

CalPERS for California 2018

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CalPERS for California

CalPERS is one of the largest investors in the world, with \$351.8 billion in assets as of June 30, 2018.

Approximately \$33.5 billion (9.5 percent) of these funds are invested in California-based companies and projects.

CalPERS for California highlights some of the additional benefits of CalPERS' investments in California.

Executive Summary

As the nation's largest public pension fund, we play a vital role in California's economy, providing retirement and health benefits to over 1.9 million public employees, retirees, and their families, and 2,892 employers.

CalPERS for California examines our investment portfolio as of fiscal year ending June 30, 2018. It describes the scale and breadth of our investments in companies, properties, and projects in California, and the additional benefits from our private market investments. This report does not examine the financial performance of our investments.

Our investment goal in California is to achieve appropriate risk-adjusted return. All our investments must be consistent with the fiduciary responsibility of our Board of Administration and its duty to protect the financial security of our members. Like many other large institutional investors, we diversify our portfolio among categories of investments, called "asset classes," to reduce our exposure to any one market risk and maximize our return on investment. Our investment decisions are guided by our Pension Beliefs (PDF) and are made in accordance with our strategic asset allocation policy and risk management system.

As the world's fifth largest economy, California offers a wide array of attractive investment opportunities for all investors. Investment in California by our staff and external managers and advisors reflects the strength and diversity of California's economy and the quality of its companies, properties, and other investment opportunities. The capital that we invest in California is usually not explicitly directed to the state but is the consequence of a typical institutional investment process weighing the financial merits of companies, properties, and projects, regardless of location. The size and dynamism of California's economy are the primary drivers of our significant exposure to local communities and the related benefits that this brings, like job creation.

The data in this report offers a snapshot of our investments and has been analyzed by Pacific Community Ventures (PCV), a third-party research organization. The research methods in this report are fully documented in footnotes. The difficulty of attributing ancillary benefits directly to us is especially notable and explains why any ancillary benefits associated with public market investments are excluded from this report.

As of June 30, 2018, we had invested 9.5 percent or \$33.5 billion of our \$351.8 billion in total assets in California.

CalPERS Investments in CA by Asset Class: June 30, 2018

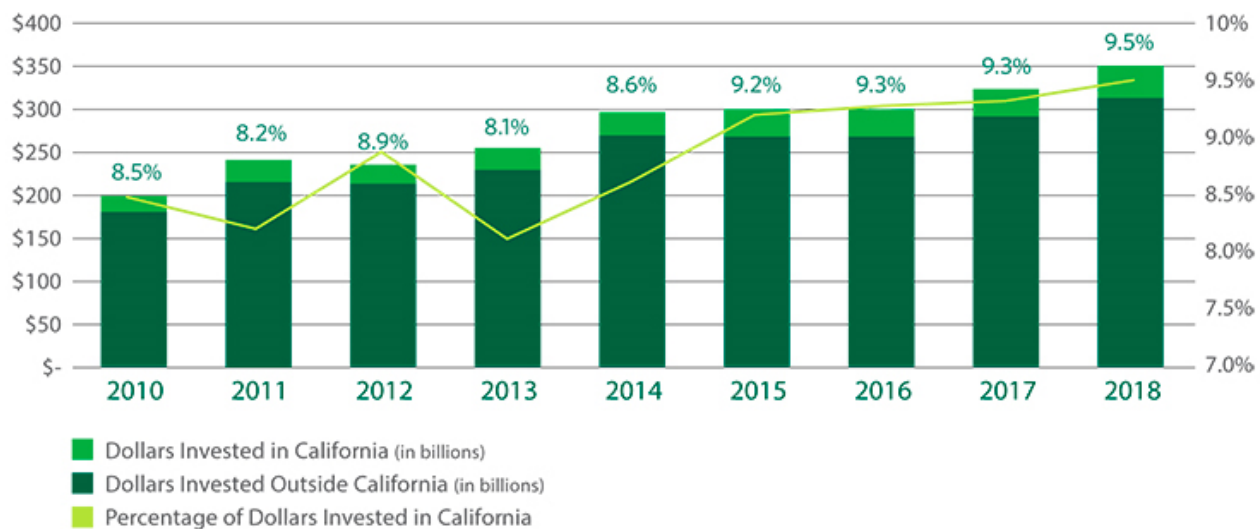
	Total Portfolio Value (in Billions) ¹	Dollars Invested in California (in billions)	Percentage of Dollars Invested in CA	Annual Percentage Change in Dollars Invested in CA
Global Equity	\$171.8	\$17.5	10.2%	20.7%
Global Fixed Income	\$79.1	\$5.7	7.2%	54.1%
Private Equity	\$27.2	\$1.0	3.7%	(54.5%) ²
Real Assets ³	\$36.1	\$9.3	25.8%	(3.1%)
Other ⁴	\$37.6	—	—	—
Total	\$351.8	\$33.5	9.5%	11.6%

The 11.6 percent increase in dollars invested in California over the last year is a result of increases across global equity and global fixed income. Factors driving year-over-year changes in dollars invested in California are described as follows for each asset class:

- **Global equity:** Market gains in existing California holdings have led to an increase in dollars invested in California. This increase has been driven by the strong overall performance of the U.S. stock market including technology companies, of which many are based in California

- **Global fixed income:** Our increased exposure to corporate bonds and structured securities, which have maintained a consistent weighting towards California-based investments, led to an increase in fixed income dollars invested in California.
- **Private equity:** Sales outpaced acquisitions, resulting in cash returns and a reduction in private equity exposure in California.⁵
- **Real assets:** Over the past year, the sale of real estate properties in California, particularly retail and housing properties, has led to a decrease in dollars invested in real assets in California.

We have had 8 percent or more of our assets invested in California since 2010. The following chart depicts our exposure in California.



In addition to our goal of achieving appropriate risk-adjusted returns, our investments can also strengthen the communities in which they're located.

The additional benefits of our private investments in California, for instance, include the support of local jobs, infrastructure for communities and commerce, and business expansion and related economic activity. As of June 30, 2018, our active private markets investments in California have resulted in \$36.5 billion in total economic activity across the state, benefiting not only businesses and projects receiving capital directly from us, but also suppliers, workers, and the public sector broadly through tax revenues.⁶

The total number of jobs supported by our investments in private markets is shown below.

Jobs by Asset Class: June 30, 2018⁷

Private Equity

48,000

Real Assets

198,400

Private Markets Total

246,400

[View Map of All CalPERS Private Market Assets in California \(JPG\)](#)

[Next Section: Public Markets →](#)

Footnotes

¹ Willshire Associates, Executive Summary of Performance for California Public Employees' Retirement System (PDF). (June 30, 2018)

² The decrease in our private equity exposure in California is also the result of a correction to reporting on our private equity investments. In 2017, several hundred companies that we had exited or liquidated were incorrectly included in the reported data that was used in the analysis of our private equity dollars invested in California.

³ For the purposes of this report, real assets encompass our real estate and infrastructure investments.

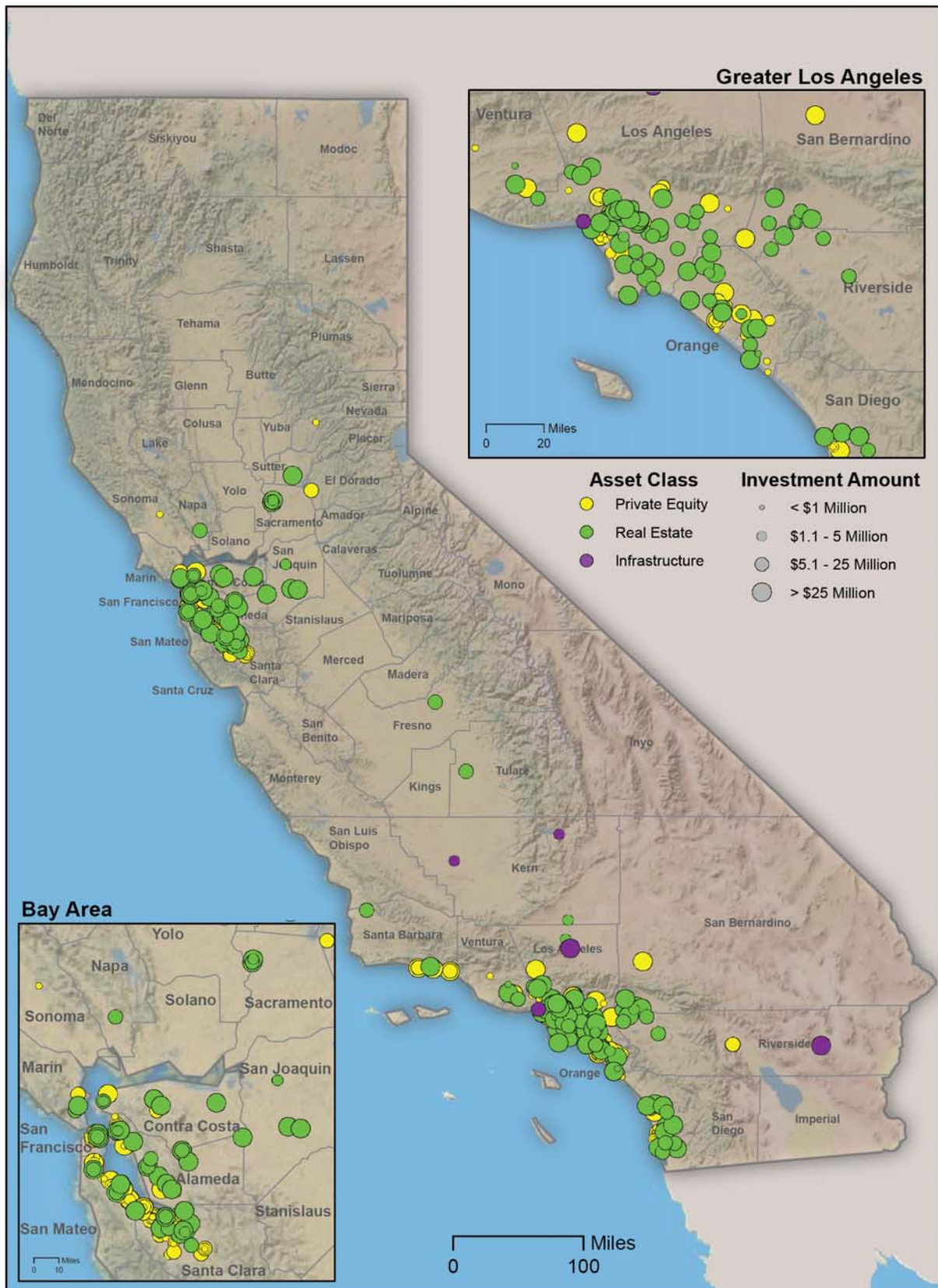
⁴ Our total portfolio value was \$351.8 billion at June 30, 2018. The five asset classes above do not comprise the entire portfolio. "Other" consists primarily of forestland, inflation linked securities, absolute return strategies, cash, and cash-equivalents.

⁵ The decrease in our private equity exposure in California is also the result of a correction to reporting on our private equity investments. In 2017, several hundred companies that we had exited or liquidated were incorrectly included in the reported data that was used in the analysis of our private equity dollars invested in California.

⁶ Total economic activity in California is calculated as of June 30, 2018 and uses data from our California private market investments in private equity, real estate, and infrastructure.

⁷ For methodologies for calculating the number of jobs supported in California please refer to individual asset class sections within the report.

CalPERS Private Market Investments in California



Public Markets

We invest the largest amount of our total assets, and assets in California, in the public markets through global equities and fixed income investments.

CalPERS investments in public companies and projects cannot be directly tied to the creation of jobs or other ancillary benefits at those companies and projects receiving investment. Our public markets investments are intentionally excluded from this analysis due to the more indirect relationship between our investment of capital and the use of this capital by recipient public companies. Therefore, the CalPERS for California report examines CalPERS' investment exposure in California, but not the job creation or ancillary benefits associated with its public market investments.

Global Equity

Total Market Value: \$171.8 billion

Value in CA: \$17.5 billion

Percentage in CA: 10.2%

Global equity investments in public companies make up nearly half of our total assets. We invest in public companies primarily as a long-term investor. The largest allocation of global equity is passively managed by an in-house team of investment professionals. We maintain an allocation to active strategies, both internally and externally managed, to seek added value. Global equity is the principal asset class providing growth exposure in our strategic asset allocation.

Global Fixed Income⁸

Total Market Value: \$79.1 billion

Value in CA: \$5.7 billion

Percentage in CA: 7.2%

Our global fixed income strategy seeks to diversify and minimize risk in our overall investment programs and to enhance total returns. We have global fixed income investments in California in four areas:

- **Corporate bonds:** Corporate bonds are debt securities issued by private and public corporations. Companies issue corporate bonds to raise money for a variety of purposes, such as building new plants or purchasing equipment.
- **Structured securities:** Structured securities are investments in a diverse group of loans and provide risk and return characteristics contingent on a range of underlying indicators, interest rates, or cash flows.
- **Short-term investments:** Short-term investments consist of U.S. Treasury and government sponsored securities, money market funds, commercial paper, certificates of deposit, repurchase agreements, asset backed securities, notes and bonds issued by U.S. corporations, and other allowable instruments that meet short-term maturity or average life, diversification, and credit quality restrictions.
- **Whole loans:** Whole loans include remaining California mortgages through the CalPERS Member Home Loan Program.⁹

The following table shows our global fixed income investments in California.

CalPERS Global Fixed Income Investment Classes in California: June 30, 2018

	Dollars invested (in millions)	Percentage of dollars invested
Corporate Bonds	\$1,646	28.8%
Structured Securities	\$3,115	54.6%
Short-term Investments	\$907	15.9%
Whole Loans	\$40	0.7%
Total	\$5,708	100%

Next Section: Private Markets ➔

Footnotes

⁸ The global fixed income asset class includes five distinct investment types.

⁹ The CalPERS Member Home Loan Program was launched in 1982 and offered a unique mortgage benefit for members, including, reduced lender fees through preferred mortgage lenders, lower closing costs through participating partners, and a down payment assistance program that allowed members to borrow against their CalPERS retirement for up to 100% of their required down payment. Our Board of Administration suspended the program in December of 2010 citing limited interest, increased risk, and a changing marketplace.

Private Markets

We invest in private markets¹⁰ that include private equity and real assets, including real estate and infrastructure investments, exclusively using external investment managers. Private market strategies encompass investments in companies, properties, and projects that cannot be accessed publicly.

The job creation and other additional benefits of private companies, properties, and projects that receive investments directly from us, or through contracted third-party investment managers, can be more directly attributed to us than investments in public markets. As a result, the CalPERS for California report examines the additional benefits of our private market investments.

Access to capital is an important factor in business and productivity growth, job and wealth creation, innovation, and sustainable community and economic development. The benefits of access to capital benefit not only the direct recipients of investments, but also the areas in which they're located.

The private markets section of CalPERS for California highlights four areas in which capital may be especially socially beneficial.¹¹ These include:

- Low- to moderate-income (LMI) areas¹²
- High unemployment areas¹³
- High minority areas¹⁴
- Rural areas¹⁵

As with all our investments, the decision by us and our third-party investment managers to support a California-based company, property, or project is made solely based on the financial merits of the particular investment opportunity.

Private Equity

Total market value: \$27.2 billion

Value in CA: \$1.0 billion¹⁶

Percentage in CA: 3.7%

The strategic objective of our private equity investments is to maximize risk-adjusted rates of return and enhance the equity return of our total portfolio. We are a significant investor in privately held California-based companies in a wide range of industries.

We invest in private companies primarily through limited partnerships or commingled funds. These investments are often structured as 10-year agreements with a dedicated investment manager. The manager, known as the general partner, is the intermediary between investors with capital and businesses seeking capital.

The companies in our private equity portfolio that are headquartered in California are estimated to employ 48,000 workers in the state. An estimated \$13 billion has been invested alongside us in the same California-based companies by other limited partners.¹⁷ However, these investments are not directly attributable to our investments.

CalPERS Private Equity Portfolio in California: June 30, 2018

Total Companies

379

CalPERS Investments (in billions)

\$1.0

Estimated Jobs in CA¹⁸

48,000

Our private equity investments provide a unique additional benefit by deploying capital to areas that have traditionally had limited access to institutional private equity assets. Private equity investment has historically been clustered in geographic regions such as Silicon Valley. Specifically, between 2008 and 2017, 90 percent of private equity capital in the United States was invested in just 600 ZIP codes across the country, representing 18 percent of United States ZIP codes. For the purposes of this analysis, any company that is located outside of these 600 ZIP codes is in an area that has historically had limited access to institutional equity capital. As of June 30, 2018,

11 percent of our private equity investments were directed to California ZIP codes outside the areas receiving the clear majority of investments from all sources of institutional private equity capital.

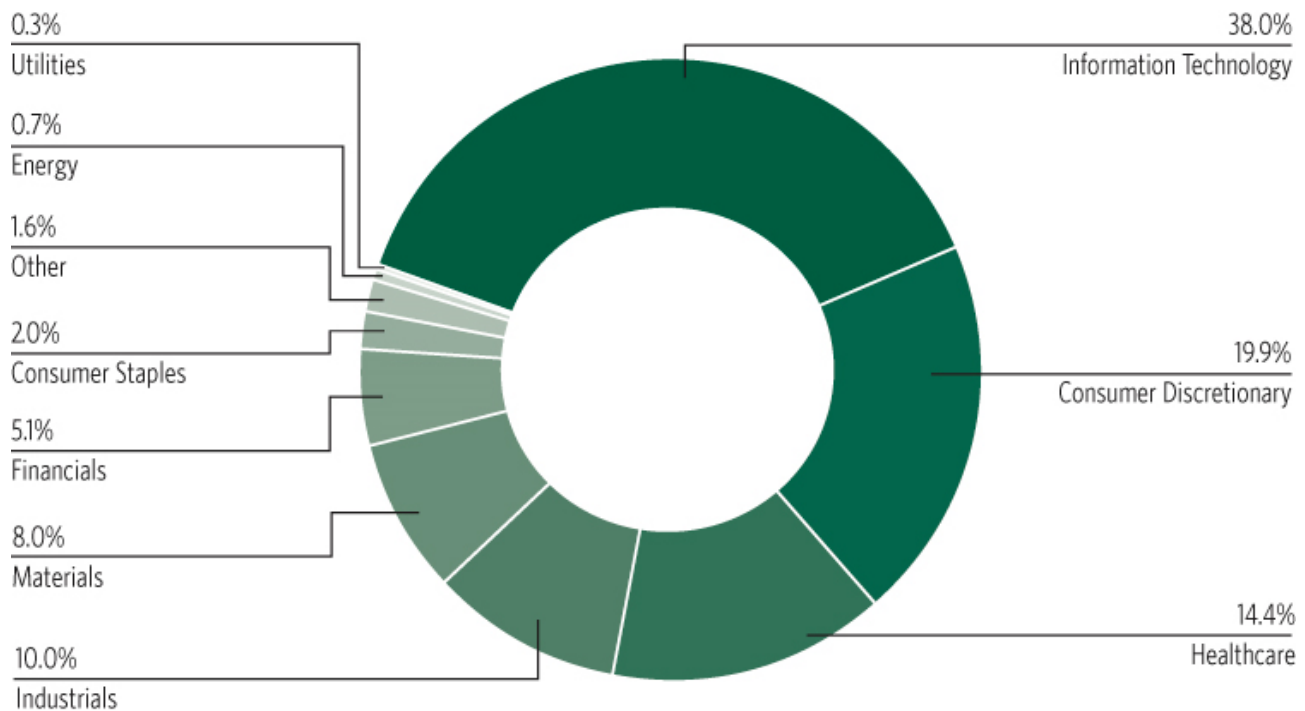
Seventy-nine percent of our private equity investments in California are in high minority areas. We also have private equity investments in high unemployment, LMI, and rural areas. The following table depicts our private equity investments in California:

Private Equity Ancillary Benefits in California¹⁹

	Percentage of investments	Percentage of dollars
High Unemployment Areas	5%	8%
Rural Areas	6%	12%
High Minority Areas	79%	73%
LMI Areas	37%	33%
Limited Capital Access Areas ²⁰	11%	8%

We invest in a wide range of companies, with investments in more than nine different industries. The following chart shows the diversity of our California private equity portfolio across sectors.

California Private Equity Investments by Industry²¹



Case Study: Signature Coast

Signature Coast Holdings was founded in 2017 and is a woman-led, nationally-ranked company that provides landscape design, construction, and maintenance services to retail, industrial, commercial, residential, and municipal clients. Signature Coast Holdings received investment through the Central Valley Fund III, managed by CVF Capital Partners. For the last 20 years, we've partnered with CVF Capital Partners, including through our Emerging Manager Program. CVF Capital Partners' funds focus on providing mezzanine debt and preferred equity investments to small and medium-sized businesses across California and the Central Valley. The Central Valley Fund has invested a majority of its capital in businesses owned by women and/or minorities, or businesses located in low- to moderate-income communities. In 2017, the Central Valley Fund invested \$11.2 million in Signature Coast as a minority partner, which helped it grow operations by acquiring other leading landscaping companies.

Signature Coast benefits California communities by creating jobs in Northern California for historically underserved communities. The company employs 570 landscape management professionals, 90 percent of whom identify as Latino or Hispanic, across labor, foreman, production assistant, irrigation, and management positions. Over 95 percent of Signature Coast's positions are full-time. Employees are also eligible for employer-subsidized health insurance, a 401k plan with employer

matching, and paid time off. In addition, Signature Coast supports a safe working environment and career growth opportunities through formalized employee training. All employees participate in a comprehensive two-tier, company-led training program that covers worker safety and equipment use, as well as advanced agricultural techniques. Signature Coast reimburses employees for the cost of continuing education courses that support their career growth, such as horticulture classes.

In addition to creating jobs that foster career growth, Signature Coast supports the communities that its eight offices are located in and its employees reside. Signature Coast employees volunteer with local organizations, such as Boys and Girls Clubs, foster homes, and senior assistance service providers, on an ongoing basis. Signature Coast also responds to community challenges — during the 2018 Camp Fire, employees were redirected from landscaping efforts to volunteer at wildfire disaster relief call centers.

Signature Coast contributes to a more sustainable California by utilizing environmentally responsible practices. The company utilizes techniques that avoid harmful pesticides. In Davis, Signature Coast has ceased all use of Roundup and instead employs a steaming device to kill existing weeds and reduce future regrowth. Signature Coast's utilization of this non-chemical weed control method reduced the use of pesticides in Davis and piqued demand for the same technique in five other cities across California.

Our investment in Signature Coast, through the Central Valley Fund, demonstrates our commitment to producing appropriate risk-adjusted financial returns while supporting local businesses that strengthen communities across the State of California.

Real Assets

Total Market Value: \$36.1 billion

Value in CA: \$9.3 billion

Percentage in CA: 25.8%

Our Real Assets Program includes real estate and infrastructure investments.²² These investments are acquired and managed through separate accounts, joint ventures, and commingled funds between us and investment management firms. Real assets play a strategic role within our total fund by providing benefits of stable and predictable cash yield, diversification of equity risk, and inflation protection. Our real assets investments benefit California communities by creating jobs, contributing to local economic development, and providing critical community resources.

CalPERS Real Assets Portfolio in California: June 30, 2018

CalPERS CA Portfolio Value (in Millions)

\$9.3

Number of Investments

182

Estimated Jobs in CA²³

198,400

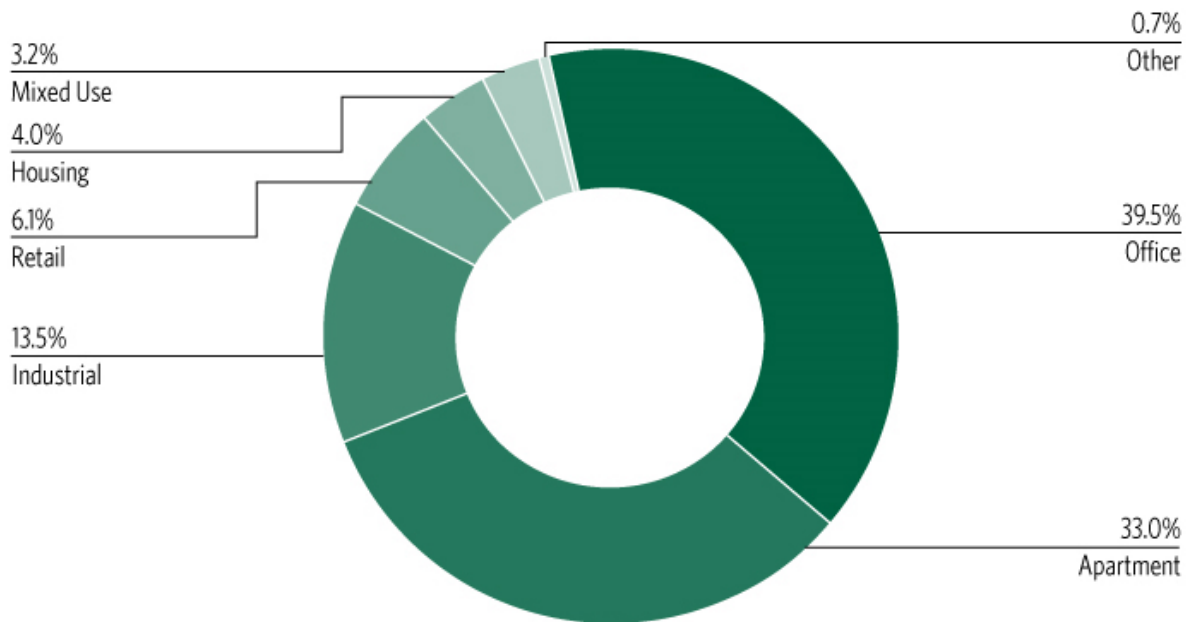
Real Estate

We invest in real estate primarily through separate accounts and funds with third-party investment managers. Our investment strategy for real estate is to invest in core assets with stable income, diversified by property type and geography.

The real estate portfolio is more heavily weighted to California than any other asset class. This weighting reflects the real estate team's intent to deploy capital similarly to the current benchmark, the NCREIF ODCE Index and our Real Assets Strategic Plan's focus on core markets, which are concentrated in California for real estate. The portfolio in California includes a diverse group of assets that provide additional benefits in the areas in which they are located, including the creation of construction jobs and economic activity connected to construction, the accommodation of new retail, industrial and commercial employers, and the anchoring of communities with real assets.

The following chart highlights the distribution of our California real estate investments, which span more than six property types.

CalPERS Real Estate Investments by Property Type



Combined, our real estate investments support a total of 177,000 jobs.²⁴ This figure encompasses jobs at the development and construction phase, as well as from income-generating properties.

Our California real estate projects in the development and construction phase support a total of 1,600 jobs. The construction of our California real estate projects not only support workers within the construction industry, but also indirectly support workers throughout the state.²⁵

Our California real estate investment portfolio includes income-generating properties with high occupancy levels such as apartments, mixed use developments, retail centers, office buildings, and industrial centers. These properties provide housing, as well as infrastructure and operating space for retail, professional service providers, and manufacturers. Our properties with high occupancy levels also support workers in property management, service, security, and other related industries.²⁶ The sales and leasing income from these income-generating properties supports a total of 175,400 jobs.

CalPERS Real Estate Portfolio in California: June 30, 2018

CalPERS CA Portfolio Value (in Millions)

\$8.9

Number of Investments

177

Estimated Jobs in CA²⁷

177,000

In addition to our \$8.9 billion in investments, an estimated \$3.1 billion has been invested alongside us in the same third-party partnerships.²⁸ However, these investments are not directly attributable to our investments.

Real estate investments are often in central business districts and concentrated in urban areas, where property investments of all types are more readily available. These urban districts typically include a larger proportion of LMI, high unemployment, and high minority areas.

Real Estate Ancillary Benefits in California²⁹

	Percentage of investments	Percentage of invested dollars
High Unemployment Areas	29%	17%
Rural Areas	11%	7%
High Minority Areas	82%	87%
LMI Areas	49%	43%

Case Study: 560 Mission Street

560 Mission Street is a 31-story office tower located in the South Financial District of San Francisco, boasting 670,000 square feet of office space and a one-third acre urban park. Since its construction in 2002, 560 Mission Street has been an important commercial center, housing anchor tenants such as JPMorgan Chase, Ernst and Young, and TIAA-CREF. Commonwealth Partners acquired 560 Mission Street in 2011 on our behalf.

Since 2011, we've partnered with CommonWealth Partners to invest over \$20 million in improvements that have enabled the property to maintain a high occupancy rate and tenant retention ratio. The property currently has a 99 percent occupancy rate and is leased to premier office tenants, with significant remaining lease terms. As a result of the property's long-term tenant lease commitments and high occupancy rate, 560 Mission Street provides consistent cash flows to our members and beneficiaries.

The property's sustainability features reduce the building's environmental footprint and reduce costs associated with the property. While office buildings are typically the most energy-intensive property type, 560 Mission Street has implemented extensive energy-efficiency measures — it's been Energy Star certified since 2004 and LEED Platinum certified since 2010. In addition to benefiting the environment through reduced energy usage, 560 Mission Street diverts 75 to 85 percent of waste using a textile recycling program and plastic foam and e-waste pick-up service. The property encourages the use of environmentally-friendly transportation by dedicating parking spaces for ZipCars to encourage car sharing, offering 4 electric vehicle charging stations, and ensuring ample bicycling parking.

560 Mission Street helps the community by creating employment opportunities and supporting local vendors. In addition to employing property management personnel, the office building supports over 60 contractors across maintenance/engineering, janitorial services, parking, and security. The property utilizes the services of local vendors, including landscapers, HVAC technicians, elevator technicians, and others. In aggregate, 560 Mission Street's maintenance contracts are valued at \$4.5 million annually.

The office building creates a high-quality work environment for its nearly 2,500 tenants. In spring 2018, 560 Mission Street received a Fitwell certification, which demonstrates that a building has been optimized to improve health and productivity outcomes through improvements to workplace design and operational policies. 560 Mission's certification is primarily based on its transit-oriented and walkable location, fitness centers with accessible showers, secured parking, and green cleaning.

Our investment in 560 Mission Street, through our partnership with Commonwealth Partners, demonstrates our ability to acquire high-quality properties that produce stable, attractive returns to our members and beneficiaries, while benefitting the environment and strengthening communities.

Infrastructure

We seek stable infrastructure investments within the water, energy, waste, transportation, technology, and communications sectors. We invest both directly and in partnership with third-party investment managers. Infrastructure investments have the potential to benefit local economic development and provide essential community services within the state.

Our infrastructure investments in California are estimated to employ 21,400 workers in the state. In addition to our \$378 million in investments, an estimated \$939 million has been invested alongside us in the same infrastructure projects.³⁰ However, these investments from other funding sources are not directly attributable to our investments.

CalPERS Infrastructure Portfolio in California: June 30, 2018

CalPERS CA Portfolio Value (in Millions)

\$378.2

Number of Investments

5

Estimated Jobs in CA³¹

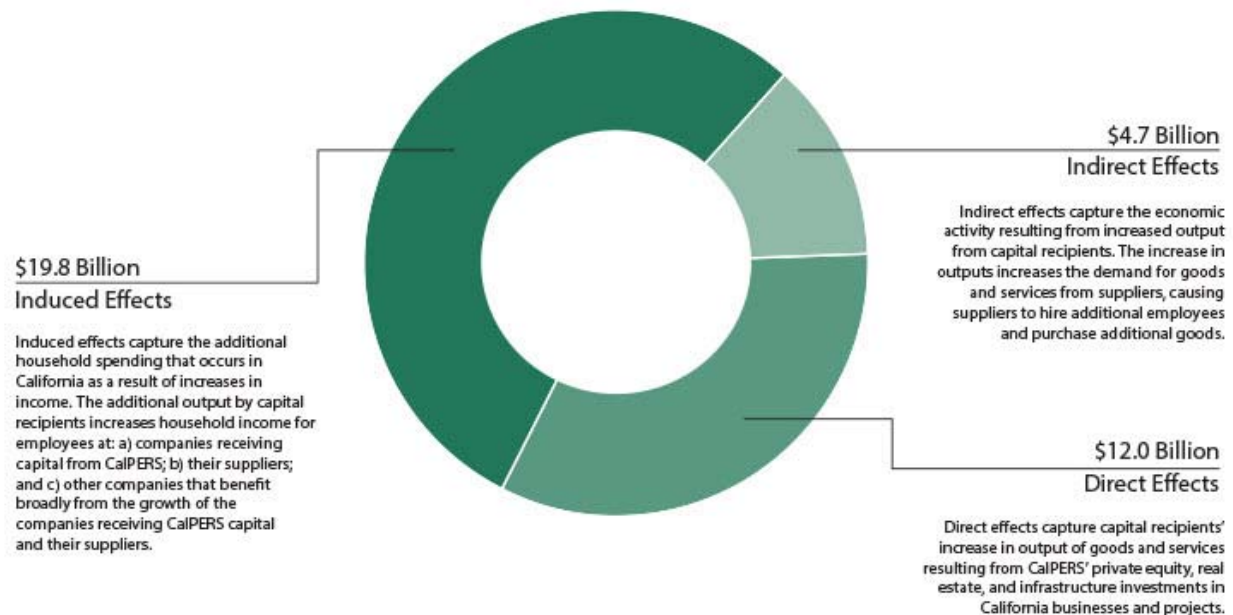
21,400

The Economic Impact of CalPERS Private Markets Investments in California

Our private markets investments in California generate \$36.5 billion in economic activity across the state through the multiplier effect — our investments result in direct effects, indirect effects, and induced effects within the California economy as

described in the chart below.³² A more detailed explanation of the methodology employed for estimating the total economic impact of our private markets investments in California is included in the endnotes.

CalPERS Total Economic Impact in California: \$36.5 billion³⁴



[View Full-Size Image](#)

[Next Section: Conclusion ➔](#)

Footnotes

¹⁰ The analysis in this section uses the demographic and income characteristics of ZIP codes. If the ZIP code in which an investment is located is determined to be an LMI, high unemployment, high minority, or rural area, then the investment and the dollars associated with the investment are in the defined community.

In the case of high unemployment, rural, and high minority areas, the calculations are relatively straightforward. The data used to determine the appropriate status of relevant populations is available by ZIP code and uses 2010 U.S. Census and 2010 California Employment Development Department data.

Calculating the LMI status of a ZIP code is more complex. The following method is applied using U.S. Census Bureau 2010-2014 American Community Survey data for every tract in the United States:

1. The number of census tracts and percentage of each census tract that geographically overlaps with every ZIP code is determined using geographic information systems (GIS) data.
2. The percentage of land in a ZIP code that overlaps with LMI census tracts is calculated for every ZIP code by combining partial census tracts.
3. The ZIP code is considered to be LMI if more than 50 percent of the total land in a ZIP code overlaps with LMI census tracts.

In the United States 46 percent of all ZIP codes are classified as LMI using this analysis. In California, 65 percent of all ZIP codes are classified as LMI, including 85 percent in the urban core comprising the central business districts of San Francisco, Oakland, Los Angeles, and San Diego.

¹¹ To determine the dollar amounts invested in these areas, the market value of each investment is attributed to the ZIP code provided for a given company, property or project. Dollars invested in all ZIP codes that match the given criteria are summed and reported as a percentage of the total market value for each asset class invested in California.

The proportion of our investments in LMI, high unemployment, high minority, and rural areas reflects the demand for capital in the asset classes in which we invest. For example, we invest in companies and properties in central business districts and other economic hubs that offer attractive investment opportunities. These areas tend to be more ethnically and economically diverse, but our investment is not a result of these characteristics.

¹² Low- to moderate-income (LMI) areas are predominantly (50 percent or more) composed of LMI residents (46 percent of U.S. ZIP codes fall into this category). A census tract is determined to be LMI based on the following criteria:

- Median income of the tract is at or below 80 percent of the metropolitan statistical area median or below 80 percent of the statewide, non-metropolitan area median income
- At least 20 percent of the population lives in poverty

- The unemployment rate is at least 1.5 times the national average (based on US Census Bureau and 2006-10 American Community Survey data, consistent with research on the California Initiative (PDF). 1.5 times the 2006-10 national average of 6.8 percent is 10.2 percent)

See the Milken Institute [↗](#) Center for Capital Access and Job Formation for extensive literature on the lack of access to capital in LMI communities.

¹³ High unemployment areas are defined by the State of California Employment Training Panel as being 15 percent higher than the California average. At June 30, 2018, the California average unemployment rate was 4.2 percent; therefore, any ZIP code with an unemployment rate above 4.8 percent is considered a high unemployment area.

¹⁴ High minority areas are defined as ZIP codes in which the percentage of the minority population is higher than the median percentage of the minority population in all California ZIP codes (above 24 percent). See MBDA Study Finds Capital Access Remains Major Barrier to Success for Minority-Owned Firms [↗](#) for more information on access to capital in minority communities. U.S. Department of Commerce Minority Business Development Agency, January 29, 2010. According to the MBDA study, minority-owned firms receive fewer loans and smaller equity investments than non-minority owned firms, even when controlling for firm size.

¹⁵ Rural areas are defined as ZIP codes in which the percentage of the rural population is higher than the median percentage of the rural population in all California ZIP codes (above 3.67 percent). See Advancing Rural America [↗](#), U.S. Small Business Administration (SBA) Office of Advocacy, for more information on access to capital in rural areas. According to the SBA, rural businesses access to capital has historically been limited and may be constrained further as bank mergers replace community banks with larger entities that are less interested in non-credit card, small-sized loans.

¹⁶ This includes our direct private equity partnership investments, direct investments, and externally managed investments. This number may differ from total portfolio numbers in our other reports due to varying standards for defining a California company. This value is significantly lower than the 2017 value and is partly the result of a correction to reporting on our private equity investments. In 2017, several

hundred companies that we had exited or liquidated were incorrectly included in the reported data that was used in the analysis of our private equity dollars invested in California.

¹⁷ Includes capital invested alongside us in the same companies in the same private equity fund, not the total market value of the company. This figure excludes co-investments for private equity investments in the California Emerging Ventures program, for whom this information was unavailable.

¹⁸ Estimated jobs in California is determined by applying the total number of California jobs supported by the California Initiative (PDF) to the entire California Private Equity portfolio. Due to the small number of California Initiative companies still active and reporting in 2017, this report applies a weighted average of private equity jobs created per our dollar invested between 2010 and 2016. Weighting is based on the number of companies in the portfolio each year.


¹⁹ Private equity ancillary benefits in California were determined using private equity California investment amounts and ZIP code data from direct partnerships and does not include data from other externally managed investments.

²⁰ According to data from Thomson Reuters analyzing all private equity transactions between 2002 and 2011, nearly 95 percent of all private equity in California has been committed to 6 percent of California ZIP codes. ZIP codes not included in this 6 percent are considered limited capital access areas.

²¹ Note: "Other" includes unclassified investments.

²² For the purposes of this report, our forestland investments included in the "Other" category in the executive summary.

²³ See endnote 32 for methodology.

²⁴ Estimated jobs supported by our real estate investments in the California are determined using the IMPLAN Version 4.0 economic multiplier model software package. IMPLAN  is used by hundreds of government agencies, colleges and universities, nonprofit organizations, corporations, and business development and community planning organizations for analyzing economic impacts.

To determine jobs supported by our California real estate investments, the IMPLAN model examines the state of California as the geographic area of the study, capturing and accounting for economic benefits resulting from our real estate investments statewide. Methodologies specific to property type and development phase were used in defining input values for the IMPLAN model to best capture the economic impacts resulting from the construction / operation of various property types. The methodologies are described as follows:

Construction of Residential and Nonresidential Properties

Total net asset values for residential and nonresidential properties including apartments, single-family housing, senior housing, office, and retail under the predevelopment, development, and redevelopment categories were uploaded directly to the IMPLAN model for analysis where they are matched with construction activities.

Sales of Goods and Services

Property square footage data for retail properties with current occupants is multiplied by industry data on retail sales. Property square footage for other non-residential properties including the office and industrial sectors are multiplied by property-specific data on rental income. Total rental income amounts are subsequently divided by a rent-to-revenue to derive total sales of goods/services for each tenant property. Mixed use establishments are assumed to be 60 percent apartment, 30 percent retail, and 10 percent office. For hotels, the process property square footage is multiplied by revenue per square foot to determine industry sales. Total sales of goods and services at tenant properties are then uploaded to IMPLAN where they match industry activities.

Rental/Leasing

Property square footage data for properties with current occupants including apartment, office, industrial, and retail are multiplied by industry data on property-specific rental income. Mixed use establishments are assumed to be 60 percent apartment, 30 percent retail, and 10 percent office. Housing leasing income was not included in the IMPLAN analysis because accurate square footage data was unavailable. The total rental income amounts are uploaded directly into the IMPLAN model for analysis where they match with rental, leasing, and property management activities.

As with other asset classes, this analysis does not imply that the jobs created and sustained by our investments in real estate are directly attributable to the system. Rather, it is an estimate of employment directly related to the properties in question, for which our investments play an important enabling role.

Estimated California Jobs from CalPERS California Real Estate Investments

Construction of Residential and Non-Residential Properties

1,600

Sales of Goods and Services

4,400

Rental/ Leasing

171,000

Total Estimated Jobs in California

177,000

The following table outlines rental income per square foot, retail sales per square foot, rent to revenue ratios, and IMPLAN industry codes used in this analysis.

Assumptions for Real Estate IMPLAN

Industry	Rental Income per Square Foot	Retail Sales per Square Foot	Revenue per Square Foot	Rent-to-Revenue Ratio	IMPLAN Industry Codes and Description
Land	—	—	—	—	58: Other Construction
Mixed Use	—	—	—	—	58: Other Construction 440: Real Estate 405: Retail: General Merchandise
Housing	—	—	—	—	440: Real Estate

Industry	Rental Income per Square Foot	Retail Sales per Square Foot	Revenue per Square Foot	Rent-to- Revenue Ratio	IMPLAN Industry Codes and Description
Retail	\$23.55	\$325.00	—	—	57: Construction of new commercial structures, including farm structures 440: Real estate 405: Retail: General Merchandise
Office	\$33.62	—	—	4.0%	57: Construction of new commercial structures, including farm structures 440: Real estate 447-460: Various professional services (legal, accounting, architectural, technical, scientific, etc.)
Apartment	\$1.26	—	—	—	440: Real estate
Industrial	\$8.58	—	—	2.1%	440: Real estate 395: Wholesale Trade
Hotel	—	—	\$0.94	—	411: Hotels and motels, including casino hotels

Sources: Cassidy Turley, IBIS World, RetailSales, and Hotel News Now

²⁵ Our California real estate projects in the development and construction phase indirectly support workers across the state through the purchase of goods and services needed for construction of these projects, and through the personal consumption by construction workers tasked to these particular projects.

²⁶ Our California investments in income generating real estate properties directly support tenant businesses through the provision of critical infrastructure and operating space. Additionally, tenant businesses indirectly support workers across the state through the purchase of goods and services needed for day-to-day business operations and through the personal consumption of workers at their businesses on household purchases.

²⁷ See endnote 32 for methodology.

²⁸ Value includes all other capital invested alongside us in the same real estate investments in the same third-party funds, partnerships, and real estate investment trusts.

²⁹ Ancillary benefits are based on the 177 California real estate investments for which valid ZIP code data was available.

³⁰ Value includes all other capital invested alongside us in the same infrastructure projects.

³¹ California infrastructure supports an estimated 21,400 jobs statewide. This estimate is derived from the IMPLAN version 4.0 economic multiplier model software package. Stage of development, land acquisition costs, and development costs were examined for California infrastructure projects. For each project, net asset values less land acquisition costs were inputted directly into the IMPLAN model using IMPLAN Industry Code 58: Construction of other new nonresidential structures.

³² The total economic impact of our private markets investments is calculated using the IMPLAN Version 4.0 economic multiplier model software package. IMPLAN utilizes social accounts to analyze the consequences of projected economic transactions in a particular region. Used by over 2,000 public and private institutions, IMPLAN is a widely employed and accepted regional economic analysis tool.

Social accounts describe the structure and function of a specific economy. IMPLAN employs input-output analysis in conjunction with region-specific social accounts or social accounting matrices (SAM) and multipliers to analyze economic impacts.

Our California private markets investments in private equity, real estate, and infrastructure are input separately into the IMPLAN economic multiplier model using the specific industries and sectors receiving investment.

Our public markets investments are intentionally excluded from this analysis due to the more indirect relationship between our investment of capital and the use of this capital by recipient public companies

IMPLAN cannot be applied to our public market investments in California, for the following reasons:

1. Attribution: We can't directly tie our provision of capital to the operations and economic activity occurring at California headquartered public companies given we are one of many investors in these businesses.
2. Overestimation: Applying the IMPLAN economic multiplier model to our public market investments in California would overstate our total economic impact.
3. Area of study limitations: IMPLAN is an input-output economic multiplier model that requires a set geographic area of study. As California headquartered public companies have a significant number of facilities and operations in and outside of California it is difficult to specify what proportion of our investment in these companies is injected directly into California's economy, limiting the accuracy of the resulting total economic impact figure.

³³ To determine the total economic impact of our California private markets investments in private equity, real estate, and infrastructure, the IMPLAN model examines the State of California as the geographic area of study, capturing and accounting for economic benefits resulting from our investments statewide. Methodologies specific to each asset class were used in determining the input values for the IMPLAN model to best capture the economic impacts resulting from our investments. The methodologies are described below:

Private Equity Investments

Our private equity investment amounts in California private companies are uploaded directly into the IMPLAN model alongside an industry spending pattern that matches each company's industry or sector. Only our direct partnership investments and investments through third party investment managers were included in this analysis. Sector/industry data was available for \$1.6 billion of our California private equity investments. The \$1.6 billion we invest in California private companies is distributed across 96 industries based upon each company's industry and the amount of capital that company has received. For the \$525 million of investments where sector/industry data was not available, our analysis assumes they reflect the same industry/sector distribution as the wider portfolio. Accordingly, the remaining \$525 million has been distributed pro rata amongst the portfolio's 96 sectors.

Real Estate Investments

Our investment amounts in California real estate projects are uploaded into the IMPLAN model to capture the economic impacts resulting from the construction/operation of various property types. The same methodology that is used to calculate jobs supported by our California real estate investments is used to calculate the total economic impact resulting from our California real estate investments. This methodology is described in greater detail above in endnote 25.

Infrastructure Investments

Our investment amounts in California infrastructure projects are uploaded into the IMPLAN model to capture the economic impacts resulting from the construction/operation of various projects. The same methodology that is used to calculate jobs supported by our California infrastructure investments is used to calculate the total economic impact resulting from our California infrastructure investments. This methodology is described in greater detail above in endnote 32.

Conclusion

We invest \$33.5 billion (9.5 percent) of our \$351.8 billion in assets in California, including in the state's underserved communities. Our private market investments in California generate \$36.5 billion in economic activity and provide significant additional benefits resulting from the magnitude and breadth of our presence in the state.

We'll continue to pursue California-based investment opportunities grounded in the historic strength of the state economy, seeking attractive risk-adjusted financial returns. CalPERS for California demonstrates our ongoing commitment to rigorously track and report on these efforts.

Location of our Investments in California

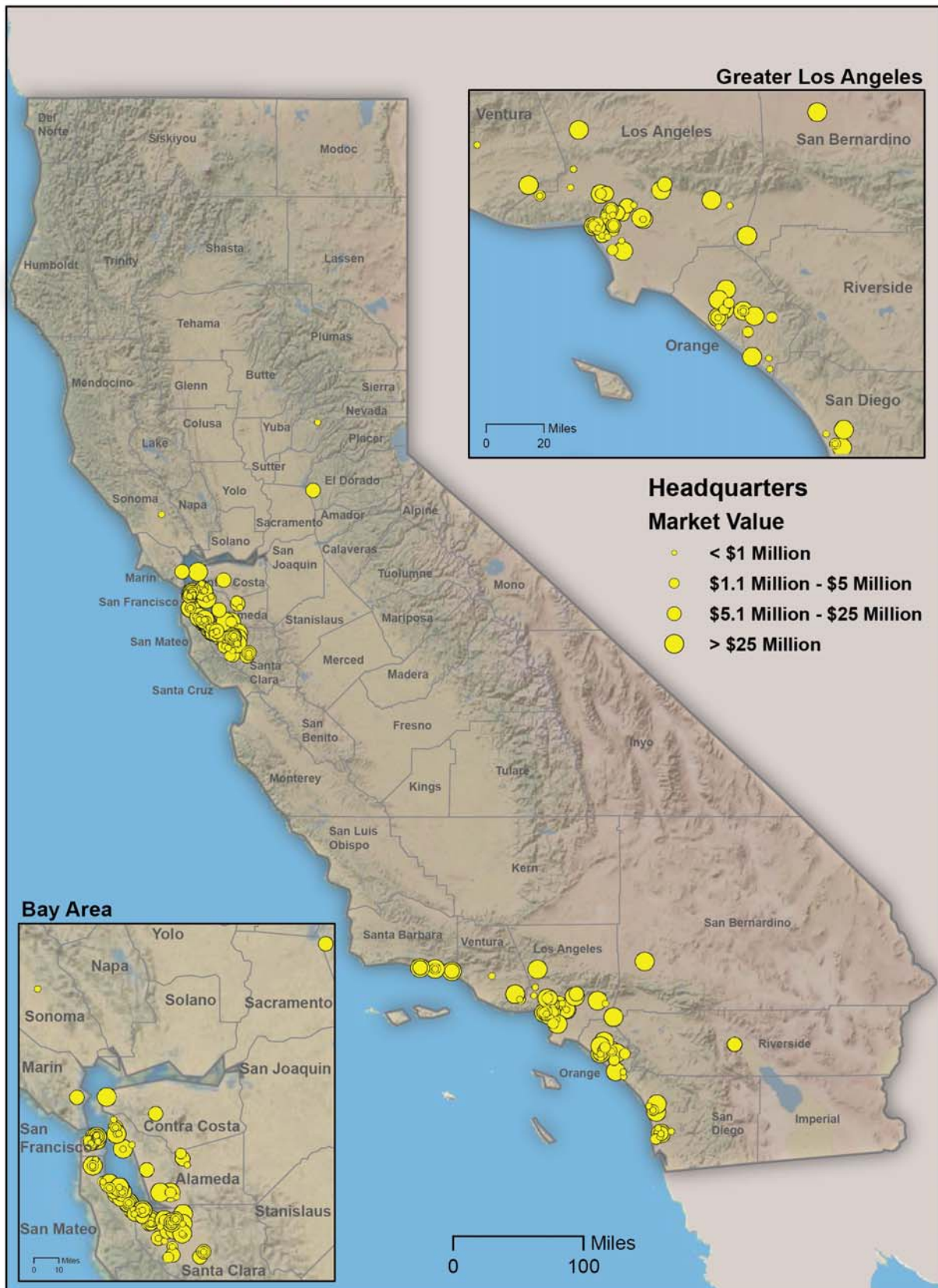


All Private Market Assets
(JPG)

Private Equity
Investments (JPG)

Real Estate &
Infrastructure
Investments (JPG)

CalPERS Private Equity Investments in California



CalPERS Real Estate and Infrastructure Investments in California

