**Appendix F: Labor Market Analysis by EDD's LMID**

**Table of Contents**

## A. CALIFORNIA'S ECONOMY IS BIG AND GROWING

- With a Gross Domestic Product of over $2.1 trillion in 2014, a labor market with more than 19 million participants, and a nonfarm economy with over 16 million jobs, California has the largest economy of any state in the nation.

- California experienced an economic rollercoaster ride over the decade ending in July 2015, beginning with a bursting of the housing bubble and ensuing Great Recession, a prolonged period of economic recovery, and ending with the economy in sustained expansion.

- The state also experienced a demographic transformation over the last decade as the predominantly white and native-born baby boomer generation has gotten older and begun retiring from the labor force, leaving the more racially and ethnically diverse millennial generation to take their place.

## B. THE GREAT RECESSION AND ITS AFTERMATH

### *1. The Great Recession*

- U.S. economic business cycles are officially arbitrated and dated by the National Bureau of Economic Research (NBER) based on their analysis of a basket of economic indicators, including real Gross Domestic Product (GDP), real income, employment, industrial production, and wholesale-retail sales. According to the NBER, the U.S. Great Recession began December 2007 and ended in June 2009. However, the NBER does not officially date business cycles in states, for which available data is more limited.

- By convention, economists date state business cycles by the peaks and troughs in total nonfarm payroll employment. Based on this criterion, California's economy entered recession earlier than the nation in July 2007 and emerged from recession later, in February 2010. However one dates the Great Recession in California, it was the deepest and most severe recession the state has experienced in the post-World War II era. The Great Recession continues to affect California's labor market to this day, even as its impacts fade with time.

## i. Statewide Nonfarm Job Loss

- California lost 1,333,000 nonfarm jobs from July 2007 through February 2010, a decline of 8.6 percent (see Reference A and B). One out of every 12 of the state's nonfarm wage and salary jobs disappeared during this extraordinary 31-month great recession period. Prior to the Great Recession, the worst recession that California had experienced in the post-World War II era was that of July 1990 through May 1993, during which time nonfarm job losses totaled 506,000 or 4.0 percent.

- The recession originated in the housing-oriented construction and financial activities industries, spread into the consumer economy, and from there into the rest of the economy. Although government was the last sector of the economy to be affected by recession, its effects were no less devastating as revenue losses due to the recession wreaked havoc on state and local government budgets beginning with the 2008-09 fiscal year. By its conclusion, all California industry sectors experienced substantial job losses during the July 2007 to February 2010 Great Recession with one notable exception (Reference B). Educational and health services added 117,800 jobs over the July 2007-February 2010 period. Construction (335,900) experienced the largest job loss in number over the July 2007 to February 2010 period, followed by trade, transportation, and utilities (311,000). Three additional industry sectors lost more than 100,000 jobs: manufacturing (226,100), professional and business services (222,500), and financial activities (137,700).

- All regions of the state experienced substantial job losses during the recession. The California Employment Development Department has identified eight economic markets for economic analysis based on population, commute patterns, labor market size, industry composition, and geographic location (see Reference C). Not seasonally adjusted data[1] show that California lost 1,258,700 nonfarm jobs from July 2007 through July 2010 (see Reference D), which is the period of time that best approximates the July 2007 to

[1] Seasonal adjustment is a statistical technique that models and filters out normal and predictable seasonal patterns of employment that are associated with recurring events during the calendar year such as the beginning and end of the school year or the holiday season. Once seasonality is removed from a data series, observed changes between any two points in time are presumed to reflect economic factors. Although seasonally adjusted total nonfarm employment data are available for most California metropolitan divisions and statistical areas, several areas of the state are uncovered. As such, a thorough analysis of regional and area job growth trends requires the use of not seasonally adjusted jobs data. The most effective way to filter seasonality out of not seasonally adjusted data is to compare like months in a year.

February 2010 recession when using unadjusted data. The Southern Economic Market, which includes the Los Angeles Basin and represents the state's largest economic market, lost 689,900 jobs over this three-year period. Nonfarm job losses in the state's seven remaining economic markets ranged from a high of 251,000 in the San Francisco Bay Area to a low of 5,300 jobs in the Eastern Sierra, the state's smallest economic market.

- In percentage terms, California total nonfarm payrolls fell by 8.2 percent over the July 2007 to July 2010 period. Sacramento (10.6 percent) experienced the largest percentage job loss among the state's eight economic markets, followed by Southern (9.4 percent), Eastern Sierra (8.6 percent) and Northern (8.6 percent). San Joaquin Valley (8.3 percent) was the remaining economic market that had a larger percentage job loss than the state as a whole over the July 2007 to July 2010 period. Although Coastal (6.3 percent), Southern Border (6.3 percent), and the San Francisco Bay Area (7.4 percent) experienced smaller percentage job losses than the state as a whole from July 2007 through July 2010, each economic market experienced significant job losses.

## ii. Unemployment

- Unemployment in California skyrocketed during the Great Recession. From its pre-recession low of 4.9 percent during the months of March 2006 through December 2006, California's seasonally adjusted unemployment rate rose by 7.3 percentage points to a peak of 12.2 percent in the months of February through April and September and October of 2010 (see Reference E). This was the highest unemployment rate on record that California has experienced in a series dating back to January 1976, eclipsing the previous high of 11.0 percent that occurred in December 1982 and January 1983.[2]

- The number of unemployed Californians rose from a pre-recession low of 859,000 persons in August and September 2006 to a peak of 2,231,000 in October 2010 (see Reference F), an increase of nearly 1.4 million persons (160 percent).

- All of California's economic markets experienced steep increases in unemployment during the Great Recession (see Reference G). California's not seasonally adjusted unemployment rate rose from 5.2 percent in July 2006 to 12.6 percent in July 2010, an increase of 7.4 percentage points.[3] Unemployment rate increases in California's eight economic markets over this same period ranged from a low of 5.9 percentage points in the San Francisco Bay Area and Coastal economic markets to a high of 8.8 percentage points in San Joaquin Valley. Moreover, the unemployment rate in each of California's 58 counties rose by 4.0 percentage points or more during the period.

- All demographic groups in California experienced rising unemployment during the recession. The unemployment rates of demographic groups are calculated differently from the official unemployment rate in that they are derived from raw Current Population Survey (CPS) of household data and are expressed on a 12-month average basis only. According to these 12-month average CPS data, California's overall unemployment rate attained a low of 4.8 percent in March 2007 and rose 7.4 percentage points to reach 12.2 percent in December 2010. Over this same period the unemployment rate among California men rose by 8.1 percentage points compared to just 6.4 percent among women. Unemployment rates rose among all of California's major racial and ethnic groups between March 2007 and December 2010, with the largest increase occurring among African Americans (9.8 percentage points) and Latinos (9.2 percentage points) and the smallest increases occurring among Asians (6.0 percentage points) and Whites (7.3 percentage points).

[2] According to unofficial historical data, the peak unemployment rate of 12.2 percent that was associated with the Great Recession was the highest unemployment rate the state has experienced since December 1940.
[3] Using not seasonally adjusted data, the July 2006 through July 2010 best approximates the trough-to peak increase in the seasonally adjusted unemployment that was discussed previously.

- Unemployment was strongly correlated with age (work experience) and education (skill level), with inexperienced youths and less educated or unskilled workers suffering most during the recession. The unemployment rate among California youths age 16 to 24 increased from 10.8 percent in March 2007 to 22.8 percent in December 2010, an increase of 12.0 percentage points from March 2007. The unemployment rate among teens and youths age 20 to 24 rose by 16.5 and 11.2 percentage points, respectively, over the same period to 34.4 and 19.0 percent in December 2010. In contrast, the unemployment rate among prime working age Californians age 25 to 54 increased from 3.9 percent in March 2007 to 10.9 percent in December 2010, an increase of 7.0 percentage points. Older workers had the lowest unemployment rates of any age group in December 2010 - 9.5 percent among workers age 55 to 64 and 9.0 percent among workers age 65 and older. Both of these older worker cohorts experienced an unemployment rate increase of 6.0 percentage points over the March 2007 to December 2010 period.

- The unemployment rate among California workers who attained less than a high school diploma shot up from 9.3 percent in March 2007 to 19.1 percent in December 2010, an increase of 9.9 percentage points. High school diploma holders and workers who had attended some college but hadn't received a degree fared little better, experiencing unemployment rate increases of 9.7 and 9.3 percentage points, respectively, over the March 2007 through December 2010 period. In contrast, the unemployment rate among associate degree holders and those with a bachelor's degree or higher increased by 6.5 and 4.0 percentage points, respectively, over the same period. The unemployment rate among workers with a Bachelor's degree or higher stood at just 6.7 percent in December 2010.

## iii.California Gross Domestic Product (GDP)

- The economic costs of the Great Recession in California can be measured through California's GDP provided by the U.S. Bureau of Economic Analysis. In real terms, or chained 2009 dollars, California GDP fell from $2.0 trillion in 2008 to $1.9 trillion in 2009, a decrease of 4.4 percent. The state lost $88 billion in economic activity in a single year.

- California's GDP grew by $198 billion over the five years from 2009 through 2014. The pace at which it was growing accelerated during this period. The state GDP grew at a comparatively sluggish pace early in the recovery, growing by 1.1 and 1.2 percent in 2010 and 2011, respectively. GDP growth accelerated to 2.5 percent in 2012, held more or less steady at 2.3 percent in 2013, and strengthened to 2.8 percent in 2014. 2014 was California's strongest year of GDP growth since 2006, when it grew by 3.6 percent.

- The share of two industry sectors in total GDP grew by more than one percent over the 2009 through 2014 period. Professional and business services share of total GDP increased 1.5 percentage points from 12.3 percent to 13.8 percent and information's share grew 1.3 percentage points from 7.4 to 8.7 percent. In contrast, the share of government and manufacturing in total GDP fell by 1.0 percentage point or more. Government's share of total GDP fell 1.5 percentage points from 13.7 percent in 2009 to 12.2 percent in 2014 and manufacturing's share 1.0 percentage point from 12.0 percent in 2009 to 11.0 percent in 2014.

*2. Recovery and Expansion*

# i. Statewide Nonfarm Job Growth

- California total nonfarm employment finally bottomed out in February 2010 and the economy has been expanding ever since. However, the recovery from the recession was a slow and arduous process. It took four years (48 months) or until February 2014 for California to recover the 1,333,000 nonfarm jobs it lost during the 31-month period from July 2007 to February 2014. In so doing, total nonfarm employment returned to where it had peaked previously in July 2007, nearly seven years prior. Although this was a major milestone for the economy, it was only one part of the recovery process since the state's working age population grew by over 2.7 million persons over the July 2007 to February 2010 period. Fortunately, California's economic and employment growth since February 2014 has been strong enough to begin narrowing the gap between where it is and where it needs to be to accommodate the state's growing population.

- California total nonfarm payrolls grew by 2,027,700 jobs from February 2010 through July 2015, an increase of 14.4 percent over this 65-month period (see Reference H). It took time for the economy to gather strength. Over the first 22 months of the expansion, or from February 2010 through December 2010, the California economy added 342,200 jobs, growing at an average pace of 15,600 nonfarm jobs per month or an annualized pace of 1.3 percent. Beginning in 2012, the California's economic expansion took off. The state gained 1,685,500 jobs from December 2011 through July 2015, growing at a remarkably consistent pace of 39,200 jobs per month, or an annualized pace of 3.3 percent.

- Nine of California's 11 major industry sectors gained jobs during the early recovery period with job growth concentrated in high technology, trade, and consumer-oriented industries. The state's professional and business services sector added 129,200 jobs from February 2010 through December 2010, growing at an annualized pace of 3.4 percent over the period. Over half (55.6 percent) of the sector's job gains during this period occurred in the high-technology-oriented professional, scientific, and technical services subsector, which added 71,800 jobs and grew at an annualized pace of 3.9 percent. The state's trade, transportation, and utilities sector added 92,000 jobs during the early recovery period, with the strongest growth occurring in wholesale trade (29,100 jobs; 2.5 percent annualized growth) and retail trade (51,500 jobs; 1.9 percent annualized growth). Leisure and hospitality added 73,100 jobs and grew at an annualized pace of 2.7 percent from February 2010 through December 2010, with 90.0 percent of this gain occurring in the accommodation and food services subsector. Educational and health services added 63,500 jobs and grew at an annualized rate of 1.7 percent during the early recovery period, with over half of these gains occurring in educational services. Mining and logging (9.6 percent) and other services (3.6 percent) were the other California industry sectors that grew at a faster annualized pace than the economy-wide rate of 1.3 percent.

- California's overall job growth during the early recovery period was dampened by job losses in government, and to a much lesser extent, information. California government lost 55,500 jobs over the February 2010 to December 2011 period, with local government accounting for over 90 percent of the sector's job loss. Information lost 1,900 jobs over the period.

- California's economic expansion gathered force at the beginning of 2012 and extended throughout the economy. Ten of California's 11 industry sectors gained jobs from December 2011 through July 2015, when the economy expanded at a more robust pace. Professional and business services (412,000) continued to add the most jobs of any sector over this period, followed by educational and health services (391,100); leisure and hospitality (274,400); and trade, transportation, and utilities (253,500). In addition, construction gained 149,500 jobs over the December 2011 to July 2015 period, and government and information, the two industry sectors that lost jobs during the early recovery period, gained 47,600 and 45,800 jobs, respectively. Mining and logging (1,100) was the only California industry sector that experienced a net job loss over the December 2011 through July 2015 period, reflecting the collapse in oil prices that occurred in 2014.
- In percentage terms, construction enjoyed the fastest job growth over the December 2011 through July 2015 period, growing at an annualized pace of 7.3 percent. Professional and business services (5.3 percent), educational and health services (5.2 percent), and leisure and hospitality (4.9 percent) were the other California industry sectors that grew at a faster rate than the overall economy's annualized rate of 3.3 percent over the December 2011 through July 2015. Every California industry sector experienced more rapid job growth over the December 2011 through July 2015 period than it did during the early recovery period, with the exception of mining and logging.

- Looking at the entire February 2010 to July 2015 expansion, professional and business (541,200) gained the most jobs of any California industry sector, with half (273,000 jobs) of these gains occurring in the professional, scientific, and technical services subsector. Educational and health services (454,500) had the second largest job gain, over four-fifths of which occurred in the health care and social assistance subsector. Leisure and hospitality (347,500); trade, transportation, and utilities (345,500); and construction (157,400) were the remaining industry sectors that gained at least 150,000 jobs. Government was the only California industry sector to experience a net loss of jobs over the period, losing 7,900 jobs.

- In July 2015, California total nonfarm employment exceeded its pre-recession peak in July 2007 by 694,700 jobs (see Reference I). Employment increased in six industry sectors: educational and health services; professional and business services; leisure and hospitality; other services; trade, transportation, and utilities; and mining and logging. However, employment in five industry sectors had yet to return to their July 2007 levels. In order of the magnitude of the shortfall, they were: manufacturing, construction, financial activities, government, and information. In addition, within the trade, transportation, and utilities sector, employment in the retail trade subsector had yet to return to July 2007 levels.

## ii. Demand and Emergent Industries (Over the Last Three Years)

- As discussed previously, four industry sectors have driven California's economic expansion: professional and business services, educational and health services, leisure and hospitality, and construction. Within these sectors are a range of high, middle, and low paying industries. However, the drivers of California's economy have been its high technology and information services (including social media) industries, international trade, and a recovering housing market.

- The best way to identify demand and emergent industries using available labor market information resources is to identify the fastest growing industries in the highest level of detail available. Although the identification of emergent industries is beyond the scope of this analysis given the limitations of the historically-oriented North American Industry Classification System (NAICS)[4], it is safe to assume they are included within what are currently the fastest growing industries in the economy.

[4] Essentially, an industry has to have already emerged for it to receive a NAICS classification.

- California has experienced strong and steady job growth since the beginning of 2012. Reference J shows the detailed California industries that experienced the largest job gains and grew at the fastest rate over the three years ending in July 2015. Because industry data are not seasonally adjusted, this time interval best approximates industry job growth trends at the height of the current economic expansion. Not seasonally adjusted, California total nonfarm payrolls grew by 9.8 percent from July 2012 through July 2015. The industries shown (see Reference J) grew by 14.8 percent or more over the three years ending in July 2015. Also listed are industries that gained 9,000 or more jobs over the last three years.

- Several information technology industries are among California's fastest growing industries, including: other information services; data processing, hosting, and related services; computer systems design and related services; management, scientific, and technical consulting services; electronic computer manufacturing; and specialized design services. These tend to be high paying industries that demand highly skilled workers.

- California's fastest growing industries also include several industries associated with California's rebounding housing and construction sector, including but not limited to: building material and garden equipment and supply dealers; building finishing contractors; residential and nonresidential building construction; building foundation and exterior contractors; lumber and other construction materials merchant wholesalers; and offices of real estate agents and brokers. These industries tend to employ middle skilled workers and pay middle level wages.

- Several of California's fastest growing industries are in the population-serving educational and health services sector, including but not limited to: individual family services; offices of other health practitioners; (private) elementary and secondary schools, and community care facilities for the elderly. As a group, these industries employ a mix of middle and low skill workers and pay middle-to-low wages.

- Several industries that tend to employ low skill workers and pay low wage industries are also among California's fastest growing, including but not limited to: amusement parks and arcades; employment services; limited-service eating places; special food services; investigation and security services; and drinking places.

### a. Industry Wages in the Fourth Quarter of 2014

- While industry job growth totals tell a story of how different industry sectors are performing, they say little about whether an industry tends to pay high or low wages. This section provides an industry wage template using Quarterly Census of Wages and Employment (QCEW) data. The most recent QCEW data that are available are from the fourth quarter of 2014.

- The QCEW publishes average weekly wages for California industries based on the employment and payroll totals reported by California businesses that participate in the Unemployment Insurance program. This covers about 98 percent of businesses in California. Based on the QCEW, California industry sectors and subsectors can be classified as high wage, middle wage, and low wage sectors.

- California's high wage industry sectors, with the average weekly wage listed in parentheses for the fourth quarter of 2014, include: mining and logging ($3,062), information ($2,725), financial activities ($1,879), manufacturing ($1,648), and professional and business services ($1,626). Professional and business services have something of a split personality. Whereas average weekly wages in the management of companies and enterprises and professional, scientific, and technical services subsectors were $2,265 and $2,254 respectively, they were only $762 in the low wage administrative and support and waste remediation services subsector.

- California's middle wage industry sectors, with the average weekly wage listed in parentheses for the fourth quarter of 2014, include: construction ($1,250); government (approximately $1,200); educational and health services ($977); and trade, transportation, and utilities ($948). Within the trade, transportation, and utilities sector, the wholesale trade ($1,499) and transportation, warehousing, and utilities ($1,114) subsectors may be classified as middle wage industries, but retail trade ($664) is clearly a low wage industry.

- The industries with the lowest average weekly wages include: leisure and hospitality ($594); agriculture, forestry, fisheries, and forestry ($603); and other services ($707). The retail trade and administrative and support and waste remediation subsectors can also be classified as low wage industries.

## iii.California's Economic Markets

- California's recovery and expansion have extended to all regions of California. From July 2010 through July 2015, which is the time period that best captures the expansion using not seasonally adjusted data, California total nonfarm payrolls grew by 1,905,900 jobs, or by 13.5 percent (see Reference K). Each of the state's eight economic markets experienced net job gains over this period. As befitting its large size, the Southern Economic Market gained the most jobs of any region, adding 818,000 jobs over the five-year period. San Francisco Bay Area had the second highest five-year growth among regions, adding 592,200 jobs. Southern Border (159,300) and San Joaquin Valley (128,400) were the other economic markets that gained more than 100,000 jobs over the July 2010 to July 2015 period, although Sacramento's 95,000-job gain came close.

- In percentage terms, San Francisco Bay Area (18.9 percent) experienced far and away the strongest job growth among California economic markets over the five years ending in July 2015. San Francisco Bay Area was the only California economic market, which bettered the overall economy's 13.5 percent job gain. Underscoring the important role that high technology and information technology industries have as drivers of California's economy, San Francisco-Redwood City-South San Francisco Metropolitan Division (MD) and San Jose-Sunnyvale-Santa Clara Metropolitan Statistical Area (MSA), the two areas that encapsulate Silicon Valley, were the fastest growing areas in the San Francisco Bay Area Economic Market with five-year job gains totaling 23.1 and 23 percent, respectively.

- Total nonfarm payrolls in both the Southern and Southern Border economic markets grew by 12.4 percent, by 11.9 percent in San Joaquin Valley, and by 10.7 percent in Sacramento over the five years ending in July 2015. Although each of California's three smallest regions, which tend to be more sparsely populated and agriculturally-oriented, added jobs over the July 2010 to July 2015 period, their percentage job gains were weaker than those in the state's five largest regions, ranging from a 3.0 percent gain in Eastern Sierra to a 7.6 percent gain in Coastal Economic Market.

- The San Francisco Bay Area Economic Market led California's economy out of recession and into recovery. From the trough in February 2010 through February 2012, California total nonfarm payrolls grew by 3.2 percent (not seasonally adjusted). San Francisco Bay Area (4.2 percent) had the strongest growth of any region during this period. The recovery was more mixed in other regions of the state, but strongest in Southern Border (2.7 percent), Southern (2.4 percent), Coastal (2.2 percent), and San Joaquin Valley (1.9 percent). In contrast, job growth lagged behind this in Sacramento (0.8 percent) and Northern and Eastern Sierra Economic Markets experienced job losses of 1.4 and 3.2 percent, respectively, from February 2010 through February 2012. Generally speaking, job growth was weakest where government or housing-oriented industries played a comparatively large role in the regional economy.

- Job growth in California and each of its eight economic markets was appreciably stronger over the three years ending in July 2015 as government finances stabilized and housing markets bottomed out and joined the

recovery. California total nonfarm payrolls grew by 9.8 percent over the July 2012 to July 2015 period, or at a pace of 3.2 percent per year. At the regional level, job growth in San Francisco Bay Area Economic Area continued to outpace that of other regions, growing by 12.3 percent or 4.1 percent per year. Southern Border (9.0 percent), Southern (8.9 percent), Sacramento (8.6 percent), and San Joaquin Valley (8.2 percent) were the other economic markets with three-year job gains of more than 8 percent. Although the rate of job growth lagged behind in the state's three smallest economic markets, each region experienced net job growth over the three years ending in July 2015, ranging from a gain of 4.5 percent in Eastern Sierra to a 7.6 percent gain in the Northern Economic Market.

## iv. Future Projected Demand and Emergent Industries

Total industry employment in California, which includes self-employment, unpaid family workers, private household workers, farm employment, and nonfarm employment, is expected to reach 18,708,600 by 2022, an increase of 14.9 percent during the 10-year projection period. Total nonfarm employment is projected to add 2,296,700 jobs during the same period. Seventy-two percent of all projected nonfarm growth is concentrated in four industry sectors, educational services, health care, and social assistance; professional and business services; leisure and hospitality; and retail trade.

The major industry sector projected to have the largest job growth is educational services (private), health care, and social assistance, accounting for 25 percent of the projected nonfarm job growth. The projected growth for the sector is 576,300 jobs during the 10-year projection period (see Reference L). As the population grows and demographics change, the demand for workers in the educational services (private), health care, and social assistance sector will remain high. The greatest concentration of job gains is projected to occur in the following subsectors:

- Social assistance (201,300)
- Ambulatory health care services (181,900)
- Educational services (private) (79,200)

The major industry sector projected to have the fastest growth rate is construction with an expected annual average growth rate of 3.4 percent (see Reference M). The expected job gain of 201,700 in construction is due to the improving housing market across California. The number of home building permits is forecasted to grow at an annual average rate of 20.4 percent with residential building construction projected to grow at a 4.5 percent annual average rate. Within this sector, the greatest concentration of job gains is projected in the following industry groups:

- Building equipment contractors (46,100)
- Building finishing contractors (38,900)
- Residential building construction (35,700)

The top 25 industry groups that are expected to generate the most employment are projected to account for nearly 1,498,500 jobs during the 2012-2022 projection period (see Reference N).

- Seven of the top 25 industry groups generating the most employment are within the health care and social assistance subsector. They are expected to generate 439,100 jobs during the 10-year projection period.
- Individual and family services tops the list with a projected employment growth of 197,300 jobs during the 10-year projection period.

The top 25 industry groups by percentage growth are expected to grow a combined 40.4 percent (1,038,900 jobs) during the 10-year projection period.

- Six of the top 25 fastest growing industry groups are within the health care and social assistance subsector.
- Management, scientific, and technical consulting services tops the list with an expected growth rate of 69.2 percent during the 10-year projection period.

### a. Top 25 Middle-Skilled Occupations with Replacement Needs

Middle-skilled occupations are those that require more than a high school education but less than a four-year degree. The top 25 middle-skilled occupations (see Reference O) that are expected to generate the most job openings are projected to account for nearly 497,000 job openings during the 2012-2022 projection period. These openings include approximately 225,000 openings due to new job growth and 272,000 due to replacement needs. Replacement needs estimate the number of job openings created when workers retire or permanently leave an occupation and need to be replaced.

- Registered nurses top the list with an expected 92,300 openings during the projection period (see Reference O).
- Ten of the top 25 occupations are in a health care related field and are expected to generate 256,000 openings during the 10-year projection period.
- Annual salaries range from $19,115 for manicurists and pedicurists to $100,312 for dental hygienists.

(next page)

### b. Knowledge Requirements in California's Top 10 Middle-Skilled Occupations

The table below lists the top 10 occupations and associated knowledge requirements categorized by middle-skilled[5] education level and total projected job openings[6]. Knowledge requirements are organized sets of principles and facts applying to a wide range of situations acquired through education or experience. These are grouped into 33 categories, which include some of the following: administration and management; computers and electronics; education and training; mathematics; sales and marketing; and transportation. The most common among the top 10 occupations are customer and personal service; education and training; and English language. The knowledge requirements identified for each occupation are from the U.S. Department of Labor's Occupational Information Network (O*NET) which is a comprehensive system that provides information for over 950 occupations within the U.S. economy.

[5] Middle-skilled occupations are jobs, which require education beyond high school but not a four-year degree.
[6] For the 2012-2022 period, the total projected job openings reflect the sum of new and replacement jobs.

| Occupations | Knowledge | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Administration and Management | Biology | Chemistry | Clerical | Communications and Media | Computers and Electronics | Customer and Personal Service | Education and Training | Engineering and Technology | English Language | Geography | Law and Government | Mathematics | Mechanical | Medicine and Dentistry | Personnel and Human Resources | Philosophy and Theology | Production and Processing | Psychology | Public Safety and Security | Sales and Marketing | Sociology and Anthropology | Telecommunications | Therapy and Counseling | Transportation |
| Registered Nurses | | ● | | ● | | | ● | ● | | ● | | | ● | | ● | | | | ● | | | ● | | ● | |
| Teacher Assistants | | | | ● | | ● | ● | ● | | ● | ● | | ● | | | | | | ● | | | ● | | ● | |
| Heavy and Tractor-Trailer Truck Drivers | ● | | | | | | ● | ● | | ● | ● | ● | ● | ● | | | | | | ● | | | | | ● |
| Nursing Assistants | | | | ● | | ● | ● | ● | | ● | | | | | ● | ● | | | ● | ● | | | | ● | |
| Medical Assistants | ● | | | ● | | ● | ● | ● | | ● | | | | | ● | | | | ● | ● | | | | ● | |
| Licensed Practical and Licensed Vocational Nurses | | | ● | ● | | | ● | ● | | ● | | | ● | | ● | | ● | | ● | | | | | ● | |
| Computer User Support Specialists | ● | | | ● | ● | ● | ● | ● | ● | ● | | | ● | | | | | | | | | | ● | | |
| Preschool Teachers, Except Special Education | ● | | | | | | ● | ● | | ● | ● | | | | | | ● | | ● | ● | | ● | | ● | |
| Hairdressers, Hairstylists, and Cosmetologists | ● | | ● | | ● | | ● | ● | | ● | | | ● | | | ● | | | ● | | ● | | | | |
| Dental Assistants | | | ● | ● | | ● | ● | ● | | ● | | | | | ● | | | ● | ● | | ● | | | | |

*Source: U.S. Department of Labor's* Occupational Information Network (O*NET) *at www.onetonline.org.*

### c. Skill Requirements in California's Top 10 Middle-Skilled Occupations

The table below lists the top 10 occupations and associated skill requirements categorized by middle-skilled[7] education level and total projected job openings[8]. Skills are developed capacities that facilitate learning or the more rapid acquisition of knowledge that are developed through training or experience. Skills cover performance applicable to a broad range of jobs in the world's economy. These are grouped into six categories: basic; complex problem solving; resource management; social systems; and technical. The most commonly shared skills are active listening; critical thinking; monitoring; service orientation; and speaking. The skill requirements identified for each occupation are from the U.S. Department of Labor's Occupational Information Network (O*NET) which is a comprehensive system that provides information for over 950 occupations within the U.S. economy.

[7] Middle-skilled occupations are jobs, which require education beyond high school but not a four-year degree.
[8] For the 2012-2022 period, the total projected job openings reflect the sum of new and replacement jobs.

| Occupations | Skills | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Active Learning | Active Listening | Complex Problem Solving | Coordination | Critical Thinking | Equipment Maintenance | Instructing | Judgment and Decision Making | Learning Strategies | Monitoring | Operation and Control | Operation Monitoring | Persuasion | Reading Comprehension | Service Orientation | Social Perceptiveness | Speaking | Time Management | Writing |
| Registered Nurses | ● | ● | | ● | ● | | ● | | | ● | | | | ● | ● | ● | ● | | |
| Teacher Assistants | | ● | | ● | ● | | ● | | ● | ● | | | | ● | ● | ● | ● | | |
| Heavy and Tractor-Trailer Truck Drivers | | ● | ● | | ● | ● | | | | ● | ● | ● | | ● | | | ● | ● | |
| Nursing Assistants | ● | ● | | ● | ● | | | | | ● | | | | ● | ● | ● | ● | | ● |
| Medical Assistants | ● | ● | | ● | ● | | | | | ● | | | | ● | ● | ● | ● | | ● |
| Licensed Practical and Licensed Vocational Nurses | | ● | | ● | ● | | | ● | | ● | | | | ● | ● | ● | ● | ● | |
| Computer User Support Specialists | ● | ● | | ● | ● | | ● | | | ● | | | | ● | ● | | ● | | ● |
| Preschool Teachers, Except Special Education | | ● | | ● | ● | | | | ● | ● | | | | ● | ● | ● | ● | ● | |
| Hairdressers, Hairstylists, and Cosmetologists | ● | ● | | | ● | | ● | | ● | ● | | | ● | | ● | ● | ● | | |
| Dental Assistants | ● | ● | | | ● | | ● | | | ● | | | | ● | ● | ● | ● | | ● |

*Source: U.S. Department of Labor's Occupational Information Network (O*NET) at www.onetonline.org.*

### d. Ability Requirements in California's Top 10 Middle-Skilled Occupations

The table below lists the top 10 occupations and associated ability requirements categorized by middle-skilled[9] education level and total projected job openings[10]. Abilities are enduring attributes of the individual that influence performance and demonstrates proficiency in a particular area. These are grouped into four categories: cognitive; physical; psychomotor; and sensory abilities. The most common include oral comprehension and oral expression, followed by near vision; deductive reasoning; problem sensitivity; and written comprehension. The ability requirements identified for each occupation are from the U.S. Department of Labor's Occupational Information Network (O*NET) which is a comprehensive system that provides information for over 950 occupations within the U.S. economy.

[9] Middle-skilled occupations are jobs which require education beyond high school but not a four-year degree.
[10] For the 2012-2022 period, the total projected job openings reflect the sum of new and replacement jobs.

| Occupations | Abilities | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Arm-Hand Steadiness | Control Precision | Deductive Reasoning | Far Vision | Finger Dexterity | Fluency of Ideas | Inductive Reasoning | Information Ordering | Manual Dexterity | Multilimb Coordination | Near Vision | Oral Comprehension | Oral Expression | Originality | Problem Sensitivity | Rate Control | Reaction Time | Response Orientation | Speech Clarity | Speech Recognition | Static Strength | Trunk Strength | Visual Color Discrimination | Visualization | Written Comprehension | Written Expression |
| Registered Nurses | | | ● | | | | ● | ● | | | ● | ● | ● | | ● | | | | | ● | | | | | ● | ● |
| Teacher Assistants | | | | | | | ● | ● | | | ● | ● | ● | | ● | | | | ● | ● | | | | | ● | ● |
| Heavy and Tractor-Trailer Truck Drivers | | ● | | ● | | | | | | ● | ● | ● | ● | | | ● | ● | ● | | | ● | | | | | |
| Nursing Assistants | | | ● | | | | | | | | ● | ● | ● | | ● | | | | ● | ● | ● | ● | | | ● | |
| Medical Assistants | | | ● | | | | ● | | | | ● | ● | ● | | ● | | | | ● | ● | | | | | ● | ● |
| Licensed Practical and Licensed Vocational Nurses | | | ● | | | | ● | ● | | | ● | ● | ● | | ● | | | | | ● | | | | | ● | ● |
| Computer User Support Specialists | | | ● | | | | ● | ● | | | ● | ● | ● | | ● | | | | ● | | | | | | ● | ● |
| Preschool Teachers, Except Special Education | | | ● | | | ● | | ● | | | | ● | ● | ● | ● | | | | | ● | | | | | ● | ● |
| Hairdressers, Hairstylists, and Cosmetologists | ● | | ● | | ● | ● | | | ● | | ● | ● | ● | | | | | | | | | | ● | ● | | |
| Dental Assistants | ● | | ● | | | | ● | | | | ● | ● | ● | | ● | | | | | ● | | | | | ● | ● |

*Source: U.S. Department of Labor's Occupational Information Network (O*NET) at www.onetonline.org.*

### e. California Middle Skill Supply and Demand Analysis

According to the National Skills Coalition (NSC), middle-skill jobs account for more of California's economy than either low-skill or high-skill jobs. These middle-skill jobs, requiring an education beyond high school but less than a four-year degree, are in high demand in California (see Reference P). In 2012, 50 percent of all jobs in California were middle-skill. Projecting into the future, from 2010-2020, it is expected that middle-skill jobs will represent 47 percent of job openings, showing a continually strong demand. Unfortunately, only 40 percent of the state's workers have education and/or training at the middle-skill level even though middle-skill jobs make up half of California's labor market.[11]

The State Workforce and Education Alignment Project (SWEAP), a National Skills Coalition initiative, is a strategic endeavor to provide state officials with supply and demand information to identify and measure industry skill gaps. These supply and demand reports are essential as one of several system-wide data tools. By comparing the supply of skilled workers who have completed education and training programs with employer demand using job openings as a short-term indicator and employment projections as a long-term indicator, workforce development, legislative and other government officials can assess where education and training programs in the state are needed to address gaps, and to direct resources to where they are most needed to meet employer demand.

California has completed a literature review on best practices for capturing supply and demand data and has concluded that both short-term and long-term demand indicators are necessary to capture long-term trends as well as to adjust for seasonal and temporary economic fluctuations. On the supply side, California's project scope currently focuses on using the California Community Colleges Chancellor's Office's completer data. The table below displays the supply and demand for the top 10 middle skills occupations in California, with their respective long-term total projected job openings and real-time Help Wanted Online™ (HWOL) job advertisements, along with associate degree and certificate completer data.

California's SWEAP participation is ongoing with a goal to create a robust supply and demand tool to inform the workforce development community and policy and decision-makers in their concerted efforts to most effectively close middle-skill gaps.

[11] Bryan Wilson, "How Many More Skilled Workers Do We Need? Using Supply and Demand Reports for State Workforce Planning." National Skills Coalition, June 2014.

## v. Regional Planning Unit Framework

The Regional Planning Unit (RPU) framework provides a basis upon which Local Boards and chief elected officials (CEOs) can incorporate each of their local plans into a regional plan. The WIOA requires Local Boards and CEOs to cooperate within a planning region and develop a common response to local planning requirements that discusses regional labor market information. The use of economic and labor market information ensures that local strategies are based on a thorough understanding of the economic opportunities and workforce needs of the region, and informs the alignment of the best interests of job seekers and employers with the economic future of the state.

The RPU framework is primarily based on population and commute patterns, but also labor market information and geographic location. The purpose of this framework is to place counties with shared labor markets into regional planning units as a basis to satisfy local and regional planning requirements. The WIOA also prohibits the division of existing Local Workforce Development Areas (LWDAs) for the purpose of creating regional planning units. Therefore, the RPU framework protects the current configuration of LWDAs and places them into regional planning units based on shared labor markets and workforce investment opportunities.

There is a total of 14 Regional Planning Units:

- Coastal Region
- Middle Sierra
- North Coast
- North State
- Capitol Region
- East Bay
- North Bay
- Bay Peninsula
- San Joaquin Valley and Associated Counties
- Southern Border
- Los Angeles Basin
- Orange
- Inland Empire
- Ventura

## C. WHILE CALIFORNIA'S ECONOMY IS BIG AND GROWING, IT IS STILL CHARACTERIZED BY INEQUALITY

### *1. Unemployment*

- Unemployment in California has decreased steadily over the course of the current expansion. California's seasonally adjusted unemployment rate stood at 6.2 percent in July 2015, which was the lowest the rate had been since February 2008. California's unemployment rate fell by 6.0 percentage points from its most recent peak of 12.2 percent in October 2010 through July 2015.

- There were 1,179,000 unemployed Californians in July 2015, which less than there had been in any month since March 2008. The number of unemployed Californians fell by 1,052,000 from its recessionary high in October 2010 through July 2015. California civilian unemployment fell at a remarkably consistent pace over this period and as of July 2015, has fallen in 56 out 57 months. Despite this improvement, 320,000 more Californians were unemployed in July 2015 than in September 2006, which was the pre-recession low.

- The unemployment situation has improved across age, racial and ethnic, and educational attainment groups during the current expansion (see Reference Q). According to a 12-month average of Current Population Survey data, California's unemployment rate peaked at 12.2 percent in December 2010 and fell to 6.7 percent in July 2015, a decrease of 5.5 percentage points. Over this same period:

    - The unemployment rate among youths age 16 to 24 decreased from 22.8 percent in December 2010 to 13.8 percent in July 2015, a decrease of 9.0 percentage points. The unemployment rate of teens age 16 to 19 and youths age 20 to 24 fell by 11.9 and 7.7 percentage points, respectively.[12] In contrast, the unemployment rate among prime working age workers (age 25 to 54) fell by 5.3 percentage points over the same period, and the rate among older workers age 55 to 64 and over 65 fell by 4.2 and 3.2 percentage point, respectively.
    - The unemployment rate of California men fell by 6.3 percentage points to 6.6 percent and the rate among women fell 4.4 percentage points to 6.9 percent.
    - Unemployment rates among each of California's major racial and ethnic groups decreased substantially, with the largest decrease occurring among Latinos (6.9 percentage points) and the smallest decrease occurring among Asians (4.7 percentage points).
    - Unemployment rates also fell across the educational attainment spectrum. The largest unemployment rate decrease occurred among those who had not completed high school (8.6 percentage points) and the smallest decrease occurred among persons holding at least a Bachelor's degree (2.9 percent).[13]

- California's not seasonally adjusted rate was 6.5 percent in July 2015. This was 6.1 percentage points lower than was in July 2010, when the unemployment rate was hovering at its pre-recession peak. Unemployment

[12] Despite this improvement, the July 2015 unemployment rates among teens age 16 to 19 was 22.5 percent and that of youths age 20 to 24 was 11.3 percent.

[13] However, July 2015 unemployment rates remained highest among workers who had not completed high school (10.5 percent) and lowest among workers who had obtained at least a Bachelor's Degree (3.8 percent).

rates in California's eight economic markets ranged from a low of 4.5 percent in San Francisco Bay Area to a high of 9.9 percent in San Joaquin Valley in July 2015 (see Reference R). Regional unemployment rates decreased by at least 4.9 percentage points in every California economic market over the five years ending in July 2015. San Joaquin Valley, Northern, and Sacramento economics experienced the largest rate improvement, with their regional unemployment rates falling by 6.7 percentage points since July 2010. The smallest five-year rate decreases were in Coastal (4.9 percentage points) and Southern Border (5.8 percentage points). The July 2015 unemployment rates of California and every economic market except San Francisco Bay area were the lowest of any July since 2007. San Francisco Bay Area's July 2015 unemployment rate was the lowest its rate had been in July 2000.

## i. Educational Attainment, Age, Industry, Occupation

### a. Educational Attainment

- The following educational attainment levels will be examined to show trends in unemployment rates and education levels: less than a high school diploma; high school graduate, no college; some college, no degree; Associate degree; and Bachelor's degree or higher.

- Among California's unemployed, the largest share (29.4 percent) of individuals was high school graduates with no college experience and their unemployment rate was 8.5 percent in July 2015. The members of the unemployed with the highest unemployment rate (10.6 percent) were those with less than a high school diploma. Unemployed persons with a bachelor's degree or higher had the lowest unemployment rate (3.8 percent). The unemployed with an associate degree (8.0 percent share) or a bachelor's degree or higher (19.9 percent share) made up the smallest shares of the unemployed population.

- Unemployed individuals of all education levels experienced declines in their respective unemployment rates over the past five years. The unemployment rate of those with less than a high school diploma dropped by the 8.8 percentage points between July 2010 and July 2015, the largest drop when compared to other education levels. The unemployment rates of individuals with an Associate degree (2.5 percent) or a Bachelor's degree or higher (2.7 percent) declined by less than 3 percentage points over the past five years.

### b. Age

- The following age groups will be highlighted to show trends in unemployment rates and age groups: 16 to 19; 20-24; 25-34; 35-44; 45-54; 55 years and older.

- Members of the civilian labor force between the ages of 16 and 19 had the highest unemployment rate of any group in July 2015, with a rate of 21.7 percent. Persons between the ages of 20 and 24 had an unemployment rate that was twice (11.4 percent) as high as individuals that were 35 years or older. Those in the labor force between the ages of 45 and 54 had the lowest unemployment rate (4.8 percent) in July. The unemployed between the ages of 35 and 44 (5.1 percent); and 55 years and older (5.4 percent) had unemployment rates that were just over 5.0 percent.

- As the state economy improved over the past five years, so did the employment prospects of those of all ages seeking work, as seen in the declines in every age group's unemployment rate. Persons between the ages of 16 and 19 had an unemployment rate of 34.1 percent in July 2010, 12.4 percentage points higher their July 2015

rate (21.7 percent). Other notable five-year declines were experienced by individuals between the ages of 20 and 24 (7.7 percentage points); and 35 and 44 (5.5 percentage points).

### c. Industry Sector

- When the state's 11 major industry sectors are compared, the leisure and hospitality (7.3 percent); and the construction (7.0 percent) sectors had the highest unemployment rates in July 2015. Each sector's unemployment rate tends to be higher than other sectors, due to the seasonal nature of each sector. The demand for workers within an industry such as financial services tends to be throughout the year while workers in the leisure and hospitality sector tend to be in the highest demand during the months in which tourism is highest.

- The trade, transportation, and utilities (6.5 percent); and other services (6.1 percent) sectors each had unemployment rates that hovered above 6.0 percent in July 2015. The sectors with the lowest unemployment rates were the government (3.3 percent) and financial activities (3.3 percent) sectors in July 2015.

- Between July 2010 and July 2015, the construction sector's unemployment rate dropped by 16.5 percentage points, the highest decline of any industry sector over the past five years. The information (8.7 percentage points); and manufacturing (7.7 percentage points) sectors experienced declines in excess of 7 percentage points during this five-year period as well. The industry sector with the smallest five-year decline was the educational and health services sector, whose rate dipped from 6.3 percent in July 2010 to 4.6 percent in July 2015. This sector's unemployment rate has been amongst the lowest of any of the state's industry sectors over the past five years.

### d. Occupations

- Members of the workforce within farming, fishing, and forestry (17.3 percent); construction (8.7 percent); and transportation and material moving (8.4 percent) occupations had the highest unemployment rates in July 2015. Occupational groups with the lowest unemployment rates were the management, business, and financial (3.3 percent); and professional and related occupations (3.7 percent) groups.

- Workers within personal service occupations such as gaming dealers, recreation workers, and ushers made up the largest share (237,000) of unemployed persons statewide. Furthermore, one out of every five unemployed persons (21.4 percent) was in a service occupation.

- In July 2010, the unemployment rates of the farming, fishing, and forestry (27.0 percent); and the construction (26.9 percent) occupational groups exceeded 20.0 percent. In addition, the transportation and material moving (15.5); and production (15.5 percent) groups had unemployment rates that topped 15.0 percent as well. The only groups with unemployment rates below 10.0 percent were the management, business, and financial (7.7 percent); and professional and related occupations (6.6 percent) groups.

## ii. Long-Term Unemployed

- Persons defined as long-term unemployed are those that sought work and remained jobless for 27 weeks or more. In July 2015, 2.6 million of the nation's unemployed were classified as long-term unemployed. During

this month, 31.1 percent (395,000 unemployed) of California's 1.3 million unemployed were unemployed long-term.

- At the start of the most recent U.S. recession (December 2007 to June 2009), 16.8 percent of the state's unemployed population was unemployed for 27 weeks or more. Between the start (December 2007) and the end of the U.S. recession (June 2009), the share of long-term unemployed increased by 9.9 percentage points. In March 2011, the share of long-term unemployed peaked at 46.8 percent, as just over 1 million people were unemployed for 27 weeks or more.

- Since the March 2011 peak, the share of long-term unemployed has steadily declined and by July 2015, roughly one out of every three unemployed persons (31.1. percent) was defined as long-term unemployed. Despite this decline, July's percent share was roughly twice as high as the share during the start of the U.S. recession (16.8 percent).

- In terms of age groups, nearly one out of every four long-term unemployed people (23.1 percent) were between the ages of 24 and 34 years old, followed by persons aged 55 years and older (21.0 percent). The unemployed between the ages of 16 and 24 made up 18.2 percent of the long-term unemployed. The smallest shares (17.4 percent) of long-term unemployed were between the ages of 45 and 54.

- The highest level of education for nearly 50 percent (47.1 percent) of the Golden State's long-term unemployed was a high school diploma or less. Just over 29 percent of the long-term unemployed had a high school diploma and no college experience (29.1 percent); and 18.0 percent of the state's long-term unemployed had less than a high school diploma.

- Despite an improved economy, the share of long-term unemployed has remained relatively high when compared to its levels at the start of the most recent recession. Research suggests that business trends such as the increased use of a contingent workforce contributed to the slow, rather than rapid, decline in the number of long-term unemployed. Contingent workers are hired by firms to address seasonal and cyclical workloads and the labor demands of just-in-time production. Examples of contingent workers are as follows: independent contractors, part-time, seasonal, temporary, and leased workers.

- Research conducted by Manpower and Staffing Industry Analysts suggest that businesses will continue to increase their use of this specialized workforce to meet their needs. In addition, the Bureau of Labor Statistics 2010-2020 forecast projects that the number of jobs in the employment services industry, which includes temporary help services, was expected to increase at an annual rate of 2.1 percent through 2020.

## iii.Labor Underutilization and Underemployment

- The six alternative measures of labor underutilization are derived from the Current Population Survey (CPS) in a designated range from U-1 to U-6. The U-3 and states' official unemployment estimates are measured as the total unemployed as a percent of the civilian labor force. However, the U-3 may differ from the state's official estimates because calculation of the official estimates includes additional inputs (e.g., official job count, unemployment insurance claims). When compared to the U-3, the U-4, U-5, and U-6 rates provide a more robust view of the state's workforce, since they are inclusive of discouraged, involuntary part-time, and marginally attached workers.

- In the second quarter of 2015, the state's U-4 rate was 7.2 percent and has been on a steady decline since the first quarter of 2011 (12.9 percent). The U-4 rate is inclusive of the total number of unemployed and discouraged workers and this decline suggests that there was a decline in the number of people that believed no jobs were available; or there were none for which they would qualify. At the start of the most recent U.S.

recession (2007:Q4), the U-4 rate was 5.5 percent and by its conclusion (2009:Q3), the rate increased 5.4 percentage points to 10.9 percent. After the close of the U.S. recession, the state's U-4 continued to increase, hitting a high of 12.9 percent in 2010:Q3 and 2011:Q1.

- For the second quarter of 2015, the state's U-5 rate was 8.2 percent, but is still 2.0 percentage points higher than its pre-recession low of 6.2 percent (2007:Q4). The U-5 includes the total unemployed, discouraged workers, and the marginally attached. The marginally attached are persons not in the labor force who want and are available for work; and have looked for a job sometime in the prior 12 months. During the U.S. recession (2007:Q4-2009:Q3), the U-5 peaked at 12.0 percent, 5.8 percentage points higher than its rate at the start (6.2 percent) of the recession period. During the post-recession period (2009:Q3-2015:Q2), the rate hit its highest level from 2010:Q3-2011:Q1; 14.0 percent. Between 2011:Q1 and 2015:Q2, this rate has declined by 5.8 percentage points.

- The state's U-6 was 14.0 percent in 2015:Q2, 8.1 percentage points lower than its post-recession peak of 22.1 percent. The U-6 contains the total unemployed, marginally attached, and those that worked part-time (1-34 hours) for economic reasons. At the start of the U.S. recession, the U-6 was less than 10 percent (9.9 percent) and it steadily rose in every quarter of the recession period. By the end of the recession (2009:Q3), the rate was more than twice as large (19.6 percent) as level seen at the start of the recession (9.9 percent). During the current expansion period (2009:Q4-2015:2), the U-6 topped 20.0 percent from 2009:Q4 to 2012:Q2. Since 2012:Q2, the rate declined by 6.3 percentage points and stood at 14.0 percent in 2015:Q2.

- The U-6 contains persons that worked part-time for economic reasons and two subsets within this group are persons that work part-time due to slack work or business conditions; and persons that could only find part-time work. At the start of the U.S. recession period, roughly 2 out of every three persons (61.4 percent) that worked part-time for economic reasons did so because they could only find part-time work. By 2015, this number had increased to over 75 percent or 3 out of every 4 persons.

- In contrast, the share of persons that worked part-time due to slack work or business conditions has been on the decline since the start of the most recent recession period (December 2007 to June 2009). At the start of the U.S. recession period roughly 1 out of every three persons (38.6 percent) that worked part-time for economic reasons did so because of slack work or business conditions. By the close of the recession period in June 2009, this share declined by 2.4 percentage points and held at 36.2 percent. Over the course of the expansion period (July 2009 to July 2015), the rate declined to just over 20 percent (22.8 percent), meaning, one out of every five persons that worked part-time for economic reasons did so because of slack work or business conditions.

### *2. Labor Force Numbers*

- The labor force includes all persons classified as employed or unemployed. The employed are persons 16 years and over in the civilian non-institutional population that worked at least one hour as a paid employee during a reference week, that includes the 12th day of the month (see Reference S for a complete definition). The unemployed are persons 16 years and older who had no employment, but were available for work and made efforts to find employment within the previous four weeks.

- With a labor force of more than 19 million people in July 2015, California has the largest labor market in the nation. The state's civilian labor force was made up of 17.9 million employed and 1.1 unemployed persons in July 2015. May 2015 marked the first time the state's labor force exceeded 19 million people.

- The U.S. labor force was made up of 157 million people in July 2015 and the state of California represented 12.1 percent of it. California has held a 12 percent share of the U.S. labor force since March 2013; the largest share held by any state. Texas (8.2 percent), New York (6.1 percent), and Florida (6.0 percent) held less than a ten percent share of the nation's labor force in July 2015.

- Since the start of California's economic expansion in February 2010 to July 2015, the state's civilian labor force increased by 801,000 persons. During this period, the number of employed persons increased by 1.8 million people and the number of unemployed persons declined by 1.0 million people. The state increased its labor force by 4.4 percent over the course of the current expansion, growing at twice the pace set by the nation (2.2 percent) during this period.

- The labor force participation rate (LFPR) refers to the share of the working age population that is actively participating in the labor force (i.e., is employed or is unemployed). Historically, labor force participation increases when the economy is in expansion but dips when it is in recession, but has expanded over time. This appears to have changed in both California and the nation during the Great Recession.

- The seasonally adjusted California LFPR peaked at 66.1 percent in the months of August through October 2008 and began to fall precipitously thereafter when the economy fell into recession. By January 2012, which was previously identified as the point in time that job growth in California began to expand robustly, the LFPR had fallen 3.1 percentage points to 63.0 percent. It continued to fall even as the labor market strengthened until it bottomed out at 62.3 percent in October 2013. This was the state's lowest LFPR since April 1976. From October 2013 through July 2015, the California LFPR was stable overall, increasing by 0.1 percentage point only.

- It is not immediately clear why the LFPR has not increased even after five years of economic expansion. The aging and retiring baby boom population certainly has had a dampening on labor force participation. Labor force participation rates typically begin to decrease when workers turn 55 and fall at an increased pace thereafter. According to the Current Population Survey of households, the LFPR among Californians age 54 was 76.3 percent in 2014. In contrast, the LFPR of persons aged 60 was 63.4 percent, the LFPR of persons age 63 was 52.3, the LFPR of persons age 65 was 50.0 percent, and that of persons age 70 was 21.5 percent. The oldest baby boomers that were born in 1946 would have turned 60 in 2006 and 65 in 2011. Thus, waves of

aging baby boomers will have a dampening effect on the overall California LFPR. However, this tells only part of the story because the wave of retiring baby boomers has really only just begun.

- The unprecedented decrease in the California LFPR since late 2008 also suggests that large numbers Californians responded employment losses and bleak prospects to finding a job during the Great Recession by exiting the labor force, and even after over five years of economic expansion and employment growth, many have yet to be drawn into the labor force. In other words, even as the economy has expanded vigorously, there has continued to be slack in California's labor market which is slowly being winnowed away.
- According to a 12-month average of Current Population Survey data, labor force participation peaked at 66.9 percent in March 2009 and bottomed out at 62.0 percent in July 2014 through March 2015. The decline in the LFPR appears to have been correlated with age. The largest decrease in labor participation between March 2009 and July 204 occurred among teens age 16 to 19 (8.6 percentage points) followed by youths age 20 to 24 (4.0 percentage points). The only age group that experienced increased labor participation during this time period was those age 65 and older, whose LFPR increased by 1.7 percentage points.

- California youths face a particularly challenging labor market after the events of the business cycle these last eight years. In fact, the labor force participation rates among California youths, and particularly teens, have steadily eroded over time. The LFPR among California teens peaked at 46.9 percent in March 2001. By the December 2005, the teen LFPR had fallen to 38.6, and by December 2010 it had fallen to 28.1 percent. It was only in the months of October and November 2014 that the teen LFPR appears to have bottomed out at 24.5 percent, after which it increased to 27.3 percent by July 2015. In other words, California's economic expansion appears to have reached teenagers belatedly.

- The LFPR of California youths age 20 to 24 peaked at 76.4 percent in April 2002. By December 2005, it had fallen to 73.0 percent and by December 2010, it had fallen to 67.5 percent. In July 2015, the youth LFPR stood at 66.3 percent.

- In contrast, the LFPR of prime working age Californians held constant at around 80 percent from the beginning of 2000 through the middle of 2015, give or take a percentage point or two. In contrast, older workers have been staying in the labor force longer. In January 2000, only 12.1 percent of Californians age 65 and over participated in the labor force. The 65 and over LFPR rose to 15.6 percent by December 2005 and to 16.8 percent by December 2010. The trend of rising LFPR among Californians age 65 and over has accelerated thereafter, rising to 20.0 percent in July 2015

### *3. Coastal Versus Inland Areas of California*

- Many observers point to growing inequalities between the coastal and inland areas of California. This section analyzes the economies of coastal and inland areas of California. Coastal areas include all California counties that border upon the Pacific Ocean or San Francisco Bay as well as San Benito County, whose jobs are estimated as part of the coastal San Jose-Sunnyvale-Santa Clara MSA. Napa County is considered to be inland. Roughly, three-quarters of California's jobs were in coastal areas in July 2015.

- Overall, inland areas of California experienced deeper job losses than coastal areas during the Great Recession. From July 2007 through July 2010, which is the period of time that best captures the Great Recession using not seasonally adjusted data, total nonfarm payrolls in inland areas fell by a total of 387,800 jobs, or by 10.1 percent. This compares to an 8.0 percent (1,414,200 jobs) job loss in coastal areas. Generally speaking, job losses in construction and manufacturing were deeper in inland areas than in coastal areas, although the difference is mostly one of degree.

- In contrast, coastal areas of California have experienced stronger job growth than inland areas during the current expansion. Total nonfarm payrolls in coastal areas grew by 1,414,200 jobs from July 2010 through July 2015, an increase of 13.7 percent. This bettered the 13.0 percent (448,200 jobs) increase in nonfarm payrolls that occurred in inland areas over the same period, but not by a lot.

- Closer inspection reveals that job growth in coastal areas was stronger than in inland areas early in the expansion, but has been slightly weaker later in the expansion. Whereas total nonfarm payrolls in coastal areas grew by 4.0 percent from July 2010 through July 2012, they grew by 2.6 percent in inland areas. In contrast, total nonfarm payrolls grew by 9.4 percent in coastal areas from July 2012 through July 2015, compared to 10.1 percent in inland areas.

- In conclusion, any inequalities between coastal and inland areas of California do not appear to emanate from the business cycle. They instead reflect differences in the structure of coastal and inland area economies. In July 2015, a much higher percentage of total industry jobs were in the following industries in inland areas than in coastal areas: total farm employment (7.0 percent of jobs in inland areas but only 1.4 percent of jobs in coastal areas); government (19.0 percent inland vs 12.7 percent coastal); trade, transportation, and utilities (19.2 percent inland vs 17.0 percent coastal).

- In contrast, the following industries made up a much larger proportion of total industry jobs in coastal areas than in inland areas: professional and business services (16.7 percent coastal jobs vs just 10 percent inland); information (3.5 percent coastal vs 1.0 inland); manufacturing (8.5 percent coastal vs 6.6 percent inland); financial activities (5.2 percent coastal vs 3.6 percent inland); and leisure and hospitality (11.9 percent coastal vs 10.3 percent) inland.

- The share of mining and logging and other services jobs in coastal and inland economies was more or less similar.

- Categorizing industries by wage levels as discussed previously reveals that high-wage industry sectors represent a much larger share of total coastal economy jobs (34.0 percent) than inland economy jobs (21.5 percent). In contrast, middle wage industry sector jobs comprise 57.9 percent of inland area jobs and low wage industries account for 20.4 percent of inland jobs. The share of middle and low wage industry sector jobs in coastal areas was 49.2 and 16.8 percent, respectively.

- The different wage structure of coastal and inland area economies is magnified if one breaks the trade, transportation, and utilities sector into wholesale trade; retail trade, and transportation, warehousing, and utilities because the low wage retail trade subsector represents a larger share of inland area employment than coastal employment. While this change does not affect the share of high wage industry jobs in either the inland or coastal economies, it does increase the share of low wage industry jobs in inland economies to 31.8 percent from 20.8 percent and the share of low wage industry jobs in coastal economies to 26.6 percent from 16.8 percent in coastal economies.

- The concentration of high wage industry jobs in coastal areas is magnified if one looks at the component parts of professional and business services sector in coastal and inland areas. An analysis of fourth quarter 2014 QCEW data indicated that over three-fifths (61.3 percent) of professional and business services jobs in coastal areas were in the high wage professional, scientific, and technical services and management of companies and enterprises subsectors compared to just two-fifths (42.2 percent) in inland areas. In other words, professional and business services jobs in coastal areas are more likely to be high wage jobs in coastal areas but low wage jobs in inland areas.

- Because of the differences in the industry structure of coastal and inland areas, unemployment rates in inland areas tend to be higher than in coastal areas. In July 2015, the unemployment rate in inland areas of California

was 8.1 percent but just 5.9 percent in coastal areas. While the inland unemployment rate rose by more than the coastal unemployment rate during the recession, it has fallen more during the expansion.

### *4. High Wage vs. Low Wage*

- The Bureau of Labor Statistics identifies high wage jobs as those jobs that exceed the median earnings for jobs on the whole at the state or national level. The following wage analysis is based upon Occupational Employment Statistics (OES) wage data collected by the EDD's Labor Market Information Division for the state of California.

- In California, the median hourly wage in 2015 was $19.20, which equates to $39,900 per year. Roughly, one out of every three jobs in the state of California could be classified as a high wage job in 2015. Just over 60 percent of the state's jobs were low wage jobs, jobs that did not exceed the state's median hourly wage of$19.20.

- Major occupational groups were designed by the U.S. Office of Management and Budget as a means of bringing together detailed occupations, which have similar qualifications, skills, training, and experience. Generally speaking, the state's high wage jobs derived from the following occupational groups: management; business; computer; engineering; sciences; legal; education; design; healthcare practitioner; and construction. According to the most recent estimates (May 2014), 5.4 million jobs or 35.4 percent of the state's workforce are associated these groups.

- A majority of the state's low wage jobs are found in the following occupational groups: office and administrative support; sales; and food preparation. The total number of jobs found within these three groups (5.4 million) is comparable to the total number of high wage jobs (5.4 million) statewide.

- Over 800,000 low wage jobs were found in the state's production occupations; and transportation and material moving occupational groups. In terms of workforce size, the smallest low wage occupational groups were the state's community and social services (228,000 jobs); and farming, fishing, and forestry (211,000 jobs) occupational groups.

- The management and legal occupational groups had the highest hourly wages earning $53.49 and $48.05 respectively. Within these groups, the occupations with the highest hourly wages were as follows: chief executives (>$90.00), judges ($83.85), architectural and engineering managers ($75.42), marketing managers ($72.90), and lawyers ($69.53).

- The farming, fishing, and forestry ($9.25); food preparation ($9.85); and personal care and service ($11.06) occupational groups had the lowest hourly wages statewide. Among these groups, the occupations with the lowest wages included: forest and conservation workers ($8.19); animal product graders and sorters ($9.20); gaming dealers ($9.26); dining room attendants ($9.30); fast food cooks ($9.36); and manicurists ($9.36).

### *5. Demographic Data*

## i. Gender, Race/Ethnicity, Educational Attainment, Veteran Status

- The Golden State had the largest population in the nation with over 38 million people in 2014. The state's population increased from 37.3 million to 38.8 million between 2010 and 2014. Twelve percent of the nation's population (318 million) derived from California in 2014. Furthermore, the Golden State has accounted for at least 12 percent of the nation's population since 2010.

### a. Gender

- Women made up the largest share of the state's population in 2015. Over 50 percent (51.1 percent) of the state's population was made up of women in July 2015. Within this demographic group, one out of every three women were 55 years or older. There were 2.6 million women in each of the following age groups in July 2015: 25 and 34 years old; 35 and 44 years; and 45 and 54 years old. Over the past five years, the number of women in California's population has increased by 1.1 million. The age group that experienced the largest five-year increase was women 55 years and older, growing from 4.3 million in 2010 to 5.0 million in 2015.

- In July 2015, men made up 48.9 percent of the state's population. Men 55 years and older made up nearly one-third (29.5 percent) of all men in California in July. Men between the ages of 16 and 24 (2.7 million); and 25 and 34 (2.7 million) were the only age groups to outnumber women in 2015. During this year, women between the age groups of 16 and 24; and 25 and 34 made up 2.4 million and 2.6 million persons respectively. Despite increases in overall numbers, between 2010 (13.9 million) and 2015 (14.8 million), the share of men in the Golden State has declined from 49.2 percent to 48.9 percent.

### b. Ethnicity

- One out of every three (35.0 percent) Californians was Hispanic in July 2015. The overall population of Hispanics in the state increased from 9.5 million in July 2010 to 10.6 million in July 2015. Over the past five years the following age groups increased by at least 200,000 people: 55 years and older (429,500); 16 and 24 years old (299,600); and 45 and 54 years old (291,800). Just over 40 percent of the state's Hispanic population were within the age groups of 16 and 24 (22.6 percent); and 25 and 34 (21.5 percent).

- Hispanics have grown at a faster rate than non-Hispanics over the past five years in California. Between July 2010 and July 2015, the state's Hispanic population has grown by 11.2 percent, outpacing the growth rate of non-Hispanics (4.7 percent) by 6.5 percentage points. Among Hispanics, the fastest growing age groups were persons 55 years and older (26.3 percent); 45-54 year olds (19.3 percent); and 16-24 year olds (14.3 percent).

### c. Race

- The following is an analysis of population trends by race and inclusive of the following racial distinctions: White only; Black only; American Indian, Alaskan Native only; Asian only; and Hawaiian/Pacific Islander only. Please note that due to data limitations within the Census Bureau's Current Population Survey, 2010 data by race were not available for analysis purposes.

- In July 2015, Whites made up 75.5 percent of the state's total population and year-over this demographic group increased by 76,700 people. Despite this increase, year-over there was a decline of 94,700 and 84,400 whites between the ages of 16 and 24; and 25 and 34 respectively. However, year-over gains were experienced in the remaining groups 35 and 44 (28,000); 45 and 54 (41,600); and 55 years and older (185,100). Persons aged 55 years and older made up over 30 percent of the white population in California in 2014 (31.5 percent) and 2015 (32.2 percent).

- Asians made up 15.6 percent of the state's population in July 2015. The percent share of Asians in California has increased from 14.8 percent in July 2014 to 15.6 percent in July 2015. Over 1.4 million Asians were 55 years and older. Asians were the only racial group to have increases in every one of its age categories between 2014 and 2015. Gains ranged from 40,700 for persons between the ages of 25 and 34; and 80,900 for persons between the ages of 35 and 44.

- The number of Blacks in the state has increased and this group's percent share has held steady at 6.4 percent over the past two years. Year-over figures showed an increase in the numbers of blacks between the ages of 35 and 44 (22,400); and 45 and 54 (20,600). The largest year-over decline was seen in the number of blacks between the ages of 25 and 34 (18,400). The other groups that declined included blacks between the ages of 16 and 24 (less than 1,000); and 55 years and older (1,500).

- American Indian, Alaskan Native; and Hawaiian/Pacific Islanders made up less than 2 percent of the state's total population in July 2015. Year-over, the American Indian population increased from 1.3 percent in July 2014 to 1.6 percent in July 2015. Among the 459,300 American Indians in California, those between the ages of 16 and 24 years old made up the largest share (22.9 percent) of the population for this group in July 2015. The number of Hawaiian/Pacific Islanders decreased by 4,400 persons between July 2014 and July 2015, with the largest decreases between the ages of 25 and 34 (9,400).

*Educational Attainment*

- The following is an analysis of population trends by educational attainment and inclusive of the following: less than a high school diploma; high school graduates, no college; some college, no degree; Associate degree; and Bachelor's degree or higher.

- More than one out of every three Californians had an Associates or a Bachelor's degree or higher in July 2015. Just over nine million people in California had a Bachelor's degree or higher and 2.4 million people had an Associate degree.

- The overall numbers of persons with either an Associate or Bachelor's degree or higher has increased over the past five years. Between July 2010 and July 2015, the number of person with a Bachelor's degree or higher increased by just over 1 million people. Over this period, the number of individuals with an Associate degree increased by 140,700 people. In terms of percent share, persons with either an Associate or Bachelor's degree or higher, increased from 36.2 percent in July 2010 to 37.8 percent in July 2015. The age group with the largest number of Associate degrees (900,800) or had a Bachelor's degree or higher (3.1 million) were those aged 55 years or more.

- The number of persons with less than a high school diploma has been on the decline since 2010. Roughly 5.8 million people had less than a high school diploma in 2010, but that number has steadily declined and hovered around 5.5 million people in 2015. Over this five-year period, the percent share of persons with less than a high school diploma fell from 20.5 percent (July 2010) to 18.1 percent (July 2015). The age groups that represented

the largest shares of persons with less than a high school diploma were those 55 years and older (28.9 percent); and 16 to 24 year olds (27.9 percent). Each age group represented 1.5 million people.

- The percent shares of high school graduates with no college experience; and those with some college and no degree remained relatively unchanged over the past five years. High school graduates made up 23.4 percent of the state's population in July 2010 and 23.7 percent in July 2015 despite increasing by 564,900 people over that period of time.

*Veterans*

- In July 2015, California accounted for 8.6 percent of the nation's 21.3 million veterans. Over 1.8 million veterans resided in California in 2015. Year-over, the state experienced an increase of roughly 16,000 veterans between July 2014 and July 2015.

- Two out of every three veterans in California were 55 years and older. Just over 450,000 (25.0 percent) of veterans were between the ages of 35 and 54. The age group that represented the smallest share of veterans was between the ages of 16 and 24 (11.3 percent).

- Twenty-eight percent of the state's military veterans served during the Vietnam era (August 1964 to April 1975). During the Gulf War I (August 1990 to August 2001) and Gulf War II (September 2001 or later) eras, over 200,000 military veterans were involved in each military campaign. Just over 350,000 veterans served between May 1975 and July 1990.

- California's 188,400 women veterans made up 10.2 percent of the veterans' population statewide in July 2015. More than 100,000 women served during the Gulf War I (52,100) and Gulf War II (56,000) eras. Nine out of every ten military veterans in California are men.

## ii. Californians with Disabilities

- In July 2015, there were 2.9 million people with a disability in California, nearly 10 percent of the state's general population. The U.S. Department of Housing and Urban Development defines a person with a disability as any person who has a physical or mental impairment that substantially limits one or more major life activities; has a record of such impairment; or is regarded as having such an impairment. Examples of major life activities include: walking, talking, hearing, seeing, breathing, performing manual tasks, or caring for oneself.

- The unemployment rate for disabled persons in the civilian labor force (e.g., employed person, unemployed person) was 13.1 percent in July 2015, more than twice as high as the state unemployment rate (6.2 percent). However, July's unemployment rate for disabled persons has been on the decline since January 2013. Between January 2013 (18.7 percent) and July 2015 (13.1 percent), this rate has declined by 5.6 percentagepoints.

- In July 2014, nearly 40 percent of disabled persons within California's labor force had an associate degree or higher. Roughly, 30 percent (28.2 percent) of disabled persons had a bachelor's degree or higher and 10.4 percent had an associate degree. Disabled and non-disabled members of California's civilian labor force had comparable levels of educational attainment, with the largest difference being between shares with a bachelor's degree or higher. One-third of non-disabled persons (35.4 percent) had a bachelor's degree or higher, 7 percentage points more than the share for disabled persons (28.2 percent).

- The labor force participation rate for disabled persons was 19.7 percent in July 2014, 1.3 percentage points higher than its rate in July 2013 (18.4 percent). Increases in the number of employed and declines in the number of unemployed within this population have contributed to increases in the labor force participation rate. Year-over, there was a gain of 24,000 employed persons that had a disability in California. Furthermore, there was a decline of 2,400 unemployed persons with disabilities over this same period.

## iii. Youth Employment Trends

- In July 2015, workers between the ages of 16 and 24 made up 13.1 percent of the state's workforce. Over the past five years, their percent share of the workforce has remained unchanged at 13.0 percent. However, the overall number of employed 16 to 24 year olds has increased by 271,000 workers between July 2010 and July 2015.
- The unemployment rate for 16 to 24 year olds was 13.8 percent in July 2015. The unemployment rate has been on the steady decline since reaching 23.4 percent in September 2010. At the start of the most recent U.S. recession, the unemployment rate for 16 to 24 year olds was 11.6 percent and it steadily rose to 18.6 percent by the last month of the recession (June 2009). As of July 2015, the unemployment rate for 16 to 24 year olds was still 2.2 percentage points higher than its rate at the start of the recession (11.6 percent).

- Nearly two-thirds (63.6 percent) of all 16 to 24 year olds in California were employed in either the leisure and hospitality; or trade, transportation, and utilities sector in July 2015. These industries are well suited for members of the workforce that have not received high levels of specialized training yet. Occupations within these industry sectors such as: retail salesperson, cashier, and recreation attendant require most of the basic skills (e.g., basic mathematics, communication, etc.) that 16-24 year olds generally have. Just over 10 percent (11.9 percent) of 16-24 year olds were employed in the other services sector that typically employs people with general repair skills, personal care services training, and experience providing social services.

- In terms of occupations, 44 percent or roughly 1.2 million 16 to 24 year olds in California were employed in a sales (23.0 percent) or service (21.0 percent) occupation in July 2015. These occupations ranged from child care workers to ushers. Just over 17 percent were employed in office and administrative support occupations that include: customer service representatives, dispatchers, and office clerks.

- In July 2015, over 85 percent of the state's 16 to 24 year olds were not in the labor force because they were in school. Roughly nine percent cited the need to take care of family as the reason why they were not in the labor force. Less than one percent of 16 to 24 year olds were too disabled or ill to participate in the state's labor force.

## iv. Baby Boomer Population

- The baby boomer generation was born between 1946 and 1964. Based upon this time period, in 2010 baby boomers would be between the ages of 46 and 64; and in 2015, between the ages of 51 and 69 years of age.

- In July 2015, members of the baby boomer generation in California made up roughly 27 percent of the state's population (27.1 percent) and civilian labor force (26.8 percent). There were 4.8 million employed and 269,300 unemployed baby boomers in the state's civilian labor force in July. Over the past five years, the share of baby boomers in the state's population and labor force has declined noticeably. In July 2010, baby boomers made up 29.9 percent of the state's population and by July 2015, it dropped by 2.8 percentage points to 27.1 percent. In addition, the share of baby boomers in the labor force also declined from 33.9 percent in July 2010 to 26.8

percent in July 2015. Baby boomers decline in the civilian labor force has been attributed to the rise in retirements that have occurred due to by-products (e.g., improved investment portfolio, economic stability) of the improved state and national economies.

- In July 2015, 1.9 million baby boomers were employed in either the educational and health services (1.1 million); or trade, transportation, and utilities (876,900) sectors. Over 700,000 were employed in professional and business services sector as well. Sectors that employed just over 300,000 baby boomers includes the: construction (348,000); other services (312,000); and leisure and hospitality (306,500) sectors.

- Over the past five years, the total number of employed baby boomers declined from 6.3 million in 2010 to 5.1 million in 2015. The industry sectors that experienced the largest five-year declines in their number of baby boomers were the educational and health services (337,800); trade, transportation, and utilities (187,100); and manufacturing (182,900) sectors. Every one of California's major industry sectors, except mining, experienced a decline in its number of baby boomers from July 2010 through July 2015.

- Among the 5 million baby boomers employed across the state, over 1.0 million of them were employed in either a professional and related occupation (1.2 million); or management (1.0 million) occupation. Over 500,000 were employed in either a service (816,100); or office and administrative support (524,600) occupation. Less than 300,000 baby boomers were employed in production (291,400); transportation and material moving (276,700); or construction (226,700) occupations in 2015.

## v. Role of In-Migration

- Migration is defined as the movement of people from one location to another permanent place of residence. The reasons why people migrate are due to push and pull factors. Push factors such as retirement, movement of a business, or lack of work often drive people from their current place of residence. A healthy economy and a pleasant climate are examples of pull factors that attract people to new locations.

- According to the latest figures from the American Community Survey, 485,500 people migrated out of California in 2013 and 581,700 migrated in from the nation's 49 states. Between 2012 and 2013, the number of people migrating out of the state declined by 8,200. Over this one-year period, migration into the Golden State increased from 567,000 in 2013 to 582,000 in 2013, an increase of roughly 14,700 people.

- In 2013, Californians that moved out of the state tended to gravitate towards the states of: Washington (37,200), Arizona (36,600), Texas (32,300), and New York (30,700), with over 30,000 people taking up new residence in each state. One out of every four Californians that migrated out of the Golden State moved to one of these four areas.

- The Golden State attracted 581,700 residents from across the country in 2013 and most previously resided in the states of: Texas (66,300), Arizona (48,000), Nevada (47,900), and Washington (37,200). One in three persons that migrated into California that year came from one of these four states.

- In terms of global migration, one out of every four Californians was foreign born in 2014. Roughly 9.7 million California residents were either foreign-born citizens by naturalization or foreign born non-citizens. The number of foreign-born non-citizens has been on a steady decline since 2010, as this group of foreign born went from 5.2 million in 2010 to 4.8 million in 2014. In contrast, the number of foreign born citizens by naturalization has increased by 7.2 percent going from 4.5 million in 2010 to 4.8 million in 2014.

- Just over 50 percent (56.2 percent) of California's foreign-born held jobs in the following industry sectors: educational and health services (15.6 percent); professional and business services (14.7 percent); wholesale and retail trade (13.3 percent); and manufacturing (12.6 percent). Less than 3 percent were employed in the public administration (2.7 percent); information (1.8 percent); or the mining (0.2 percent) sectors.

- A majority of the Golden State's foreign-born worked in service (23.0 percent); professional (18.0 percent); or management, business, and financial occupations (11.6 percent) in 2014. Just over 3 percent of the state's foreign-born were employed in occupations related to farming, fishing, and forestry (3.2 percent); or installation, maintenance, and repair (3.2 percent).

## vi. Populations with Barriers to Employment

### a. Ex-Offenders

- Barriers to employment are any of the job candidates attributes (e.g., skills, experience, and work history) that may hinder their chances for acquiring gainful employment. California's ex-offenders are challenged by barriers such as: a limited education, a lack of work experience, and negative stigmas when trying to find a job in today's economy.

- The Center for Economic and Policy Research finds that time behind bars often leads to a reduction in a worker's human capital. Meaning, it limits the workers ability to attain a formal education, gain on-the-job experience, and use soft skills (e.g., customer relations) in a work environment.

- In addition to these barriers, ex-offenders trying to find a job often lack the social networking skills necessary to acquire employment. A criminal record also subjects ex-offenders to legal restrictions that limit employment within specific industries and their ability to acquire professional licenses. Occupations that are often legally closed to ex-offenders are those that require contact with children, certain healthcare professions, and jobs that provide security services.

- The Bureau of Justice Statistics estimated that in 2014, 70 million U.S. adults had an arrest or conviction record. Furthermore, data from the Bureau's Survey of State Criminal History Information Systems indicated that 27.8 percent or roughly 8 million Californians 18 years or older had a criminal record on file with the state in 2012.

- California's Department of Corrections and Rehabilitation annual data on parolees provides insight into the number of persons being released from confinement in state prison. This information helps to gauge the number of ex-offenders that may have sought entry into the state's labor force within a given year. Parole population data reflect point-in-time data from June 30$^{th}$ of each respective year.

- California's parole population has been on the decline since 2007 and this trend is forecasted to continue through 2015. Between 2007 and 2013, the state's parole population declined from 126,000 to 51,000, a decline of 59.4 percent. From 2013 to 2015, parolee numbers are projected to decline by 22 percent, going from 51,000 in 2013 to 40,000 in 2015.

### b. Homeless

- The U.S. Public Health Service Act defines a homeless individual as an individual who lacks housing (without regard to whether the individual is a member of a family), including an individual whose primary residence during the night is a supervised public or private facility (e.g., shelters) that provides temporary living accommodations, and an individual who is a resident in transitional housing.

- The U.S. Department of Housing and Urban Development estimates that there were 578,400 homeless individuals in the U.S. and 69 percent (401,100) of these individuals were sheltered and 31 percent (177,400) were unsheltered. Nearly two-thirds of the nation's homeless were over the age of 24. Between 2012 and 2014, the total number of homeless persons in the U.S. declined by 7.1 percent, as this population declined from 623,000 to 578,400 persons.

- California had 114,000 sheltered and unsheltered homeless people in 2014. This total accounted for roughly 20 percent of the nation's homeless population. Year-over, the state's homeless population declined by 4,600 persons (3.9 percent), second only to Florida (6,300) in terms on year-over declines between 2013 and 2014. Between 2007 and 2014, California's homeless population dropped by 25,000 persons, the largest decline of any state during that period.

- The nation's homeless population was concentrated in some of its most populous states. California (114,000, 20.0 percent), New York (80,600, 14.0 percent), Florida (41,500, 7.0 percent) Texas (28,500, 5.0 percent), and Massachusetts (21,200, 4.0 percent) accounted for roughly half of the nation's homeless population.

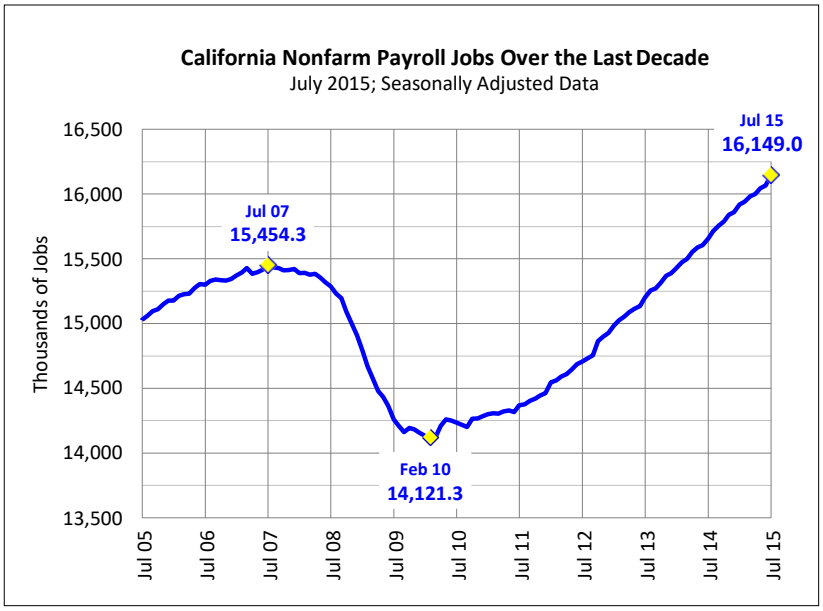
- Thirty percent of California's homeless population was located in Los Angeles in 2014. At least five percent of the state's homeless population were located in San Diego (8,500, 7.0 percent), San Jose (7,600 persons, 6.1 percent), or San Francisco (6,400 persons, 5.2 percent). Nearly one in five homeless people were located in New York City (67,800 persons) or Los Angeles (34,400 persons).

- Homeless people in families are people who are homeless, as part of households, that have at least one adult and one child. California had 23,200 homeless people in families, 10.7 percent of the national total, only New York had a higher share (22.2 percent) of the national total in 2014. The overall number of homeless people in families declined from 28,034 in 2007 to 23,187 in 2014, a 17.3 percent decline.

- In 2014, there were 49,900 homeless veterans in the U.S. and roughly, two-thirds of them were in a shelter, mission, single room occupancy facility, abandoned building, or vehicle. Just over 12,000 of these veterans were located in California and 4,500 were sheltered and 7,600 were unsheltered. Between 2013 and 2014, the state saw its number of homeless veterans decline by 800 individuals and over the past seven years, this population has declined by 27.5 percent.

## D. REFERENCES

### *1. Reference A: California Total Nonfarm Payroll Jobs over the Last Decade*




Source: Employment Development Department, Labor Market Information Division

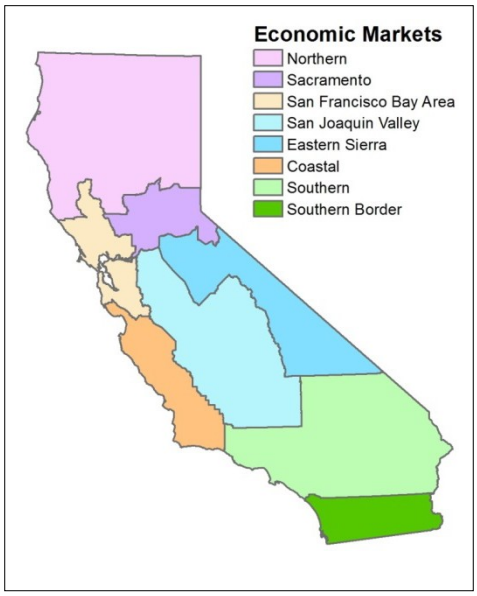
### *2. Reference B: Change in California Industry Sector Jobs during the Great Recession*

**Change in California Industry Sector Jobs during the Great Recession**
(July 2007 – February 2010; Seasonally Adjusted Data)

| Change in Number (Thousands) | | Change in (%) | |
|---|---|---|---|
| Total Nonfarm | -1,333.0 | Total Nonfarm | -8.6 |
| Educational and Health Services | 117.8 | Educational and Health Services | 6.1 |
| Mining and Logging | -1.1 | Government | -2.4 |
| Other Services | -31.3 | Mining and Logging | -4.1 |
| Information | -46.4 | Leisure and Hospitality | -5.1 |
| Government | -59.0 | Other Services | -6.1 |
| Leisure and Hospitality | -79.8 | Information | -9.8 |
| Financial Activities | -137.7 | Professional and Business Services | -9.8 |
| Professional and Business Services | -222.5 | Trade, Transportation, and Utilities | -10.6 |
| Manufacturing | -226.1 | Financial Activities | -15.3 |
| Trade, Transportation and Utilities | -311.0 | Manufacturing | -15.4 |
| Construction | -335.9 | Construction | -37.3 |
| Total Private | -1,274.0 | Total Private | -9.8 |

Source: Employment Development Department, Labor Market Information Division

### *3. Reference C: Regional Economic Markets*




Source: Employment Development Department, Labor Market Information Division

### *4. Reference D: Change in California Economic Markets during the Great Recession*

**Change in Nonfarm Jobs in California Economic Markets During the Great Recession**

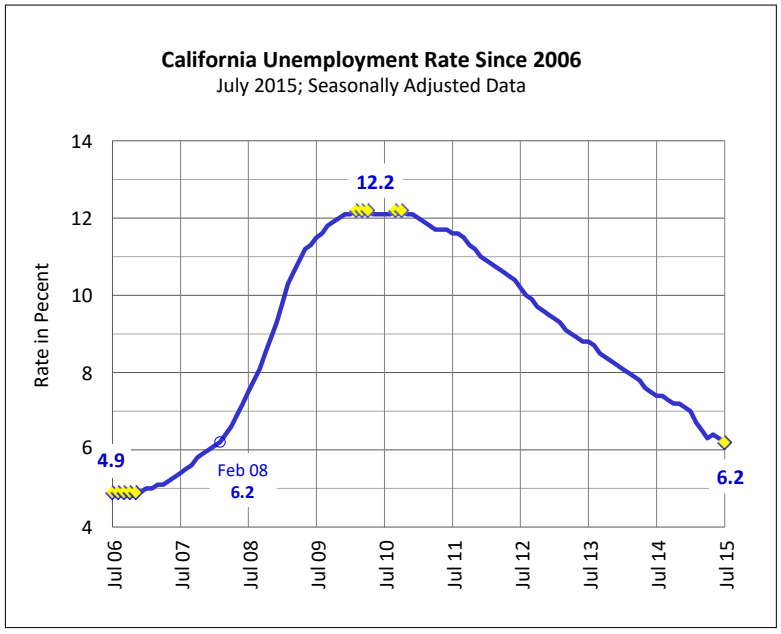
(July 2007 – July 2010: Not Seasonally Adjusted Data)

| Change in Number | | Change in Percentage | |
|---|---|---|---|
| California | -1,258,700 | California | -8.2% |
| <u>Largest Markets</u> | | <u>Largest Markets</u> | |
| Southern California | -689,900 | Greater Sacramento | -10.6% |
| Bay Area | -250,990 | Southern California | -9.4% |
| Greater Sacramento | -104,840 | San Joaquin Valley | -8.3% |
| San Joaquin Valley | -97,800 | Bay Area | -7.4% |
| Southern Border | -86,200 | Southern Border | -6.3% |
| <u>Smaller Markets</u> | | <u>Smaller Markets</u> | |
| Central Coast | -32,500 | Northern California | -8.6% |
| Northern California | -25,470 | Central Sierra | -8.6% |
| Central Sierra | -5,270 | Central Coast | -6.3% |

1) The sum of economic markets does not equal the California total because of statewide reporters whose jobs can't be assigned to a specific area.
2) Dates only approximate the recession because not seasonally adjusted data require that like months in the year be compared to control for seasonal patterns of employment.

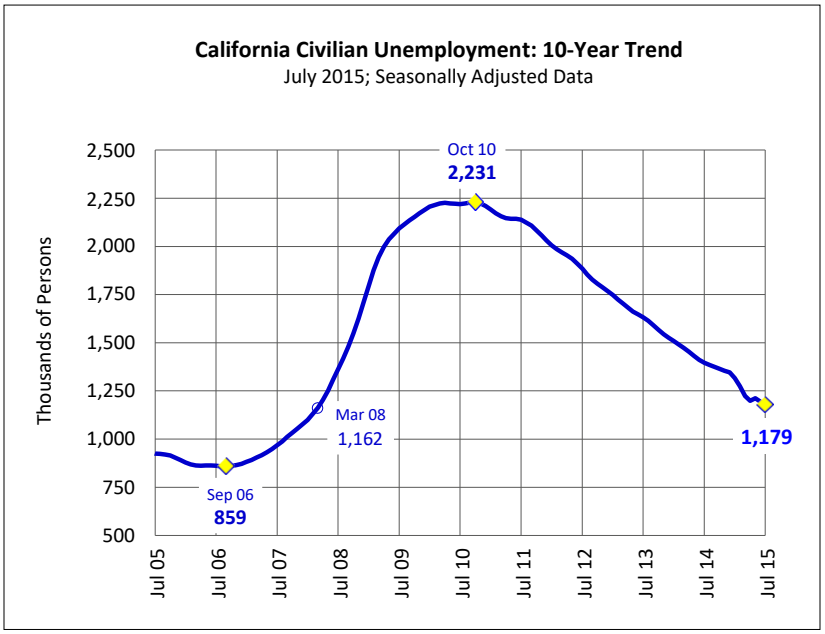
Source: Employment Development Department, Labor Market Information Division

### *5. Reference E: California Unemployment Rate Since 2006*




Source: Employment Development Department, Labor Market Information Division

### *6. Reference F: California Civilian Unemployment, 10-Year Trend*




Source: Employment Development Department, Labor Market Information Division

### *7. Reference G: Unemployment Rates in CA Economic Markets at Key Points of the Business Cycle*

**Unemployment Rates in California Economic Markets at Key Points of the Business Cycle**
(Unemployed as a Percent of the Labor Force; Not Seasonally Adjusted Data)

| | **July 2006** | **July 2010** | **July 2015** | **Recession Change** (July 06 to July 10) | **Expansion Change** (July 10 to July 15) |
|---|---|---|---|---|---|
| CALIFORNIA | 5.2 | 12.6 | 6.5 | 7.4 | -6.1 |
| Coastal | 4.7 | 10.6 | 5.7 | 5.9 | -4.9 |
| Eastern Sierra | 5.4 | 12.9 | 6.5 | 7.5 | -6.4 |
| Northern | 6.5 | 14.1 | 7.4 | 7.6 | -6.7 |
| Sacramento | 5.1 | 12.9 | 6.2 | 7.8 | -6.7 |
| San Francisco Bay Area | 4.6 | 10.5 | 4.5 | 5.9 | -6.0 |
| San Joaquin Valley | 7.8 | 16.6 | 9.9 | 8.8 | -6.7 |
| Southern | 5.0 | 12.8 | 6.8 | 7.8 | -6.0 |
| Southern Border | 4.9 | 12.1 | 6.3 | 7.2 | -5.8 |

Notes: Dates only approximate the business cycle because not seasonally adjusted data require that like months in the year be compared to control for seasonal patterns of employment.

Source: Employment Development Department, Labor Market Information Division

### *8. Reference H: Change in California Industry Sector Jobs during the Current Expansion*

**Change in California Industry Sector Jobs During the Current Expansion**
(February 2010 – July 2015; Seasonally Adjusted Data)

| **Change in Number (Thousands)** | | **Change in Percent (%)** | |
|---|---|---|---|
| Total Nonfarm | 2,027.7 | Total Nonfarm | 14.4 |
| Professional and Business Services | 541.2 | Construction | 27.9 |
| Educational and Health Services | 454.5 | Professional and Business Services | 26.4 |
| Leisure and Hospitality | 347.5 | Leisure and Hospitality | 23.4 |
| Trade, Transportation and Utilities | 345.5 | Educational and Health Services | 22.3 |
| Construction | 157.4 | Other Services | 13.9 |
| Other Services | 67.3 | Mining and Logging | 13.3 |
| Information | 43.9 | Trade, Transportation and Utilities | 13.2 |
| Financial Activities | 39.4 | Information | 10.3 |
| Manufacturing | 35.5 | Financial Activities | 5.2 |
| Mining and Logging | 3.4 | Manufacturing | 2.9 |
| Government | -7.9 | Government | -0.3 |
| Total Private | 2,035.6 | Total Private | 17.4 |

Source: Employment Development Department, Labor Market Information Division

### *9. Reference I: Change in California Industry Sector Jobs from July 2007 through July 2015*

**Recovery: Change in California Industry Sector Jobs from July 2007 through July 2015**
(Seasonally Adjusted Data)

| **Change in Number (Thousands)** | | **Change in Percent (%)** | |
|---|---|---|---|
| Total Nonfarm | 649.7 | Total Nonfarm | 4.5% |
| Educational and Health Services | 572.3 | Educational and Health Services | 29.8% |
| Professional and Business Services | 318.7 | Leisure and Hospitality | 17.1% |
| Leisure and Hospitality | 267.7 | Professional and Business Services | 14.0% |
| Other Services | 36.0 | Mining and Logging | 8.6% |
| Trade, Transportation and Utilities | 34.5 | Other Services | 7.0% |
| Mining and Logging | 2.3 | Trade, Transportation and Utilities | 1.2% |
| Information | -2.5 | Information | -0.5% |
| Government | -66.9 | Government | -2.7% |
| Financial Activities | -98.3 | Financial Activities | -10.9% |
| Construction | -178.5 | Manufacturing | -13.0% |
| Manufacturing | -190.6 | Construction | -19.8% |
| Total Private | 761.6 | Total Private | 5.9% |

Source: Employment Development Department, Labor Market Information Division

### *10. Reference J: CA's Fastest Growing Industries over the Last Three Years*

***California's Fastest Growing Industries over the Last Three Years of the Economic Expansion***
(July 2012 – July 2015, Not Seasonally Adjusted Data)

| | | | |
|---|---|---|---|
| Individual and Family Services | 188,900 | Other Information Services | 55.7% |
| Limited-Service Eating Places | 98,800 | Mother Vehicle Manufacturing | 50.0% |
| Employment Services | 91,900 | Individual and Family Services | 49.3% |
| Full-Service Restaurants | 73,300 | Building Material and Garden Equip. and Suppliers | 34.6% |
| Computer Systems Design and Related Services | 59,100 | Data Processing, Hosting and Related Services | 33.6% |
| Management, Scientific and Technical Consulting Svcs. | 45,300 | Building Finishing Contractors | 30.4% |
| Building Equipment Contractors | 40,500 | Electronic Shipping and Mail-Order | 30.3% |
| Other Information Services | 29,600 | Used Merchandise Stores | 28.3% |
| Building Finishing Contractors | 29,100 | Amusement Parks and Arcades | 26.8% |
| Offices of Physicians | 27,200 | Computer Systems Design and Related Services | 25.7% |
| Grocery Stores | 22,300 | Building Equipment Contractors | 25.0% |
| Management of Companies and Enterprises | 20,400 | Employment Services | 24.5% |
| Investigation and Security Services | 20,300 | Management, Scientific and Technical Consulting Svcs. | 24.1% |
| Residential Building Construction | 19,100 | Lessors of Nonfinancial Intangible Assets | 24.1% |
| Architectural, Engineering and Related Services | 18,700 | Residential Building Construction | 23.5% |
| State Government Education | 18,400 | Lumber and Other Const Materials Merchant Wholesalers | 22.9% |
| Building Foundation and Exterior Contractors | 17,300 | Building Foundation and Exterior Contractors | 22.3% |
| Automobile Dealers | 17,300 | Offices of Real Estate Agents and Brokers | 21.7% |
| Services to Buildings and Dwellings | 17,000 | Nonresidential Building Construction | 20.5% |
| Accounting, Tax Preparation and Bookkeeping Services | 15,700 | Other Personal Services | 20.4% |
| Outpatient Care Centers | 15,400 | Electronic Computer Manufacturing | 20.0% |
| Accommodation | 15,200 | Apparel, Piece Goods and Notions Merchant Wholesalers | 19.6% |
| Nursing Care Facilities | 14,700 | Performing Arts, Spectator Sports, and Related | 19.4% |
| Elementary and Secondary Schools | 13,700 | Limited-Service Eating Places | 19.3% |
| Other Amusement and Recreation Industries | 12,900 | Special Food Services | 18.7% |
| Amusement Parks and Arcades | 12,500 | Specialized Design Services | 18.6% |
| Warehousing and Storage | 12,500 | Facilities Support Services | 18.3% |
| Nonresidential Building Construction | 12,100 | Offices of Other Health Practitioners | 18.0% |
| Offices of Other Health Practitioners | 12,100 | Other Financial Investment Activities | 17.7% |
| Community Care Facilities for the Elderly | 11,800 | Other Specialty Trade Contractors | 17.5% |
| Scientific Research and Development Services | 11,500 | Elementary and Secondary Schools | 17.4% |

| | | | |
|---|---|---|---|
| Other General Merchandise Stores | 11,000 | Warehousing and Storage | 17.2% |
| Agencies, Broker and Other Insurance Related Activities | 10,500 | Advertising and Related Services | 17.0% |
| Advertising and Related Services | 10,200 | Investigation and Security Services | 16.7% |
| Special Districts | 10,200 | Other Schools and Instruction | 16.3% |
| County Government | 10,000 | Drinking Places (Alcoholic Beverages) | 16.2% |
| Electronic Computer Manufacturing | 9,600 | Motor Vehicle and Parts Merchant Wholesalers | 16.0% |
| General Freight Trucking | 9,600 | Commercial and Industrial Machinery Rental and Leasing | 16.0% |
| Special Food Services | 9,500 | Automobile Dealers | 15.9% |
| Wholesalers Electronic Markets Agents and Brokers | 9,200 | Independent Artists, Writers and Performers | 15.9% |
| Other Specialty Trade Contractors | 9,100 | Land Subdivision | 15.6% |
| Electronic Shopping and Mail-Order | 9,100 | Nonmetallic Mineral Product Manufacturing | 15.4% |
| Colleges, Universities and Professional Schools | 9,000 | Community Care Facilities for the Elderly | 15.2% |
| | | Nondepository Credit Intermediation | 14.8% |

Source: Employment Development Department, Labor Market Information Division

### *11. Reference K: Change in California Economic Markets during the Economic Expansion*

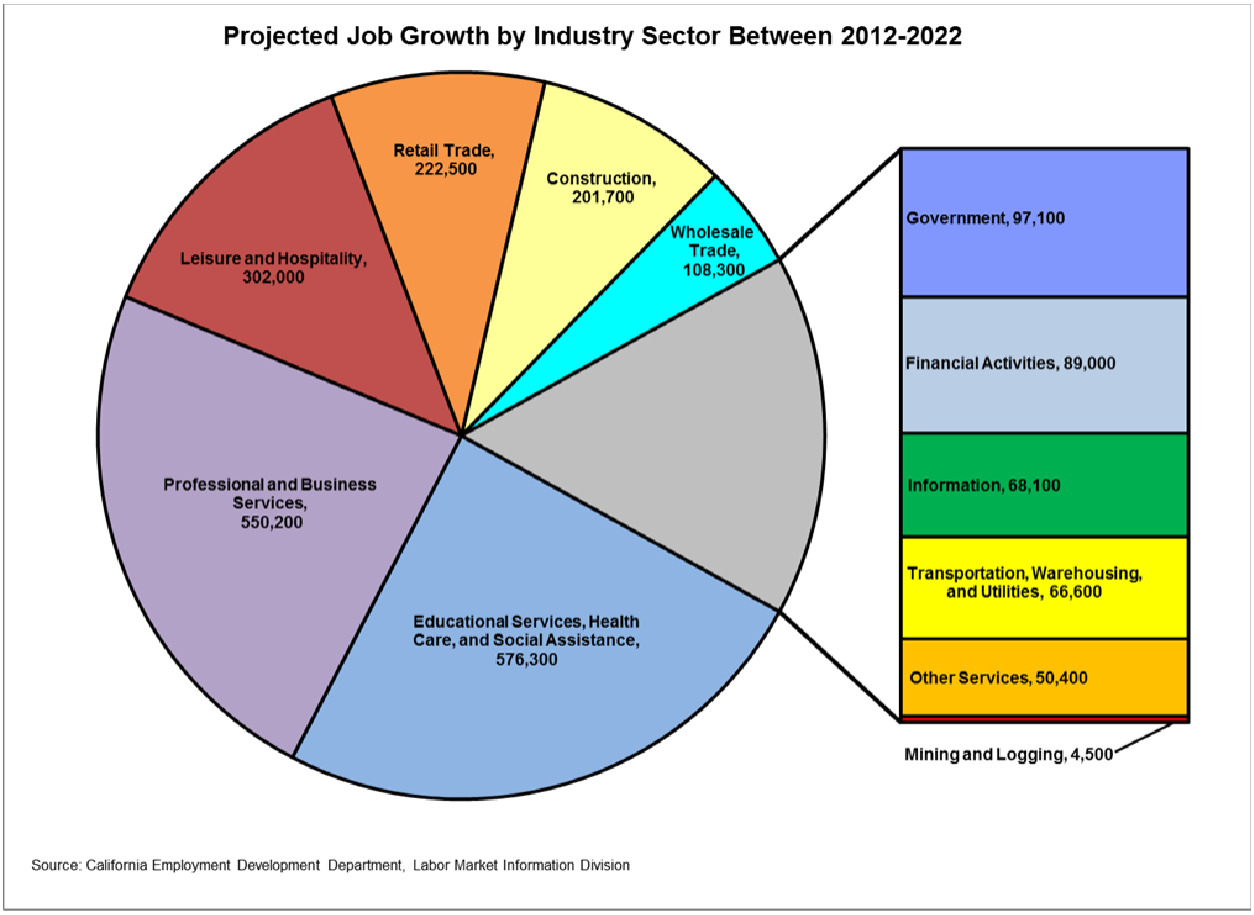
**Change in Nonfarm Jobs in California Economic Markets During the Economic Expansion**
(July 2010 – July 2015: Not Seasonally Adjusted Data)

| | | | |
|---|---|---|---|
| California | 1,905,900 | California | 13.5% |
| | | | |
| Largest Markets | | Largest Markets | |
| Southern California | 818,000 | Bay Area | 18.9% |
| Bay Area | 592,160 | Southern Border | 12.4% |
| Southern Border | 159,300 | Southern California | 12.4% |
| San Joaquin Valley | 128,400 | San Joaquin Valley | 11.9% |
| Greater Sacramento | 94,960 | Greater Sacramento | 10.7% |
| | | | |
| Smaller Markets | | Smaller Markets | |
| Central Coast | 36,900 | Central Coast | 7.6% |
| Northern California | 18,300 | Northern California | 6.8% |
| Central Sierra | 1,670 | Central Sierra | 3.0% |

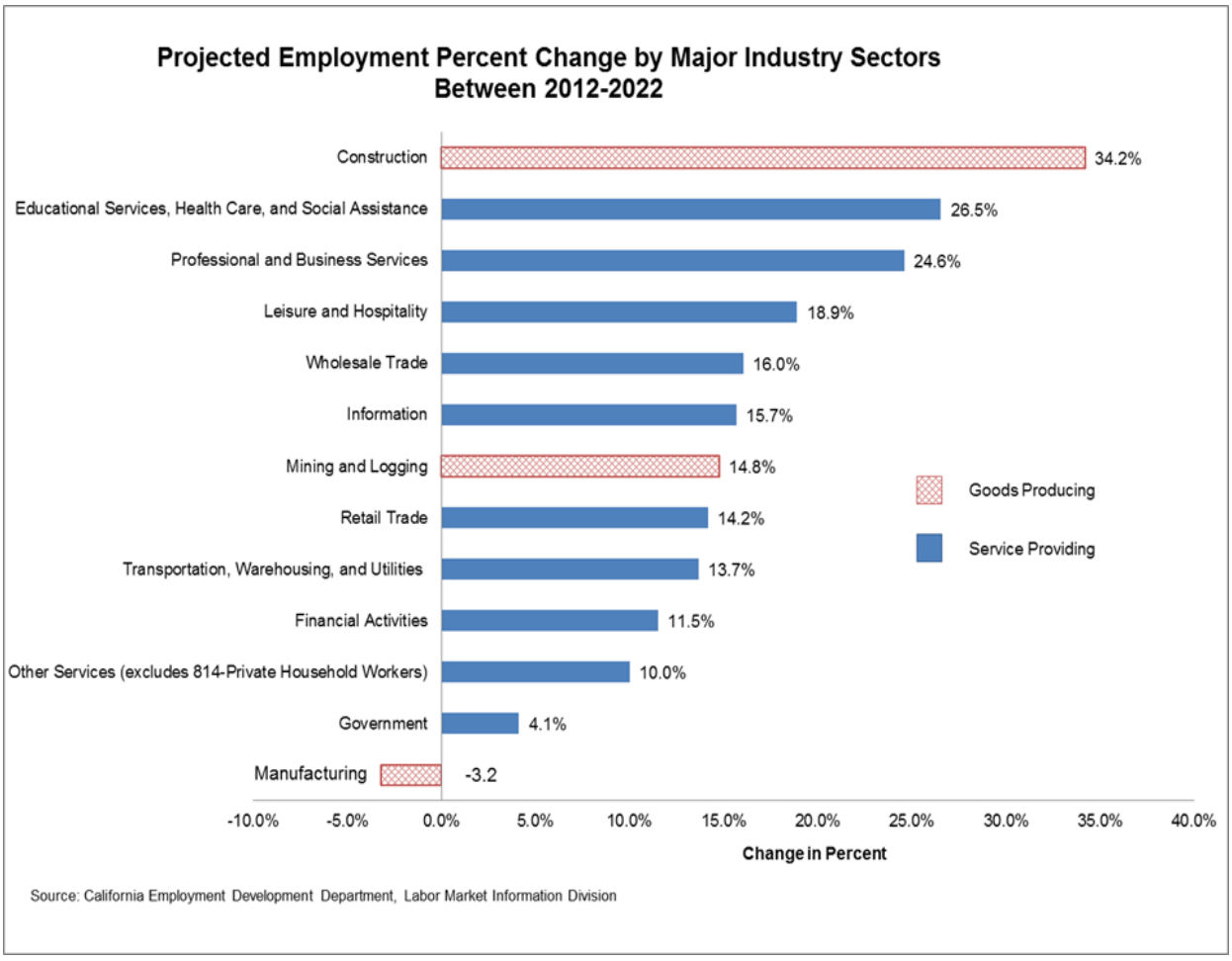
Notes:
1) The sum of economic markets does not equal the California total because of statewide reporters whose jobs can't be assigned to a specific area.
2) Dates only approximate the recession because not seasonally adjusted data require that like months in the year be compared to control for seasonal patterns of employment.

Source: Employment Development Department, Labor Market Information Division

### *12. Reference L: Projected Job Growth by Industry Sector between 2012-2022*



### *13. Reference M: Projected Employment Percent Change by Major Industries*



### *14. Reference N: Projected Job Gains for Demand Industry Groups*

| Industry Title | Projected Gain in Number 2012-2022 | Industry Title | Projected Gain in Percent (%) 2012-2022 |
|---|---|---|---|
| Individual and Family Services | 197,300 | Management, Scientific, and Technical Consulting Services | 69.2% |
| Full-Service Restaurants | 132,100 | Electronic Shopping and Mail-Order Houses | 65.1% |
| Management, Scientific, and Technical Consulting Services | 129,800 | Continuing Care Retirement Communities and Assisted Living Facilities for the Elderly | 49.2% |
| Employment Services | 117,100 | Other Information Services | 49.0% |
| Limited-Service Eating Places | 106,400 | Individual and Family Services | 48.4% |
| Computer Systems Design and Related Services | 74,900 | Home Health Care Services | 45.7% |
| Offices of Physicians | 54,900 | Residential Building Construction | 44.6% |
| Other General Merchandise Stores | 54,200 | Foundation, Structure, and Building Exterior Contractors | 43.2% |
| Local Government Education | 50,500 | Building Finishing Contractors | 42.0% |
| Other Local Government | 46,500 | Other General Merchandise Stores | 40.5% |
| Building Equipment Contractors | 46,100 | Outpatient Care Centers | 37.1% |
| General Medical and Surgical Hospitals | 40,000 | Other Specialty Trade Contractors | 35.4% |
| Outpatient Care Centers | 39,800 | Nondepository Credit Intermediation | 34.3% |
| Building Finishing Contractors | 38,900 | Office Administrative Services | 34.0% |
| Assisted Living Facilities for the Elderly | 38,100 | Computer Systems Design and Related Services | 32.8% |
| Nursing Care Facilities (Skilled Nursing Facilities) | 36,800 | Other Motor Vehicle Dealers | 31.8% |
| Residential Building Construction | 35,700 | Wholesale Electronic Markets and Agents and Brokers | 31.2% |
| Management of Companies and Enterprises | 35,000 | Employment Services | 30.9% |
| Services to Buildings and Dwellings | 34,600 | Software Publishers | 30.4% |
| Colleges, Universities, and Professional Schools | 33,600 | Facilities Support Services | 30.4% |
| Foundation, Structure, and Building Exterior Contractors | 32,500 | Utility System Construction | 30.1% |
| Home Health Care Services | 32,200 | Nursing Care Facilities (Skilled Nursing Facilities) | 30.0% |
| Wholesale Electronic Markets and Agents and Brokers | 31,600 | Other Schools and Instruction | 30.0% |
| Scientific Research and Development Services | 31,300 | Data Processing, Hosting, and Related Services | 29.5% |
| Automobile Dealers | 28,600 | Offices of Other Health Practitioners | 29.4% |

Source: Employment Development Department, Labor Market Information Division

### *15. Reference O: CA's Top 25 Middle-Skilled Occupations with Replacement Needs (2012-2022)*

| SOC Code* | Occupational Title | Average Annual Job Openings | | | 2014 First Quarter Wages [4] | |
|---|---|---|---|---|---|---|
| | | New Jobs [1] | Replacement Needs [2] | Total Jobs [3] | Median Hourly | Median Annual |
| 29-1141 | Registered Nurses | 4,300 | 4,930 | 9,230 | $45.87 | $95,415 |
| 25-9041 | Teacher Assistants | 1,190 | 3,280 | 4,470 | [5] | $29,623 |
| 53-3032 | Heavy and Tractor-Trailer Truck Drivers | 2,240 | 2,180 | 4,410 | $19.77 | $41,117 |
| 31-1014 | Nursing Assistants | 2,310 | 1,870 | 4,180 | $13.66 | $28,426 |
| 31-9092 | Medical Assistants | 1,890 | 1,560 | 3,450 | $15.83 | $32,940 |
| 29-2061 | Licensed Practical and Licensed Vocational Nurses | 1,560 | 1,480 | 3,040 | $25.11 | $52,225 |
| 15-1151 | Computer User Support Specialists | 1,530 | 960 | 2,490 | $26.24 | $54,582 |
| 25-2011 | Preschool Teachers, Except Special Education | 250 | 1,570 | 1,820 | $15.26 | $31,727 |
| 39-5012 | Hairdressers, Hairstylists, and Cosmetologists | 810 | 950 | 1,750 | $11.07 | $23,045 |
| 31-9091 | Dental Assistants | 700 | 940 | 1,640 | $17.71 | $36,850 |
| 27-2011 | Actors | 400 | 1,100 | 1,500 | $40.83 | N/A |
| 29-2021 | Dental Hygienists | 510 | 560 | 1,060 | $48.23 | $100,312 |
| 15-1134 | Web Developers | 680 | 340 | 1,020 | $35.04 | $72,874 |
| 23-2011 | Paralegals and Legal Assistants | 530 | 490 | 1,020 | $27.44 | $57,081 |
| 49-2022 | Telecommunications Equipment Installers and Repairers, Except Line Installers | 600 | 380 | 980 | $30.72 | $63,897 |
| 33-2011 | Firefighters | 180 | 780 | 970 | $33.49 | $69,659 |
| 49-9021 | Heating, Air Conditioning, and Refrigeration Mechanics and Installers | 460 | 510 | 970 | $25.34 | $52,702 |
| 29-2012 | Medical and Clinical Laboratory Technicians | 450 | 420 | 870 | $20.48 | $42,593 |
| 29-2041 | Emergency Medical Technicians and Paramedics | 390 | 460 | 850 | $14.40 | $29,947 |
| 51-1011 | First-Line Supervisors | 60 | 740 | 800 | $26.70 | $55,539 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | of Production and Operating Workers | | | | | |
| 29-2071 | Medical Records and Health Information Technicians | 340 | 440 | 780 | $19.61 | $40,782 |
| 39-5092 | Manicurists and Pedicurists | 550 | 190 | 740 | $9.19 | $19,115 |
| 25-4031 | Library Technicians | 90 | 550 | 640 | $19.89 | $41,359 |
| 31-9011 | Massage Therapists | 310 | 180 | 500 | $17.09 | $35,540 |
| 15-1152 | Computer Network Support Specialists | 190 | 290 | 470 | $35.44 | $73,724 |

Source: Employment Development Department, Labor Market Information Division

Notes:

*The Standard Occupational Classification (SOC) system is used by government agencies to classify workers into occupational categories for the purpose of collecting, calculating, or disseminating data.

**Data sources: U.S. Bureau of Labor Statistics' Current Employment Statistics (CES) March 2013 benchmark, Quarterly Census of Employment and Wages (QCEW) industry employment, and Occupational Employment Statistics (OES) data.

Occupational employment projections include self-employed, unpaid family workers, private household workers, farm, and nonfarm employment.

[1] New jobs are only openings due to growth and do not include job declines. If an occupation's employment change is negative, there is no job growth and new jobs are set to zero. New jobs may not equal numerical change.

[2] Replacement needs estimate the number of job openings created when workers retire or permanently leave an occupation and need to be replaced.

[3] Total jobs are the sum of new jobs and replacement needs.

[4] Median hourly and annual wages are the estimated 50th percentile of the distribution of wages; 50 percent of workers in an occupation earn wages below, and 50 percent earn wages above the median wage. The wages are from 2014 first quarter and do not include self-employed or unpaid family workers.

[5] In occupations where workers do not work full-time all year-round, it is not possible to calculate an hourly wage.

### *16. Reference P: California Middle Skill Supply/Demand Table, 2012-2022*

| California Middle Skill[14] Supply/Demand Table | | | | | | |
|---|---|---|---|---|---|---|
| **Occupational Title** | **Average Annual Total Projected Job Openings[15]** | **Supply** | | **Demand** | **2014 First Quarter Wages[16]** | |
| | | **AA/AS Attainment** | **Certificate Attainment** | **HWOL Job Ads[17]** | **Median Hourly Wage** | **Median Annual Wage** |
| Registered Nurses | 9,230 | 5,085 | 458 | 58,060 | $45.87 | $95,415 |
| Teacher Assistants | 4,470 | 49 | 37 | 8,743 | -- [18] | $29,623 |
| Heavy and Tractor-Trailer Truck Drivers[19] | 4,410 | 0 | 0 | 34,706 | $19.77 | $41,117 |
| Nursing Assistants | 4,180 | 0 | 302 | 3,805 | $13.66 | $28,426 |
| Medical Assistants | 3,450 | 355 | 1,171 | 8,003 | $15.83 | $32,940 |
| Licensed Practical and Licensed Vocational Nurses | 3,040 | 306 | 711 | 8,245 | $25.11 | $52,225 |
| Computer User Support Specialists | 2,490 | 44 | 63 | 19,571 | $26.24 | $54,582 |
| Preschool Teachers, Except Special Education | 1,820 | 71 | 175 | 7,815 | $15.26 | $31,727 |
| Hairdressers, Hairstylists, and Cosmetologists | 1,750 | 130 | 1,388 | 4,967 | $11.07 | $23,045 |
| Dental Assistants | 1,640 | 145 | 429 | 7,207 | $17.71 | $36,850 |

[14] The Bureau of Labor Statistics develops and assigns education and training categories to each occupation. For more information on these categories, please see http://www.bls.gov/emp/ep_education_training_system.htm
[15] For the 2012-2022 period, the total projected job openings reflect the sum of new and replacement jobs.
[16] EDD/LMID Occupational Employment Statistics; Median hourly and annual wages are the point at which half of workers earn more and half earn less. The wages are from the 2014 first quarter and do not include self-employed or unpaid family workers.
[17] The data from The Conference Board Help Wanted OnLine™ (HWOL) data series reflects occupations with the highest number of online job advertisements in 120 day period ending September 2, 2015.
[18] In occupations where workers do not work full-time all year-round, it is not possible to calculate an hourly wage.
[19] Heavy and Tractor-Trailer Truck Drivers represent an occupation where potential candidates are generally trained through private, independent truck driving schools. Training programs for this occupation may not be available at the California Community Colleges.

*17. Reference Q: Unemployment Rates by Age, Gender, Race/Ethnicity and Educational Attainment in CA*

| **Unemployment Rates by Age, Gender, Race/Ethnicity, and Educational Attainment at Key Points of California's Business Cycle**<br>(Unemployed as a Percent of the Labor Force; 12-Month Average of Current Population Survey) Data) | | | | | |
|---|---|---|---|---|---|
| | **Mar 07** | **Dec 10** | **Jul 15** | **Change: Mar 07-Dec 10** | **Change: Dec 10-Jul 15** |
| Total (All Groups) | 4.8 | 12.2 | 6.7 | 7.4 | -5.5 |
| | | | | | |
| Age | | | | | |
| Age 16-19 | 17.9 | 34.4 | 22.5 | 16.5 | -11.9 |
| Age 20-24 | 7.8 | 19.0 | 11.3 | 11.2 | -7.7 |
| Age 25-34 | 4.4 | 12.0 | 7.0 | 7.6 | -5.0 |
| Age 35-44 | 3.9 | 10.7 | 5.0 | 6.8 | -5.7 |
| Age 45-54 | 3.5 | 9.9 | 4.8 | 6.4 | -5.1 |
| Age 55-64 | 3.5 | 9.5 | 5.3 | 6.0 | -4.2 |
| Age 65+ | 3.0 | 9.0 | 5.8 | 6.0 | -3.2 |
| | | | | | |
| Gender | | | | | |
| Men | 4.8 | 12.9 | 6.6 | 8.1 | -6.3 |
| Women | 4.9 | 11.3 | 6.9 | 6.4 | -4.4 |
| | | | | | |
| Race/Ethnicity | | | | | |
| White | 4.6 | 11.9 | 6.4 | 7.3 | -5.5 |
| Black | 9.7 | 19.5 | 12.9 | 9.8 | -6.6 |
| Asian | 3.4 | 9.4 | 4.7 | 6 | -4.7 |
| Hispanic/Latino | 5.5 | 14.7 | 7.8 | 9.2 | -6.9 |
| | | | | | |
| Educational Attainment | | | | | |
| Did not complete high school | 9.3 | 19.1 | 10.5 | 9.9 | -8.6 |
| High school graduates, no college | 5.6 | 15.3 | 8.5 | 9.7 | -6.7 |
| Some college, no degree | 4.4 | 13.7 | 7.5 | 9.3 | -6.2 |
| Associate degree | 3.1 | 9.6 | 6.3 | 6.5 | -3.3 |
| Bachelor's degree or higher | 2.7 | 6.7 | 3.8 | 4.0 | -2.9 |

Source: Employment Development Department, Labor Market Information Division

### *18. Reference R: July Unemployment Rates in California Economic Markets 2005-2015*

**July Unemployment Rates in California Economic Markets: 2005-2015**
(Unemployed as a Percent of the Labor Force: Not Seasonally Adjusted Data)

| | Jul 05 | Jul 06 | Jul 07 | Jul 08 | Jul 09 | Jul 10 | Jul 11 | Jul 12 | Jul 13 | Jul 14 | Jul 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CALIFORNIA | 5.5 | 5.2 | 5.7 | 7.6 | 11.7 | 12.6 | 12.2 | 10.9 | 9.3 | 7.9 | 6.5 |
| Coastal | 4.9 | 4.7 | 5.0 | 6.3 | 9.4 | 10.6 | 10.5 | 9.6 | 8.2 | 6.9 | 5.7 |
| Eastern Sierra | 5.7 | 5.4 | 5.8 | 7.6 | 11.4 | 12.9 | 12.8 | 11.8 | 9.5 | 8.0 | 6.5 |
| Northern | 6.9 | 6.5 | 7.1 | 8.8 | 12.7 | 14.1 | 14.2 | 13.0 | 10.7 | 9.1 | 7.4 |
| Sacramento | 5.2 | 5.1 | 5.7 | 7.5 | 11.5 | 12.9 | 12.5 | 11.1 | 9.2 | 7.7 | 6.2 |
| San Francisco Bay Area | 5.2 | 4.6 | 4.9 | 6.2 | 10.3 | 10.5 | 9.8 | 8.6 | 7.0 | 5.8 | 4.5 |
| San Joaquin Valley | 8.2 | 7.8 | 8.4 | 10.3 | 14.6 | 16.6 | 16.3 | 14.8 | 12.6 | 11.1 | 9.9 |
| Southern | 5.3 | 5.0 | 5.5 | 7.8 | 12.0 | 12.8 | 12.5 | 11.2 | 9.8 | 8.3 | 6.8 |
| Southern Border | 5.1 | 4.9 | 5.6 | 7.3 | 10.9 | 12.1 | 11.9 | 10.7 | 9.1 | 7.9 | 6.3 |

Source: Employment Development Department, Labor Market Information Division

### *19. Reference S: Labor Force Definitions*

- **Civilian labor force.** Included are all persons in the civilian non-institutional population ages 16 and older classified as either employed or unemployed.

- **Employed persons.** These are all persons who, during the reference week (the week including the 12th day of the month), (a) did any work as paid employees, worked in their own business or profession or on their own farm, or worked 15 hours or more as unpaid workers in an enterprise operated by a member of their family, or (b) were not working but who had jobs from which they were temporarily absent because of vacation, illness, bad weather, childcare problems, maternity or paternity leave, labor-management dispute, job training, or other family or personal reasons, whether or not they were paid for the time off or were seeking other jobs. Each employed person is counted only once, even if he or she holds more than one job.

- **Unemployed persons.** Included are all persons who had no employment during the reference week, were available for work, except for temporary illness, and had made specific efforts to find employment some time during the 4 week-period ending with the reference week. Persons who were waiting to be recalled to a job from which they had been laid off need not have been looking for work to be classified as unemployed.

- **Unemployment rate.** The unemployed percent of the civilian labor force.

Source: Bureau of Labor Statistics, Local Area Unemployment Statistics