

The background of the cover is a low-angle photograph of tall, mature trees with thick trunks and dense green foliage against a clear blue sky. A large green circle with an orange outline is centered on the page, containing the report's title and subtitle.

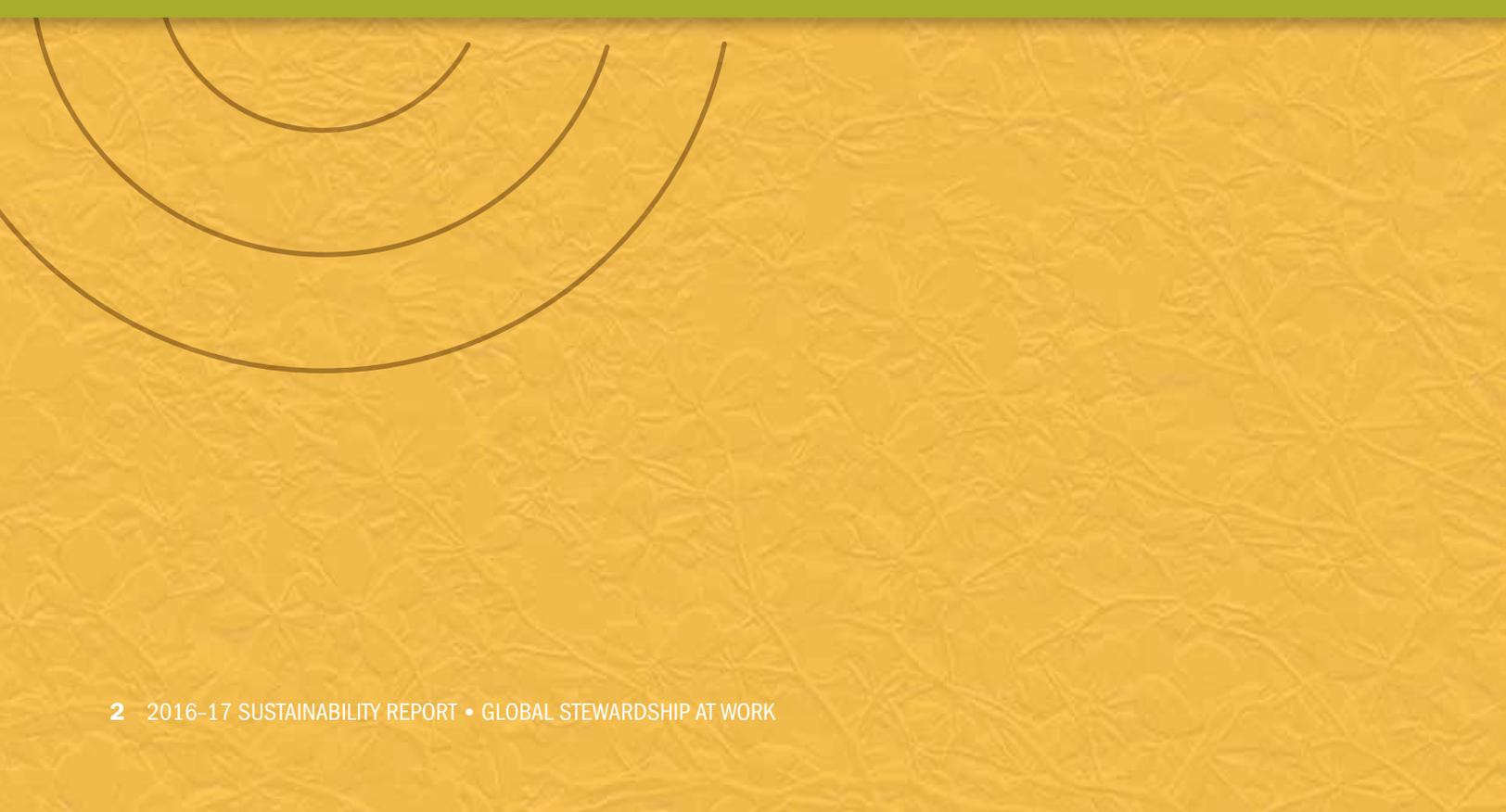
CALSTRS®

GLOBAL STEWARDSHIP AT WORK

2016-17
Sustainability Report



TABLE OF CONTENTS



Global Stewardship at Work

2016–17 CalSTRS Sustainability Report

04	A Word From CEO Jack Ehnes	50	Encouraging Retirement Security
06	Report Profile	52	The CalSTRS Hybrid Retirement System
08	About CalSTRS	54	Preparing for Retirement
10	About CalSTRS	58	Annual Member Survey: Voice of the Customer
11	The CalSTRS Strategic Plan Goals	60	Ensuring Responsible Business Practices
12	CalSTRS Executive Staff and Teachers' Retirement Board	62	Functions of Organizational Transparency
16	CalSTRS Member Profile	64	Cybersecurity at CalSTRS
18	Office Locations and Employees	66	A Culture of Ethics
19	Operations Financial Profile: State Teachers' Retirement Plan	70	Sustainability-Related Investment Risk Management
24	Funding Levels and Risks	72	The CalSTRS Investment Portfolio Cost Report
28	Aligning Our Sustainable Values	73	Sustainable Investment Strategies
30	Stakeholder Engagement	78	CalSTRS' Sustainable Employee Culture
33	Contractor ESG Activity	80	Headquarters' Environmental Performance
34	Core Values, Sustainability Vision and Guiding Beliefs	86	Earth Week 2017 at CalSTRS
36	Leading the Direction in Sustainable Finance	87	BikeSTRS
38	Workforce Development	87	Paper Reduction Initiative
40	Workforce Profile	88	Sustainable Engagement and Connectivity
42	Diversity and Inclusion: The Power of Difference	89	Notable CalSTRS Awards and Achievements
43	Workforce Development	90	GRI Content Index

A Word From CEO Jack Ehnes



Photo by Clarissa Resultan, CalSTRS

Global Stewardship at Work

Year after year, CalSTRS continues to underscore and emphasize the need to look over a long-term, 30-year horizon and well beyond the immediate impacts of any short-term results. And in this, our fourth sustainability report, we once again focus on our responsibility as trusted stewards of the Teachers' Retirement Fund.

At CalSTRS, we take our stewardship responsibility seriously by taking deliberate actions and making informed, accountable decisions to ensure a fully sustainable organization.

It is this unwavering commitment to stewardship that enables us to be here for our members long after they dedicate their careers to educating California's youth, as we steadfastly deliver on the promise of a secure retirement future.

CalSTRS demonstrates our commitment to securing our members' retirement futures and organizational sustainability by modeling best practices in corporate governance, employing risk-mitigation policies, developing workforce succession plans and dedicating resources to increase

our members' financial awareness and retirement security. Across the spectrum of our activities, we consistently advocate for the importance of long-term value creation, which continues to be the essence of the "Global Stewardship at Work" theme in our annual sustainability report.

CalSTRS' sustainability framework has greatly expanded since the fund was established in 1913, when we started with 120 retired members and 15,000 active members. Over the past century, our organization has grown to include

more than 933,000 California educators and their beneficiaries who depend on and trust us to successfully carry out our mission.

The relationship with our members begins when they first enter their teaching careers and extends through their retirement years. On average, CalSTRS members dedicate more than 25 years to educating California's youth and retire at just under 63 years of age. And, according to data outlined in our most recent actuarial experience study adopted by the Teachers' Retirement Board in February 2017, CalSTRS members are living longer in retirement.

Reflecting on the longevity of our members' careers and their increased lifespans, CalSTRS dedicates resources to emphasize awareness, outreach and education to provide members with retirement planning tools throughout their careers. We offer a financial awareness workshop series that emphasizes the importance of supplemental savings plans in addition to the defined benefit pension. Members are educated on the impactful difference they can make by saving early in their careers when they can benefit most from the power of time and compounding. Additionally, CalSTRS provides members with tools to determine their financial goals throughout their career stages, so they are better prepared for the future that lies ahead of them in retirement.

Stewardship at CalSTRS also includes implementing responsible investing strategies. As a long-term, 30-year horizon investor, we take steps to mindfully balance risk with opportunity in order to preserve the integrity and strength of the fund. Managing a multi-billion dollar portfolio requires thoughtful diligence to monitor investment performance, analyze projections, and take necessary actions to ensure a stable, risk-adjusted return profile. And though CalSTRS is largely a passive equity investor, we take an active shareowner role by regularly engaging with our portfolio companies to ensure responsible corporate governance practices, board diversity, and ultimately, performance accountability to their shareholders.

As trusted fiduciaries, CalSTRS staff and third-party experts continually monitor the financial health of the fund by providing an actuarial valuation and funding levels risk report to the Teachers' Retirement Board every year. The valuation is presented every spring and the funding report in the fall. The results of both reports confirm that CalSTRS continues to make progress toward the long-term funding goal outlined in the passage of Assembly Bill 1469 in July 2014.

This report illustrates that CalSTRS' sustainability-focused mission has permeated the nexus of our organization. Our employees

demonstrate this every day by using alternative transportation, recycling and diverting waste from landfills and purchasing environmentally preferred goods, all the while supporting sustainable lifestyles in our LEED Platinum-certified headquarters building. CalSTRS staff are cognizant that choices we make related to our environment further demonstrate our commitment to sustainability and our intention to conserve resources for future generations.

As a global, institutional investor, CalSTRS has a fiduciary duty to be principled and effective within our operations to meet financial commitments for the next century and beyond. We believe that establishing a corporate environment with sustainable values is a blueprint for better governance and increased profitability. This sustainability report, covering the 2016-17 fiscal year, illustrates the power of global stewardship at work and how we continue to manage resources and our fund with great diligence and care, in fulfilling our commitment to being a fully sustainable organization.

Respectfully submitted,



Jack Ehnes
Chief Executive Officer



REPORT PROFILE

This report is an overview of the relative data and assessment of the material topics covering July 1, 2016–June 30, 2017, and, in some cases, later into calendar year 2017, as noted. This report was prepared in accordance with the Global Reporting Initiative G4 Guidelines Core option. This is CalSTRS' fourth annual GRI report.

The report's boundary and scope include CalSTRS' West Sacramento headquarters building, six member service centers—one located within the headquarters building—and financial information from the

State Teachers' Retirement Plan. Most data is aggregated statewide across our six California locations, with some data specific to our Northern California headquarters.

Energy, water, greenhouse gas emissions, alternate transportation and waste diversion figures reported represent CalSTRS' headquarters performance. Member service centers do not materially affect our energy and water performance because utility savings and usage are primarily controlled by lease agreements.

Assurance

CalSTRS has no policy on the report's external assurance at this time but strives to provide accurate, transparent and internally verified information.

CalSTRS' Internal Audit staff performed an independent and objective review of the information submitted in this report. Our internal audit procedures were designed to obtain a limited level of assurance over the measurable statements and facts.

For questions or comments about this report, email us at Sustainability@CalSTRS.com.

CalSTRS discloses material sustainability issues and sustainable performance data.

—*CalSTRS Guiding Belief No. 9*



ABOUT CALSTRS

10	About CalSTRS
11	The CalSTRS Strategic Plan Goals
12	CalSTRS Executive Staff and Teachers' Retirement Board
16	CalSTRS Member Profile
18	Office Locations and Employees
19	Operations Financial Profile: State Teachers' Retirement Plan
24	Funding Levels and Risks

**CalSTRS responsibly manages risk
for the long-term financial strength of
CalSTRS, to the benefit of our members,
stakeholders and the environment.**

—CalSTRS Guiding Belief No. 2

Mission

Securing the financial future and sustaining the trust of California's educators

Vision

Your Reward—A Secure Retirement
Our Reward—Getting You There

About CalSTRS

The California State Teachers' Retirement System provides pension, disability and survivor benefits to California's full-time and part-time public school educators from prekindergarten through community college and certain other employees of the public school system. Membership in the defined benefit plan is mandatory for all full-time certificated public school educators. Our global investments are both internally and externally managed. CalSTRS is the largest educator-only pension fund in the world.

When founded in 1913, CalSTRS started with 15,000 members and a very small asset base. Over the past century, we have grown to represent a portfolio valued at just under \$210.3 billion and 933,301 members and beneficiaries as of June 30, 2017. In 1913, the annual benefit was \$500; currently, the median Member-Only Benefit is about \$4,266 a month. Decade after decade, CalSTRS' mission has remained the same: to secure the financial future and sustain the trust of California's educators now and for generations to come.

CalSTRS is a component unit of the State of California and a cost-sharing public pension system that administers a hybrid retirement system consisting of a traditional defined benefit plan, a cash balance plan and a defined contribution plan.

The Teachers' Retirement Law (California Education Code section 22000 et seq.) as enacted and amended by the California Legislature, established these plans and CalSTRS as the administrator. The terms of our plans may be amended through legislation.

Due to the timing of when membership numbers were pulled, there will be a difference between the numbers reported in this section and final fiscal year numbers.

CalSTRS' Strategic Plan Goals

The strategic goals for fiscal years 2016–17 to 2018–19 cover four broad areas of focus:



Financial *Ensure a financially sound retirement system.*

Our primary goal is ensuring a financially sound retirement system. We continue to make progress toward full funding of the CalSTRS Defined Benefit Program by the year 2046 according to the funding plan enacted by the California Legislature in July 2014 as part of Assembly Bill 1469. We are committed to investing responsibly over the long term, while adding value.



Member/Employer *Enhance services to members and employers.*

One of CalSTRS' primary goals focuses on ensuring our members understand their pension benefits and make educated decisions today to secure their financial futures into their retirement years. CalSTRS embraces opportunities to provide helpful financial literacy tools and resources to our members as part of our fiduciary duty. This embodies the model of shared responsibility distributed between CalSTRS, our 933,000+ members and beneficiaries and 1,700+ employers across the state. Just as we strive to partner with employers to provide their CalSTRS-covered employees with resources to further understand their pension benefits, it is equally as critical for the employers to submit accurate and complete reporting of member data and compensation information to help CalSTRS members make progress toward their secure retirement futures.



Business Transformation *Drive operational excellence.*

CalSTRS is replacing its pension administration system to better serve our members, employers and customers. Once implemented, the new system will provide improved user experiences for those we serve and long-term operational cost savings for the fund. The project will be implemented in phased releases over the upcoming years.



Workforce Transformation *Grow an engaged, highly skilled and diverse workforce.*

Creating a workplace that engages employees helps us deliver optimum service and efficient performance. An engaged workforce contributes positively to higher engagement levels with the member population, which research indicates supports retirement preparedness. CalSTRS strives to hire the right individuals for the right job at the right time and provide a diverse and inclusive work environment. We believe in encouraging our staff, both present and future, to “imagine a job you love” by embracing collaboration and the power of difference in thoughts, perspectives and experiences.

CalSTRS' Executive Staff



Jack Ehnes
Chief Executive Officer



Cassandra Lichnock
Chief Operating Officer



Christopher J. Ailman
Chief Investment Officer



Brian J. Bartow
General Counsel



Robin Madsen
Chief Financial Officer



Grant Boyken
Public Affairs Executive Officer



Ashish Jain
Chief Technology Officer



Lisa Blatnick
Chief of Administrative Services



Andrew Roth
*Benefits and Services
Executive Officer*

Teachers' Retirement Board



Dana Dillon
Board Chair
K-12 Classroom Teacher



Sharon Hendricks
Board Vice Chair
Community College Instructor



John Chiang
State Treasurer
Ex-Officio Member



Michael Cohen
Director of Finance
Ex-Officio Member



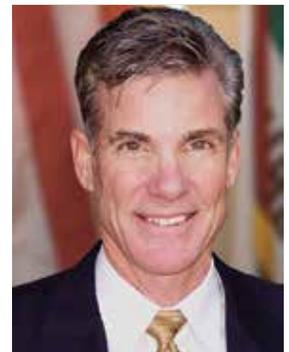
Joy Higa
Public Representative



Harry M. Keiley
K-12 Classroom Teacher



Paul Rosenstiel
Public Representative



Tom Torlakson
State Superintendent of
Public Instruction
Ex-Officio Member



Thomas Unterman
Public Representative



Nora E. Vargas
School Board Representative



Karen Yamamoto
Retiree Representative



Betty Yee
State Controller
Ex-Officio Member

Teachers' Retirement Board

CalSTRS is administered by the 12-member Teachers' Retirement Board, which has plenary authority under the California Constitution. The board sets the policy and provides direction for the system, and is responsible for ensuring the system pays benefits in accordance with the law. The board has exclusive control over the investment and administration of the Teachers' Retirement Fund and is composed of:



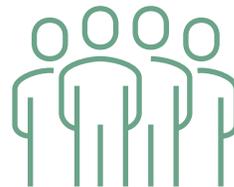
Three member-elected positions representing current educators



Three public representatives appointed by the Governor and confirmed by the Senate



A retired CalSTRS member appointed by the Governor and confirmed by the Senate



Four ex-officio members:

- » Director of Finance
- » State Controller
- » State Superintendent of Public Instruction
- » State Treasurer



A school board representative appointed by the Governor and confirmed by the Senate



Watch the Sustainability Report videos

Karen Yamamoto, the newest member of the Teachers' Retirement Board, talks about her commitment to CalSTRS' sustainable values.

Teachers' Retirement Board's Six Standing Committees

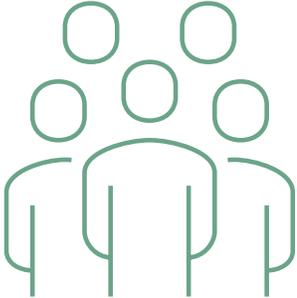
Committee	Purpose
Appeals	The Appeals Committee provides a dedicated body to hear, deliberate upon and decide appeals of system determinations pursuant to the Administrative Procedure Act.
Audits and Risk Management	The Audits and Risk Management Committee assists the board in fulfilling its fiduciary oversight responsibilities for financial reporting, risk management, internal control, compliance, internal audit, external audit of the financial statements, and engagements with other external firms.
Benefits and Services	The Benefits and Services Committee develops and oversees the execution of prudent policies relating to levels of benefits and the delivery of services to CalSTRS members, retirees and beneficiaries, and adjusts contribution and interest rates for selected aspects of the Teachers' Retirement Plan.
Board Governance	The Board Governance Committee supports the board in promoting the best interests of CalSTRS, our members, retirees and beneficiaries through the implementation of sound board governance policies and practices that enhance good, fair and open decision-making.
Compensation	The Compensation Committee provides oversight to the system's compensation policies and plan that support the successful recruitment, development and retention of talent to meet the business objectives of CalSTRS.
Investment	The Investment Committee administers all matters relating to the investment of the system's assets and investment management. The committee is charged with administering the system's assets for the exclusive purpose of providing benefits to the participants and their beneficiaries within the system and maximizing the financial stability of the system in an efficient and cost-effective manner.

Two advisory committees, the Employer Advisory Committee and the Client Advisory Committee, meet throughout the year to provide forums for active participation in forming CalSTRS' policies and procedures.

Committee charters can be found in the Teachers' Retirement Board Policy Manual at CalSTRS.com/teachers-retirement-board.

CalSTRS Member Profile

Members and Beneficiaries



933,301 Total members and beneficiaries

Active Members

Vested: 315,808
Non-vested: 129,970

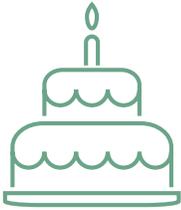
Inactive Members

Vested: 39,001
Non-vested: 153,687

Retirees & Benefit Recipients

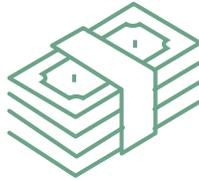
294,874

Annual Retirement Statistics July 1, 2016–June 30, 2017



62.9

Median age of retirement



\$13.8 billion

Total benefit payments for the year, which includes service retirement benefits, disability benefits, survivor benefits and purchasing power supplemental payments



\$4,266

Median monthly Member-Only Benefit



25.6 years

Median service credit



56

percent

Percentage of members selecting the Member-Only Benefit



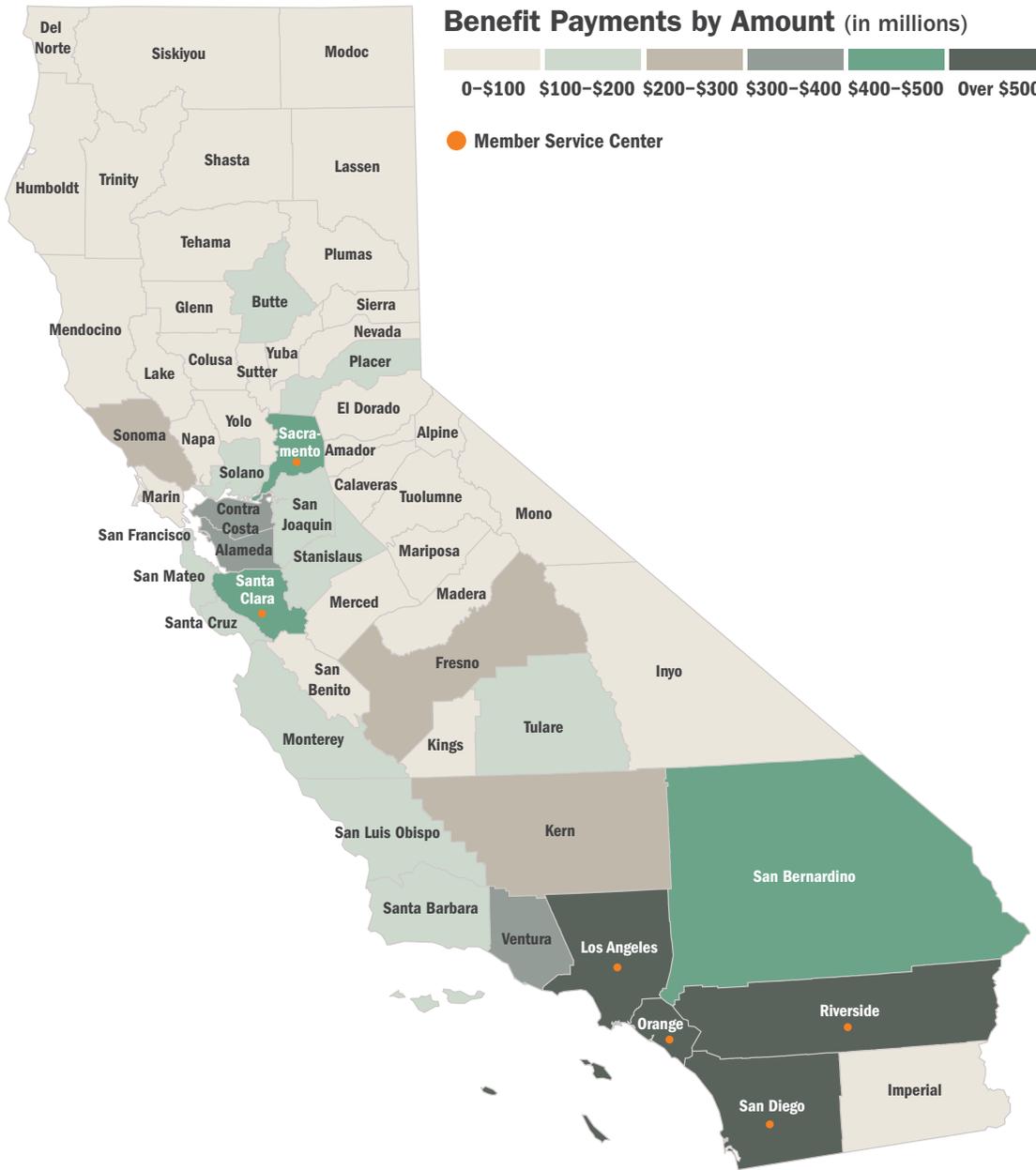
12,247

Number of defined benefit retirements

Due to the timing of when membership numbers were pulled, there will be a difference between the numbers reported in this section and final fiscal year numbers.

CalSTRS Retirement Benefits Fuel Local Economies

CalSTRS paid an estimated \$11 billion in benefits to 221,052 retirees living in California during fiscal year 2016-17. This map indicates the number of retired members living in each county and the amount of benefits paid to those members, as well as the locations of the CalSTRS member service centers.



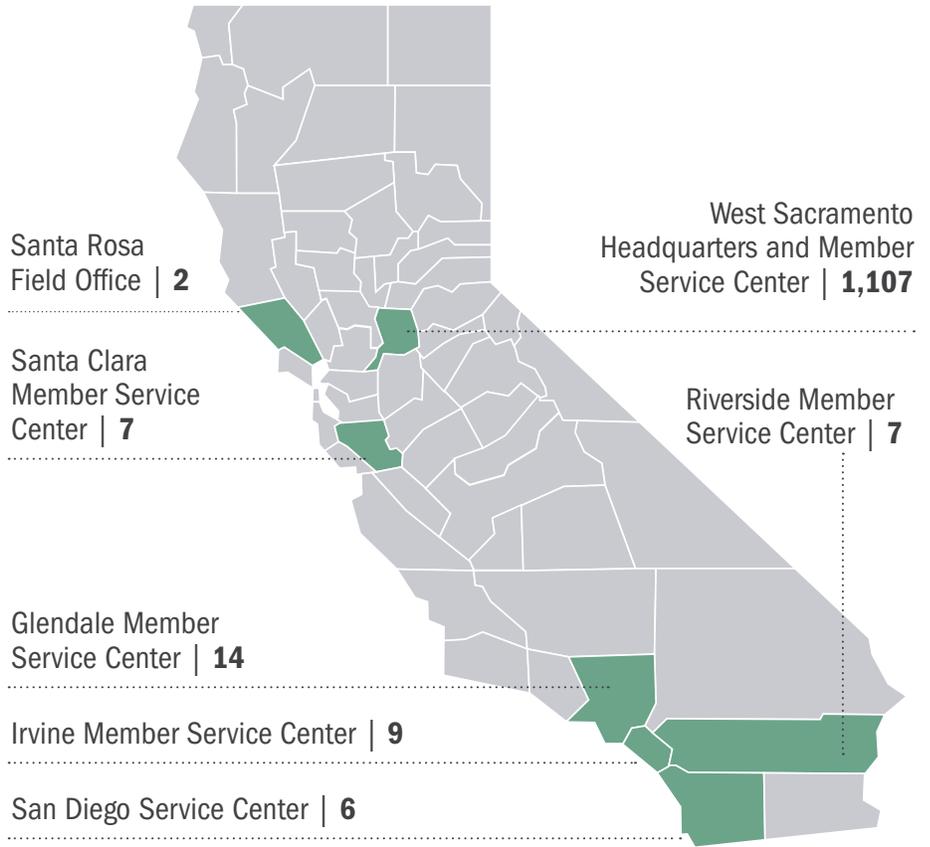
County	Retirees
Alameda	7,514
Alpine	12
Amador	439
Butte	2,340
Calaveras	590
Colusa	122
Contra Costa	7,464
Del Norte	235
El Dorado	2,098
Fresno	6,165
Glenn	179
Humboldt	1,345
Imperial	762
Inyo	156
Kern	4,169
Kings	590
Lake	474
Lassen	218
Los Angeles	42,304
Madera	1,308
Marin	2,134
Mariposa	265
Mendocino	1,132
Merced	1,479
Modoc	89
Mono	176
Monterey	2,988
Napa	1,432
Nevada	1,587
Orange	20,416
Placer	4,112
Plumas	325
Riverside	12,118
Sacramento	8,812
San Benito	306
San Bernardino	8,986
San Diego	20,571
San Francisco	2,878
San Joaquin	3,845
San Luis Obispo	4,046
San Mateo	3,722
Santa Barbara	2,891
Santa Clara	9,352
Santa Cruz	2,710
Shasta	1,641
Sierra	76
Siskiyou	604
Solano	2,931
Sonoma	4,610
Stanislaus	3,082
Sutter	748
Tehama	648
Trinity	146
Tulare	3,006
Tuolumne	678
Ventura	6,615
Yolo	1,072
Yuba	339
Total	221,052

Office Locations and Employees

CalSTRS' headquarters is located at 100 Waterfront Place in West Sacramento. The building opened in 2009 with a LEED Gold certification for New Construction. LEED stands for Leadership in Energy and Environmental Design, a green building rating system developed by the U.S. Green Building Council. The 409,000-square-foot Class A office building now operates under a LEED Platinum certification for Existing Building, Operations and Maintenance.

Since its Energy Star registration in 2011, the building has earned an average Energy Star score above 90 percent. For two years consecutively, 2016 and 2017, the building achieved the high score of 99 out of 100 on the Energy Star scale, garnering a classification as a top performer. CalSTRS diverts more than 90 percent of

Total Workforce by Region



1,152 total staff and leadership positions

generated ongoing consumable waste and reduces water use with low-flow water fixtures, an efficient landscape and irrigation system, and an occupant environmental awareness campaign.

CalSTRS has six member service centers located across the state in West Sacramento, Glendale, Santa Clara, Irvine, Riverside and San Diego, and a small field office in Santa Rosa.

Operations Financial Profile: State Teachers' Retirement Plan

Financial Highlights

The Statement of Fiduciary Net Position

The Statement of Fiduciary Net Position presents information on assets and liabilities, with the difference between the two reported as net position. The tables that follow present comparative information and changes to the plan net position for the State Teachers' Retirement Plan for fiscal years 2016–17 and 2015–16.

Net Position <i>(Dollars in Thousands)</i>			
ASSETS AND DEFERRED OUTFLOWS OF RESOURCES	2017	2016	PERCENT CHANGE
Investment Assets ¹	\$229,079,341	\$207,541,517	10.4%
Cash	459,456	164,597	179.1
Investment Receivables	2,349,266	1,280,564	83.5
Member, Employer and Other Receivables	3,523,160	2,693,178	30.8
Capital and Other Assets	259,011	231,216	12.0
Deferred Outflows of Resources	70,934	22,756	211.7
TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES	\$235,741,168	\$211,933,828	11.2%
LIABILITIES AND DEFERRED OUTFLOWS OF RESOURCES			
Benefits in Process of Payment	\$234,379	\$1,188,518	(80.3%)
Investment Liabilities	260,133	169,246	53.7
Investment Payables	3,270,703	1,403,511	133.0
Loans Payable	2,824,259	2,129,694	32.6
Net Pension and OPEB Obligation	323,058	256,069	26.2
Other	353,766	127,494	177.5
Securities Lending Obligation	18,184,444	17,530,264	3.7
Deferred Inflows of Resources	526	15,545	(96.6%)
TOTAL LIABILITIES AND DEFERRED INFLOWS OF RESOURCES	\$25,451,268	\$22,820,341	11.5%
NET POSITION	\$210,289,900	\$189,113,487	11.2%

¹ Includes securities lending collateral of \$18.2 billion and \$17.5 billion for 2017 and 2016, respectively.

The Statement of Changes in Fiduciary Net Position

The Statement of Changes in Fiduciary Net Position shows how the STRP's net position changed during the fiscal year, reflecting contributions earned, benefit payments made, net investment returns and the costs of plan administration.

Changes in Net Position <i>(Dollars in Thousands)</i>			
ADDITIONS	2017	2016	PERCENT CHANGE
Member Contributions	\$3,440,883	\$2,957,473	16.3%
Employer Contributions	4,173,235	3,391,144	23.1
State of California Contributions	2,478,230	1,939,902	27.8
Net Investment Income ¹	25,165,180	2,337,364	976.6
Other	72,005	41,519	73.4
TOTAL ADDITIONS	\$35,329,533	\$10,667,402	231.2%
DEDUCTIONS			
Benefit Payments	\$13,787,035	\$13,064,557	5.5%
Refunds of Contributions	115,509	84,001	37.5
Administrative Expenses	182,367	180,056	1.3
Borrowing Costs ¹	57,958	32,406	78.8
Other	10,251	15,231	(32.7)
TOTAL DEDUCTIONS	\$14,153,120	\$13,376,251	5.8%
Net Position Increase (Decrease)	\$21,176,413	(\$2,708,849)	881.7%
Beginning Net Position	189,113,487	191,822,336	(1.4)
ENDING NET POSITION	\$210,289,900	\$189,113,487	11.2%

¹ Borrowing costs of \$32,406 associated with the master credit facility portfolio for the year ended June 30, 2016, were reclassified from Net Investment Income to Deductions to conform to the presentation as of, and for the year ended, June 30, 2017. The reclassifications had no impact on net position or changes in net position.



All financial data in the Operations Financial Profile can be found in the *CalSTRS 2016-17 Comprehensive Annual Financial Report: Advancing Sustainability Forward*.

Administrative and Investment Expenses

The combined administrative and investment expenses for 2016–17 were approximately \$581.4 million.

Most of CalSTRS administrative and investment contractors and vendors are located within North America, with a small number of business partners in Europe and Asia. The information provided below is derived from the *CalSTRS 2016–17 Comprehensive Annual Financial Report: Advancing Sustainability Forward* (CAFR). Further details on operating costs and a list of contractors can be also found in the CAFR.

Administrative Expenses

The State Teachers' Retirement Plan administrative operating and personnel expenses for fiscal year 2016–17 were approximately \$182.3 million. Administrative expenses increased by \$2.3 million or 1.26 percent in 2016–17.

CalSTRS contracted with more than 100 organizations to provide consulting and professional services not directly related to investment management, at an approximate cost of \$28 million.

Investment Expenses

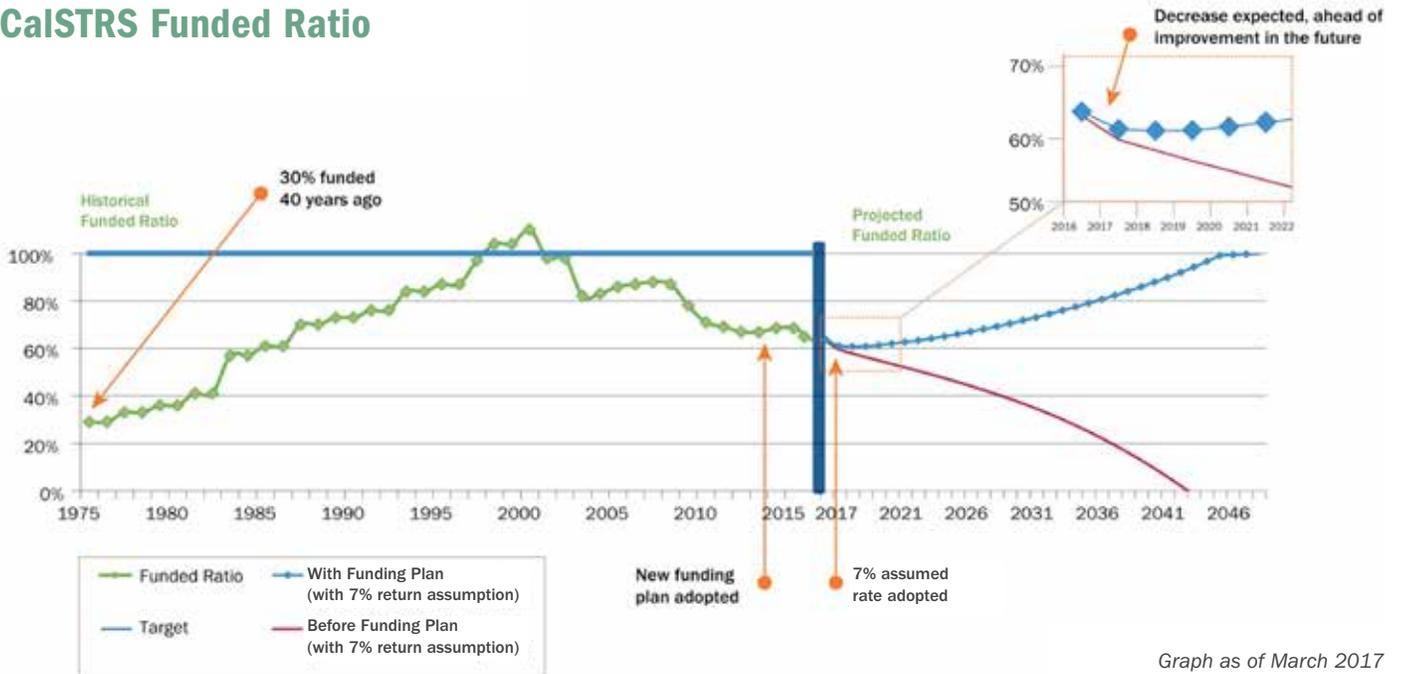
CalSTRS' investment operating and personnel services expenses for fiscal year 2016–17 were approximately \$399 million, including securities lending expenses. We contracted with more than 100 organizations to provide investment management, research and analytics, custody services, legal services, trading, and risk management systems at a cost of approximately \$193.3 million. In addition, CalSTRS incurred \$85.4 million for other investment expenses, \$52.8 million of which was related to foreign tax withholding.

In fiscal year 2016–17, CalSTRS had a net investment income of \$25.1 billion, or a 976.6 percent increase primarily due to a strong market performance resulting in an investment return of 13.4 percent (net of fees).

Funded Status

CalSTRS continues to build on the momentum of Assembly Bill 1469 (Chapter 47, Statutes of 2014), which established a model of shared responsibility outlining fair and gradual contribution rate increases among members, employers and the State of California.

CalSTRS Funded Ratio



Graph as of March 2017



\$210.3 billion

Total net position of the State Teachers' Retirement Plan as of June 30, 2017

Portfolio-Wide Rate of Return on Investments, Net of Fees

Time-weighted return as of June 30, 2017

Time	FY 2016–17	Over three years	Over five years	Over 10 years	Over 20 years
Return	13.4%	6.3%	10.1%	5.0%	6.9%

The total contributions to the State Teachers’ Retirement Plan for 2016–17 increased by \$1.8 billion (21.8 percent) over the previous fiscal year due to increases in both creditable compensation and the statutory contribution rate changes implemented under AB 1469. Member contributions increased \$483.4 million (16.3 percent), employer contributions increased \$782.1 million (23.1 percent), and state contributions increased \$538.3 million (27.8 percent).

For the fiscal year ending June 30, 2017, the total net position of the plan increased by \$21.2 billion, or 11.2 percent, from the previous

fiscal year ending June 30, 2016, to \$210.3 billion.

Changes in the net position were primarily driven by three factors—contributions, investment income and benefit payments. The most significant reason for the increase was a 976.6 percent increase in net investment income due to strong market performance resulting in an investment return of 13.4 percent (net of fees).

As a long-term investor projecting over a 30-year horizon, CalSTRS consistently emphasizes the long-term nature of pension funding as it pertains to investment performance and the need to look

beyond the immediate impacts of any single year’s returns.

Although meeting the investment return assumption is an important component in the system’s overall funding picture, additional factors such as member compensation and longer life expectancies also play important roles.

With the AB 1469 parameters defining shared responsibility for contribution rates, including limited authority of the board to make adjustments depending on the status of the plan, CalSTRS continues to make progress toward our funding goal by the year 2046.

Key Findings From the Funding Risk Profile Report:

- The system is financially stronger today, positioning CalSTRS to achieve our goal of ensuring the long-term sustainability of the system and securing the benefits of California educators.
- Significant risk remains in CalSTRS' ability to achieve full funding by 2046.
- As the system continues to mature over time, small but routine investment losses will have a greater impact on the contribution requirements needed to ensure full funding.

Funding Levels and Risks

2016 Review of CalSTRS Funding Levels and Risks

Internal actuarial staff conducted an extensive review of funding levels and risks and delivered its report, *Review of Funding Levels and Risks*, to the board in November 2016. The report was prepared to assist board members, policy makers, media, stakeholders and members in understanding and assessing the risks inherent in the funding of the system. While the annual valuation process is predicated on what we know from a point in time in the past, the risk report was designed to assess a range of potential risks and outcomes in an unpredictable future, including economic and demographic uncertainties. The report focused on:

- Plan maturity and how it affects volatility.
- Added volatility resulting from the Supplemental Benefit Maintenance Account fund.
- Negative amortization and its impact on long-term funding.
- Unfunded actuarial obligation related to new benefits and post-2014 service.

- Impact of investment returns on historical and future funding levels.
- Funding risk measures based on stochastic projections.

With the adoption of the CalSTRS Funding Plan enacted through AB 1469, the board has some limited ability to adjust contribution requirements for both the state and employers to ensure long-term funding of benefits. As a result, the risk of low funded status or even fully depleting the fund has been reduced considerably. However, it is important and best practice as a system that we keep our eye on various factors, including investment volatility, membership demographic changes and the active-to-retiree ratio, while consistently evaluating which ones might pose a potential risk.

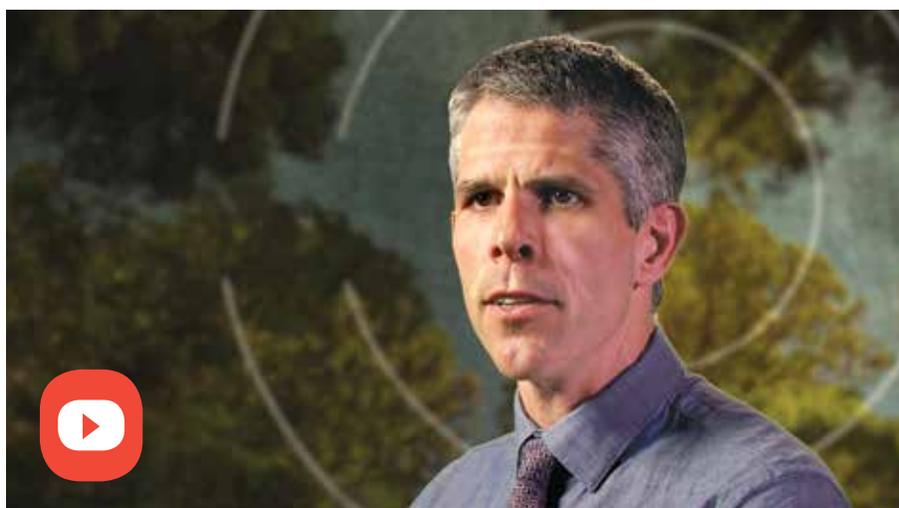
Examining these risks and holding transparent, thorough and educated discussions assists board members in carrying out their fiduciary duties.

Defined benefit plans are an efficient means to provide retirement security for educators. This efficiency is achieved by pooling risks such as investment, inflation and longevity risks. The pooling mechanism reduces these risks significantly by spreading the cost of adverse experience over a large group of educators and by extending the period of time over which the financial consequences of any adverse experience is felt. These risks, however, cannot be fully eliminated.

CalSTRS Actuarial Update

As noted previously, the report, *Review of Funding Levels and Risks*, indicated that the system is financially stronger because of the enactment of AB 1469, the plan to fully fund CalSTRS by 2046. However, it is also a critical component of CalSTRS' responsibility to our members to carefully assess the risk environment to outline any impediments to achieving full funding by 2046. According to our actuarial experts, at this time the most significant risk is the potential for financial market volatility and the long-term impact on the sustained growth of the fund.

Periodically, external actuaries prepare a full experience study on CalSTRS members to determine whether actuarial assumptions used in the funding of the system should be modified to better reflect anticipated plan experience. The study uses actuarial data



CalSTRS Deputy System Actuary David Lamoureux explains how CalSTRS monitors funding levels and risks to ensure members' benefits are secure.

collected over a several year period and is typically presented on a four-to-five year basis. At its meeting in February 2017, after being presented with the most recent actuarial experience study data, the Teachers' Retirement Board adopted new actuarial assumptions—both economic and demographic. These changes reflect longer member life expectancy

rates, lower inflation factors and a reduction in the expected rate of investment returns over the long term. Specifically, the board adopted a phased-in approach to reduce the investment return assumption, which had previously been 7.5 percent annually. Over a two-year period starting with the board action in February 2017, the investment assumption was reduced

Timeline of Actuarial Presentations to the Teachers' Retirement Board

2016

NOVEMBER

- Annual Funding Levels and Risk Report

2017

FEBRUARY

- Actuarial Experience Study (every four to five years)

APRIL

- Annual Actuarial Valuation

Stakeholder Engagement—Communicating Complicated Calculations

CalSTRS believes including the voices of our members and stakeholders in conversations relative to fund sustainability is essential. In an effort to alleviate confusion regarding complicated financial findings and actuarial assumptions, we took a proactive approach to engage with stakeholders.

Staff designed a comprehensive strategy to communicate with our vast network of stakeholders, including the Governor's administration, legislators, employers, members, labor representatives and the media. The goal was to provide stakeholders with a foundation to interpret complex actuarial issues prior to the release of the *Review of Funding Levels and*

Risks, the *Actuarial Experience Study Report*, and the latest actuarial valuation. CalSTRS staff engaged stakeholders using various methods and channels of communication to ensure increased understanding and input with the topics that would be presented to the board and in keeping with our commitment to transparency.

The result was a productive discussion at the board table, with thoughtful comments from members of the public who seemed to have a clear grasp of the issues. Additionally, CalSTRS' increased engagement contributed to generally accurate and fair media coverage.

to 7.25 percent for the valuation that was dated June 30, 2016. Next, for the upcoming valuation dated June 30, 2017, the rate will adjust a second time as part of the planned phased-in approach, reducing to 7 percent from that point forward or until any future board action.

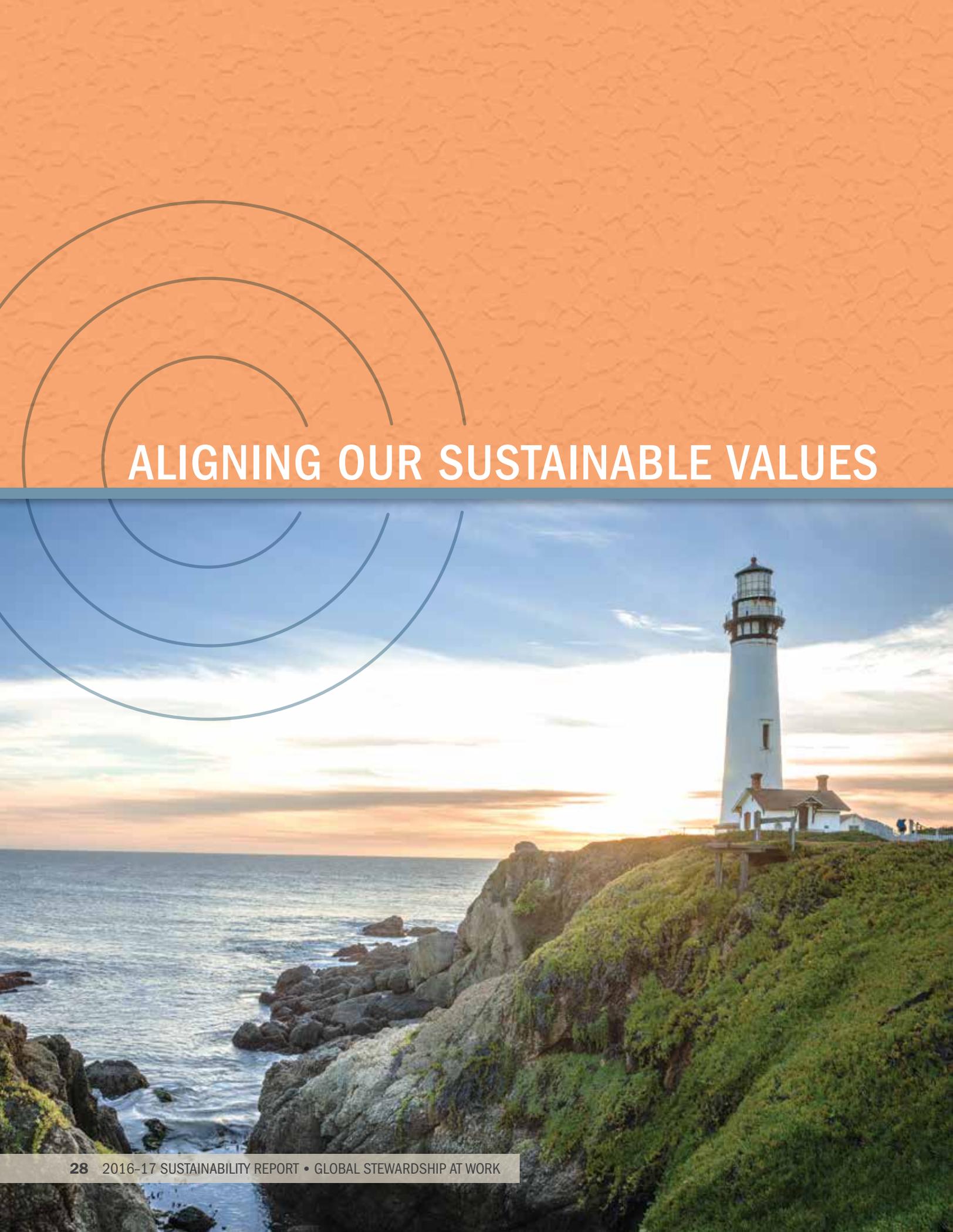
At the April 2017 board meeting, staff presented the latest actuarial valuation dated June 30, 2016, which reflected the newly adopted actuarial assumptions from February 2017. Actuarial valuations are performed on an annual basis to provide the board with a snapshot in time of the overall financial health of the system.

Based on the June 30, 2016, actuarial valuation, the system's funding ratio—the actuarial value of assets as compared to benefit obligations—stands at 63.7 percent, with a funding gap, or unfunded actuarial obligation, estimated to be approximately \$96.7 billion.

To help bridge this funding gap, the board exercised its authority to adopt a contribution increase for the State of California contribution rate, adjusting it by an additional 0.5 percent of payroll to ensure the system remains on course to achieve full funding by 2046. CalSTRS' ability to require an annual 0.5 percent

increase in state contributions, if necessary, is a provision included in AB 1469. In fact, the Governor's administration anticipated this increase and proactively included it in the proposed state budget released in January 2017.

The annual review of funding levels and risk, combined with annual actuarial valuations and periodic reviews of actuarial assumptions, represent a clear demonstration of CalSTRS' commitment to be a sustainable organization that will be here in perpetuity and able to fulfill our mission to provide a secure retirement to California's educators.



ALIGNING OUR SUSTAINABLE VALUES

30	Stakeholder Engagement
33	Contractor ESG Activity
34	Core Values, Sustainability Vision and Guiding Beliefs
36	Leading the Direction in Sustainable Finance

CalSTRS encourages procurement of goods and services with contractors and supply chain vendors that incorporate sustainability and environmental, social and governance criteria into their business practices.

—CalSTRS Guiding Belief No. 6

Stakeholder Engagement

CalSTRS regularly elicits feedback from our stakeholder groups through many avenues, including direct email and online surveys, public meetings and web-based communications. We welcome open

discussion to inform and discuss current topics.

To frame this sustainability report, the CalSTRS executive team and staff reviewed the GRI aspects

and topics, as well as the feedback from our 2016 anonymous materiality survey in which stakeholders, including CalSTRS executives, prioritized 11 material issues.

Topics reviewed and prioritized by CalSTRS executives represent:



The materiality survey was solicited on our internal and external websites and social media, and emailed to a group of stakeholders. It was open for one month from mid-August to mid-September 2016.

Stakeholders were asked to prioritize 11 material issues based on the topic's importance to CalSTRS in meeting our mission; CalSTRS executives were asked to prioritize the material issues based on their impact to CalSTRS. More than

1,200 stakeholders participated in the material topic survey.

This exercise defined a set of six material topics for this report representing the top three areas of concern for each group of stakeholders.

Top Areas of Concern for Stakeholders

This chart reflects the total score of each surveyed material topic. Because stakeholder groups are significantly different in their relationship with CalSTRS, we chose the top three topics of each group to address in this report.



Top Three Topics Ranked by Stakeholder Group

Rank	Employees	Members	Other Stakeholders	Executives*
1	Retirement Preparedness	Cybersecurity	Sustainability-Related Investment Risk	Cybersecurity
2	Cybersecurity	Organizational Transparency	Organizational Transparency	Ethics and Compliance
3	Ethics and Compliance	Ethics and Compliance	Ethics and Compliance	Workforce Development, Employee Engagement, Diversity and Inclusion

*Executives rated topics according to impact to CalSTRS.

Stakeholders Solicited

CalSTRS addressed input from the following constituent groups and stakeholders in developing this report. These stakeholder groups were selected based on their commitment to California’s public educators, their principles of sustainability as they pertain to financial markets, and the direct impact that CalSTRS’ actions have on their livelihood.

A

American Federation of Teachers

Association of Asian American Investment Managers

C

California Federation of Teachers

California Teachers Association

CalPERS Corporate Governance Office

CalSTRS Client Advisory Committee

CalSTRS employees

CalSTRS employers

CalSTRS members

CDP, formerly the Carbon Disclosure Project

Ceres

Council of Institutional Investors

G-I

Generation Investment Management

International Public Management Association for Human Resources

J

JLL–Corporate Sustainability

JLL–Headquarters Property Management

M

Meketa Investment Group

MSCI

N

National Association of Securities Professionals

National Council on Teacher Retirement

National Institute for Retirement Security

National Education Association

New America Alliance

P

Pension Consulting Alliance

Principal Real Estate Investors

Principles for Responsible Investment

S-T

Service Employees International Union
Local 1000

Trucost

Contractor ESG Activity

CalSTRS has been refining and enhancing our environmental, social and governance policies and practices for many years. We believe it is in the best interest of CalSTRS and our members to align our risk management principles with those we establish agreements with. We provide our contractors with a set of environmental and social-based standards for all contracted business services, which includes anti-discrimination clauses, human rights regulations, and fair labor and environmental compliances.

These social and environmental mandates were established by the State of California, and CalSTRS has the responsibility to ensure that we do business only with those in compliance. To further enhance our goals, we conduct an annual survey that helps to identify ESG alignment with our business contractors.

In August 2017, we sent our third annual questionnaire to our private industry-based business contractors with contracts valued at or above \$50,000 to assess their

efforts in addressing environmental, social and governance risks. The questions were based on 17 ESG-related activities, from employee development programs to ESG reporting. More than 200 companies were solicited and approximately 60 responded, resulting in an approximately 30 percent response rate. For the first time, "uphold environmentally preferred purchasing" was selected by 75 percent to 100 percent of those who responded. The results are summarized by activity type:

25% to 49% of Respondents	50% to 74% of Respondents	75% to 100% of Respondents
Publish sustainability reports	Employ health and safety programs	Provide career development programs
Report and/or manage GHG emissions	Practice energy conservation	Maintain employee retirement programs
Screen suppliers for ESG risk	Operate in green facilities	Practice waste reduction
Manage or conserve water use	Formalize ESG policies	Employ employee values and ethics policies
Engage employees in sustainable practices	Practice sustainable transportation/commuting	Manage information privacy and data security systems
		Provide reporting mechanisms for grievances
		Uphold environmentally preferred purchasing

CalSTRS Core Values

CUSTOMER SERVICE

We never compromise on quality as we strive to meet or exceed the expectations of our customers.

ACCOUNTABILITY

We operate with transparency and accept responsibility for our actions.

LEADERSHIP

We model best practices in our industry and innovate to achieve higher standards.

STRENGTH

We ensure the strength of our system by embracing a diversity of ideas and people.

TRUST

We conduct ourselves with integrity, acting ethically in every endeavor.

RESPECT

We respect the needs of our members, co-workers and others, treating everyone with fairness, honesty and courtesy.

STEWARDSHIP

We recognize our fiduciary responsibility as the foundation for all decision-making.

Core Values, Sustainability Vision and Guiding Beliefs

The CalSTRS Core Values are a set of attitudes, beliefs and behaviors that define CalSTRS and our employees. CalSTRS' core values orientation is an important component of our onboarding program and contributes to our sustainability practices. Employees who consistently exhibit our core values are nominated and selected for our highest honor, the annual Virtuoso award.

2017 CalSTRS Virtuosos



Photo by Clarissa Resultan, CalSTRS

CalSTRS employees who consistently exhibit our core values are nominated and selected for our highest honor, the annual Virtuoso award. Front row: Lisa Kashiwamura, David Oshima, Heather Totten, Lucy Arbuckle. Second row: Jesse Darden, Patrick Bivins, Shaun White. Third row: Lamont King, Tom O'Hair, Lew Levy, Pam Simmons.

Our Sustainability Vision

CalSTRS advances sustainability practices that promote long-term value creation, responsible investment strategy, stewardship of our natural resources and engagement with our stakeholder community.

Guiding Beliefs

CalSTRS' guiding beliefs shape our environmental, social and governance actions and interactions with our stakeholders.

1. CalSTRS supports sustainability programs that build environmental, social and governance principles into our core business and investment practices.
2. CalSTRS responsibly manages risk for the long-term financial strength of CalSTRS, to the benefit of our members, stakeholders and the environment.
3. CalSTRS engages with our stakeholders, business partners and community on environmental, social and governance issues and principles to understand their insights and perspectives.
4. CalSTRS considers the global impact of our business practices in the use of natural resources within our facilities and through the procurement of goods and services.
5. All CalSTRS' investments should seek to responsibly manage and disclose economic, social and environmental criteria in order to deliver sustainable and profitable, risk-adjusted returns.
6. CalSTRS encourages procurement of goods and services with contractors and supply chain vendors that incorporate sustainability and environmental, social and governance criteria into their business practices.
7. CalSTRS believes in providing a supportive work environment where employees are encouraged to develop and achieve their full career potential.
8. CalSTRS recognizes plan assets will contribute to and be affected by climate change and that appropriate risk mitigation must occur in order to deliver profitable, risk-adjusted returns.
9. CalSTRS discloses material sustainability issues and sustainable performance data.

Leading the Direction in Sustainable Finance

Through our collaborative partnerships, we can provide guidance on environmental, social and governance issues that impact the Teachers' Retirement Fund. Executives and senior level staff provide leadership to vital organizations that drive strategic direction within the sphere of corporate sustainability and responsible long-term investing.

Below is a list of our strategic leadership roles and general memberships:



Jack Ehnes, Chief Executive Officer

- Bipartisan Policy Center, Executive Council on Infrastructure
- Ceres, Board Member
- FTSE, Environmental Markets Advisory Committee, Chair
- FTSE, ESG Advisory Committee, Member
- National Council on Teacher Retirement, President-Elect
- International Foundation of Employee Benefit Plans, Public Employees Board Member
- Sustainability Accounting Standards Foundation Board, Member
- Sacramento Downtown/Riverfront Street Car Policy Steering Committee, Member



Christopher J. Ailman, Chief Investment Officer

- EDHEC-Risk Institute, Board Member
- 300 Club North American Chapter, Co-Chair
- MSCI Barra Index Editorial Advisory Board, Member
- Milken Global Capital Markets Advisory Council, Co-Chair
- Principles for Responsible Investment, Asset Owners Advisory Committee, Member
- Robert Toigo Foundation, Advisory Board Member
- SASB, Investor Advisory Group, Chair
- CFA Institute, Steering Committee on Diversity, Member



Anne Sheehan, Director of Corporate Governance

- California Women Lead, Member
- International Women's Forum of Northern California, Member
- SEC Investor Advisory Committee, Chair
- The Thirty Percent Coalition, Institutional Investor Committee, Co-Chair
- The Thirty Percent Coalition, Board Member
- Weinberg Center for Corporate Governance, University of Delaware, Advisory Board Member



WORKFORCE DEVELOPMENT



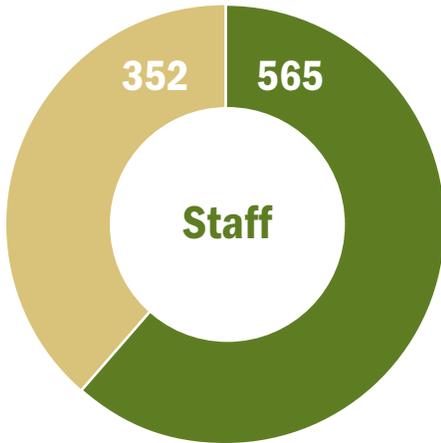
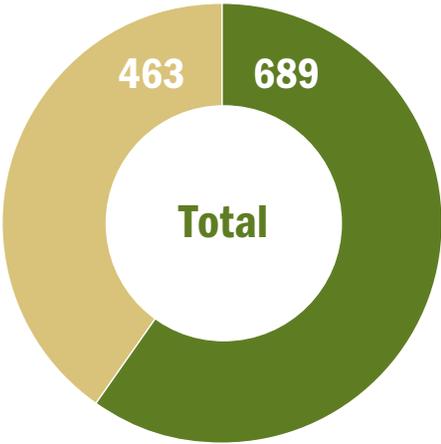
CalSTRS believes in providing a supportive work environment where employees are encouraged to develop and achieve their full career potential.

—CalSTRS Guiding Belief No. 7

- 40 Workforce Profile**
- 42 Diversity and Inclusion: The Power of Difference**
- 43 Workforce Development**

Workforce Profile As of June 30, 2017

Male Female



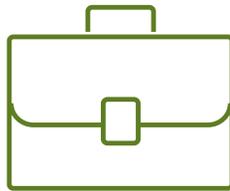
1,152 Total CalSTRS employees



40% male



60% female



98 percent

Percentage of employees who are full time; 2 percent are part time or intermittent

71 percent

Percentage of all staff covered by bargaining units



42

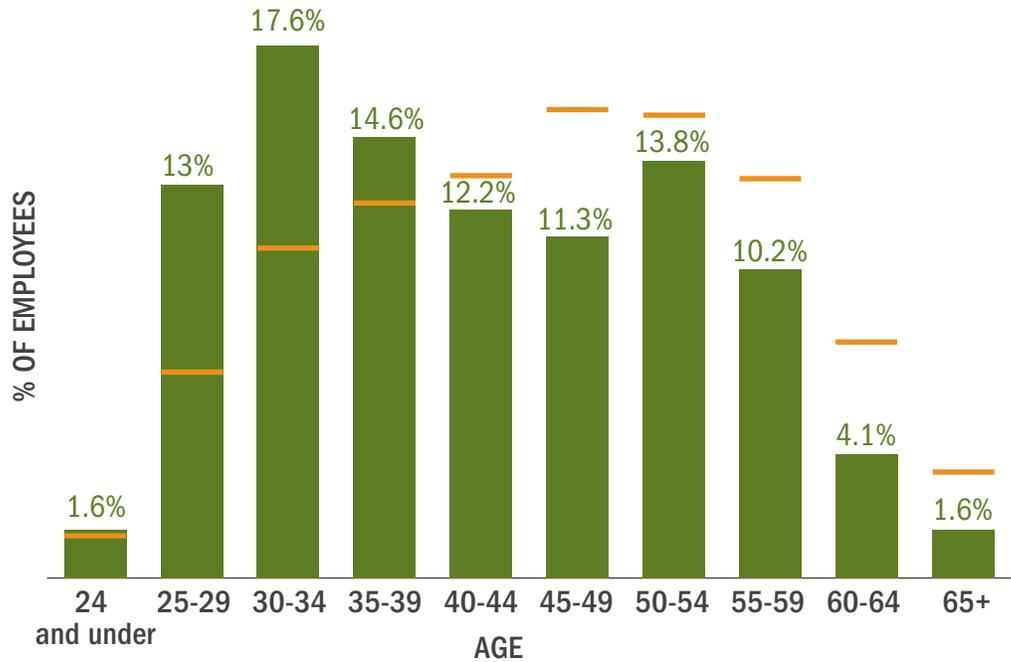
Average age of a CalSTRS employee

Average Age by Level		
Level	Average Age	Total Employees
Staff	41	917
Leadership	47	235

Workforce by Age

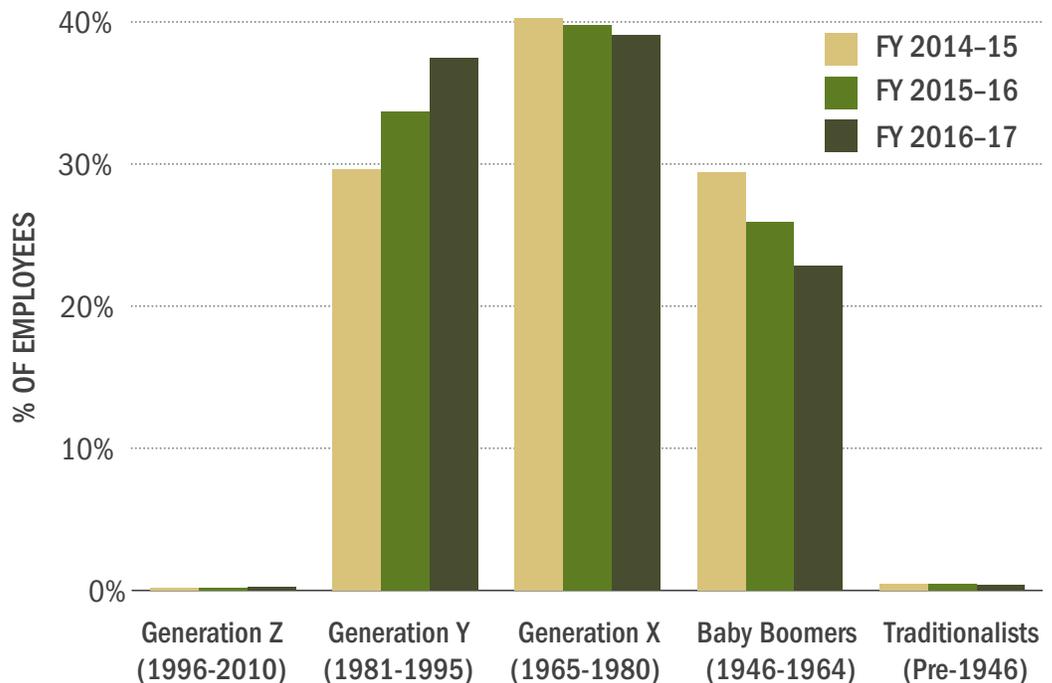
When compared with the state workforce, CalSTRS' workforce is younger and trending higher in the under-40 population. Data reflects employee population as of December 2016.

- State average
- CalSTRS



CalSTRS Employees by Generation Groups

The CalSTRS workforce has shifted generations over the past several years, which is expected since Baby Boomers have reached retirement age. We now have more staff in either Generation X or Y than in the Baby Boomer generation. We also are introducing Generation Z—born between 1996 and 2010.



Diversity and Inclusion: The Power of Difference

CalSTRS seeks to foster a diverse and inclusive workplace, where each person feels valued and respected. Diversity is explicitly supported in our core value of strength: We ensure the strength of our system by embracing a diversity of ideas and people.

Based on staff feedback, CalSTRS worked with organizational development professionals to create a unique learning workshop for staff to interact with one another by providing insight and ideas for what diversity and inclusion means for each

individual. The all-day, interactive workshop, titled Diversity and Inclusion: The Power of Difference, helps to show staff how working together creates a more inclusive, supportive organizational culture.

In the 2016–17 fiscal year, CalSTRS introduced a diversity and inclusion training pilot. All employees are expected to complete the day-long training in the 2017–18 fiscal year. An additional half-day session is available to leadership to expand their understanding of leading in a diverse and inclusive environment.

During the workshops, employees participated in facilitated discussions to:

- Reflect on our similarities and differences and their impact on the work of the organization as a whole.
- Explore tools for seeing the world through different lenses.
- Learn skills for communicating across differences.
- Understand what an inclusive organization looks like and the path to get there.

Employee Diversity at CalSTRS

Ethnicity	FY 2014–15	FY 2015–16	FY 2016–17
American Indian	0.48%	0.55%	0.52%
Asian	18.41%	19.19%	19.70%
Black	8.43%	8.21%	7.64%
Filipino	4.75%	4.98%	4.95%
Hispanic	15.12%	15.87%	16.23%
Other	1.94%	2.03%	2.08%
Pacific Islander	0.97%	0.83%	0.87%
Undeclared	0.19%	0.37%	0.35%
White	49.71%	47.97%	47.66%

Workforce Development

CalSTRS continues to expand our efforts to grow an engaged, highly skilled and diverse workforce.

Our approach to workforce retention and succession is designed around the employee life cycle, a component of our performance objectives that encompasses an

employee’s experiences from pre-hire to retirement or separation from CalSTRS. This holistic view and its philosophies serve to support CalSTRS’ employees during every phase of their career life cycle.

This approach demonstrates CalSTRS’ commitment to

sustainability by directly supporting one of our most important assets, our people. The benefit to the organization is the spillover effect of highly engaged and dedicated employees who are poised to develop and support innovative services to CalSTRS members while fulfilling our mission.

CalSTRS Employee Life Cycle

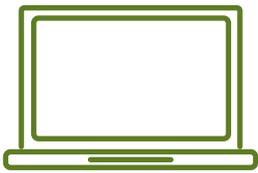


Development

CalSTRS Talent Development Pipeline

Employees completing the talent development pipeline have the opportunity to attend:

Pre-Analyst Academy <i>Nine classes</i> Purpose: Introduces a selection of soft and technical skills	Analyst Academy <i>Seven classes</i> Purpose: Sharpens analytical skills	Lead-Person Training <i>Three classes</i> Purpose: Supports those desiring or holding lead positions	Emerging Leadership Series <i>Eight classes</i> Purpose: Supports senior analysts exploring management positions	Manager Academy <i>Five classes</i> Purpose: Provides 80 hours of mandatory training for new supervisors	Masters Series <i>12-month course</i> Purpose: Prepares management seeking senior leader positions	Executive Development Program <i>18-month course</i> Purpose: Prepares senior leaders for executive level responsibilities and positions
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During fiscal year 2016-17, CalSTRS offered 368 in-house training sessions, which were attended by 4,457 participants.

Academy Graduate Statistics

	FY 2014-15	FY 2015-16	FY 2016-17
Pre-Analyst	11	9	16
Analyst	48	46	52
Manager	23	37	44

Overall Employee Training Hours

	FY 2014-15	FY 2015-16	FY 2016-17
Total training hours	32,225	35,332	37,102
Average annual training hours per employee	31	31	32.2

Career Mastery

Annual Performance Reviews

Annual performance reviews are required for every CalSTRS employee who successfully passes their probationary period. Ongoing feedback and the opportunity to learn are essential to employee engagement. By formally focusing on the immediate and future career goals of the individual, our employees are continuously challenged to grow in their current roles and prepare for what's next.

To be successful in developing our employees, we strive for the following goals in the annual review process:

- 100-percent timely submittals.
- Feedback quality and correlation with documented development plans, both CalSTRS' strategic workforce and individual career development goals.

Review Submissions

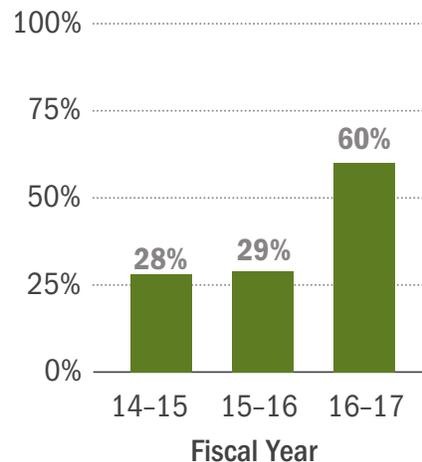


Mandatory Management Training

A full 80 hours of supervisor training is required within the first 12 months for any new leader in state service. CalSTRS has an established learning plan to support new leaders in this requirement with 17 supervisor training courses taught over 80 hours. The coursework includes basic supervision training, equal employment opportunity topics, harassment prevention, performance management approaches, the candidate selection process, ethics and core values. As part of our effort to meet 100 percent compliance, executives receive quarterly status reports on the completion of manager training.

New Managers Who Finish Training in 12 Months

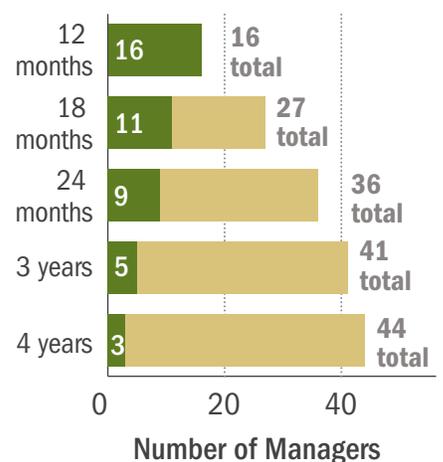
The percentage of new supervisors who completed mandatory 80 hours training within 12 months of appointment:

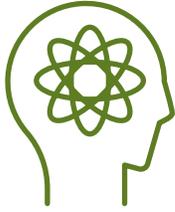


Time New Managers Take to Complete Training

At the end of fiscal year 2016-17, 26 managers were still completing the mandatory training program.

■ Completed training in the time period
 ■ Total who completed training





In the 2016–17 fiscal year, 77 percent of our leadership appointments were internally sourced. Employees either transferred or promoted within leadership, or promoted to leadership for the first time.

Leadership Development

Our end-to-end leadership development pipeline includes every employee in the organization. This ensures a broad and deep bench of internal candidates who are prepared to assume higher-level roles when they become available, and contributes to the stability and sustainability of the organization.

Our succession planning and leadership development efforts are proving successful over time. In the 2016–17 fiscal year, 77 percent of our leadership appointments were employees who either transferred or promoted within leadership, or who promoted to leadership for the first time.

CalSTRS offers multiple training opportunities to prepare employees to move into leadership roles. From providing foundational leadership skills through Lead-Person Training and the Emerging Leader Series to giving guidance to new managers through the Manager Academy and leadership onboarding, CalSTRS

is committed to sustaining our leadership pipeline.

For upper-level managers, CalSTRS is focused on developing strategies for leadership succession. We provide several programs to prepare managers for advanced leadership roles and to ensure institutional knowledge is preserved through succession planning. They include:

Executive Development Program

This 18-month program was designed to prepare upper-level managers to compete for future executive or senior-level positions.

CalSTRS uses talent developed in the program to fill key leadership roles and to lend oversight to high-priority efforts as we face increased retirements and organizational demands. Seven of the 11 original cohort members have been promoted to director or executive level positions within the organization.



Photo by Clarissa Resultan, CalSTRS

Inaugural Master Series Leadership class: First row: Kristel Turko, David Walton, Diane Alsup, Jennetta Brown, Katie Valdivia, Sean King. Second row: Kathy Halstead, Michelle Crosby, Joycelyn Martinez-Wade. Third row: Kimberley Petz, Shani Keyser Boes, Michelle Johnson, Melyssa Adams. Fourth row: Phil Burkholder, Denise Gonzalez, Mark Gini. Not pictured: Sukha Chima, Kirsten Casella, Anjum Keval, Alisa Dobbins.

Masters Series Leadership Development Program

Launched in November 2016, this program relates directly to CalSTRS' business goal of workforce transformation and enhances organizational performance by strengthening strategies for leadership succession.

Twenty managers from a cross section of levels, branches and divisions were selected for the 12-month learning commitment, which includes 10 hours per month devoted toward development.

Knowledge Transfer and Transition Efforts

This program is designed to harness the institutional knowledge of departing staff. The pilot effort mapped the experience and background of a long-tenured executive who was responsible for CalSTRS' plan design, policy and public affairs business areas. The unit transitioned critical business knowledge to individuals throughout the organization and implemented an effective succession strategy with little to no interruption in business continuity.

Knowledge transfer is planned for positions or individuals who are mission critical, provide specialized support and serve as stand-alone subject matter experts.

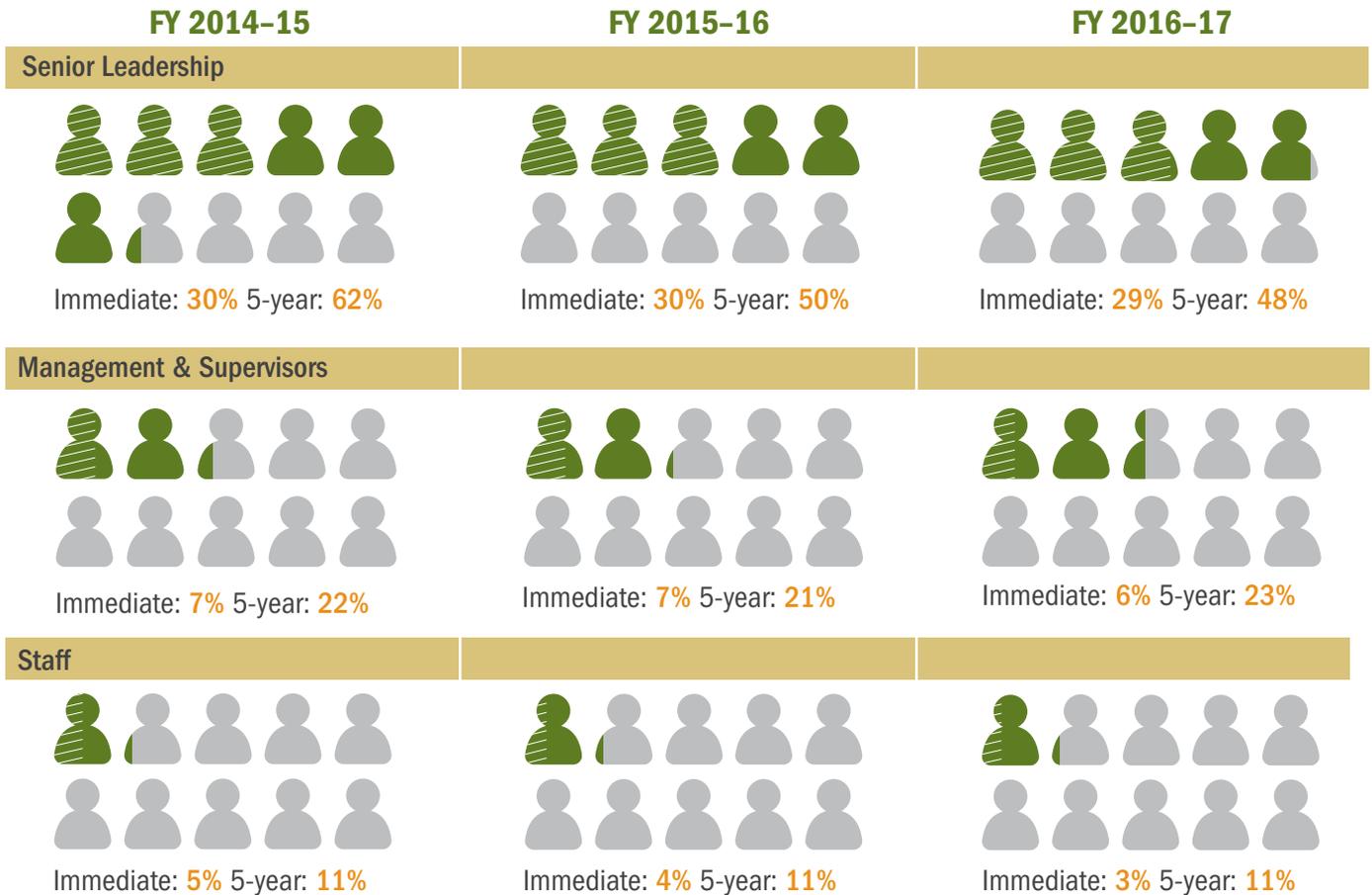
Offboarding and Employee Turnover

CalSTRS continues to mitigate the risk of knowledge loss as a result of turnover and retirements. We communicate with our staff about their career plans. We use this information to drive our strategies for retention, knowledge transfer, learning and development, and succession planning. The annual turnover for CalSTRS is at 8.17 percent, which includes retirements, and voluntary and involuntary turnovers.

As of June 30, 2017, there were 42 senior leaders in the organization, encompassing director and executive level staff. Twenty-nine percent are immediately eligible to retire, having reached age 55 with 20 years of state service accumulated.

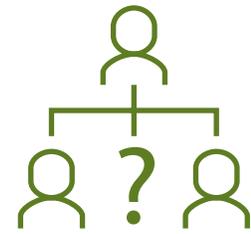
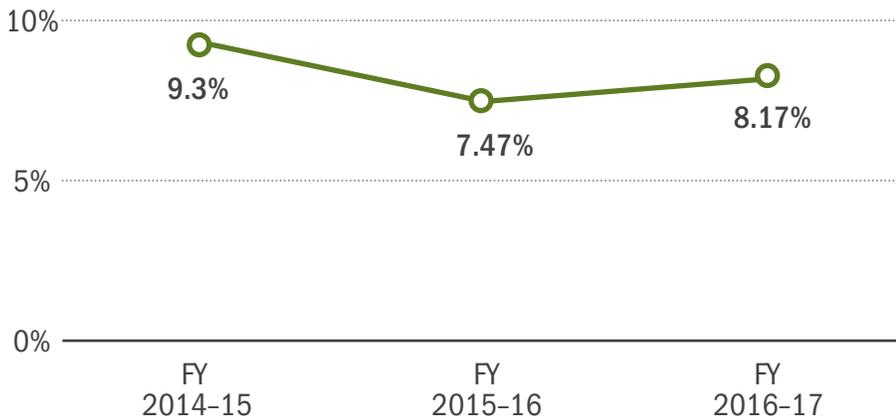
Retirement Risk

 % at immediate retirement risk*  Five-year retirement risk**



* 55 years or older with 20 years of state service **50 years or older with 15 years of state service

Employee Turnover



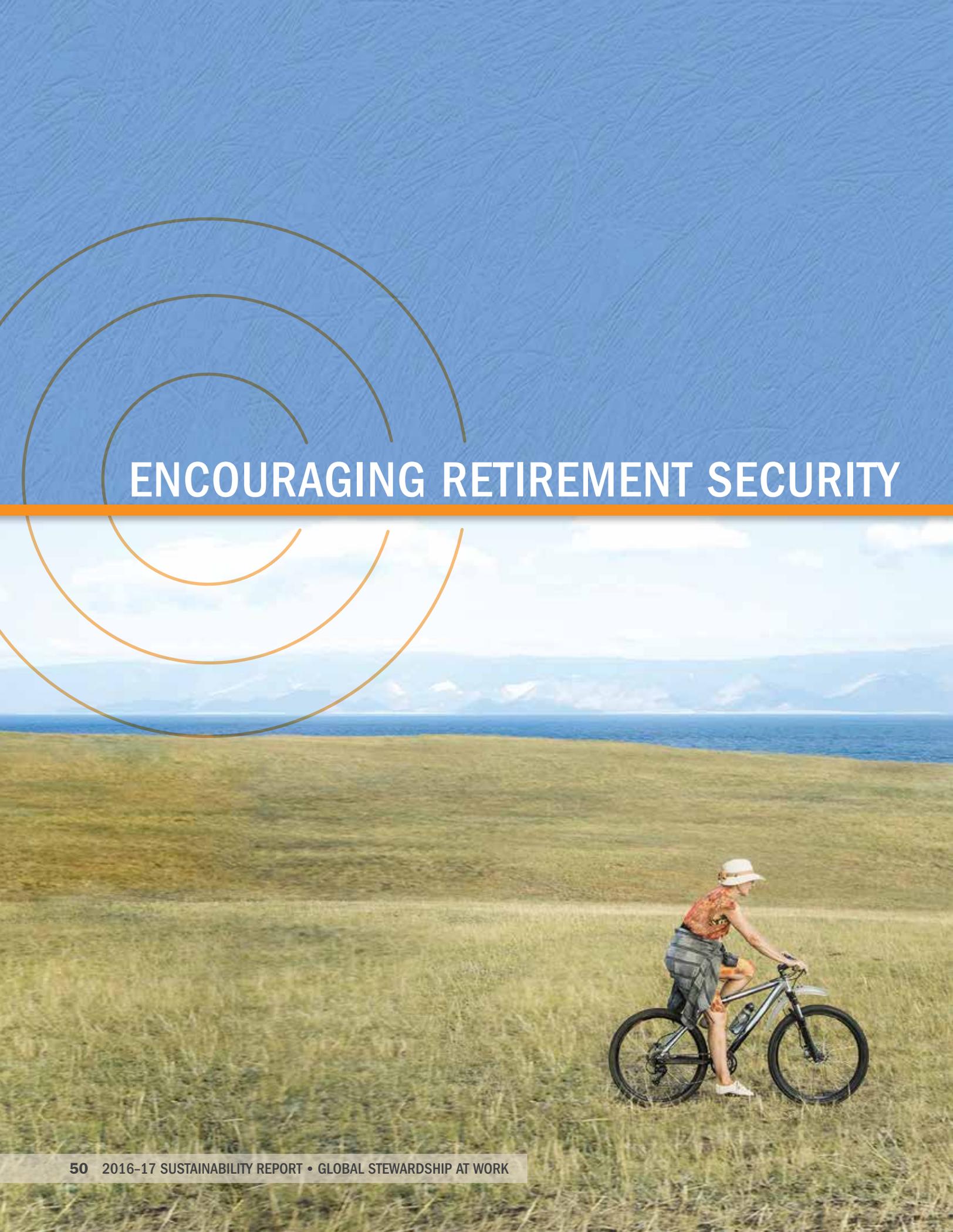
Twenty-nine percent of senior leaders in the CalSTRS organization are immediately eligible to retire, having reached age 55 with 20 years of state service accumulated.

Internal Promotions/Transfers/Hires

	FY 2014-15	FY 2015-16	FY 2016-17
Internal Promotions	151	110	145
Internal Transfers	44	63	68
External Hires	120	127	165



CalSTRS Organizational Development Manager Katie Valdivia explains how succession planning and leadership development contribute to CalSTRS' stability.

A person wearing a hat and a patterned shirt is riding a bicycle across a vast, open landscape of tall grass. In the background, there is a blue ocean and a range of mountains under a clear blue sky. The image is overlaid with a large, stylized graphic of three concentric, semi-circular lines in a dark brown color, which are partially obscured by the text.

ENCOURAGING RETIREMENT SECURITY

52 The CalSTRS Hybrid Retirement System

54 Preparing for Retirement

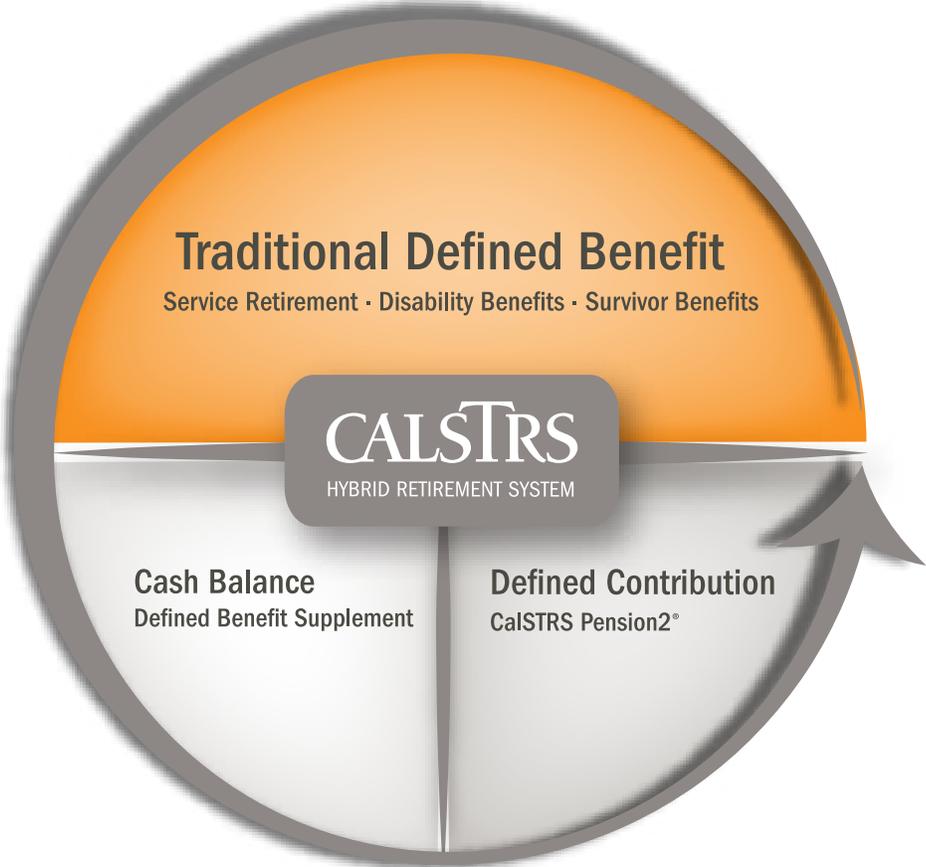
58 Annual Member Survey: Voice of the Customer

CalSTRS engages with our stakeholders, business partners and community on environmental, social and governance issues and principles to understand their insights and perspective.

—CalSTRS Guiding Belief No. 3

CalSTRS Hybrid Retirement System

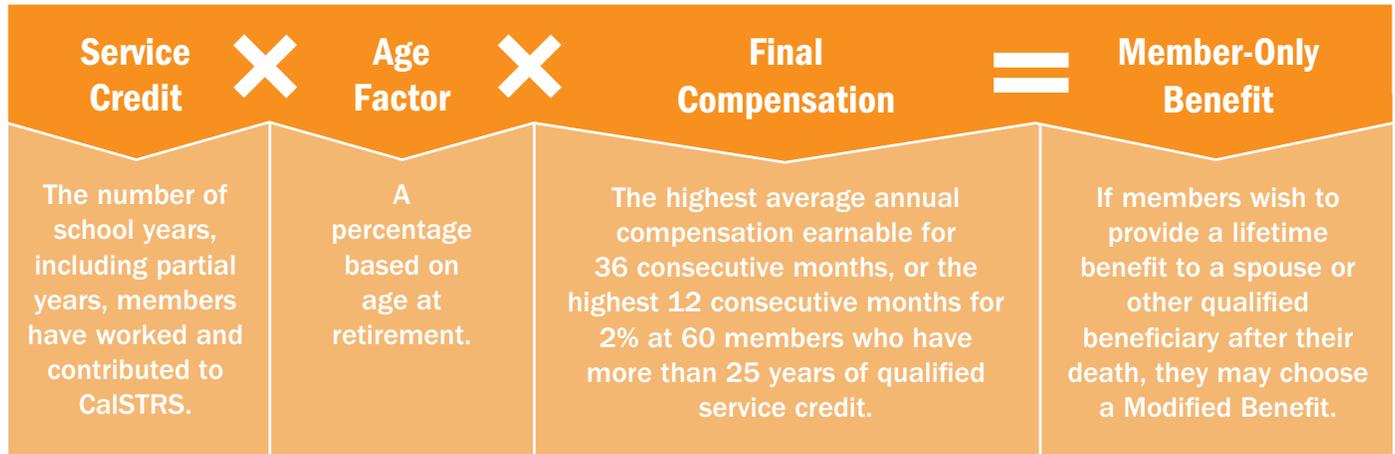
CalSTRS administers a hybrid retirement system consisting of traditional defined benefit, cash balance and voluntary defined contribution plans:



Member income in retirement is a shared responsibility between CalSTRS and the member.

Traditional Defined Benefit Plan

The CalSTRS main retirement benefit is a defined benefit pension based on a formula set by law, not on how much a member contributes or how well investments perform:



Cash Balance Plans

Defined Benefit Supplement Program

CalSTRS Defined Benefit members have a defined benefit supplement account that provides additional savings for their retirement. Since members cannot earn more than one year of service credit in a school year, their member contributions and their employer's contributions on earnings in excess of one year of service, up to the compensation limit, are credited to this account. These excess earnings are not considered in the calculation of a member's monthly retirement benefit, a defined benefit pension. Full-time educators build their Defined Benefit Supplement accounts when they take on outgrowth (extra-pay) assignments

such as summer school or coaching. Contributions earn a guaranteed interest rate. Members receive the funds in their account at retirement.

Cash Balance Benefit Program

The CalSTRS Cash Balance Benefit Program, an alternative to membership in the Defined Benefit Program for part-time educators, is also a cash balance plan. Employers must contribute at least 4 percent of participants' earnings, and generally, participants also contribute 4 percent. Contributions earn a guaranteed interest rate. At retirement, participants receive all the funds in their account—their contributions and their employer's contributions, plus the compounded interest earned.

Defined Contribution Plan

Pension2, the CalSTRS voluntary defined contribution plan, is an important piece of the CalSTRS hybrid retirement system. With CalSTRS Pension2, members can set aside additional savings for retirement in 403(b), 457(b), Roth 403(b) and Roth 457(b) plans with low costs and flexible investment options.



Pension2 E-book

Preparing for Retirement

A long and rewarding career in the public teaching profession provides CalSTRS members with a guaranteed defined benefit pension in retirement. For members who work 30 or more years and retire with the maximum age factor, their defined benefit pension may be sufficient to maintain their pre-retirement standard of living. Since the average member retires with 25 years of service, we strongly encourage new members, as well

as those at all stages of their career, to understand the need for supplemental savings in their retirement planning.

CalSTRS Pension2, a defined contribution program, is an important component of the CalSTRS hybrid retirement system and complements our defined benefit and cash balance plans, the Defined Benefit and Defined Benefit Supplement programs.

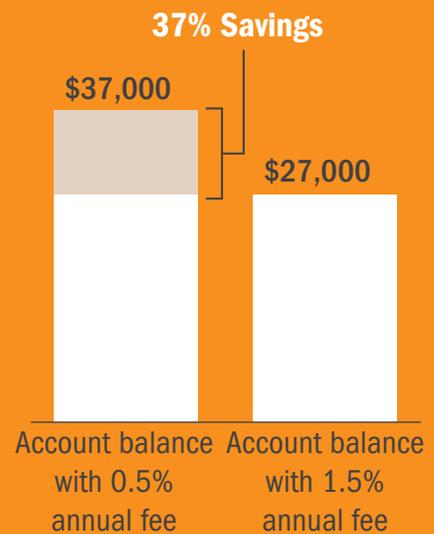
The Pension2 403(b) and 457(b) retirement savings plans are designed to help members fill any gap between their monthly retirement benefit and their retirement income goal. With Pension2, members belong to a plan with low and transparent costs—there are no commissions, no load fees and no surrender charges—along with flexible investment options that match all levels of investment ability.

Fees Matter

All 403(b) products charge fees and expenses. But not all 403(b) plan providers charge fees the same way. In addition, there can be commissions, surrender charges and other restrictions to accessing savings.

CalSTRS is committed to transparency and ensuring members are aware of the fees they are paying for their supplemental savings accounts. Over time, even 1 percent can make a big difference.

Consider a one-time investment of \$10,000 with no additional contributions that earns an average of 5 percent over 30 years. Investment fees usually range from 0.5 percent to 1.5 percent a year. Paying 1 percent less in fees after 30 years would net the investor an additional \$10,000—37 percent more in savings from an account charging 1.5 percent in fees each year.



403bCompare

In California, there are 59 403(b) vendors offering some 220 different products with more than 5,000 investment options. In response to this wide open market, the California Legislature passed a law requiring CalSTRS to provide and maintain an internet site where 403(b) vendors must register and clearly disclose product, fee and performance information. The 403bCompare website launched in 2004. In March 2017, CalSTRS released a redesigned 403bCompare platform with more robust features and enhanced user functionality.

403bCompare is available to all employees—certificated and classified—of California public school and community college districts, county offices of education

and charter schools. School employees can use the site's tools to compare fees, commissions and other costs, along with performance and services, for all the 403(b) products their district offers. 403bCompare is the only comprehensive resource in the U.S. that provides cost comparisons by product type.

The redesigned 403bCompare website garnered the prestigious Best of the Web Award in the State Government Experience category from the national Center for Digital Government, the Award of Innovation from *Pensions & Investments* magazine and the Defined Contribution Institutional Investment Association, and the Drexel LeBow Analytics 50 Award from Drexel University's LeBow College of Business.



At 403bCompare.com, members can learn about and compare the 403(b) tax-advantaged retirement products their districts offer.

Online 403(b) Tools

With the goal to make retirement planning easier and more transparent, at 403bCompare.com members can:

- Learn about the advantages of a 403(b) retirement account.
- Find a list of their district's approved 403(b) vendors.
- Compare 403(b) products side by side, including all costs, performance and services, with real-time updates on vendor products and commissions through a partnership with Morningstar.
- Get information on how to enroll and begin contributing.
- Access savings calculators, retirement planning tips, videos and more.

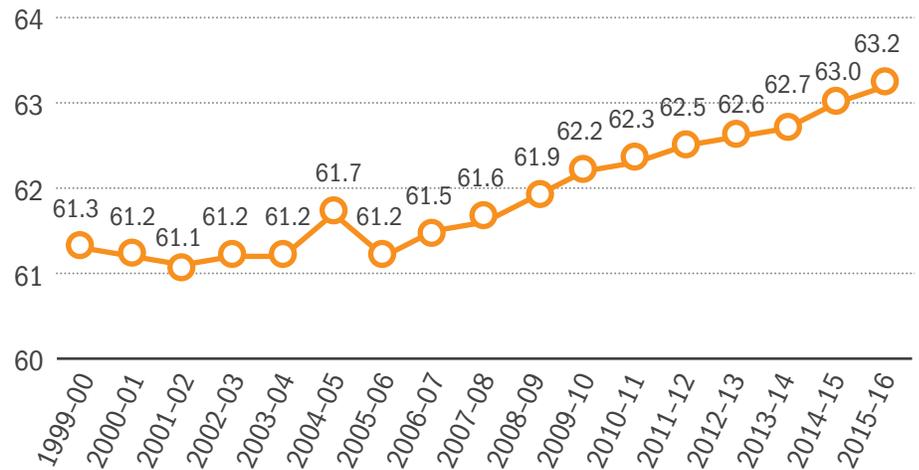
Life Expectancy and Retirement Planning

In addition to a defined benefit pension and supplemental savings, life expectancy is another important factor to consider in retirement planning, both for members and CalSTRS. In 2016-17, staff studied longevity and presented its report, *The Changing Landscape of an Aging Society*, to the Teachers' Retirement Board.

As previously analyzed mortality reports indicate, the U.S. population is projected to grow older over the next several decades, and changes in the workforce will reflect increasing lifespans.

CalSTRS recognizes that while our members' careers may span two to three decades, we typically have a 60- to 70-year relationship with them. We are committed to designing a sustainable organization to ensure we provide benefits to our members and their beneficiaries throughout those years.

Average Age of a CalSTRS Member at Retirement



According to the Pew Research Center analysis of employment data, more Americans age 65 and over are working than at any time since the turn of the century, and today's older workers are spending more time on the job than did their peers in previous years. With research identifying the positive cognitive effects of an extended career, this trend would seem beneficial to an aging

society and members who have fewer years of service.

CalSTRS members are also working into older ages. Since the early 2000s, the average age of CalSTRS members at retirement has risen by two years. Additionally, members are expected to live longer. To help them prepare, CalSTRS is dedicated to providing information to our members on the importance of planning for retirement.

Changing Landscape of an Aging Society

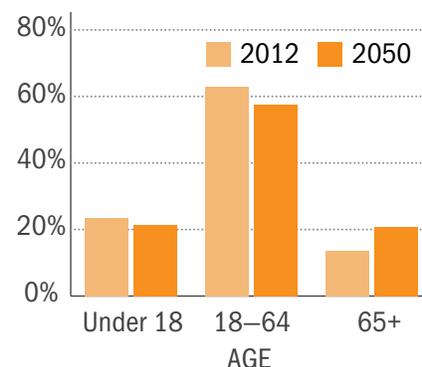
50

Average life expectancy in 1900

79

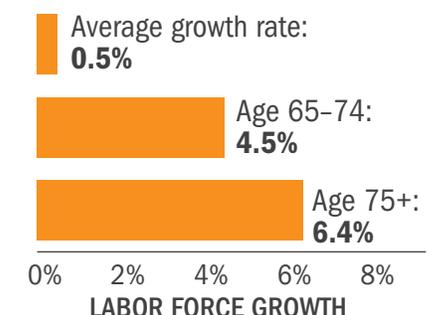
Today's average life expectancy from birth

U.S. Population by Age



U.S. Labor Force

Projected growth from 2014-2024



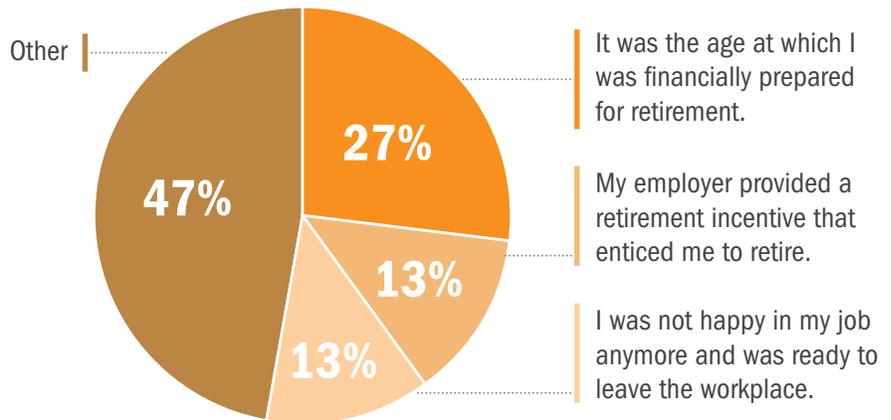
Do CalSTRS Members Feel Prepared for Retirement?

In the 2017 CalSTRS Retirement Readiness Assessment, a biennial survey of the overall financial standing and future needs of CalSTRS members, retired members were asked, “How confident are you that you will have enough money to live comfortably throughout your retirement years?” Half of the retired members who responded—51 percent—indicated they were confident or very confident, while 40 percent responded they were somewhat confident. Active and retired members also reported significant increases in their household supplemental retirement savings balances from the previous year.

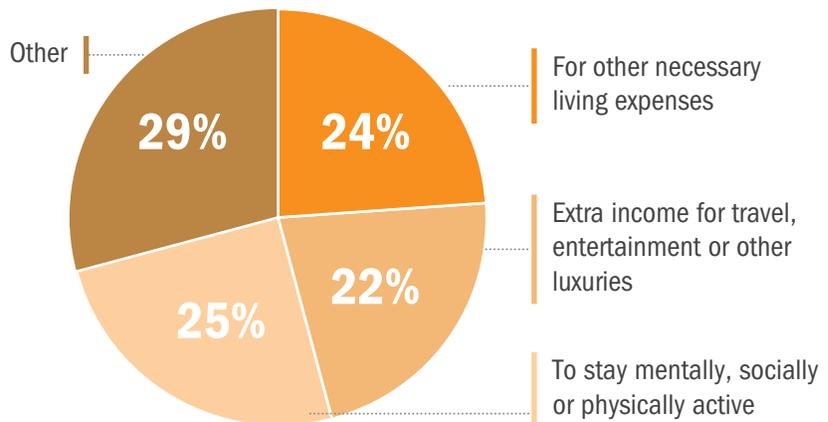
Retired members cite “the age at which I was financially prepared for retirement” as the primary reason they retired when they did 27 percent of the time.

The Retirement Readiness Assessment also found that about one in five retired members (22 percent) works for pay. The reason they work is to pay necessary living expenses, to earn extra income for travel or entertainment, or to stay mentally, socially or physically active (47 percent combined). Additionally, half of retired members—51 percent—do ongoing or regularly scheduled volunteer work. These members volunteer, on average, about nine hours per week.

Primary Reasons Members Retired at the Age They Did



Primary Reasons CalSTRS Members Work in Retirement



Future research may examine the extent to which guaranteed monthly income from CalSTRS allows members to maintain cognitive function and social engagement through volunteering—a form of work that conveys significant personal and societal benefits. Research suggests that positive, long-term mental health outcomes can be achieved when the population aged 65 and older remain engaged in the workforce, either paid or as a volunteer.

Ongoing study of active and retired members contributes to CalSTRS’ sustainability by allowing us to adapt to changing trends in the saving and expenditure behavior of members. This research also gives us insight into how the organization’s role in retirement may evolve—for example, moving from an organization focused on financial health in retirement to one that also focuses on mental, social and physical health in retirement.

Annual Member Survey: Voice of the Customer

Our extensive outreach efforts are intended to engage our members and guide them to a secure retirement. Each year, we measure our success with these efforts to gain insight into our members' experiences with the delivery of benefits and services. The survey results assist us in defining our focus to improve customer service and target business communications and services where they are most needed.

In 2017, approximately 34,000 surveys were sent via email to a sample of active and retired members. We received 1,879 responses, a response rate of 5.5 percent.

Sixty-four percent of respondents reported high levels of satisfaction

(selected a 6 or 7 rating on a 7-point scale).

Similar to previous surveys, very few members (3 percent) were dissatisfied (1 or 2 rating) with CalSTRS. However, overall satisfaction ratings revealed opportunity for improvement, with 33 percent giving moderate ratings (3, 4 or 5).

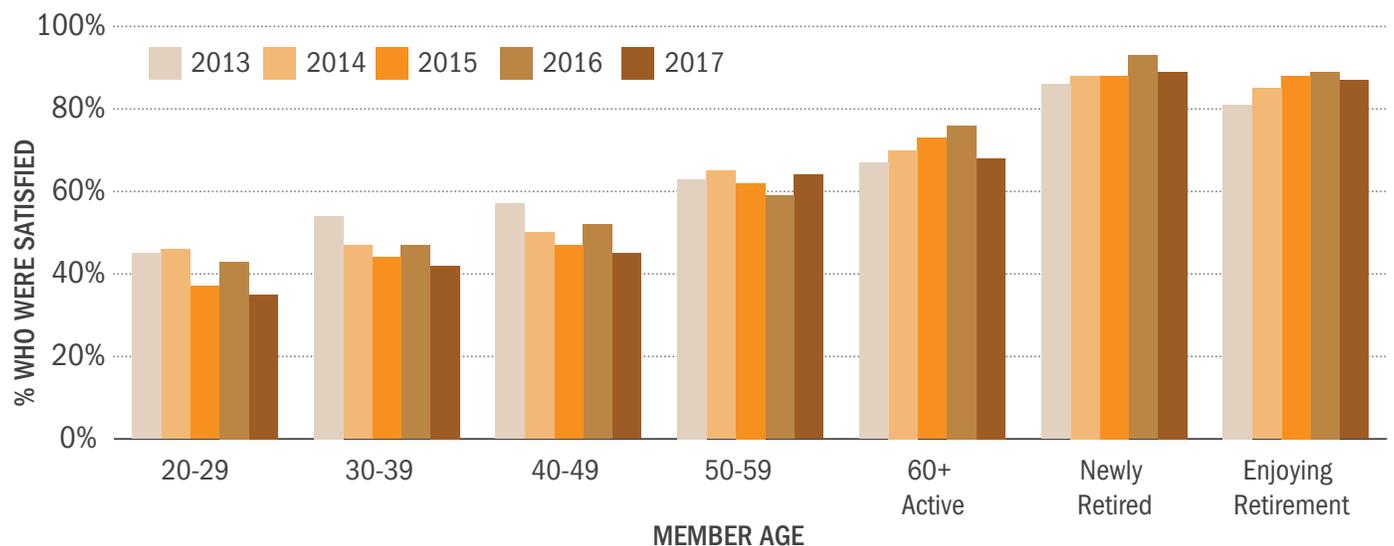
Feedback from members indicates higher satisfaction ratings were mostly attributed to good information from printed materials, websites and workshops; on-time checks and automatic deposits; and no problems with CalSTRS. Neutral ratings were attributed to members' lack of knowledge about CalSTRS and their CalSTRS

benefits. Lower ratings were attributed to difficulty in accessing services (phone, email, online and benefits specialists) and not receiving needed information.

While members reported high levels of satisfaction overall, the percent of members who were highly satisfied (6 or 7) varied by age group. Of members age 20 to 29 years old, who tend to have the least amount of interaction with CalSTRS, only 35 percent reported being highly satisfied. The percent of members who were highly satisfied with CalSTRS increased with age. New retirees reported the highest levels of satisfaction overall with 89 percent highly satisfied with CalSTRS.

Member Satisfaction by Age Group

In general, a high level of satisfaction increases with age, with the largest percentage of highly satisfied reported by newly retired members.



Member Engagement

Since 2012, CalSTRS has included an assessment of member engagement as an area of focus in our survey efforts. The engagement assessment measures more than satisfaction—it also measures our members’ relationship with and emotional attachment to CalSTRS.

In 2017, 54 percent of CalSTRS members were engaged. Of the remaining 46 percent, 44 percent of members were neither engaged nor disengaged, leaving only 2 percent of members disengaged. Forty-four to 71 percent of members provided a favorable rating of CalSTRS on each of the 15 engagement attributes (6 or 7 on a 7-point scale). More members reported high levels of agreement with the following attributes:

- CalSTRS is an organization that I can trust. (71 percent)
- CalSTRS shows me respect. (68 percent)

The lowest rated attribute was:

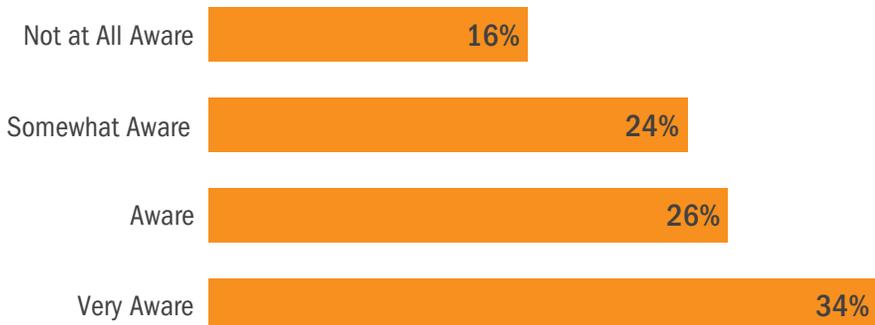
- CalSTRS continues to come up with new ways to serve me better. (44 percent)

While satisfaction is a static concept that reflects reactions to recent experiences, engagement is an active assessment of emotional attachment built over time. Research shows that engaged customers and members are more likely to try new products, make word-of-mouth recommendations, and maintain business relationships even when there are shortcomings. In addition, current research indicates that engaged members are more likely to demonstrate trust and confidence and continue interacting with CalSTRS even in trying times. Engagement is an important component as we attempt to increase member interactions with CalSTRS and their active involvement in retirement planning.

Engagement is an important component as we attempt to increase member interactions with CalSTRS and their active involvement in retirement planning.

Retirement Income Gap Awareness

Most active CalSTRS members are aware they may need to address a retirement income gap.



ENSURING RESPONSIBLE BUSINESS PRACTICES



62 Functions of Organizational Transparency

64 Cybersecurity at CalSTRS

66 A Culture of Ethics

CalSTRS supports sustainability programs that build environmental, social and governance principles into our core business and investment practices.

—CalSTRS Guiding Belief No. 1

Functions of Organizational Transparency

We communicate with our stakeholders through many channels, including our public, online video-streamed board meetings, website discussion posts and member-facing customer service centers. For sensitive issues, our compliance hotlines ensure that anonymous channels are available to employees, members and other stakeholders.

Reporting

Format	Description	Details
“What Do You Think?”	Online employee feedback forum facilitated by a third-party vendor	CalSTRS employees can pose questions, submit suggestions, post compliments and voice concerns directly to the CEO while maintaining anonymity. In turn, the CEO uses the third-party platform to respond to the anonymous employee.
Ethics Hotline	Electronic report that can be completed on our internal website	CalSTRS’ Ethics Hotline is an integral part of meeting our commitment to conduct business in an ethical manner. Employees and other stakeholders can report any unethical behavior by an employee or business partner. All investigations arising from the CalSTRS Ethics Hotline are conducted by the CalSTRS Office of the General Counsel.
Pension Abuse Reporting Hotline	Anonymous service to report suspected abuse and suspicion of pension spiking to us via electronic submission, toll-free line or mail	CalSTRS is dedicated to preventing pension spiking. This service enables anyone, including the public, CalSTRS members, and school district and county office of education employees to report suspected cases of fraudulent pension-related activity. These reports are investigated by our Compensation Review Unit.
Whistleblower Hotline	Service to handle complaints of improper governmental activities such as violations of law, misuse of state resources, or gross misconduct and incompetency by state agencies or employees	The California State Auditor investigates these claims. As stated on its website, “Upon receiving a complaint, the State Auditor may conduct an investigation into the facts alleged in the complaint to determine whether an improper governmental activity has occurred. Before launching an investigation, the State Auditor’s staff will conduct a careful evaluation of the complaint to determine whether it has enough potential merit to warrant the expenditure of state resources to conduct an investigation.”

Communicating With Our Members

Format	Description	Details
CalSTRS.com	CalSTRS' website	This site is rich with information about CalSTRS' benefits and services. Board meeting notices, documents, live web-streamed meetings and archived presentations can be viewed. Members, employers and other interested parties also can access CalSTRS' publications and reports, link to <i>myCalSTRS</i> accounts and connect with customer service staff.
Ask Jack	Online communication	This electronic forum provides answers to questions members pose to the CalSTRS CEO about current issues.
Member Survey	Email survey	This and other specific surveys provide CalSTRS with member feedback to assist us in improving our services.
myCalSTRS	Secure website	Members and beneficiaries can manage and view retirement accounts, request direct deposit and e-delivery of CalSTRS newsletters, apply for service retirement and receive customer assistance online.
Plan Perspective, Jack's Blog	Blog	Allows the CalSTRS CEO to provide in-depth information about hot topics and explain CalSTRS' perspective on current events.
Facebook, Twitter, Instagram, LinkedIn, YouTube, Pinterest	Social media	CalSTRS has a presence on these social media accounts to share information and interact with our members.
Financial Awareness Series	Three-part workshops	Member workshops provide an in-depth look at specific areas of financial planning.

Communicating With Our Employees

Format	Description	Details
CalSTRS Central	Internal website	A site where employees can access important, relevant information about business areas, employee events, and HR forms and benefits.
Employee Meetings	One-on-one, unit and divisional meetings	CalSTRS' leaders are encouraged to hold regular meetings with employees to provide top-down information while also listening for bottom-up ideas and innovation.
Organizational Performance Forum	Quarterly information sessions	CalSTRS' leaders attend these sessions to assist them in guiding and educating staff about CalSTRS' priorities.
Town Halls	Annual two-hour informative and interactive discussion	The CalSTRS CEO presents sessions covering industry topics, organization updates and current issues relevant to the jobs employees perform.

Cybersecurity at CalSTRS

Cybersecurity is an increasing risk that can threaten the sustainability of any organization today. For that reason, CalSTRS continues to focus substantial attention on this issue and is vigilant in detecting threats, proactively mitigating identified risks, and adapting to the rapidly evolving nature of the cybersecurity landscape.

The CalSTRS Information Security Office regularly reports to the board to inform its members of

the actions taken to strengthen CalSTRS' cybersecurity posture, including prevention, detection and response. CalSTRS recognizes the ever-growing and changing threat that cybersecurity presents to data contained within the CalSTRS organization; the significant costs associated with responding to a breach; the rapid increase in both the number and frequency of reported breaches; and the ongoing challenge for board members to exercise risk oversight

responsibilities and to be assured that necessary levels of due care and vigilance are being applied to continuously assess the threat and to protect the organization and members' data.

From the CalSTRS information security viewpoint, we continually review and adjust by breaking down threats and trends into component parts and address those areas where we have a lower maturity and/or potential vulnerability.

Information Security Office Staff:

- Develop and update information security policies.
- Educate employees and CalSTRS members.
- Ensure compliance with policies, standards, strategies and industry best practices.
- Perform ongoing monitoring and vulnerability assessments.
- Maintain high-level expertise in the discipline of computer and network security, virus detection, vulnerability assessment and hacking methodologies.
- Advise the board on cybersecurity mitigation strategies.

“SECURITY Is Not Complete Without U”

At CalSTRS, we believe that every employee shares responsibility to protect the confidentiality, integrity and availability of CalSTRS’ information assets. Our strategy supports the approach that one of the most important lines of cybersecurity defense is arming employees with tools and the knowledge necessary to detect suspicious activities and minimize the chance for security incidents. The ISO team ensures that all employees are properly trained and observe information security rules and policies.

Employee Awareness and Education

- Mandatory annual training
- Dedicated intranet site with resources, terms and FAQ
- Tailored onboarding presentations
- Educational campaigns throughout the year

Employee Compliance

- Clear expectations
- Strong internal controls
- Signed Confidentiality, Non-Disclosure and Acceptable Use Agreement
- Annual ISO audits of security policies, systems and accesses

2016–17 FY Results

100%: Employees reviewed and signed Confidentiality, Non-Disclosure and Acceptable Use Agreement

100%: Employees completed annual mandatory training

0: High-risk findings

0: Substantiated complaints concerning breaches of customer privacy

Assessing Cybersecurity

CalSTRS partners with an outside information security firm to assess the security infrastructure, identify gaps and make recommendations to remediate them. Annual third-party assessments are part of CalSTRS’ continuous measurement to test and validate the effectiveness of current security measures. The primary goal of performing assessments is to ensure CalSTRS has a robust security program designed to protect the confidentiality of member data as well as protect assets.

Implementing the Center for Internet Security’s 20 Critical Security Controls

during the fiscal year fortified our cybersecurity posture and substantially reduced the risk of a cyberattack. CIS is an independent, nonprofit entity that harnesses the power of the global IT community to safeguard private and public organizations against cyber threats. CIS Controls and CIS Benchmarks are the global standard and recognized best practices for securing IT systems and data against the most pervasive attacks. The decision by CalSTRS to measure against the CIS Critical Security Controls helps to lessen the negative impacts that can result when solely relying on a risk-based compliance framework.

85
percent

Reduction of
cyberattack risk by
applying just five
CIS controls

94
percent

Reduction of
cyberattack risk by
implementing all
20 CIS controls

—Reported by CIS

A Culture of Ethics

Compliance at CalSTRS

Effective compliance programs do more than simply meet the technical requirements of prevailing rules and regulations. They serve as a foundation of good corporate governance and an instrument for elevating business performance. At CalSTRS, we are committed to having an ethics and compliance program that is effective and sustainable.

In 2016, the Audits and Risk Management Committee developed a compliance program and approved the hiring of a compliance director. These are essential first steps in creating an organizational culture of doing the right thing and mitigating the consequences of noncompliance through weak internal controls, audit findings, and the potential for monetary and reputational damage.

Compliance at CalSTRS is more than simply honing our message. Fundamentally, it is about integrating compliance into the way we do business. We continue to focus on building a solid ethics and compliance program to prevent, detect and remediate issues that can arise when growing and sustaining a public organization.



“Compliance is everyone’s responsibility but starts with our CEO and executive staff. It’s the ‘tone at the top’ that is the true differentiator of success.”

—Deena Mount, CalSTRS Compliance Director

CalSTRS Employee Ethics and Compliance

CalSTRS employees are subject to various policies, statutes and regulations that relate to ethical conduct. It is each employee's responsibility to understand and abide by these policies, statutes and regulations while employed with us. In an effort to support this

accountability, CalSTRS requires the review and acknowledgment of certain policies on the date of hire, in addition to a mandatory policy review process for all employees annually. Certain CalSTRS employees in designated positions listed in the conflict of interest code are required to file

the Statement of Economic Interests (Form 700) upon assuming the position, annually thereafter and when leaving office.

In addition, certain policies, statutes and regulations require disclosure filings and acknowledgments described in the table below.

Subject	Filing Timeline/Date	Summary/Action
Gift Policy Attestation	Employees file annually by April 1.	Employees sign the Gift Policy attestation, stating compliance with the Gift Policy.
Policy Prohibiting Insider Trading	Upon hire and annually thereafter by April 1.	Employees sign attestation regarding Insider Trading Policy.
Incompatible Activities Agreement	Upon hire and annually thereafter by April 1.	Employees review and sign the Incompatible Activities Agreement.
Confidentiality, Non-Disclosure and Acceptable Use Agreement	Upon hire and annually thereafter by April 1.	Employees review and sign the Confidentiality, Non-Disclosure and Acceptable Use Agreement.
Internet Access Policy	Upon hire and annually thereafter by April 1.	Employees review and sign the Internet Access Policy and Acknowledgment.
Form 700 Statement of Economic Interests	Annually by April 1 for designated positions. New CalSTRS staff in designated positions file within 30 days of assuming office; staff leaving CalSTRS must submit form within 30 days of leaving office.	CalSTRS employees in designated positions file a Form 700 Statement of Economic Interests annually, and upon assuming and leaving office.
State Ethics Training	CalSTRS staff in positions designated in the conflict of interest code file completion certificate biennially by April 1. New CalSTRS employees designated in the conflict of interest code file completion certificate within six months of hire.	Participate in ethics training within six months of hire and every two years thereafter by April 1.

Ethics Training and Legal Responsibilities

**Required to
take biennial
ethics training**

12

Board members

20

Designees

254

External
representatives

423

Employees (37 percent
of employees)

How binding laws apply to public employees:

- Public servants are required to serve the public's interest and may not use their public employment to serve private or political interests.
- Public officials who conduct themselves according to a standard that exceeds the minimum requirements set in the ethics laws help to maintain the public's faith in government.
- The disclosure requirements apply to every state-elected official and to almost all state agency department heads and members of state commissions, boards, committees and other bodies. They also apply to all other state employees who have significant decision-making authority or input into agency decisions.
- All state agencies that make decisions having financial impacts are required to adopt what is known as a "conflict-of-interest code." The conflict-of-interest code designates those employees who play a significant role in the agency's decision-making processes and tailors disclosure obligations for them based on the types of private financial interests they can affect through their decisions.
- Designated employees must file a statement disclosing their interests when assuming office, annually while in office, and upon leaving office.





SUSTAINABILITY-RELATED INVESTMENT RISK MANAGEMENT

All CalSTRS' investments should seek to responsibly manage and disclose economic, social and environmental criteria in order to deliver sustainable and profitable, risk-adjusted returns.

—CalSTRS Guiding Belief No. 5

72 CalSTRS Investment Portfolio Cost Report

73 Sustainable Investment Strategies

CalSTRS Investment Portfolio Cost Report

CalSTRS developed a pioneering investment cost-reporting standard for costs across all asset classes and investment strategies, including the costs embedded in partnerships and carried interest, making CalSTRS one of the frontrunners among our peers.

The 2016 calendar year investment cost report was presented to the Teachers' Retirement Board in November 2017 and is available on the public board website. CalSTRS' total expenses, including carried interest, were \$1.64 billion

for calendar year 2016, or 0.85 percent of the portfolio's \$194.7 billion average net asset value for that year.

Our cost report marked a milestone among U.S. public pension funds by providing a holistic view into our investment expenses and precedes the heightened focus being placed on fees and expenses by global investors. With our comprehensive cost report, we have made strides in fee disclosure by reporting costs of the entire portfolio. The report

includes partnership expenses. Producing and enhancing the reporting framework demonstrates CalSTRS' ongoing commitment to transparency and provides the board with meaningful investment cost information.

Board members said the report was invaluable given the insight and clarification it provided on important investment costs. "This is absolutely fantastic," said Board Member Paul Rosenstiel. "I think it's very well worth the time and the expenditure."

"To the best of my knowledge, this is the most comprehensive review of investment costs. On the issue of transparency and disclosure, CalSTRS will be seen as the new leader."

—Allan Emkin, Pension Consulting Alliance, on the 2015 Cost Report

Sustainable Investment Strategies

CalSTRS' primary mission is to maximize returns for the fund in order to safeguard the retirement security of California's educators. The financial security of our members is our highest priority and depends on well-managed, long-term financial performance. As the trusted fiduciary of members' contributions, CalSTRS must derive the most value out of investments. CalSTRS is a passive investor, but an active owner through engagement.

Financial and ESG Risks Considered When Managing Portfolio Investments

CalSTRS has a well-established, thorough vetting process for investments grounded in the investment beliefs adopted by the board in fiscal year 2016–17, which include environmental, social and governance factors as a consideration.

Along with aligning the board, staff and consultants around a common set of core views for investing the CalSTRS portfolio, the CalSTRS Investment Beliefs guide decision-makers toward sound principles and provide an important reference point when making key investment policy and strategy decisions.

ESG risks are taken into consideration to the extent that such factors bear on the

financial advisability of the investment, are a material risk to the fund, or weaken the trust of a significant portion of the members of the system. Fiduciary standards do not allow CalSTRS to select or reject investments based solely on ESG risks.

All CalSTRS investment managers—internal and external—use the ESG policy to identify and assess the risks associated with an investment and to define areas of focus as they manage the portfolio and engage to affect change. All external active managers agree to adhere to the CalSTRS ESG Policy and annually certify their adherence to the policy as they buy and sell securities for CalSTRS.

CalSTRS Investments Beliefs

BELIEF 1

Diversification benefits

BELIEF 2

The global public investment markets are largely, but not completely, efficient

BELIEF 3

Long-term benefits of managing investment costs

BELIEF 4

Internal management is a critical capability

BELIEF 5

CalSTRS can potentially capture an illiquidity risk premium

BELIEF 6

Managing short-term drawdown risk can positively impact CalSTRS' ability to meet its long-term obligations

BELIEF 7

Responsible corporate governance, including the management of environmental, social and governance factors, can benefit long-term investors like CalSTRS

Diversity Forum

In May 2017, CalSTRS co-hosted a diversity forum with the California Public Employees Retirement System. The event, attended by over 350 industry professionals, brought together investment and corporate executives to discuss how to better capitalize on the abilities of the diverse modern workforce. The forum featured experts from McKinsey, The 30% Club, Microsoft, Harvard University, University of California-Merced, Mellon Capital, Blackstone, State Street Corporation and Morgan Stanley, among others.

The diversity forum focused on developing and implementing positive, solutions-oriented initiatives



and real-world best practices based on recent research that included the insight and experience of industry leaders.

“As long as there are teachers in the state of California, CalSTRS is going to be an investor. We’ve been here in the past, we are here today, and we will continue to be here tomorrow.”



—Christopher J. Ailman,
Chief Investment Officer

CalSTRS has several teams that include senior leaders and staff across the asset classes to manage and integrate the ESG policy throughout the CalSTRS Investment Portfolio.

- **Green Initiative Task Force**—Known as “the Green Team,” this task force manages the risks and captures the opportunities associated with global sustainability issues by identifying environmentally focused strategies intended to enhance the risk-adjusted returns of the CalSTRS portfolio.
- **21 Risk Factor Review Committee**—This cross-asset class group evaluates and addresses issues that affect the total fund and aids Investments staff in engagement on these issues. The committee is chaired

by the Corporate Governance Unit and consists of the chief investment officer, the deputy chief investment officer and at least one senior staff member from each asset class within the Investments Branch.

- **Diversity Team**—This team works to increase awareness and advance understanding of diversity and inclusion internally and externally among staff, external managers, portfolio companies and service providers through ongoing education, relationship building, networking and direct engagement. Representing every asset class and program, the team worked to prepare CalSTRS’ 2017 *Diversity in the Management of Investments Annual Progress Report*.

Managing Investment Risk Through Active Engagement

As a global investor, CalSTRS is regularly confronted with risk, which makes engagement an important part of our corporate governance strategy. Once invested, we use our position to affect change, when warranted, through corporate governance and engagement strategies. The mission of CalSTRS' Corporate Governance Program is to exercise fiduciary responsibility as an investor to protect the value of our investments.

Responsible investing is complex and CalSTRS' engagement strategies are driven by multiple components and considerations:

- **Environmental**—Climate change risk reporting, energy efficiency and methane emissions reporting.
- **Social**—Corporate and board diversity, human rights issues, indigenous persons' rights and workers' rights.

- **Governance**—Executive compensation, board independence, corporate structure, majority voting standards and shareholder voting rights.

CalSTRS' engagement on environmental, social and governance issues covers a wide spectrum, including proxy voting and campaigns, letter writing, regulatory action, and coordination with other investors.



“Our strategy is to be active owners, to engage our portfolio companies to mitigate risk and create opportunities for improved performance.”

—Anne Sheehan, Director of Corporate Governance

The Value of CalSTRS Engagements

Direct engagement with companies is one of the key tools CalSTRS uses to influence change in the marketplace on a variety of issues. Each year, CalSTRS' Corporate Governance staff, with input from the Teachers' Retirement Board, determines key issues to focus on during the next fiscal year in an engagement plan. And yearly, Corporate Governance reports back to the board with an annual report.

CalSTRS prefers engagement over divestment, which is a last resort action that can have a lasting negative impact on the health of the fund, while severely limiting CalSTRS' ability to shape corporate behavior for long-term growth. However, the board will take such action when it is deemed the right course of action after pursuing engagement and conducting careful analysis.

Our commitment to engagement with companies rather than divestment is based on several considerations:

- Divestment would eliminate our standing and rights as a shareowner and foreclose further engagement.
- Divestment would be likely to have negligible impact on portfolio companies or the market.
- Divestment could result in increased costs and short-term losses.
- Divestment could compromise CalSTRS' investment strategies and negatively affect investment performance.



Corporate Governance Portfolio Managers Brian Rice and Aisha Mastagni explain why CalSTRS prefers engagement over divestment.

Investor Sustainability Coalitions and Partnerships

CalSTRS supports and works with organizations that facilitate investor communication and action on the various sustainability issues we focus on. These organizations include:

- Ceres
- CDP
- Environmental Defense Fund
- Principles for Responsible Investment
- Sustainability Accounting Standards Board

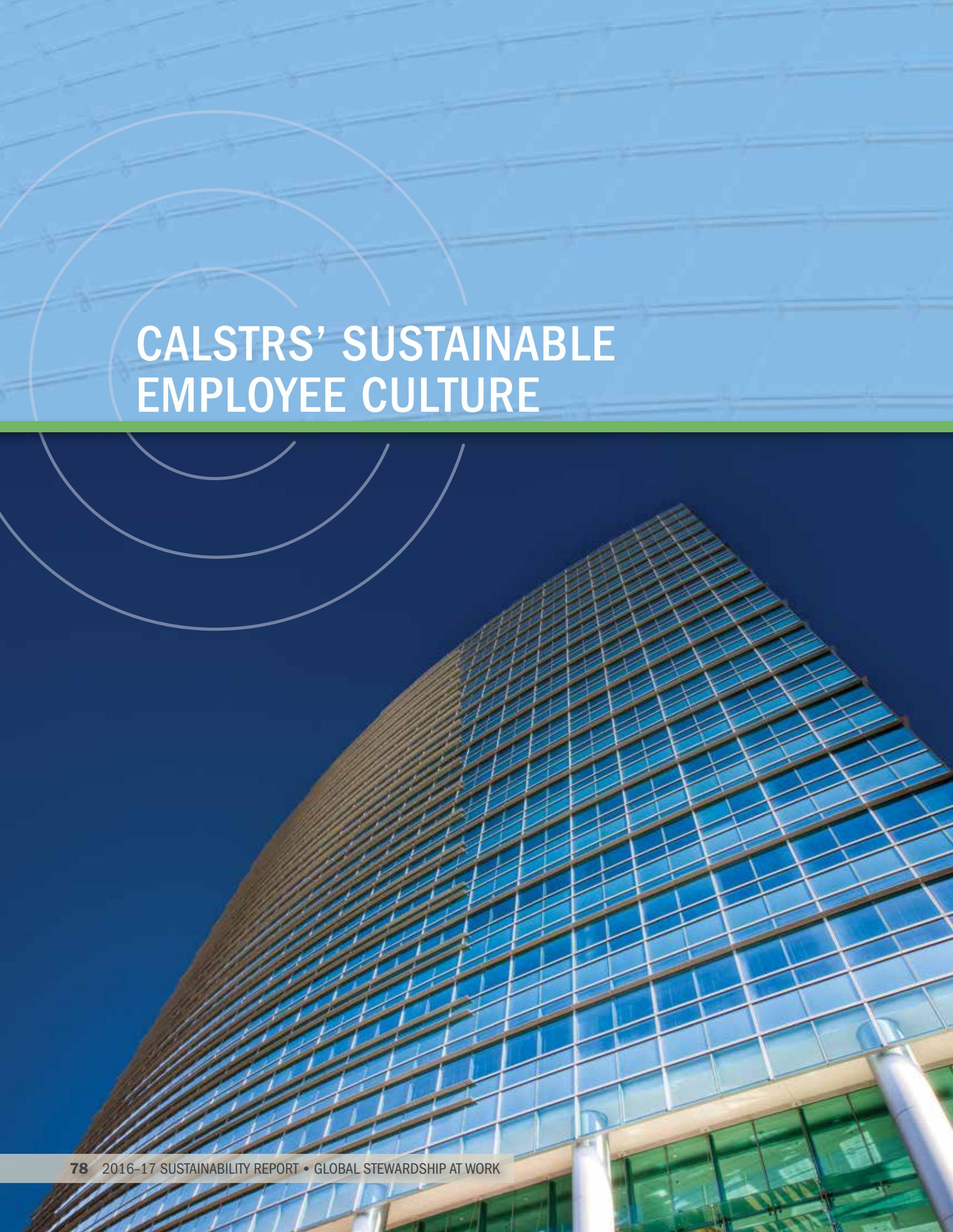
CalSTRS has long advocated for companies to provide integrated reporting to investors. To this end, CalSTRS is a founding board member of the Sustainability Accounting Standards Board and encourages companies to report on material ESG issues that affect their financial performance.

SASB is an independent nonprofit organization incorporated in July 2011 that sets sustainability accounting standards to help public corporations disclose material, decision-useful information to

investors in SEC filings. That mission is accomplished through a rigorous process that includes evidence-based research and broad, balanced stakeholder participation. CalSTRS CEO Jack Ehnes serves as a board member of SASB, and CalSTRS CIO Christopher J. Ailman chairs the Investor Advisory Group of SASB.

Earlier this year, CalSTRS staff formally commented to the U.S. Securities and Exchange Commission on its concept release surrounding Business and Financial Disclosure Required by Regulation S-K. CalSTRS staff emphasized that the SEC should focus on requiring industry-specific standardized metrics to disclose material ESG information, requiring robust discussion of an issuer's industry-specific, long-term ESG risks and opportunities. CalSTRS believes that the use of industry-specific sustainability accounting standards, such as those developed by SASB, will help public corporations simplify their ESG disclosures, while providing valuable information to investors.

CalSTRS strives to be a global governance leader and a source of innovation and collaboration on governance and sustainability issues.



CALSTRS' SUSTAINABLE EMPLOYEE CULTURE

80	Headquarters' Environmental Performance
86	Earth Week 2017 at CalSTRS
87	BikeSTRS
87	Paper Reduction Initiative
88	Sustainable Engagement and Connectivity

CalSTRS considers the global impact of our business practices in the use of natural resources within our facilities and through the procurement of goods and services.

—CalSTRS Guiding Belief No. 4

Headquarters' Environmental Performance

CalSTRS employs components of an environmental management system based on the International Organization for Standardization 14001 environmental management standards, including executive-level planning, employee engagement and

the plan-do-check-act cycle of continuous improvement for building energy, water, waste, greenhouse gas emissions and alternate transportation. Targets are established in alignment with the LEED building certification standards and the Governor's

Executive Order B-18-12 for state facilities. The building operations team regularly monitors performance, communicates results and engages the CalSTRS employee-driven Green Rangers Team to encourage employees to support our environmental efforts.

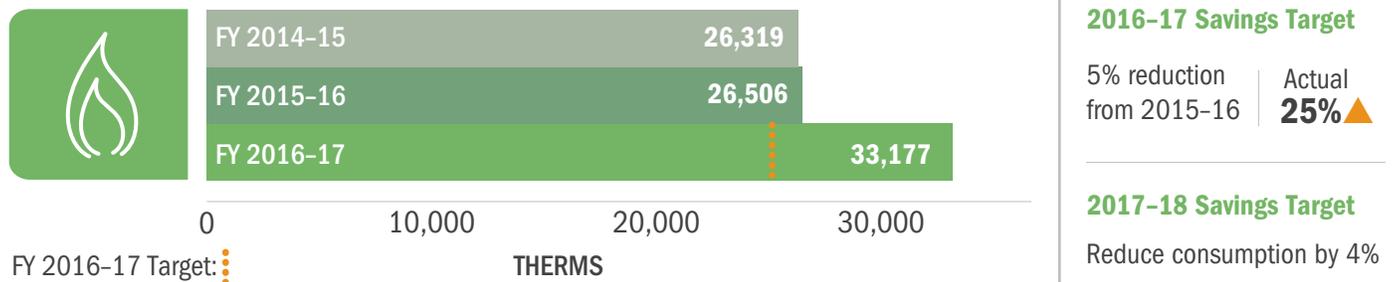


Photo by Linda Hightower, CalSTRS

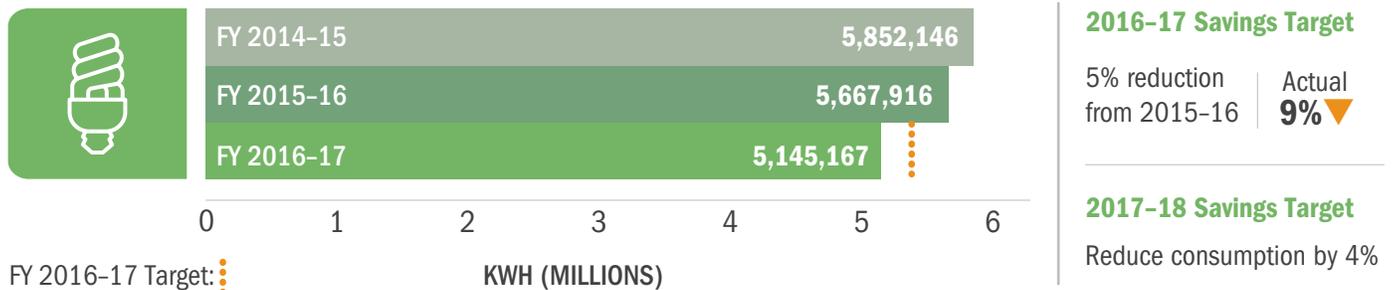
Energy

Natural Gas

Natural gas use increased in 2016–17 due to changes in weather where headquarters is located. A colder-than-average winter and warmer-than-average summer required additional natural gas usage to regulate building temperature.



Electricity



Server Room Upgrade

Since 2013, staff has collaborated with the headquarters building chief engineer, property management team, sustainability experts and our energy utility provider to explore ways to continuously improve energy savings in our high-performance building. To achieve energy reduction, staff introduced a policy to reduce after-hours use of air conditioning, ensured that all janitorial operations occurred during open hours, and added HVAC sensors that respond to occupants in areas of the building that are used less frequently.

One area of energy consumption with the highest opportunity for energy savings, representing a significant portion of our annual electricity use, was our Headquarters Data Center. In 2017, CalSTRS completed energy improvements through PG&E's Data Center Energy Efficiency Program, including upgrades to existing air conditioning fans and system controls, and adjustments to temperature set points.

The data center retrofit took nearly two years to complete. Staff added

curtains to partition server cold and hot aisles and reduce the amount of space that required cooling. Additional controls were added to four cooling units to allow for incremental and individual control of each unit, ensuring that cooling is supplied only at the level space demands. Through these refinements to the data center, CalSTRS achieved an annual savings of 211,364 kwh and \$42,109—an energy cost reduction of more than 17 percent in the data center alone.

CalSTRS accounts for six greenhouse gases:

- Carbon dioxide (CO2)
- Methane (CH4)
- Nitrous oxide (N2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulphur hexafluoride (SF6)

Scope 1 and Scope 2

Scope 1 Direct emissions: natural gas, mobile combustion and fugitives, which includes stored refrigerants

Scope 2 Indirect emissions: purchased electricity

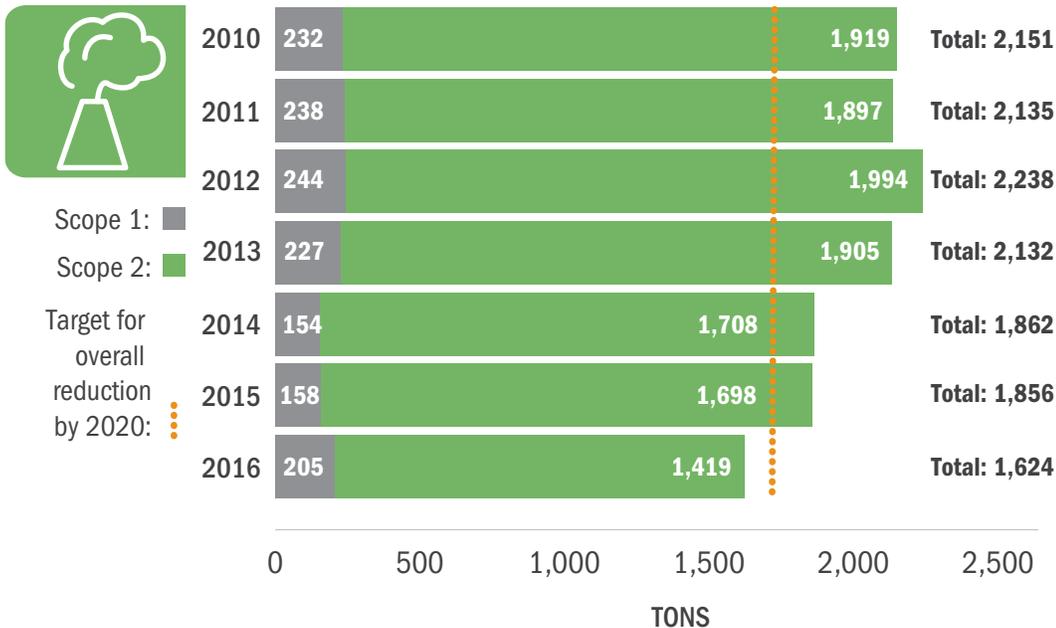
Greenhouse Gas Emissions

Scope 1 and Scope 2 Emissions

Since 2005, CalSTRS has been reporting headquarters' greenhouse gas emissions to the North American nonprofit organization, The Climate Registry. Emissions are reported annually for the prior calendar year. We have fulfilled a goal to reduce scope 1 and scope 2 emissions.

CalSTRS regularly reviews performance and works toward ongoing reduction in carbon emissions and increased use of renewable energy to decrease carbon emissions or remove

carbon from the atmosphere. In 2016, we purchased renewable energy credits in the amount of 5,537 megawatt hours from the Roosevelt Wind Project, a renewable energy windfarm located in New Mexico. The purchase of renewable energy credits helps to advance the development of global clean energy choices, while simultaneously contributing to reduce emissions, improve air quality, and shift toward a carbon-free economy.



Reduction From 2015

Operational:

13% ▼

Reporting and/or Greenhouse Gas Impact:

88% ▼

Reduction From 2010

Operational:

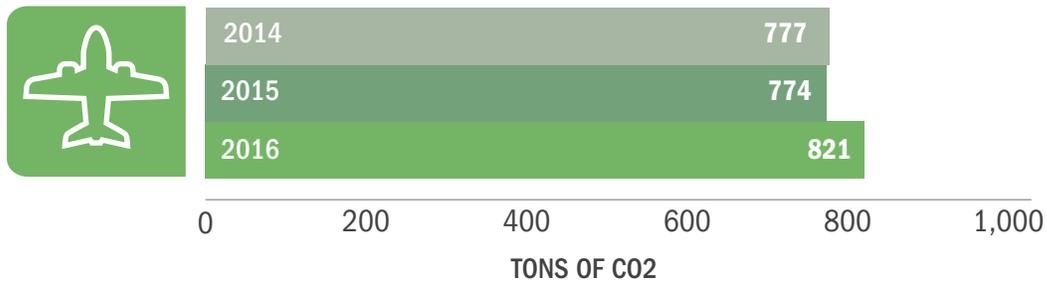
25% ▼

Reporting and/or Greenhouse Gas Impact:

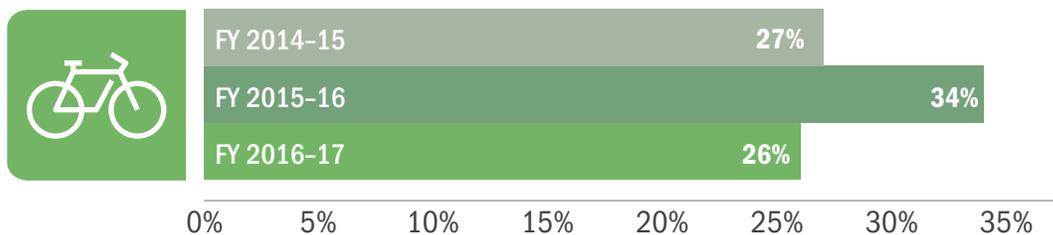
90% ▼

Scope 3 Emissions

Scope 3 emissions encompass all indirect business-related emissions outside of scope 2. We monitor and report emissions from airline flight travel, rental car usage, and use the Green Lodging Directory of green-certified hotels. CalSTRS has not initiated an organized effort to reduce scope 3 emissions at this time. Figures are representative of all employees.



Alternate Transportation Use

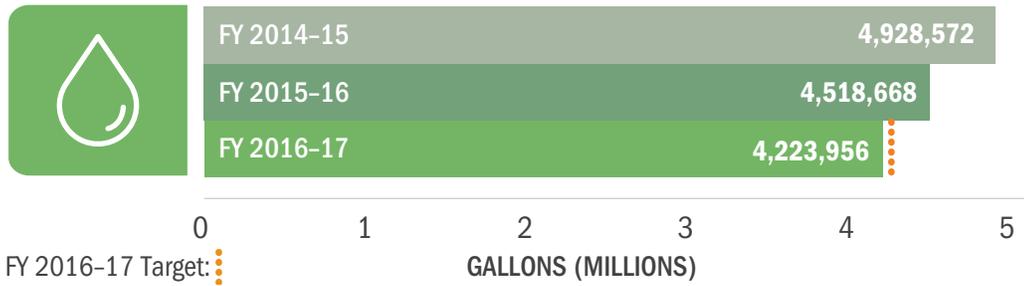


Bike Share Launch

CalSTRS is a member of Sacramento's bike share program operated by Social Bicycles, which provides hourly or monthly rental bike access from local stations, including three bikes for public use at our West Sacramento building. We joined the Sacramento Area Council of Governments in the bike-share program's pre-launch event and support its mission to enhance the region's transportation options, reduce traffic congestion and boost the local economy.

Water

Building Water



2016-17 Savings Target

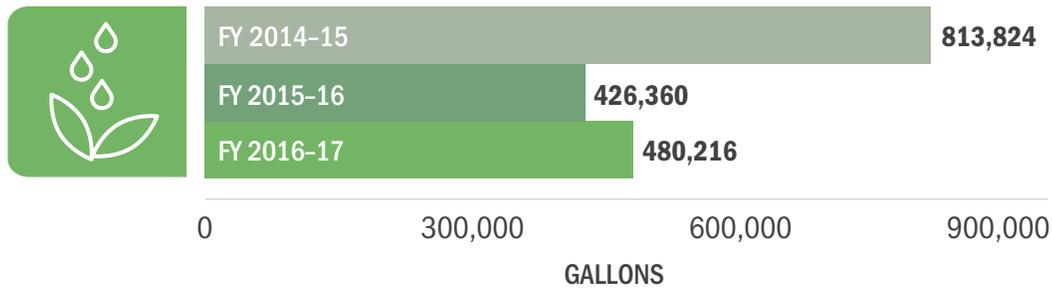
5% reduction from 2015-16 | Actual **7%** ▼

2017-18 Savings Target

Reduce use by 4%

Irrigation Water

Irrigation water use increased in 2016-17 due to an increase in watering schedules to maintain the Waterfront Gardens and our native plant landscape. As temperatures rose, increased watering was required to properly nourish plants. While still adhering to state drought regulations, the Waterfront Gardens watering schedule increased from one to two days of watering per week.



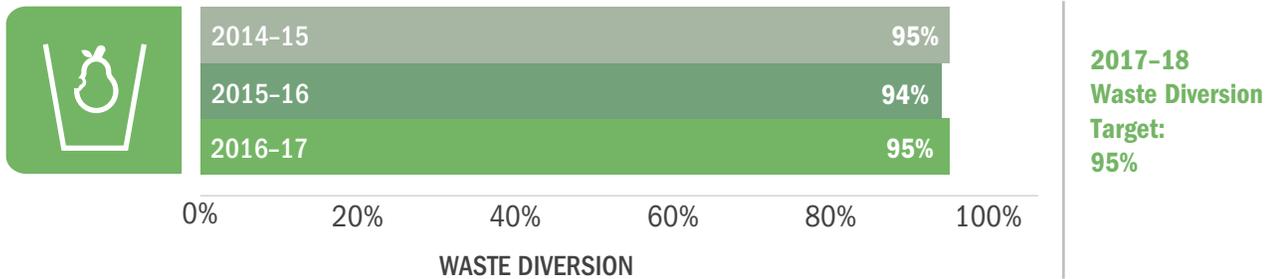
2016-17

Change from 2015-16: **13%** ▲

2017-18 Target

Not to exceed 573,467 gallons

Waste Diversion



Zero Waste Facility

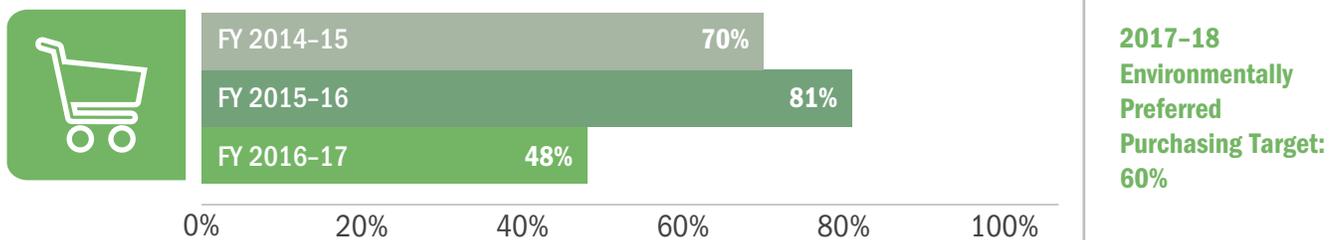
According to the U.S. Green Building Council, efforts for waste diversion move communities further to help eliminate "all discharges to land, water or air that are a threat to planetary, human, animal or plant health."

For 2016-17 performance, CalSTRS headquarters building in West Sacramento earned Zero Waste Certification at the Gold level by Green Business Certification Inc. for successfully diverting more than 95 percent of office waste from landfills, incinerators and the environment.

Environmentally Preferred Purchasing

CalSTRS' commitment to procuring environmentally preferred purchases is consistent with our fiduciary responsibility. Purchasing sustainably made goods and services from environmentally conscientious suppliers, locally when possible, reduces waste and emissions and saves natural resources. We strive to purchase Energy Star-certified products, such as electronics, appliances or other equipment, locally manufactured and distributed products, and desk supplies with pre- and post-consumer recycled content.

Our green procurement initiative calls for increasing the percentage of sustainably preferred purchases and includes increased employee education and training, revisions to purchasing processes and procedures, and monitoring of our progress in meeting LEED purchasing standards.



Earth Week 2017 at CalSTRS



Photo by Melissa Wiese, CalSTRS

A Tiny Farms employee offers samples of cricket shortbread cookies and chili lime fried crickets during an Earth Week event.

CalSTRS celebrated Earth Week in April 2017 with activities and workshops at headquarters:

- During a lunchtime nature scavenger hunt, employees searched for species native to the Sacramento River area such as cormorants, Suisun thistles, hummingbirds and western fence lizards.
- CalSTRS Green Rangers provided employees with information for alternative proteins, including lentils, peas and whey protein.

- Employees with Tiny Farms, an agriculture technology company, explained the advantages of eating crickets, an excellent source of environmentally friendly protein.

In addition, informational posters presented facts on the water used to produce coffee, watermelons, tomatoes and beef. Other educational materials illustrated the long life of nylon, wool, leather shoes, plastic bottles and plastic bags.



Photo by Clarissa Resultan, CalSTRS

BikeSTRS

Work-life balance supports our employees' well-being and their engagement at work. BikeSTRS is a group of cycling enthusiasts who promote and encourage the organization's sustainable culture. They have a shared commitment to reduce their carbon footprint by commuting to work and other activities by bike. They encourage their coworkers to take advantage of CalSTRS' Bicycle Library, an employee benefit which provides eight bikes that can be checked out for recreation or work activities. In May 2017, the group coordinated and led several sessions where volunteers inspected and tuned up bicycles at no cost to employees.

Alternative commuting is encouraged with special events

held for all ability levels throughout the year. Daily lunchtime and frequent after-work rides during *May Is Bike Month* support the regional competition. In 2017, our 10th year competing, we matched our highest finish among large employers in the Sacramento region, ranking fifth overall with 29,862 miles ridden.

In October 2017, BikeSTRS joined other alternative commuters to make CalSTRS the top-ranked mega-employer in the first-ever Sacramento Region Ready Set Ride Commute Challenge with 579 trips replaced in a designated week in October. The regional website featured BikeSTRS among champions of promoting alternative commuting.

Paper Reduction Initiative

CalSTRS' responsible business practices require regular examination of how we use resources. In 2016, we reviewed the use of paper related to mailed member communications, committed to a significant reduction in paper use, and identified measures to streamline our usage.

In June 2017, we launched a paper reduction initiative that resulted in a 9.75-percent overall reduction in paper separator sheets used and eliminated over 900 duplicate prints of member communications in the month of June alone. In addition, new recognition barcodes reduce our reliance on paper separator sheets during the printing process.

Sustainable Engagement and Connectivity

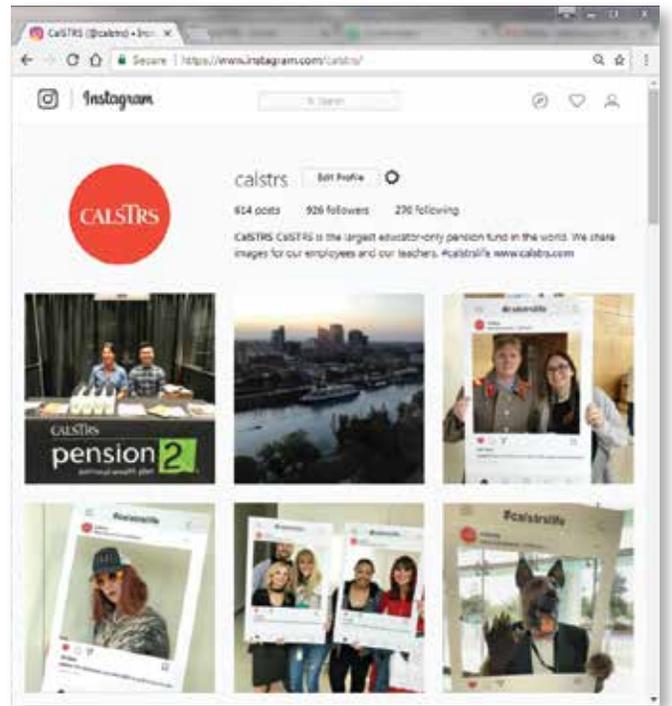
#CalSTRSlife Campaign

According to Towers Watson, a leading global human resource consultant, stress level, workload and work-life balance are among the top drivers of sustainable engagement. Its research indicates what matters to employees is that they have manageable stress levels at work and a healthy balance between their work and personal life. In fiscal year 2016–17, CalSTRS launched the hashtag campaign, #calstrslife, on Instagram to engage our employees—more than 1,100 statewide—by encouraging them to share photos and glimpses into their personal lives and the work-life balance they enjoy. The goals of the program are to:

- Stimulate morale and relationship building among employees through the sharing of personal stories and photos with coworkers and the workplace.
- Serve as a recruitment tool by having staff demonstrate the positive work-life balance they enjoy by working at CalSTRS, which illustrates the benefits of the cohesive and encouraging work environment to potential job candidates.
- Personalize the “face” of the organization by highlighting CalSTRS’ staff members, recognizing their accomplishments and demonstrating the dedication they invest every day in service of California’s educators.

Employees use their own “voice” and personal images to illustrate the high priority CalSTRS places on maintaining a healthy work-life balance through employee development and family/personal goal fulfillment.

CalSTRS employees are the first line of contact to providing exceptional levels of service to our nearly 1 million members and beneficiaries. Part of the campaign includes CalSTRS’ primary Instagram account where we seek permission to repost images shared



by employees to further personalize the face of the organization to our member population. This helps to build trust, enhance transparency and remove the mystique of CalSTRS as a large government agency. Furthermore, the photos personify employees by showing members and stakeholders the life “behind the staff” and the faces of the people who genuinely care about what they do and who serve them every day.

Visible Results

As of June 30, 2017, CalSTRS had more than 850 followers on Instagram, including employees and member educators. Since launching the #calstrslife campaign in mid-2016, the main CalSTRS Instagram account has nearly 500 posts, and more than 950 posts feature the hashtag #calstrslife. This has increased grassroots engagement efforts among employees, including an informal networking group that regularly meets to acknowledge fellow #calstrslife Instagram users and brainstorm ideas for teambuilding events across the organization.

Notable CalSTRS Awards and Achievements

Government Finance Officers Association

**Certificate of Achievement for
Excellence in Financial Reporting**
Comprehensive Annual Financial
Report
Fiscal year ended June 30, 2016

National Coalition of 100 Black Women

Leadership in Business Award
Excellence in Education and
Leadership Awards
Debra Smith, Chief Operating
Investment Officer

Chief Investment Officer magazine

Forty Under Forty, 2017
Orintheo Swanigan,
Investment Officer

Neighborhood Youth Association of Los Angeles

Investors in Education
Christopher J. Ailman,
Chief Investment Officer

Securities and Exchange Commission's Investor Advisory Committee

Anne Sheehan, Director of
Corporate Governance
Elected Chair

Pensions and Investments magazine

**Best Places to Work in Money
Management**

Public Company Accounting Oversight Board's Standing Advisory Group

Debra Smith, Chief Operating
Investment Officer

The SHE Index Inspired by CalSTRS CIO Industry Innovation Award for Responsible Investing

The William F. Sharpe Indexing
Achievement Awards

California Association of Public Information Officials

Award of Excellence (1st Place)
Publications: 2014–15 GRI
Sustainability Report

Award of Distinction (2nd Place)
Video Production: "Core Values"

Award of Distinction (2nd Place)
Most Creative Activity with
Low-to-No Cost: #calstrslife
Employee Work-Life Balance
Instagram Photo Campaign

Graphic Design USA

**American In-House Design Award
(1st Place)**

Displays/Signage: CalSTRS
Virtuosity—Powered By You

Videographer Awards

Award of Distinction (2nd Place)
Government: "CA Educator:
Steve Davis"

Award of Distinction (2nd Place)
Corporate Image/Company:
"Core Values"

Honorable Mention

Information/Instructional Video:
"Investments 101 Video Series"

Honorable Mention

Marketing Product/Government:
"What Are These Teachers Doing?"

Telly Awards

Bronze Award (3rd Place)
"Investments 101 Video Series"

Ragan/PR Daily Awards

Honorable Mention

Employee Engagement and
Recruitment: #calstrslife Employee
Work-Life Balance Instagram Photo
Campaign

GRI Content Index for In Accordance-Core Option

General Standard Disclosures

GENERAL STANDARD DISCLOSURES	PAGE	EXTERNAL ASSURANCE
STRATEGY AND ANALYSIS		
G4-1	4	No
ORGANIZATIONAL PROFILE		
G4-3	10	No
G4-4	10	No
G4-5	7	No
G4-6	7	No
G4-7	10	No
G4-8	10	No
G4-9	10, 16-20, 40	Yes, financial information reported and verified in CAFR. Auditors statement pages 25-27. Data pages 30-31, 51-52.
G4-10	16, 40	No
G4-11	40	No
G4-12	21-23, 85	Yes, operating expenses have been verified and reported in CAFR. Auditors statement pages 25-27. Data pages 95.
G4-13	18	No
G4-14	35	No
G4-15	35-36	No
G4-16	36	No

GENERAL STANDARD DISCLOSURES	PAGE	EXTERNAL ASSURANCE
IDENTIFIED MATERIAL ASPECTS AND BOUNDARIES		
G4-17	7, 10	Yes, data reported and verified in CAFR. Auditors statement pages 25-27. Data page 53.
G4-18	30-31	No
G4-19	30-31	No
G4-20	7	No
G4-21	7	No
G4-22	No significant changes.	
G4-23	No significant changes.	
STAKEHOLDER ENGAGEMENT		
G4-24	32	No
G4-25	32	No
G4-26	30	No
REPORT PROFILE		
G4-28	7	No
G4-29	7	No
G4-30	7	No
G4-31	7	No
G4-32	7	No
G4-33	7	No
GOVERNANCE		
G4-34	14-15	No
ETHICS AND INTEGRITY		
G4-56	34	No
G4-58	62-63	No

Specific Standard Disclosures

MATERIAL ASPECTS	DMA AND INDICATORS		OMISSIONS	EXTERNAL ASSURANCE	
	Disclosure	Page		Assurance	Page Reference
ECONOMIC					
Economic Performance	G4-DMA	72-73	–	No	
	G4-EC1	19-21	–	Yes	Financial information verified in CAFR. Auditors statement pages 25-27. Data page 88.
	G4-EC3	22	–	Yes	Financial information verified in CAFR. Auditors statement pages 25-27. Data page 90.
ENVIRONMENTAL					
Supplier Environmental Assessment	G4-DMA	75-77	–	No	
	G4-EN33	75-76	–	No	
SOCIAL					
Labor Practices and Decent Work					
Employment	G4-DMA	33	–	No	
	G4-LA1	48-49	–	No	
Training and Education	G4-DMA	43	–	No	
	G4-LA9	44-45		No	
	G4-LA10	44	–	No	
	G4-LA11	45	–	No	
Diversity and Equal Opportunity	G4-DMA	42	–	No	
	G4-LA12	40-42	–	No	
Society					
Anti-Corruption	G4-DMA	66	–	No	
	G4-S04	67-68	–	No	
Product Responsibility					
Product and Service Labeling	G4-DMA	52-53	–	No	
	G4-PR5	58-59	–	No	
Customer Privacy	G4-DMA	64-65	–	No	
	G4-PR8	65		No	

MATERIAL ASPECTS	DMA AND INDICATORS		OMISSIONS	EXTERNAL ASSURANCE	
	Disclosure	Page		Assurance	Page Reference
ADDITIONAL INDICATORS					
Energy	G4-EN3	81	—	No	
	G4-EN6	81	—	No	
Water	G4-EN8	84	—	No	
Emissions	G4-EN15	82	—	No	
	G4-EN16	82	—	No	
	G4-EN17	83	—	No	
	G4-EN19	82	—	No	
Effluents and Waste	G4-EN23	85	—	No	

*Where CAFR is noted: 2016–17 CalSTRS Comprehensive Annual Financial Report, available on CalSTRS.com/publications.



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