5	11	12	6	0	0	43
55-59	0	0	1	0	2	3	1	6	4	2	0	0	19
60-64	0	0	0	0	0	1	3	4	1	0	1	0	10
65-69	0	0	0	0	0	0	0	0	0	0	0	0	0
70 & Over	0	0	0	0	0	0	1	0	0	0	0	0	1
Total Count	51	57	71	67	51	143	98	109	63	15	1	0	726

Compensation (\$)

Age	Years of Service												Avg. Comp.
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	0
20-24	56,101	56,309	65,029	78,065	0	0	0	0	0	0	0	0	59,351
25-29	57,994	58,346	63,701	65,784	69,370	75,056	0	0	0	0	0	0	64,923
30-34	56,083	60,182	62,474	64,503	72,097	76,460	79,739	0	0	0	0	0	70,478
35-39	56,830	66,228	66,310	61,519	74,341	78,609	90,233	95,858	0	0	0	0	80,901
40-44	82,742	0	73,308	55,769	76,650	79,762	82,619	92,905	110,115	0	0	0	90,050
45-49	0	0	87,850	66,338	0	85,815	89,760	88,760	98,669	96,238	0	0	92,869
50-54	90,223	84,288	67,530	75,664	0	58,035	79,433	92,445	107,035	87,824	0	0	91,275
55-59	0	0	124,064	0	87,510	85,028	75,473	84,115	101,948	95,572	0	0	91,225
60-64	0	0	0	0	0	97,311	84,759	75,462	166,491	0	82,560	0	90,249
65-69	0	0	0	0	0	0	0	0	0	0	0	0	0
70 & Over	0	0	0	0	0	0	170,942	0	0	0	0	0	170,942
Average	59,456	59,773	65,372	65,318	72,225	77,451	88,230	91,109	103,727	92,784	82,560	0	78,241

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX A – MEMBERSHIP INFORMATION

**Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2020
Safety Members (Ceres and Other Districts)**

Count

Age	Years of Service												Total Count
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0	0	0	0	0	0
25-29	3	3	2	0	0	0	0	0	0	0	0	0	8
30-34	1	4	0	1	6	6	1	0	0	0	0	0	19
35-39	1	0	0	0	1	3	7	3	0	0	0	0	15
40-44	0	0	0	1	0	1	5	2	3	0	0	0	12
45-49	1	1	1	1	1	1	2	6	5	1	0	0	20
50-54	0	0	0	0	0	0	1	1	1	1	0	0	4
55-59	0	1	0	0	0	0	0	0	1	0	0	0	2
60-64	0	0	0	0	0	0	0	0	0	0	0	0	0
65-69	0	0	0	0	0	0	0	0	0	0	0	0	0
70 & Over	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Count	6	9	3	3	8	11	16	12	10	2	0	0	80

Compensation (\$)

Age	Years of Service												Avg. Comp.
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0	0	0	0	0	0
25-29	66,078	57,163	65,891	0	0	0	0	0	0	0	0	0	62,688
30-34	44,045	62,071	0	71,517	66,062	75,946	95,200	0	0	0	0	0	69,005
35-39	61,436	0	0	0	68,081	84,498	90,851	88,767	0	0	0	0	85,684
40-44	0	0	0	53,762	0	93,865	86,899	87,420	110,137	0	0	0	90,614
45-49	63,223	132,999	67,875	81,648	74,896	77,442	89,351	109,611	131,069	114,912	0	0	105,235
50-54	0	0	0	0	0	0	82,056	98,212	96,197	114,987	0	0	97,863
55-59	0	71,615	0	0	0	0	0	0	117,987	0	0	0	94,801
60-64	0	0	0	0	0	0	0	0	0	0	0	0	0
65-69	0	0	0	0	0	0	0	0	0	0	0	0	0
70 & Over	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	61,156	69,376	66,552	68,976	67,419	80,043	89,150	99,751	119,994	114,950	0	0	85,887

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX A – MEMBERSHIP INFORMATION

**Reconciliation of Plan Membership Since Prior Valuation
All Members**

All Members

	Actives	Transfers	Non Vested Terminations due Refunds	Vested Terminations	Ordinary Disabled	Duty Disabled	Retired	Beneficiaries	Total
July 1, 2019	4,504	675	442	447	82	219	3,231	469	10,069
New Entrants	406	0	0	0	0	0	0	0	406
Rehires	29	(10)	(9)	(4)	0	0	0	0	6
Duty Disabilities	(5)	(3)	0	(1)	0	9	0	0	0
Ordinary Disabilities	0	0	0	0	0	0	0	0	0
Retirements	(171)	(24)	0	(30)	0	0	225	0	0
Retirements from General with Safety Service	0	0	0	0	0	0	0	0	0
Vested Terminations	(63)	(5)	(1)	69	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	(1)	0	0	0	(1)	0	(33)	35	0
Died, Without Beneficiary, and Other Terminations	(130)	0	127	(3)	(2)	(3)	(48)	(2)	(61)
Transfers	(36)	64	(10)	(11)	0	0	0	0	7
Beneficiary Deaths	0	0	0	0	0	0	0	(17)	(17)
Domestic Relations Orders	0	0	0	0	0	0	0	9	9
Withdrawals Paid	(75)	(2)	(40)	(2)	0	0	0	0	(119)
Member Reclassifications	0	(2)	(3)	0	0	2	(2)	4	(1)
July 1, 2020	4,458	693	506	465	79	227	3,373	498	10,299

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX A – MEMBERSHIP INFORMATION

**Reconciliation of Plan Membership Since Prior Valuation
General Members (County and Former County)**

	Actives	Transfers	Non Vested Terminations due Refunds	Vested Terminations	Ordinary Disabled	Duty Disabled	Retired	Beneficiaries	Total
July 1, 2019	3,557	460	377	369	74	84	2,724	364	8,009
New Entrants	330	0	0	0	0	0	0	0	330
Rehires	25	(9)	(7)	(3)	0	0	0	0	6
Duty Disabilities	(3)	0	0	0	0	3	0	0	0
Ordinary Disabilities	0	0	0	0	0	0	0	0	0
Retirements	(126)	(13)	0	(28)	0	0	167	0	0
Retirements from General with Safety Service	0	0	0	0	0	0	0	0	0
Vested Terminations	(50)	(4)	(1)	55	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	(1)	0	0	0	(1)	0	(23)	25	0
Died, Without Beneficiary, and Other Terminations	(117)	0	113	(1)	(2)	(3)	(46)	(2)	(58)
Transfers	(30)	49	(8)	(7)	0	0	0	0	4
Beneficiary Deaths	0	0	0	0	0	0	0	(14)	(14)
Domestic Relations Orders	0	0	0	0	0	0	0	4	4
Withdrawals Paid	(65)	(2)	(35)	(1)	0	0	0	0	(103)
Member Reclassifications	0	(2)	(2)	(1)	0	0	0	2	(3)
July 1, 2020	3,520	479	437	383	71	84	2,822	379	8,175

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX A – MEMBERSHIP INFORMATION

**Reconciliation of Plan Membership Since Prior Valuation
Safety Members (County and Former County)**

	Actives	Transfers	Non Vested Terminations due Refunds	Vested Terminations	Ordinary Disabled	Duty Disabled	Retired	Beneficiaries	Total
July 1, 2019	735	139	46	59	6	122	412	98	1,617
New Entrants	54	0	0	0	0	0	0	0	54
Rehires	3	(1)	(1)	(1)	0	0	0	0	0
Duty Disabilities	(1)	(3)	0	(1)	0	5	0	0	0
Ordinary Disabilities	0	0	0	0	0	0	0	0	0
Retirements	(35)	(7)	0	(1)	0	0	43	0	0
Retirements from General with Safety Service	0	0	0	0	0	0	0	0	0
Vested Terminations	(8)	(1)	0	9	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	0	0	0	0	0	0	(7)	7	0
Died, Without Beneficiary, and Other Terminations	(10)	0	11	(2)	0	0	(1)	0	(2)
Transfers	(5)	11	(1)	(2)	0	0	0	0	3
Beneficiary Deaths	0	0	0	0	0	0	0	(3)	(3)
Domestic Relations Orders	0	0	0	0	0	0	0	5	5
Withdrawals Paid	(7)	0	(5)	0	0	0	0	0	(12)
Member Reclassifications	0	0	(1)	1	0	1	(1)	1	1
July 1, 2020	726	138	49	62	6	128	446	108	1,663

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX A – MEMBERSHIP INFORMATION

**Reconciliation of Plan Membership Since Prior Valuation
General Members (Ceres and Other Districts)**

	Actives	Transfers	Non Vested Terminations due Refunds	Vested Terminations	Ordinary Disabled	Duty Disabled	Retired	Beneficiaries	Total
July 1, 2019	133	42	8	12	1	5	73	4	278
New Entrants	16	0	0	0	0	0	0	0	16
Rehires	0	0	0	0	0	0	0	0	0
Duty Disabilities	0	0	0	0	0	0	0	0	0
Ordinary Disabilities	0	0	0	0	0	0	0	0	0
Retirements	(7)	(1)	0	0	0	0	8	0	0
Retirements from General with Safety Service	0	0	0	0	0	0	0	0	0
Vested Terminations	(4)	0	0	4	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	0	0	0	0	0	0	(2)	2	0
Died, Without Beneficiary, and Other Terminations	(2)	0	2	0	0	0	(1)	0	(1)
Transfers	(1)	3	(1)	(1)	0	0	0	0	0
Beneficiary Deaths	0	0	0	0	0	0	0	0	0
Domestic Relations Orders	0	0	0	0	0	0	0	0	0
Withdrawals Paid	(3)	0	0	0	0	0	0	0	(3)
Member Reclassifications	0	0	0	0	0	0	0	1	1
July 1, 2020	132	44	9	15	1	5	78	7	291

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX A – MEMBERSHIP INFORMATION

**Reconciliation of Plan Membership Since Prior Valuation
Safety Members (Ceres and Other Districts)**

	Actives	Transfers	Non Vested Terminations due Refunds	Vested Terminations	Ordinary Disabled	Duty Disabled	Retired	Beneficiaries	Total
July 1, 2019	79	34	11	7	1	8	22	3	165
New Entrants	6	0	0	0	0	0	0	0	6
Rehires	1	0	(1)	0	0	0	0	0	0
Duty Disabilities	(1)	0	0	0	0	1	0	0	0
Ordinary Disabilities	0	0	0	0	0	0	0	0	0
Retirements	(3)	(3)	0	(1)	0	0	7	0	0
Retirements from General with Safety Service	0	0	0	0	0	0	0	0	0
Vested Terminations	(1)	0	0	1	0	0	0	0	0
Died, With Beneficiaries' Benefit Payable	0	0	0	0	0	0	(1)	1	0
Died, Without Beneficiary, and Other Terminations	(1)	0	1	0	0	0	0	0	0
Transfers	0	1	0	(1)	0	0	0	0	0
Beneficiary Deaths	0	0	0	0	0	0	0	0	0
Domestic Relations Orders	0	0	0	0	0	0	0	0	0
Withdrawals Paid	0	0	0	(1)	0	0	0	0	(1)
Member Reclassifications	0	0	0	0	0	1	(1)	0	0
July 1, 2020	80	32	11	5	1	10	27	4	170

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

**APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS**

The assumptions and methods used in the actuarial valuation as of July 1, 2020 are:

Actuarial Methods

1. Actuarial Cost Method

Annual contributions to the Stanislaus County Employees' Retirement Association (the Plan) are computed under the Entry Age Normal Actuarial Cost Method, computed to the final decrement.

Under this Cost Method, the Normal Cost is calculated as the amount necessary to fund Members' benefits as a level percentage of total payroll over their projected working lives. At each valuation date, the Actuarial Liability is equal to the difference between the liability for the Members' total projected benefit and the present value of future Normal Cost contributions.

The excess of the Actuarial Liability over Plan assets is the Unfunded Actuarial Liability, and the liability for each valuation group is amortized as a level percentage of payroll over a closed period (16 years as of the current valuation).

Amounts may be added to or subtracted from the Unfunded Actuarial Liability due to Plan amendments or changes in actuarial assumptions.

The total Plan cost is the sum of the Normal Cost (computed on an Individual basis), the amortization of the Unfunded Actuarial Liability, and the expected Administrative Expenses.

2. Actuarial Value of Plan Assets

The Actuarial Value of Plan assets is a modified market-related value. The Market Value of Assets is adjusted to recognize, over a five-year period, differences between actual investment earnings and the assumed investment return. The Actuarial Value of Assets is limited to no less than 80% and no more than 120% of the market value.

The detailed calculations of the Actuarial Value of Plan assets are shown in Section II.

3. Changes in Actuarial Methods

None

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

**APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS**

Actuarial Assumptions

All actuarial assumptions are based on the Actuarial Experience Study Report for the period covering July 1, 2015 through June 30, 2018 report. The proposed assumptions were summarized and reviewed with the Board at the January 22, 2019 Board meeting, at which the Board provided direction to proceed with the valuation based on those assumptions. Final adoption of these assumptions was effective with the June 30, 2018 report.

4. Rate of Return

The annual rate of return on all Plan assets is assumed to be 7.00%, net of investment expenses.

5. Cost of Living

The cost of living as measured by the Consumer Price Index (CPI) will increase at the rate of 2.75% per year.

6. Administrative Expenses

An allowance of \$2,983,171 for Plan administrative expenses for the current year has been included in the annual cost calculated. The administrative expense amount has been assumed to increase in future years at the rate of the Cost of Living assumption (2.75%).

7. Interest Credited to Employee Accounts

The employee accounts are credited with 0.25% interest annually.

8. Increases in Pay

Base salary increase: 3.00%

Assumed pay increases for active Members consist of increases due to base salary adjustments (as noted above), plus service-based increases due to longevity and promotion, as shown on the next page.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

**APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS**

Longevity & Promotion Increases		
Service	General	Safety
0	5.00%	7.00%
1	5.00%	6.00%
2	5.00%	5.00%
3	5.00%	4.00%
4	5.00%	3.00%
5	3.50%	2.00%
6	2.50%	1.75%
7	1.50%	1.50%
8	1.25%	1.25%
9	1.00%	1.00%
10	0.75%	0.75%
11+	0.50%	0.50%

9. PEPR Compensation Limit

The assumption used for increasing the compensation limit that applies to PEPR members is 2.75%

10. Post Retirement COLA

For those with the 3% COLA benefit (i.e. 100% of CPI up to 3% annually with banking), 2.60% annual increases are assumed. Increases are assumed to occur on April 1.

11. Social Security Wage Base

General Plan 3 members have their benefits offset by an assumed Social Security Benefit. For projecting the Social Security Benefit, the annual Social Security Wage Base increase is assumed to be 3.00% per year.

12. Internal Revenue Code Section 415 Limit

The Internal Revenue Code (IRC) Section 415 maximum benefit limitations have been applied to the benefits for members currently in pay status, as the limited benefits have been provided by StanCERA for valuation purposes. Future projected benefits for members in active and deferred statuses have not been reduced for potential Section 415 limits in the current valuation, though any actual limitations for these members will result in actuarial gains upon their actual retirement, which will reduce future contributions.

13. Internal Revenue Code Section 401(a)(17)

The IRC Section 401(a)(17) maximum compensation limitation for active members is not reflected in the valuation for funding purposes; limitations are reflected after retirement.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

**APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS**

14. Family Composition

Percentage married for all active members who retire, become disabled, or die during active service is shown in the following table.

Percentage Married	
Gender	Percentage
Males	80%
Females	50%

Spouses of male members are assumed to be three years younger than the member and spouses of female members are assumed to be two years older than the member.

15. Accumulated Vacation Time Load

Active members' service retirement and related benefits are loaded by 1.75% for Safety Members and 1.00% for General Members for conversion of vacation time. 1/3 of this load applies for members with a 36-month final average service period. No other adjustment is made to the liabilities for anticipated future service purchases.

16. Rates of Separation

Rates of termination apply to all active Members who terminate their employment.

Separate rates of termination are assumed among Safety and General Members.

Termination Rates		
Years of Service	General All	Safety All
0	18.0%	18.0%
1	14.0%	12.0%
2	11.7%	9.0%
3	9.4%	7.0%
4	7.1%	6.0%
5	5.0%	5.0%
10	3.5%	5.0%
15	2.9%	3.4%
20	1.5%	0.0%
25	1.3%	0.0%
30+	0.0%	0.0%

Termination rates do not apply once a member is eligible for retirement.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

**APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS**

17. Withdrawal

Rates of withdrawal apply to active Members who terminate their employment and withdraw their member contributions, forfeiting entitlement to future Plan benefits. Separate rates of withdrawal are assumed among Safety and General Members and are based on service. The rates do not overlap with the service retirement rates.

50% of all General Member terminations with less than 10 years of service are assumed to take a refund of contributions, as well as 20% of those with 10 or more years of service.

35% of all Safety Member terminations with less than 10 years of service are assumed to take a refund of contributions, and 10% of those with 10 or more years are assumed to take a refund.

18. Vested Termination and Reciprocal Transfers

Rates of vested termination apply to active Members who terminate their employment after five years of service and leave their member contributions on deposit with the Plan. Alternatively, those who terminate their employment with less than five years of service can leave their member contributions with the Plan and transfer to a reciprocal employer, therefore retaining entitlement to future Plan benefits.

Vested terminated Tier 3 General Members are assumed to begin receiving benefits at age 65 while all other General Members are assumed to begin at age 58, unless they have reciprocity, in which case they are assumed to begin at age 61; terminated Safety Members are assumed to begin receiving benefits at age 53. 50% of vested terminated General Members are assumed to be reciprocal; 65% of vested terminated Safety Members are assumed to be reciprocal.

Reciprocal members are assumed to receive 3.75% annual pay increases from the date of transfer to the assumed retirement date.

19. Form of Benefit

Upon retirement, all married members are assumed to elect the normal payment form (joint & 50% survivor annuity for Tier 3 and joint & 60% survivor annuity for all other tiers). Non-married members are assumed to elect a single life annuity. Actual form elections are not anticipated to materially affect results due to the actuarially equivalent optional form factors.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

**APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS**

20. Rates of Service-Connected Disability

Separate rates of duty disability are assumed among Safety and General Members; rates for both sexes for Safety Members are combined. Safety members are assumed to follow the CALPERS State Safety rates. Sample rates are shown below:

Rates of Service-Connected Disability			
Age	General		Safety
	Male	Female	All
20	0.0043%	0.0002%	0.0020%
25	0.0102%	0.0004%	0.0760%
30	0.0211%	0.0008%	0.1700%
35	0.0284%	0.0024%	0.2640%
40	0.0401%	0.0056%	0.3600%
45	0.0613%	0.0101%	0.4570%
50	0.0897%	0.0162%	0.5570%
55	0.1227%	0.0249%	0.6580%
60	0.1637%	0.0349%	0.7620%
65	0.0000%	0.0000%	0.8690%

21. Rates of Nonservice-Connected Disability

Separate rates of ordinary disability are assumed among Safety and General Members. Rates of ordinary disability for Safety Members are assumed to follow the CalPERS Public Agency Police Non-Industrial Disability table; rates of ordinary disability for General Members are assumed to follow the 2018 CalPERS Public Agency Miscellaneous Non-Industrial Disability table. The rates shown are applied after five Years of Service. On the next page are sample rates:

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

**APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS**

Rates of Non Service-Connected Disability			Rates of Non Service-Connected Disability	
General			Safety	
Age	Male	Female	Age	All
20	0.0170%	0.0100%	20	0.0100%
25	0.0170%	0.0100%	25	0.0100%
30	0.0190%	0.0240%	30	0.0200%
35	0.0390%	0.0710%	35	0.0300%
40	0.1020%	0.1350%	40	0.0400%
45	0.1510%	0.1880%	45	0.0500%
50	0.1580%	0.1990%	50	0.0800%
55	0.1580%	0.1490%	55	0.1300%
60	0.1530%	0.1050%	60	0.2000%
65	0.1280%	0.0880%	65+	0.2000%
70+	0.1020%	0.0840%		

22. Rates of Mortality for Non-Annuitants

Rates of ordinary death for active Members are specified by the CalPERS Pre-Retirement Non-Industrial Mortality table, adjusted by 97.2% for males and 101.6% for females, with generational mortality improvements projected from 2009 using SOA Scale MP-2018. Duty related mortality rates are only applicable for Safety Active Members and are based on the CalPERS Pre-Retirement Individual Death table without adjustment or projection.

The table on the following page provides a sample of the base mortality rates including adjustments but prior to any projections for mortality improvements.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

**APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS**

Non-Annuitant Mortality Rates			
Ordinary Death - General and Safety			Duty Death
Age	Male	Female	Safety All
20	0.0320%	0.0215%	0.0030%
25	0.0413%	0.0248%	0.0070%
30	0.0505%	0.0269%	0.0100%
35	0.0588%	0.0378%	0.0120%
40	0.0774%	0.0539%	0.0130%
45	0.1094%	0.0766%	0.0140%
50	0.1600%	0.1079%	0.0150%
55	0.2353%	0.1550%	0.0160%
60	0.3446%	0.2261%	0.0170%
65	0.4949%	0.3324%	0.0180%
70	0.6891%	0.4747%	0.0190%

23. Rates of Mortality for Nonservice-Connected Disabled Retirees

Rates of mortality for current nonservice-connected disabled Members are specified by the CalPERS Non-Industrially Disabled Annuitant Mortality table, adjusted by 104.5% for females (no adjustment for males), with generational mortality improvements projected from 2009 using SOA Scale MP-2018.

The table provides a sample of the base mortality rates including adjustments but prior to any projections for mortality improvements.

Nonservice-Connected Disabled Mortality Rates		
Age	Male	Female
45	1.297%	0.892%
50	1.784%	1.285%
55	2.095%	1.327%
60	2.634%	1.578%
65	3.120%	2.138%
70	3.890%	2.941%
75	5.398%	4.041%
80	8.230%	6.287%
85	13.166%	10.327%
90	18.469%	16.806%

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

**APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS**

24. Rates of Mortality for Service-Connected Disabled Retirees

Rates of mortality for current service-connected disabled Members are specified by the CalPERS Industrially Disabled Annuitant Mortality table, adjusted by 101.9% for males (no adjustment for females), with generational mortality improvements projected from 2009 using SOA Scale MP-2018.

The table provides a sample of the base mortality rates including adjustments but prior to any projections for mortality improvements.

Service-Connected Disabled Mortality Rates		
Age	Male	Female
45	0.344%	0.298%
50	0.542%	0.495%
55	0.648%	0.460%
60	0.884%	0.633%
65	1.455%	1.066%
70	2.254%	1.775%
75	3.908%	2.952%
80	6.754%	4.978%
85	10.587%	7.959%
90	16.493%	12.335%

25. Rates of Mortality for Emerging Disabled Retirees

Rates of mortality for future General disabled retirees, both nonservice- and service-connected, are specified by mortality tables consisting of blends of the mortality assumptions for current nonservice- and service-connected disabled retirees. The blend for future disabled General retirees is 75% and 25%, respectively. The proportions reflect the expected splits in future disabled retirees between nonservice- and service-connected disablements.

Future disabled Safety retirees are assumed to follow the same rates of mortality as the service-connected disabled retirees indicated in the prior bullet.

26. Rates of Mortality for Healthy Annuitants

Rates of mortality for retired Members and their beneficiaries are specified by the CalPERS Healthy Annuitant table, adjusted by 97.2% for males and 104.1% for females, with generational mortality improvements projected from 2009 using SOA Scale MP-2018.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

**APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS**

The table below provides a sample of the base mortality rates including adjustments but prior to any projections for mortality improvements.

Healthy Annuitant Mortality Rates		
Age	Male	Female
45	0.234%	0.221%
50	0.517%	0.515%
55	0.618%	0.479%
60	0.794%	0.556%
65	1.026%	0.779%
70	1.717%	1.317%
75	2.900%	2.283%
80	5.128%	3.847%
85	9.165%	6.949%
90	15.733%	12.841%

27. Mortality Improvement

As mentioned above, the mortality assumptions employ a fully generational mortality improvement projection from base year 2009 using SOA Scale MP-2018.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

**APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS**

28. Rates of Retirement

Retirement for members in non-PEPRA Tiers (Tier 6) are assumed to occur among eligible members in accordance with the tables below:

Rates of Retirement General (Non-PEPRA)				Rates of Retirement Safety (Non-PEPRA)			
Years of Service				Years of Service			
Age	0-9	10-29	30+	Age	0-9	10-19	20+
40-44	0.00%	0.00%	0.00%	40-48	0.00%	0.00%	5.00%
45-49	0.00%	0.00%	10.00%	49	0.00%	0.00%	20.00%
50-54	0.00%	5.00%	10.00%	50	0.00%	10.00%	30.00%
55	0.00%	7.50%	20.00%	51	0.00%	10.00%	20.00%
56	0.00%	7.50%	20.00%	52	0.00%	10.00%	20.00%
57	0.00%	7.50%	20.00%	53	0.00%	10.00%	20.00%
58	0.00%	12.50%	20.00%	54	0.00%	10.00%	20.00%
59	0.00%	12.50%	20.00%	55	0.00%	10.00%	30.00%
60	0.00%	12.50%	25.00%	56	0.00%	10.00%	30.00%
61	0.00%	20.00%	25.00%	57	0.00%	10.00%	30.00%
62	0.00%	25.00%	40.00%	58	0.00%	10.00%	30.00%
63	0.00%	20.00%	25.00%	59	0.00%	10.00%	30.00%
64	0.00%	25.00%	25.00%	60	0.00%	25.00%	100.00%
65	0.00%	35.00%	35.00%	61	0.00%	25.00%	100.00%
66	0.00%	45.00%	45.00%	62	0.00%	25.00%	100.00%
67	0.00%	20.00%	25.00%	63	0.00%	25.00%	100.00%
68	0.00%	20.00%	25.00%	64	0.00%	25.00%	100.00%
69	0.00%	20.00%	25.00%	65	0.00%	100.00%	100.00%
70	50.00%	50.00%	100.00%	66	0.00%	100.00%	100.00%
71	50.00%	50.00%	100.00%	67	0.00%	100.00%	100.00%
72	50.00%	50.00%	100.00%	68	0.00%	100.00%	100.00%
73	50.00%	50.00%	100.00%	69	0.00%	100.00%	100.00%
74	50.00%	50.00%	100.00%	70+	100.00%	100.00%	100.00%
75+	100.00%	100.00%	100.00%				

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

**APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS**

Retirement for members in PEPRA, Tier 6, are assumed to occur among eligible members in accordance with the sample rates below, from the full tables CALPERS Public Agency Miscellaneous 2% @ 62 table for General and the CALPERS Public Agency Safety Police 2.7% @ 57 table for Safety:

Rates of Retirement General (PEPRA) Years of Service				
Age	5	10	25	35
50-51	0.00%	0.00%	0.00%	0.00%
52	0.50%	0.80%	1.90%	3.80%
53	0.70%	1.10%	2.10%	4.80%
54	0.70%	1.10%	2.30%	5.40%
55	1.00%	1.90%	6.10%	15.20%
56	1.40%	2.60%	7.50%	16.70%
57	1.80%	2.90%	7.40%	14.30%
58	2.30%	3.50%	7.30%	13.50%
59	2.50%	3.80%	9.20%	17.50%
60	3.10%	5.10%	11.10%	18.30%
61	3.80%	5.80%	12.10%	23.20%
62	4.40%	7.40%	16.40%	27.10%
63	7.70%	10.50%	19.20%	26.60%
64	7.20%	10.10%	18.70%	27.60%
65	10.80%	14.10%	23.90%	34.80%
66	13.20%	17.20%	29.20%	42.60%
67	13.20%	17.20%	29.20%	40.50%
68	12.00%	15.60%	26.50%	38.70%
69	12.00%	15.60%	26.50%	36.80%
70	12.00%	15.60%	26.50%	38.70%
71	12.00%	15.60%	26.50%	38.70%
72	12.00%	15.60%	26.50%	38.70%
73	12.00%	15.60%	26.50%	38.70%
74	12.00%	15.60%	26.50%	38.70%
75+	100.00%	100.00%	100.00%	100.00%

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

**APPENDIX B – STATEMENT OF CURRENT ACTUARIAL
ASSUMPTIONS AND METHODS**

Rates of Retirement Safety (PEPRA) Years of Service				
Age	5	10	25	35
50	5.00%	5.00%	5.00%	11.00%
51	4.00%	4.00%	5.75%	13.92%
52	3.80%	3.80%	5.80%	13.21%
53	3.80%	3.80%	7.74%	28.98%
54	3.80%	3.80%	9.31%	33.25%
55	6.84%	6.84%	13.40%	38.76%
56	6.27%	6.27%	12.28%	34.49%
57	6.00%	6.00%	11.75%	32.00%
58	8.00%	8.00%	13.75%	35.00%
59	8.00%	8.00%	14.00%	40.00%
60	15.00%	15.00%	15.00%	35.00%
61	14.40%	14.40%	14.40%	26.40%
62	15.00%	15.00%	15.00%	33.00%
63	15.00%	15.00%	15.00%	40.00%
64	15.00%	15.00%	15.00%	52.50%
65+	100.00%	100.00%	100.00%	100.00%

29. Changes in Actuarial Assumptions

The administrative expenses assumption increased by 2.75% from \$2,903,330 to \$2,983,171, per the procedure established in the Actuarial Experience Study Report for the period covering July 1, 2015 through June 30, 2018.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

All actuarial calculations are based on our understanding of the statutes governing the StanCERA as contained in the County Employees Retirement Law (CERL) of 1937, with provisions adopted by the County Board of Supervisors, a district Board of Directors, or the StanCERA Board, effective through June 30, 2020. The benefit and contribution provisions of this law are summarized briefly below, along with corresponding references to the State Code. This summary does not attempt to cover all the detailed provisions of the law.

A. Definitions

Compensation: Compensation means the cash remuneration for services paid by the employer. It includes base pay and certain differential, incentive, and special pay allowances defined by the Board of Retirement. Overtime is excluded, with the exception of overtime paid under the Fair Labor Standards Act that is regular and recurring.

For Tier 6 (PEPRA) members, only pensionable compensation up to the PEPRA Compensation Limit will count for computing Plan benefits and employee contributions and employer contributions. For those participating in Social Security, the compensation cap is \$126,291 for calendar year 2020. For those not participating in Social Security, the compensation cap is \$151,549 for calendar year 2020. In addition, it is possible that some sources of compensation, such as any payments deemed to be terminal or special pays, may be excluded from the benefit and contribution computations for PEPRA members.

Credited Service: In general, Credited Service is earned for the period during which Member Contributions are paid. Since Tier 3 Members participate in a non-contributory Plan, their Credited Service is calculated based on their date of Membership only.

Temporary service for which the Member was not credited, or service for which the Member withdrew his or her Member Contributions, may be purchased by paying or repaying the Member Contributions with interest. The categories of services that credit may be purchased for are listed below:

- **Prior Part-time Service:** If a Member worked for an employer within the Association on a part-time or 'extra help' basis before his membership in the Retirement Association, the Member may buyback this service.
- **Intermittent Part-time Service**
- **Prior full time Service:** Member may buyback full time service that may have been cashed out upon termination.

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020

APPENDIX C – SUMMARY OF PLAN PROVISIONS

- **Leave of Absence (Including absence with State Disability or Worker's Compensation):** No unpaid leave of absence can be bought back except for absence due to medical reasons of up to one year.
- **Public Service:** Only Tier 1 and 4 Members may buy back this service.
- **Military Time:** Only Tier 1 and 4 Members may buy back this service.
- **Enhance Prior Tier Service:** Applies to certain active and deferred Members with Tier 1, 2, or 3 service.
- **Military "call up"**
- **AB 2766:** Only Safety Employees can buy back this service.

A percentage of credited sick leave may be credited according to the Member's applicable bargaining unit.

Final

Compensation: For Members belonging to Tier 2, Tier 3, and Tier 6, Final Compensation means the highest Compensation earned during any 36 consecutive months of the Member's employment. For all others, it is the highest Compensation earned during any twelve months of employment.

General Member: Any Member who is not a Safety Member is a General Member.

Safety Member: Any sworn Member engaged in law enforcement, probation, or fire suppression is a Safety Member.

B. Membership

Eligibility: All full-time, permanent employees of Stanislaus County, City of Ceres, Stanislaus County Superior Court, Salida Sanitary District, East Side Mosquito Abatement, Keyes Community Services, Hills Ferry Cemetery, and StanCOG hired on or after October 1, 1988 become Members on their date of appointment. All others hired before October 1, 1988 became Members on the first day of the calendar month following their date of appointment.

Detailed membership eligibility according to Tier and membership date is shown in Table 1 on the following page.

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020

APPENDIX C – SUMMARY OF PLAN PROVISIONS

C. Service Retirement

Eligibility: New members who meet the requirements to enter a legacy tier under PEPRA will enter Tier 2; all other new members will enter Tier 6.

Tier 3 General Members are eligible to retire at age 55 if they have earned 10 years of Credited Service. Tier 6 (PEPRA) General Members are eligible to retire at age 52 if they have earned five years of Credited Service. All other General Members are eligible to retire at age 50 if they have earned five years of Credited Service and have been an Association member for at least 10 years. Alternatively, General non-PEPRA Members are eligible to retire at any age after having earned 30 years of Credited Service, or upon reaching age 70 with no service requirement.

Safety Members are eligible to retire at age 50 if they have earned five years of Credited Service and have been an Association member for at least 10 years. Alternatively, Safety Members are eligible to retire at any age after having earned 20 years of Credited Service, or upon reaching age 70 with no service requirement. The 20-year Credited Service retirement eligibility is not applicable to Tier 6 (PEPRA) Safety Members, nor is the 10-year Association membership requirement.

Benefit Amount: The Service Retirement Benefit payable to the Member is equal to the Member's Final Compensation multiplied by credited service, the benefit factor from Table 1 and the age factor from Table 2 corresponding to the Member's code section. The appropriate code sections for each group are listed in Table 1. For Tier 3 members, the age factors are applied *after* the benefit amount as determined under Table 1 has been offset by the designated fraction of the member's projected age 65 Social Security benefit.

For Tier 3 Members with Credited Service up to 35 years, the percentage of Final Compensation may not exceed 70% and for those with more than 35 years, it may not exceed 80%. For all other non-PEPRA Members, the percentage of Final Compensation may not exceed 100%. For those members integrated with Social Security (other than Tiers 3 and 6), Retirement Benefits based on the first \$350 of monthly Final Average Compensation are reduced by one-third.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Table 1: Member Group Descriptions

Group	Open or Closed	FAP	Max Cola	Code Section	Description	Top Retirement Factor Age	Benefit Factor
General Tier I	Closed	1	3	31676.12	2% at 57	62	2.00%
General Tier II	Open	3	3	31676.1	2% at 62	65	1.67%
General Tier III	Closed	3	0	31499.14	Non-Contributory	65	First 35 Years: 2.0% of FAS less 1/35 th of Social Security benefit at age 65. Next 10 Years: 1% of FAS
General Tier IV	Closed	1	3	31676.14	2% at 55	65	1.67%
General Tier V	Closed	1	3	31676.14	2% at 55	65	1.67%
General Tier VI	Open	3	3	7522.2	PEPRA	67	1.00%
Safety Tier II	Open	3	3	31664	2% at 50	50	2.00%
Safety Tier IV	Closed	1	3	31664.1	3% at 50	50	3.00%
Safety Tier V	Closed	1	3	31664.1	3% at 50	50	3.00%
Safety Tier VI	Open	3	3	7522.25 (2)	PEPRA	57	1.00%

Table 2: Age Factors

Age	Safety 2% at Age 50 CERL §: 31664	Safety 3% at Age 50 CERL §: 31664.1	Safety PEPRA GC §: 7522.25 Opt2	General 2% at Age 62 CERL §: 31676.1	General 2% at Age 57 CERL §: 31676.12	General 2% at Age 55 CERL §: 31676.14	General 2% at Age 65 CERL §: 31499.14	General PEPRA GC §: 7522.20
41	0.6258	0.6258	N/A	N/A	N/A	N/A	N/A	N/A
42	0.6625	0.6625	N/A	N/A	N/A	N/A	N/A	N/A
43	0.7004	0.7004	N/A	N/A	N/A	N/A	N/A	N/A
44	0.7397	0.7397	N/A	N/A	N/A	N/A	N/A	N/A
45	0.7805	0.7805	N/A	N/A	N/A	N/A	N/A	N/A
46	0.8226	0.8226	N/A	N/A	N/A	N/A	N/A	N/A
47	0.8678	0.8678	N/A	N/A	N/A	N/A	N/A	N/A
48	0.9085	0.9085	N/A	N/A	N/A	N/A	N/A	N/A
49	0.9522	0.9522	N/A	N/A	N/A	N/A	N/A	N/A
50	1.0000	1.0000	2.0000	0.7091	0.6681	0.8850	N/A	N/A
51	1.0516	1.0000	2.1000	0.7457	0.7056	0.9399	N/A	N/A
52	1.1078	1.0000	2.2000	0.7816	0.7454	1.0000	N/A	1.0000
53	1.1692	1.0000	2.3000	0.8181	0.7882	1.0447	N/A	1.1000
54	1.2366	1.0000	2.4000	0.8556	0.8346	1.1048	N/A	1.2000
55	1.3099	1.0000	2.5000	0.8954	0.8850	1.1686	0.3900	1.3000
56	1.3099	1.0000	2.6000	0.9382	0.9399	1.2365	0.4300	1.4000
57	1.3099	1.0000	2.7000	0.9846	1.0000	1.3093	0.4700	1.5000
58	1.3099	1.0000	2.7000	1.0350	1.0447	1.3608	0.5100	1.6000
59	1.3099	1.0000	2.7000	1.0899	1.1048	1.4123	0.5600	1.7000
60	1.3099	1.0000	2.7000	1.1500	1.1686	1.4638	0.6100	1.8000
61	1.3099	1.0000	2.7000	1.1947	1.2365	1.5153	0.6700	1.9000
62	1.3099	1.0000	2.7000	1.2548	1.3093	1.5668	0.7400	2.0000
63	1.3099	1.0000	2.7000	1.3186	1.3093	1.5668	0.8200	2.1000
64	1.3099	1.0000	2.7000	1.3865	1.3093	1.5668	0.9000	2.2000
65	1.3099	1.0000	2.7000	1.4593	1.3093	1.5668	1.0000	2.3000
66	1.3099	1.0000	2.7000	1.4593	1.3093	1.5668	1.0000	2.4000
67	1.3099	1.0000	2.7000	1.4593	1.3093	1.5668	1.0000	2.5000

Form of Benefit: The Service Retirement Benefit will be paid monthly beginning at retirement and for the life of the Member. If the member selects the unmodified benefit form, in the event of the Member's death 60% of the benefit will continue for the life of the Member's spouse or to the age of majority of dependent minor children if there is no spouse. For Tier 3 Members, the benefit payable to beneficiary is limited to 50%. In the event there is no surviving spouse or minor children, any unpaid remainder of the Member's accumulated contributions will be paid to the Member's designated beneficiary.

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Actuarially equivalent optional benefit forms are also available.

Annually on April 1, benefits for all retired members other than those in Tier 3 are adjusted to reflect changes in the CPI for the San Francisco Bay Area since the prior year. Benefits may be increased or decreased, but the cumulative changes shall never reduce the benefit below the original monthly allowance. Annual increases may not exceed the COLA figures shown in Table 1, but CPI increases above this figure are “banked” and used for future increases when the CPI increases by less than the figures shown.

In addition, ad hoc cost of living adjustments have been granted in the past and may be granted in the future.

A lump sum benefit of \$5,000 will be payable upon the death of a retired member. No death benefit is payable for Tier 3 retired members.

D. Service-Connected Disability

Eligibility: All non-Tier 3 Members are eligible for Service-Connected Disability Retirement benefits at any age if they are permanently disabled as a result of injuries or illness sustained in the line of duty. Tier 3 Members are not eligible to receive disability benefits.

Benefit Amount: The Service-Connected Disability Retirement Benefit payable to Members is equal to the greater of 50% of their Final Compensation or – if the Member is eligible at disability for a Service Retirement Benefit – the Service Retirement Benefit accrued on the date of disability.

Form of Benefit: The Service-Connected Disability Retirement Benefit will be paid monthly beginning at the effective date of disability retirement and for the life of the Member; in the event of the Member's death, 100% of the benefit will continue for the life of the Member's spouse or to the age of majority of dependent minor children if there is no spouse. In the event there is no surviving spouse or minor children, any unpaid remainder of the Member's accumulated contributions will be paid to the Member's designated beneficiary.

Actuarially equivalent optional benefit forms and COLA adjustments (as described for the Service Retirement benefit) are also available. A lump sum benefit of \$5,000 will be payable upon the death of the member.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

E. Nonservice-Connected Disability

Eligibility: Tier 3 Members are not eligible to receive disability benefits. All other Members are eligible for Nonservice-Connected Disability Retirement benefits if they are permanently disabled at any age after earning five years of Credited Service.

Benefit Amount: The Nonservice-Connected Disability Retirement Benefit payable to Tier 1 General Members is equal to the greatest of:

- 1.8% of Final Compensation at disability multiplied by years of Credited Service at disability;
- 1.8% of Final Compensation at disability multiplied by years of Credited Service projected to age 62, but not to exceed one-third of Final Compensation; or
- If the Member is eligible at disability for a Service Retirement Benefit, the Service Retirement Benefit accrued on the date of disability.

The Nonservice-Connected Disability Retirement Benefit payable to Tiers 2, 4, 5, and 6 General Members is equal to the greatest of:

- 1.5% of Final Compensation at disability multiplied by years of Credited Service at disability;
- 1.5% of Final Compensation at disability multiplied by years of Credited Service projected to age 65, but not to exceed one-third of Final Compensation; or
- If the Member is eligible at disability for a Service Retirement Benefit, the Service Retirement Benefit accrued on the date of disability.

The Nonservice-Connected Disability Retirement Benefit payable to Safety Members is equal to the greatest of:

- 1.8% of Final Compensation at disability multiplied by years of Credited Service at disability;
- 1.8% of Final Compensation at disability multiplied by years of Credited Service projected to age 55, but not to exceed one-third of Final Compensation; or
- If the Member is eligible at disability for a Service Retirement Benefit, the Service Retirement Benefit accrued on the date of disability.

Form of Benefit: The Nonservice-Connected Disability Retirement Benefit will be paid monthly beginning at the effective date of disability retirement, and for the life of the Member; in the event of the Member's death, 60% of the benefit will continue for the life of the Member's spouse or to the age of majority of dependent minor children if there is no spouse. In the event there is no

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

surviving spouse or minor children, any unpaid remainder of the Member's accumulated contributions will be paid to the Member's designated beneficiary.

Actuarially equivalent optional benefit forms and COLA adjustments (as described for the Service Retirement benefit) are also available. A lump sum benefit of \$5,000 will be payable upon the death of the member.

F. Death Benefit

Eligibility: A Tier 3 Member's survivors are not eligible to receive death benefits. All other Members' survivors are eligible to receive different Death benefits dependent on the Member's cause of death and retirement eligibility.

Benefit Amount: In the event the Member's death resulted from injury or illness sustained in connection with the Member's duties, the Death Benefit payable to a surviving spouse, domestic partner, or eligible dependent children will be the greater of 50% of the Member's Final Compensation at the time of death or the Service Retirement Benefit.

In the event the Member's death did not result from injury or illness sustained in connection with the Member's duties and at the time of death, the Member was eligible for Service Retirement or Non-Service Connected Disability (i.e. the employee was employed at least five years), the Death Benefit payable to the spouse, partner or children will be 60% of the survivor benefit based on benefit due on Member's date of death.

In all other cases, the designated beneficiary (not necessarily a spouse/partner/child) will receive a refund of the Member's contributions with interest plus one month of Final Compensation for each year of service to a maximum of six years.

Form of Benefit: Annuity death benefits will be paid monthly beginning at the Member's death and for the life of the surviving spouse/partner or to the age of majority of dependent minor children if there is no spouse/partner. Lump sum benefits will be paid as described above.

COLA adjustments (as described for the annuity benefits) are also available.

G. Withdrawal Benefits

Eligibility: Tier 3 Members are not eligible to receive withdrawal benefits. All other Members are eligible for a Withdrawal Benefit upon termination of employment, if not eligible to receive or electing to waive a monthly benefit.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Benefit Amount: The Withdrawal Benefit is a refund of the Member's accumulated Contributions with interest. Upon receipt of the Withdrawal Benefit, the Member forfeits all Credited Service.

Form of Benefit: The Withdrawal Benefit is paid in a lump sum upon election by the Member.

H. Deferred Vested Benefit

Eligibility: A Member is eligible for a Deferred Vested Benefit upon termination of employment after earning five years of Credited Service, including reciprocity service from another system. For Tier 3 Members, the vesting requirement is 10 years of Credited Service.

The Member must leave his or her Member Contributions with interest on deposit with the Plan. This requirement does not apply to Tier 3 Members since they participate in a non-contributory Plan.

Benefit Amount: The Deferred Vested Benefit is computed in the same manner as the Service Retirement Benefit, but it is based on Credited Service and Final Compensation on the date of termination.

Form of Benefit: The Deferred Vested Benefit will be paid monthly beginning at retirement and for the life of the Member; in the event of the Member's death, 60% of the benefit will continue for the life of the Member's spouse or to the age of majority of dependent minor children if there is no spouse. For Tier 3 Members, the benefit payable to beneficiary is limited to 50%. In the event there is no surviving spouse or minor children, any unpaid remainder of the Member's accumulated contributions will be paid to the Member's designated beneficiary.

Actuarially equivalent optional benefit forms and COLA adjustments (as described for the Service Retirement benefit) are also available. A lump sum benefit of \$5,000 will be payable upon the death of the member. No death benefit is payable for Tier 3 retired members.

I. Reciprocal Benefit

Eligibility: A Member is eligible for a Reciprocal Benefit upon termination of employment after earning five years of Credited Service and entry, within a specified period of time, into another retirement system recognized as a reciprocal system by the Plan. For Tier 3 Members, the vesting requirement is 10 years of Credited Service.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

The Member must leave his or her Member Contributions with interest on deposit with the Plan. This requirement does not apply to Tier 3 Members since they participate in a non-contributory Plan.

Benefit Amount: The Reciprocal Benefit is computed in the same manner as the Service Retirement Benefit, but it is based on Credited Service on the date of termination and Final Compensation on the date of retirement; Final Compensation is based on the highest of the Compensation earned under this Plan or the reciprocal plan.

Form of Benefit: The Reciprocal Benefit will be paid monthly beginning at retirement and for the life of the Member; in the event of the Member's death, 60% of the benefit will continue for the life of the Member's spouse or to the age of majority of dependent minor children if there is no spouse. For Tier 3 Members, the benefit payable to beneficiary is limited to 50%. In the event there is no surviving spouse or minor children, any unpaid remainder of the Member's accumulated contributions will be paid to the Member's designated beneficiary.

Actuarially equivalent optional benefit forms and COLA adjustments (as described for the Service Retirement benefit) are also available.

A lump sum benefit of \$5,000 will be payable upon the death of the member. No death benefit is payable for Tier 3 retired members.

J. Optional Benefit Forms

Prior to retirement, a member may elect to convert his retirement allowance into a benefit of equivalent Actuarial Value in accordance with one of the optional forms described below.

1. A reduced retirement allowance payable during his life with the provision that on his death the excess, if any, of his accumulated deductions at the time of retirement over the annuity payments made to him will be paid to his designated beneficiary or estate; or
2. A reduced retirement allowance payable during his life with the provision that after his death the reduced allowance will be continued for life to the beneficiary designated by him at the time of his retirement; or
3. A reduced retirement allowance payable during his life with the provision that after his death an allowance of one-half of his reduced allowance will be continued for life to the beneficiary designated by him at the time of his retirement.

In addition, a member participating in Social Security may elect to receive an increased monthly allowance before age 62 (earliest possible receipt of Social Security benefits) and then take a reduced monthly allowance at age 62 and after. This option will not affect any

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

monthly payments payable to a beneficiary. This option is not available to those receiving a disability benefit.

K. Member Contributions

Other than Tiers 3 and 6, all Members contribute a percentage of Compensation to the Plan through payroll deduction. The percentage contributed depends on the Member's nearest age upon joining the Plan. Members do not contribute after earning 30 years of Credited Service.

Tier 6 (PEPRA) Members must contribute half of the Normal Cost of the Plan. Contributions for these members will be based on the Normal Cost associated with their benefits, including COLA; General and Safety members will pay different rates. Members will continue to contribute after earnings 30 years of service.

City of Ceres members in Tiers 1 and 4 pay the Tier 2 and 5 rates ("Full" rates), rather than the rates for their respective Tiers ("Half" rates).

Interest is credited semiannually to each Member's accumulated contributions. The crediting rate is set by the Board; the current annual rate is 0.25%.

The employee contribution rates are shown in the Appendix E.

L. Changes in Plan Provisions

No change

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX D – GLOSSARY

1. Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs such as mortality, withdrawal, disability, retirement, changes in compensation and rates of investment return.

2. Actuarial Cost Method

A procedure for determining the Actuarial Present Value of pension plan benefits and expenses and for developing an allocation of such value to each year of service, usually in the form of a Normal Cost and an Actuarial Liability.

3. Actuarial Gain (Loss)

The difference between actual experience and that expected based upon a set of Actuarial Assumptions during the period between two Actuarial Valuation dates, as determined in accordance with a particular Actuarial Cost Method.

4. Actuarial Liability

The portion of the Actuarial Present Value of Projected Benefits that will not be paid by future Normal Costs. It represents the value of the past Normal Costs with interest to the valuation date.

5. Actuarial Present Value (Present Value)

The value as of a given date of a future amount or series of payments. The Actuarial Present Value discounts the payments to the given date at the assumed investment return and includes the probability of the payment being made.

6. Actuarial Valuation

The determination, as of a specified date, of the Normal Cost, Actuarial Liability, Actuarial Value of Assets, and related Actuarial Present Values for a pension plan.

7. Actuarial Value of Assets

The value of cash, investments, and other property belonging to a pension plan as used by the actuary for the purpose of an Actuarial Valuation. The purpose of an Actuarial Value of Assets is to smooth out fluctuations in market values.

APPENDIX D – GLOSSARY

8. Actuarially Equivalent

Of equal Actuarial Present Value, determined as of a given date, with each value based on the same set of actuarial assumptions.

9. Amortization Payment

The portion of the pension plan contribution, which is designed to pay interest and principal on the Unfunded Actuarial Liability in order to pay for that liability in a given number of years.

10. Entry Age Normal Actuarial Cost Method

A method under which the Actuarial Present Value of the Projected Benefits of each individual included in an Actuarial Valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages.

11. Funded Ratio

The ratio of the Actuarial Value of Assets to the Actuarial Liability.

12. Normal Cost

That portion of the Actuarial Present Value of pension plan benefits and expenses that is allocated to a valuation year by the Actuarial Cost Method.

13. Projected Benefits

Those pension plan benefit amounts which are expected to be paid in the future under a particular set of Actuarial Assumptions, taking into account such items as increases in future compensation and service credits.

14. Unfunded Actuarial Liability

The excess of the Actuarial Liability over the Actuarial Value of Assets. The Unfunded Actuarial Liability is not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling StanCERA's benefit obligation in the event of a plan termination or other similar action. However, it is an appropriate measure for assessing the need for or the amount of future contributions.

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX E – MEMBER CONTRIBUTION RATES

Employee Normal contribution rates vary by benefit formula as defined in the CERL and described in the table below, with the exception that City of Ceres members in Tiers 1 and 4 pay the Tier 2 and 5 rates (“Full” rates), rather than the rates for their respective Tiers (“Half” rates).

Plan/Tier	Code Section	Member Contribution Provides Average Annuity
General Tier 1	31621.5	1/200th of Final Average Salary (FAS) at age 60
General Tier 2	31621	1/120th of Final Average Salary (FAS) at age 60
General Tier 3	NA	NA
General Tier 4	31621.3	1/240th of Final Average Salary (FAS) at age 55
General Tier 5	31621.9	1/120th of Final Average Salary (FAS) at age 55
Safety Tier 2	31639.25	1/100th of Final Average Salary (FAS) at age 50
Safety Tier 4	31639.5	1/200th of Final Average Salary (FAS) at age 50
Safety Tier 5	31639.25	1/100th of Final Average Salary (FAS) at age 50

Employee COLA contribution rates are determined based on 50% of the normal cost associated with the expected COLA benefits, including all forms of decrement and the value of any assumed joint and survivor benefits, determined for each individual entry age. Similar to the benefit formulas, for those members integrated with Social Security (other than Tiers 3 and 6), contributions based on the first \$350 of monthly compensation are reduced by one-third.

The rates were changed following the Experience Study covering the period June 30, 2015 through June 30, 2018. The current employee contribution rates are shown in the following tables and were determined based on the assumptions used in the current actuarial valuation. These assumptions include an interest rate of 7.00% per annum, an average salary increase of 3.00% per year (plus longevity and promotion increases), and the CalPERS mortality tables with adjustment as specified in the Appendix B and projected using Scale MP-2018 from 2009 to 2040 for General members and to 2040 for Safety members. The projection periods are based upon the duration of liabilities for the respective groups as of June 30, 2018. The rates are blended using a male/female weighting of 25% male / 75% female for General members, and 80% male / 20% female for Safety members.

Basic and COLA rates were determined based on an assumption that members would cease making contributions after 30 years of service. Basic and COLA rates include the value of the accumulated vacation time load, except that the load is not applied when calculating the Basic rates for members with less than three years of service.

Employee contribution rates for Tier 6 (PEPRA) members are determined based on half the Normal Cost (including COLA) for the PEPRA members, computed separately for General and Safety members, and for County and Ceres / Other District members. Due to the passage of SB13, contribution rates for PEPRA members are not rounded, and are recomputed each year.

The member contribution rates shown in this appendix apply only to pensionable compensation (up to the PEPRA Compensation Limits for PEPRA members).

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX E – MEMBER CONTRIBUTION RATES

Entry Age	General Tier 1					
	Basic First \$350	Basic Over \$350	COL First \$350	COL Over \$350	Total First \$350	Total Over \$350
16	2.30%	3.45%	1.16%	1.74%	3.46%	5.19%
17	2.30%	3.45%	1.16%	1.74%	3.46%	5.19%
18	2.30%	3.45%	1.16%	1.74%	3.46%	5.19%
19	2.30%	3.45%	1.16%	1.74%	3.46%	5.19%
20	2.30%	3.45%	1.16%	1.74%	3.46%	5.19%
21	2.32%	3.48%	1.19%	1.78%	3.51%	5.26%
22	2.34%	3.51%	1.21%	1.82%	3.55%	5.33%
23	2.35%	3.53%	1.24%	1.86%	3.59%	5.39%
24	2.37%	3.55%	1.27%	1.91%	3.64%	5.46%
25	2.38%	3.57%	1.30%	1.95%	3.68%	5.52%
26	2.39%	3.58%	1.33%	1.99%	3.71%	5.57%
27	2.40%	3.59%	1.36%	2.04%	3.76%	5.63%
28	2.40%	3.60%	1.39%	2.08%	3.79%	5.68%
29	2.40%	3.61%	1.41%	2.12%	3.82%	5.73%
30	2.41%	3.61%	1.44%	2.16%	3.85%	5.77%
31	2.45%	3.68%	1.47%	2.20%	3.92%	5.88%
32	2.51%	3.76%	1.50%	2.25%	4.01%	6.01%
33	2.56%	3.84%	1.53%	2.29%	4.08%	6.13%
34	2.61%	3.91%	1.56%	2.34%	4.17%	6.25%
35	2.66%	3.99%	1.60%	2.40%	4.26%	6.39%
36	2.72%	4.08%	1.64%	2.46%	4.36%	6.54%
37	2.77%	4.16%	1.69%	2.53%	4.46%	6.69%
38	2.83%	4.25%	1.73%	2.59%	4.56%	6.84%
39	2.89%	4.34%	1.77%	2.66%	4.66%	7.00%
40	2.95%	4.43%	1.81%	2.72%	4.77%	7.15%
41	3.01%	4.52%	1.85%	2.77%	4.86%	7.29%
42	3.08%	4.62%	1.88%	2.82%	4.96%	7.44%
43	3.15%	4.72%	1.91%	2.87%	5.06%	7.59%
44	3.22%	4.82%	1.94%	2.91%	5.16%	7.73%
45	3.29%	4.93%	1.97%	2.95%	5.26%	7.88%
46	3.37%	5.05%	2.00%	3.00%	5.37%	8.05%
47	3.45%	5.17%	2.02%	3.03%	5.47%	8.20%
48	3.53%	5.30%	2.05%	3.07%	5.58%	8.37%
49	3.62%	5.42%	2.06%	3.09%	5.68%	8.51%
50	3.70%	5.55%	2.07%	3.11%	5.77%	8.66%
51	3.78%	5.67%	2.07%	3.11%	5.85%	8.78%
52	3.86%	5.79%	2.05%	3.07%	5.91%	8.86%
53	3.91%	5.87%	1.99%	2.99%	5.91%	8.86%
54	3.94%	5.91%	1.96%	2.94%	5.90%	8.85%
55	3.92%	5.88%	1.92%	2.88%	5.84%	8.76%
56	3.90%	5.85%	1.84%	2.76%	5.74%	8.61%
57	3.88%	5.82%	1.71%	2.57%	5.59%	8.39%
58	3.82%	5.73%	1.67%	2.51%	5.49%	8.24%
59+	3.80%	5.70%	1.65%	2.47%	5.45%	8.17%

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX E – MEMBER CONTRIBUTION RATES

Entry Age	General Tier 2					
	Basic First \$350	Basic Over \$350	COL First \$350	COL Over \$350	Total First \$350	Total Over \$350
16	3.69%	5.53%	0.95%	1.42%	4.63%	6.95%
17	3.69%	5.53%	0.95%	1.42%	4.63%	6.95%
18	3.69%	5.53%	0.95%	1.42%	4.63%	6.95%
19	3.69%	5.53%	0.95%	1.42%	4.63%	6.95%
20	3.69%	5.53%	0.95%	1.42%	4.63%	6.95%
21	3.71%	5.57%	0.97%	1.45%	4.68%	7.02%
22	3.74%	5.61%	0.99%	1.48%	4.73%	7.09%
23	3.76%	5.65%	1.01%	1.51%	4.77%	7.16%
24	3.79%	5.68%	1.03%	1.54%	4.81%	7.22%
25	3.81%	5.71%	1.05%	1.57%	4.85%	7.28%
26	3.82%	5.73%	1.07%	1.61%	4.89%	7.34%
27	3.83%	5.75%	1.09%	1.64%	4.93%	7.39%
28	3.84%	5.76%	1.12%	1.68%	4.96%	7.44%
29	3.85%	5.77%	1.14%	1.71%	4.99%	7.48%
30	3.85%	5.77%	1.17%	1.75%	5.02%	7.52%
31	3.93%	5.89%	1.19%	1.79%	5.12%	7.68%
32	4.01%	6.01%	1.22%	1.83%	5.23%	7.84%
33	4.09%	6.14%	1.25%	1.87%	5.34%	8.01%
34	4.17%	6.26%	1.28%	1.92%	5.45%	8.18%
35	4.26%	6.39%	1.31%	1.96%	5.57%	8.35%
36	4.35%	6.52%	1.34%	2.01%	5.69%	8.53%
37	4.44%	6.66%	1.38%	2.07%	5.82%	8.73%
38	4.53%	6.80%	1.41%	2.12%	5.94%	8.92%
39	4.63%	6.94%	1.45%	2.17%	6.07%	9.11%
40	4.72%	7.09%	1.49%	2.23%	6.21%	9.32%
41	4.82%	7.24%	1.51%	2.26%	6.33%	9.50%
42	4.93%	7.39%	1.53%	2.30%	6.46%	9.69%
43	5.03%	7.55%	1.56%	2.34%	6.59%	9.89%
44	5.15%	7.72%	1.58%	2.37%	6.73%	10.09%
45	5.26%	7.89%	1.61%	2.41%	6.87%	10.30%
46	5.39%	8.08%	1.63%	2.44%	7.01%	10.52%
47	5.51%	8.26%	1.65%	2.47%	7.16%	10.73%
48	5.63%	8.45%	1.67%	2.51%	7.31%	10.96%
49	5.75%	8.63%	1.69%	2.54%	7.45%	11.17%
50	5.87%	8.80%	1.71%	2.56%	7.58%	11.36%
51	5.97%	8.95%	1.72%	2.58%	7.69%	11.53%
52	6.04%	9.06%	1.73%	2.59%	7.77%	11.65%
53	6.06%	9.09%	1.72%	2.58%	7.78%	11.67%
54	6.05%	9.07%	1.71%	2.56%	7.75%	11.63%
55	6.02%	9.02%	1.67%	2.51%	7.69%	11.53%
56	5.98%	8.97%	1.61%	2.42%	7.60%	11.39%
57	5.95%	8.93%	1.51%	2.26%	7.46%	11.19%
58	6.13%	9.19%	1.47%	2.21%	7.60%	11.40%
59+	6.33%	9.50%	1.45%	2.17%	7.78%	11.67%

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX E – MEMBER CONTRIBUTION RATES

Entry Age	General Tier 4					
	Basic First \$350	Basic Over \$350	COL First \$350	COL Over \$350	Total First \$350	Total Over \$350
16	2.09%	3.13%	1.23%	1.85%	3.32%	4.98%
17	2.09%	3.13%	1.23%	1.85%	3.32%	4.98%
18	2.09%	3.13%	1.23%	1.85%	3.32%	4.98%
19	2.09%	3.13%	1.23%	1.85%	3.32%	4.98%
20	2.09%	3.13%	1.23%	1.85%	3.32%	4.98%
21	2.10%	3.15%	1.27%	1.90%	3.36%	5.05%
22	2.10%	3.16%	1.29%	1.94%	3.40%	5.10%
23	2.11%	3.16%	1.32%	1.98%	3.43%	5.14%
24	2.11%	3.17%	1.35%	2.02%	3.46%	5.19%
25	2.11%	3.17%	1.38%	2.07%	3.49%	5.24%
26	2.16%	3.23%	1.41%	2.11%	3.56%	5.34%
27	2.20%	3.30%	1.43%	2.14%	3.63%	5.44%
28	2.25%	3.37%	1.45%	2.18%	3.70%	5.55%
29	2.29%	3.44%	1.48%	2.22%	3.77%	5.66%
30	2.34%	3.51%	1.51%	2.26%	3.85%	5.77%
31	2.39%	3.58%	1.53%	2.30%	3.92%	5.88%
32	2.44%	3.65%	1.57%	2.35%	4.00%	6.00%
33	2.49%	3.73%	1.59%	2.39%	4.08%	6.12%
34	2.54%	3.81%	1.63%	2.45%	4.17%	6.26%
35	2.59%	3.89%	1.67%	2.51%	4.27%	6.40%
36	2.65%	3.97%	1.71%	2.57%	4.36%	6.54%
37	2.70%	4.06%	1.76%	2.64%	4.46%	6.70%
38	2.76%	4.14%	1.80%	2.70%	4.56%	6.84%
39	2.82%	4.24%	1.85%	2.77%	4.67%	7.01%
40	2.89%	4.33%	1.89%	2.84%	4.78%	7.17%
41	2.96%	4.43%	1.92%	2.88%	4.88%	7.31%
42	3.03%	4.54%	1.95%	2.92%	4.97%	7.46%
43	3.10%	4.65%	1.98%	2.97%	5.08%	7.62%
44	3.17%	4.76%	2.00%	3.00%	5.17%	7.76%
45	3.25%	4.87%	2.03%	3.04%	5.27%	7.91%
46	3.32%	4.98%	2.05%	3.07%	5.36%	8.05%
47	3.39%	5.08%	2.07%	3.10%	5.46%	8.18%
48	3.44%	5.16%	2.08%	3.12%	5.52%	8.28%
49	3.46%	5.19%	2.09%	3.13%	5.55%	8.32%
50	3.44%	5.16%	2.09%	3.13%	5.53%	8.29%
51	3.42%	5.14%	2.09%	3.13%	5.51%	8.27%
52	3.41%	5.11%	2.05%	3.08%	5.46%	8.19%
53	3.36%	5.03%	2.00%	3.00%	5.36%	8.03%
54+	3.34%	5.01%	1.97%	2.95%	5.30%	7.96%

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX E – MEMBER CONTRIBUTION RATES

Entry Age	General Tier 5					
	Basic First \$350	Basic Over \$350	COL First \$350	COL Over \$350	Total First \$350	Total Over \$350
16	4.18%	6.26%	1.23%	1.85%	5.41%	8.11%
17	4.18%	6.26%	1.23%	1.85%	5.41%	8.11%
18	4.18%	6.26%	1.23%	1.85%	5.41%	8.11%
19	4.18%	6.26%	1.23%	1.85%	5.41%	8.11%
20	4.18%	6.26%	1.23%	1.85%	5.41%	8.11%
21	4.19%	6.29%	1.27%	1.90%	5.46%	8.19%
22	4.21%	6.31%	1.29%	1.94%	5.50%	8.25%
23	4.22%	6.33%	1.32%	1.98%	5.54%	8.31%
24	4.22%	6.33%	1.35%	2.02%	5.57%	8.35%
25	4.22%	6.34%	1.38%	2.07%	5.60%	8.41%
26	4.31%	6.47%	1.41%	2.11%	5.72%	8.58%
27	4.40%	6.60%	1.43%	2.14%	5.83%	8.74%
28	4.49%	6.74%	1.45%	2.18%	5.94%	8.92%
29	4.58%	6.87%	1.48%	2.22%	6.06%	9.09%
30	4.68%	7.02%	1.51%	2.26%	6.18%	9.28%
31	4.77%	7.16%	1.53%	2.30%	6.31%	9.46%
32	4.87%	7.31%	1.57%	2.35%	6.44%	9.66%
33	4.97%	7.46%	1.59%	2.39%	6.57%	9.85%
34	5.08%	7.62%	1.63%	2.45%	6.71%	10.07%
35	5.18%	7.78%	1.67%	2.51%	6.86%	10.29%
36	5.29%	7.94%	1.71%	2.57%	7.01%	10.51%
37	5.41%	8.11%	1.76%	2.64%	7.17%	10.75%
38	5.53%	8.29%	1.80%	2.70%	7.33%	10.99%
39	5.65%	8.47%	1.85%	2.77%	7.50%	11.24%
40	5.78%	8.66%	1.89%	2.84%	7.67%	11.50%
41	5.91%	8.87%	1.92%	2.88%	7.83%	11.75%
42	6.05%	9.08%	1.95%	2.92%	8.00%	12.00%
43	6.20%	9.30%	1.98%	2.97%	8.18%	12.27%
44	6.35%	9.52%	2.00%	3.00%	8.35%	12.52%
45	6.49%	9.74%	2.03%	3.04%	8.52%	12.78%
46	6.64%	9.95%	2.05%	3.07%	8.68%	13.02%
47	6.78%	10.17%	2.07%	3.10%	8.84%	13.27%
48	6.87%	10.31%	2.08%	3.12%	8.95%	13.43%
49	6.92%	10.38%	2.09%	3.13%	9.01%	13.51%
50	6.89%	10.33%	2.09%	3.13%	8.97%	13.46%
51	6.85%	10.27%	2.09%	3.13%	8.94%	13.40%
52	6.81%	10.22%	2.05%	3.08%	8.87%	13.30%
53	6.71%	10.07%	2.00%	3.00%	8.71%	13.07%
54+	6.67%	10.01%	1.97%	2.95%	8.64%	12.96%

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX E – MEMBER CONTRIBUTION RATES

Entry Age	Safety Tier 2					
	Basic First \$350	Basic Over \$350	COL First \$350	COL Over \$350	Total First \$350	Total Over \$350
18	4.95%	7.43%	1.70%	2.55%	6.65%	9.98%
19	4.95%	7.43%	1.70%	2.55%	6.65%	9.98%
20	4.95%	7.43%	1.70%	2.55%	6.65%	9.98%
21	5.06%	7.58%	1.77%	2.66%	6.83%	10.24%
22	5.16%	7.74%	1.82%	2.73%	6.98%	10.47%
23	5.26%	7.89%	1.87%	2.81%	7.14%	10.70%
24	5.37%	8.05%	1.93%	2.89%	7.30%	10.94%
25	5.48%	8.22%	1.98%	2.97%	7.46%	11.19%
26	5.59%	8.38%	2.03%	3.04%	7.62%	11.42%
27	5.70%	8.55%	2.08%	3.12%	7.78%	11.67%
28	5.82%	8.73%	2.14%	3.21%	7.96%	11.94%
29	5.94%	8.91%	2.19%	3.29%	8.13%	12.20%
30	6.06%	9.09%	2.25%	3.37%	8.31%	12.46%
31	6.19%	9.28%	2.31%	3.47%	8.50%	12.75%
32	6.32%	9.47%	2.37%	3.56%	8.69%	13.03%
33	6.45%	9.67%	2.43%	3.65%	8.88%	13.32%
34	6.59%	9.88%	2.49%	3.73%	9.07%	13.61%
35	6.73%	10.10%	2.54%	3.81%	9.27%	13.91%
36	6.88%	10.32%	2.58%	3.87%	9.46%	14.19%
37	7.03%	10.55%	2.61%	3.92%	9.64%	14.47%
38	7.18%	10.77%	2.66%	3.99%	9.84%	14.76%
39	7.32%	10.98%	2.71%	4.06%	10.03%	15.04%
40	7.45%	11.18%	2.76%	4.14%	10.21%	15.32%
41	7.58%	11.37%	2.77%	4.15%	10.34%	15.52%
42	7.70%	11.54%	2.77%	4.15%	10.46%	15.69%
43	7.79%	11.69%	2.76%	4.14%	10.55%	15.83%
44	7.86%	11.78%	2.75%	4.13%	10.61%	15.91%
45	7.87%	11.80%	2.74%	4.11%	10.61%	15.91%
46	7.83%	11.74%	2.75%	4.12%	10.58%	15.86%
47	7.74%	11.61%	2.75%	4.12%	10.49%	15.73%
48	7.95%	11.93%	2.75%	4.13%	10.70%	16.06%
49+	8.22%	12.32%	2.75%	4.13%	10.97%	16.45%

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX E – MEMBER CONTRIBUTION RATES

Entry Age	Safety Tier 5					
	Basic First \$350	Basic Over \$350	COL First \$350	COL Over \$350	Total First \$350	Total Over \$350
18	5.19%	7.78%	2.35%	3.53%	7.54%	11.31%
19	5.19%	7.78%	2.35%	3.53%	7.54%	11.31%
20	5.19%	7.78%	2.35%	3.53%	7.54%	11.31%
21	5.29%	7.94%	2.45%	3.67%	7.74%	11.61%
22	5.40%	8.10%	2.51%	3.77%	7.91%	11.87%
23	5.51%	8.26%	2.57%	3.86%	8.08%	12.12%
24	5.62%	8.43%	2.63%	3.95%	8.25%	12.38%
25	5.73%	8.60%	2.69%	4.04%	8.43%	12.64%
26	5.85%	8.78%	2.75%	4.13%	8.60%	12.91%
27	5.97%	8.95%	2.81%	4.22%	8.78%	13.17%
28	6.09%	9.14%	2.87%	4.31%	8.97%	13.45%
29	6.22%	9.32%	2.93%	4.39%	9.14%	13.71%
30	6.34%	9.52%	2.95%	4.42%	9.29%	13.94%
31	6.48%	9.71%	2.96%	4.44%	9.44%	14.15%
32	6.61%	9.92%	3.01%	4.52%	9.62%	14.44%
33	6.75%	10.13%	3.07%	4.60%	9.82%	14.73%
34	6.90%	10.34%	3.12%	4.68%	10.02%	15.02%
35	7.04%	10.57%	3.18%	4.77%	10.22%	15.34%
36	7.20%	10.80%	3.22%	4.83%	10.42%	15.63%
37	7.37%	11.05%	3.27%	4.90%	10.63%	15.95%
38	7.54%	11.31%	3.32%	4.98%	10.86%	16.29%
39	7.70%	11.56%	3.37%	5.06%	11.08%	16.62%
40	7.86%	11.79%	3.44%	5.16%	11.30%	16.95%
41	8.01%	12.02%	3.39%	5.09%	11.41%	17.11%
42	8.16%	12.24%	3.35%	5.03%	11.51%	17.27%
43	8.30%	12.45%	3.32%	4.98%	11.62%	17.43%
44	8.45%	12.67%	3.29%	4.94%	11.74%	17.61%
45	8.54%	12.81%	3.27%	4.90%	11.80%	17.71%
46	8.57%	12.86%	3.26%	4.89%	11.83%	17.75%
47	8.55%	12.83%	3.26%	4.89%	11.81%	17.72%
48	8.34%	12.51%	3.26%	4.89%	11.60%	17.40%
49+	8.22%	12.32%	3.26%	4.89%	11.48%	17.21%

**STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2020**

APPENDIX E – MEMBER CONTRIBUTION RATES

	PEPRA Rates			
	General		Safety	
	County and Former County	Ceres and Other Districts	County and Former County	Ceres and Other Districts
Current	8.74%	9.16%	12.36%	13.72%
Prior	8.73%	9.24%	12.34%	13.72%
Assumptions:				
Interest:	7.00%			
Salary:	2018 Valuation Scale (Service based, includes wage inflation at 3.00%)			
Mortality:	Because the PEPRA contributions rates are based on 50% of the actual Normal Cost, the mortality rates are the same as those used in the Actuarial Valuation (CalPERS mortality tables with adjustments based on StanCERA experience projected generationally from 2009 using Scale MP-2018)			



Classic Values, Innovative Advice

January 26, 2021

Retirement Board Agenda Item

TO: Retirement Board

FROM: Rick Santos, Executive Director

Lisa Frazer, Member and Employer Services Manager
Stan Conwell, Retirement Investment Officer
Brittany Smith-Atkins, Fiscal Services Manager
Kellie Gomes, Executive Board Assistant

- I. SUBJECT: 2021 Executive Director Goals
- II. ITEM NUMBER: 9.c.
- III. ITEM TYPE: Discussion and Action
- IV. STAFF RECOMMENDATION: Accept the Executive Director Goals (Attachment 1) for 2021
- V. ANALYSIS: This item sets forth Executive Director Goals for calendar year 2021. The goals set for 2021 come from the 3-year Strategic Plan put forth by staff and approved by Committee and the full Board late 2019. The item also includes general and/or ongoing items that appear at semi-regular times or are a normal part of routine StanCERA business. Attachment 1 contains the strategic deliverables/goals for 2021.

Strategic Objective Goals

Strategic goals for 2021 center mainly around the successful implementation of the Pension Administration System (PAS), the documentation of investment processes, succession planning and recruitment for the Organizational Support/Communications position.

Also included in this year's objectives are two holdovers from last year. Several items regarding the dispensation of retirement data and information to StanCERA constituents (Strategic Objective 3) were not completed due to the delay in the implementation of the PAS and member web portal. Additionally, the identification, documentation and implementation of risk and risk controls (Strategic Objective 4) was slowed and not completed due to personnel issues (however, a majority of the task has been completed).

StanCERA staff made great progress in 2020 fulfilling a majority of the goals/action items of the entire 3-year plan. This was done intentionally, since it was assumed (last year) that 2021 would be a very busy year due to the implementation of the PAS. The following is a quick summary of the strategic goals/action items proposed for 2021:

- ✓ *Successful implementation of the PAS* – Obviously, this is the first priority for the Organization in 2021. While the project has been slowed due to several factors, staff estimates that the majority of the project should be completed by the end of the year
- ✓ *Documentation of StanCERA Investment Processes* – Staff's goal this year is to complete the documentation of all StanCERA investment processes and governance requirements. This is an indirect consequence of the Succession

Planning Objective, since the goal here is to ensure critical tasks can continue seamlessly in the event of investment staff turnover.

- ✓ *Succession Planning* – While staff feels that the recent changes in the Org Structure, the hiring of an Investment Officer and the documentation of StanCERA administrative and investment processes has accomplished a great deal towards a robust succession plan, we would like to get more input from Trustees in 2021. As such, the goal this year is to form an Ad-Hoc Committee of 2 to 3 trustees to discuss and vet the Organization's desire regarding its identity and where it wants to be in 5 to 10 years. Since the Organization will continue to grow in terms of asset and member size, it is important to acknowledge this and plan for the transition. Additionally, part of the discussion with the Committee will be to decide how it wants to foster leadership roles in the Organization
- ✓ *Recruitment for the Organizational Support/Communications position* – Back in 2014, the Board of Retirement expressed interest in a Communications Position for the Organization. At that time, staff felt there simply wasn't enough work of this kind to fill the position. However, over the past 5 years, it has become evident that an Organizational Support/Operations position is in great need. The creation of this position now, would allow StanCERA to tag the Communications aspect that the Organization desires to this position as well.

General/Ongoing Items

General and Ongoing items for 2021 include typical tasks such as continual communication with StanCERA constituents, maintenance of the asset allocation, data clean-up and overseeing the PAS project. Unique to 2021, but not a part of the overall Strategic Plan include tasks such as transitioning to the new asset allocation and completion of the implementation of the Alameda Decision.

- VI. RISK: NONE
- VII. STRATEGIC PLAN: N/A
- VIII. ADMINISTRATIVE BUDGET IMPACT: While this agenda item does produce cost impacts on the budget, there is no marginal cost increase due specifically to this agenda item. In fact, costs for administering aspects of this item have already been built into StanCERA's annual budget.

StanCERA Strategic Goals 2021**(Attachment 1)*****General and/or Ongoing Items***

1. Continued communication, outreach and transparency with major stakeholders such as County, County BOS, Local Governments, Special Districts and Employee Groups
2. Maintenance of StanCERA's asset allocation targets
3. Continued progress on the System data clean-up project
4. Director Professional Development
5. Oversee Information Technology Solutions Project
6. Oversee and completion of day to day administrative functions
7. Oversee and monitor the transition of the StanCERA portfolio to the new targets
8. Complete implementation of the Alameda Decision

Items Tied to the Strategic Plan***Strategic Objective #1*****Develop an Organizational Structure reflective of our operational capabilities and succession planning needs****Strategic Plan Objective #1, Deliverables**

1. Develop the Job Description for the Organizational Support/Communications Manager position by StanCERA leadership
2. Hiring and onboarding of Organizational Support/Communications Manager (Late 2021- Early 2022)

Strategic Objective # 2**Successful implementation/completion of the Pension Administration System (PAS)****Strategic Plan Objective #2, Deliverables**

1. Strive to unlock the full value inherent in the PAS for both internal and external constituents
 - ✓ Consider mid-career retirement seminars
2. Rebrand and market StanCERA
 - ✓ Revamp all forms, documents and templates using StanCERA's new logo
 - ✓ Replace all items/documents using StanCERA's old mission and vision statements with new statements
 - ✓ Resume all quarterly newsletter publication
 - ✓ Consider modern, aesthetic changes to StanCERA's office

*Strategic Objective # 3***Development and implementation of a formalized succession plan for StanCERA**

Strategic Plan Objective #3 Deliverables

1. Foster and promote a professional organization and strong leadership team. Create a Committee comprised of at least 2 trustees, the Fiscal and Member & Employer Services Managers and the Executive Director. This committee will:
 - ✓ research and recommend strategies on the type of Organization StanCERA wishes to become as it grows over the next several years
 - ✓ be tasked with building a leadership program that will foster StanCERA's leadership qualities in staff who may choose to become future leaders

*Strategic Objective #4***Development of a formalized Operational Risk Management Plan**

Strategic Plan Objective #4 Deliverables

1. Identify the risks within the organization and determine the type of risk, the level of the risk, cause of the risk, effect of the risk and the controls in place regarding the risk
2. Communicate and inform StanCERA staff of their risk responsibilities and any controls that are associated with their activities

*Strategic Objective # 5***Process documentation and standardization of the Investment Governance Process**

Strategic Plan Objective #5 Deliverables

1. Create an investment governance process manual. Tasks with high operational importance and greater frequency will take priority and will be completed during 2021 with the remainder being completed in 2022
 - ✓ Processes to be documented in 2021
 - i. Capital calls
 - ii. Trade order and web cash approvals
 - iii. Trade order and web cash initiations
 - iv. Portfolio target monitoring
 - v. Alternative manager database upload
 - vi. Alternative manager reporting process
 - vii. Fund performance, ending balance, and benchmark returns database upload
 - viii. Fund cash balance database upload
 - ix. Manager fee database entry
 - x. Custody fee database upload
 - xi. Liquidity sub-portfolio: cash shortfall forecasting
 - xii. Liquidity sub-portfolio: reconciliation and reporting