

# California Labor Market and Economic Analysis 2009

Prepared by:  
Labor Market Information Division  
Employment Development Department  
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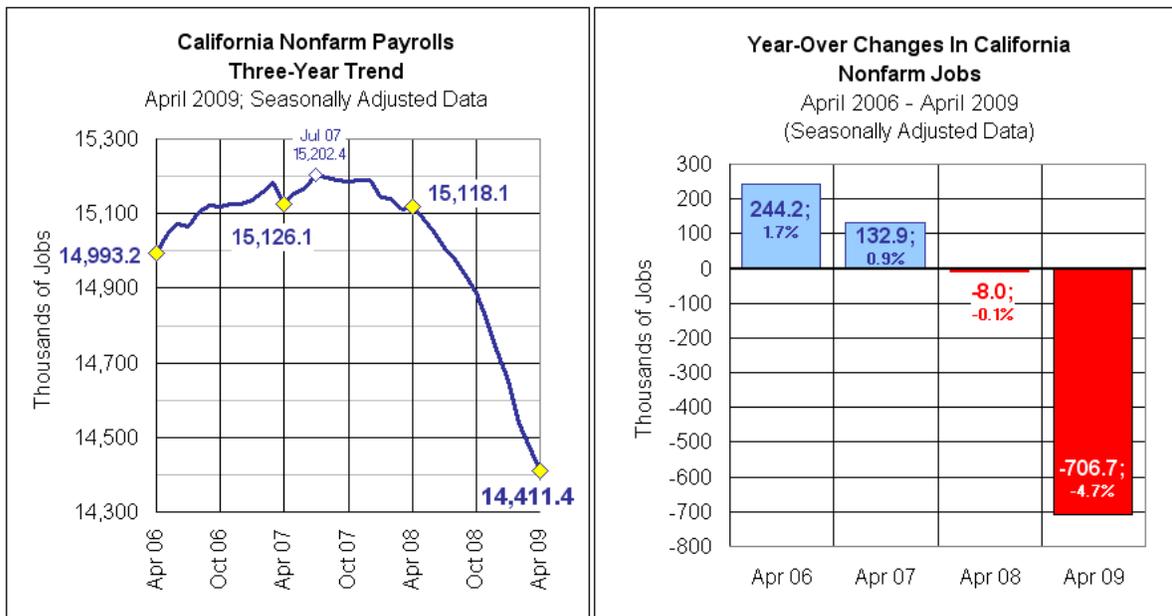
# EXECUTIVE SUMMARY

## Introduction:

The following is an executive summary of an economic and labor market analysis prepared by the Employment Development Department's (EDD) Labor Market Information Division (LMID) to support the California Workforce Investment Board's (CWIB) 2009 strategic planning processes. The analysis provides a detailed description of the State's economy, its labor pool, and its labor market context. More specifically, it addresses such questions as: 1) How has the economic downturn affected California's economy, 2) What are the current and anticipated effects on employment by sector, 3) What are the current and projected demographics of the available labor pool, 4) What are the skills gaps, if any, that California employers face based on the skills held by current and expected dislocated workers, and 5) What skills and occupations demanded by industries are expected to grow through economic recovery?

## Economic Conditions in California

Like most of the nation, in the second quarter of 2009, the California economy was gripped by a severe recession characterized by deepening job losses and rapidly rising unemployment. From their peak in July 2007 through April 2009, California nonfarm payrolls fell by 791,000 jobs (5.2 percent). This constituted the largest job loss in number and percent of any economic downturn since World War II.



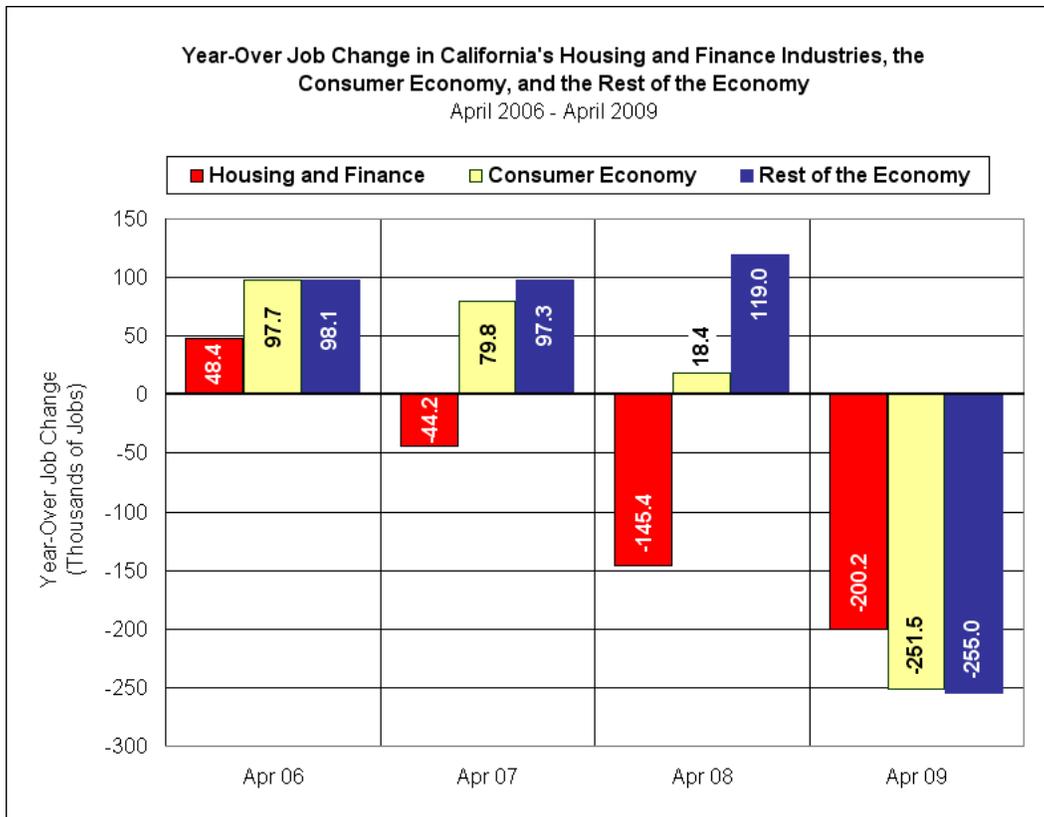
California's year-over job losses totaled 706,700 (4.7 percent) in April 2009. More than two-thirds of this loss occurred in the six months ending in April 2009. Whereas losses totaled 231,400 jobs from April 2008 through October 2008, they totaled 475,300 jobs from October 2008 through April 2009.

California's economic problems originated in the housing and financial sectors, spread into the consumer economy, and subsequently into the rest of the economy. The chart below compares the year-over job changes in California's housing and finance industries, consumer economy, the rest of the economy.

These three categories are defined as follows:

1. Housing and finance includes the construction and financial activities sectors,
2. The consumer economy includes the trade, transportation, and utilities; and leisure and hospitality sectors,
3. The rest of the economy includes all other industry sectors.

Even though the housing and finance sector had already begun losing jobs, California's year-over job gains totaled 244,200 jobs in April 2006, with housing and finance contributing nearly one-fifth of this gain. Year-over job growth slowed to 132,900 in April 2007 as the consequences from the bursting of the housing bubble deepened. This slowdown was primarily attributable to year-over job losses totaling 44,200 jobs in housing and finance. In contrast, year-over job growth in the consumer economy slowed only slightly from the previous year, and was largely unchanged in the rest of the economy.



In April 2008, California experienced a year-over nonfarm payroll loss totaling 8,000 jobs. Year-over job losses in housing and finance were more than triple those of April 2007, and year-over job growth in the consumer economy slowed to less than one-quarter of its April 2007 total. In contrast, year-over job growth in the rest of the economy was stronger in April 2008 than in April 2007.

California's job losses mushroomed to 706,700 over the year-ending in April 2009. While job losses in housing and finance deepened to 200,200, job losses in the consumer economy, and the rest of the economy totaled 251,500 and 255,000 jobs, respectively. The large majority of job losses in the rest of the economy were in the manufacturing and professional and business services sectors.

### **Current and Anticipated Effects on Employment**

With severe job losses and rapidly rising unemployment continuing, the outlook for the California economy, and particularly its labor markets, remained uncertain at the beginning of the second quarter of 2009. The emerging consensus was that job losses were expected to continue into first or second quarter of 2010, but gradually diminish in magnitude over time. The pace of job growth was expected to gradually strengthen through the first half of 2011. In turn, the unemployment rate was expected to remain high through the end of 2011, and not fall below double digits until sometime in 2012. Consumers were not expected to drive

economic growth as they did in the last expansion, but were instead expected to increase savings and spend more modestly.

Job losses in California's hard hit construction industry were expected to begin abating in the second half of 2009 and into 2010 as the State's housing markets finally hit bottom and began to recover gradually. On the positive side, State and federal stimulus spending for infrastructure was expected to bolster construction employment, particularly in heavy construction. In addition, stimulus monies for energy conservation were expected to boost employment in certain specialty trade contracting industries. However, commercial construction was expected to remain weak through much of 2010.

Educational and health services were expected to continue to be a source of strong job growth into the foreseeable future due to demographic factors such as the aging baby boom population. State and federal investments in education and health care were expected to further bolster job growth.

Over the longer term, it is important to note that the current economic downturn, although severe, is a cyclical event. California's comparative economic advantage, primarily its entrepreneurial and innovative spirit and highly skilled and educated workforce, remains strong but must be nurtured and expanded over the long run. Also, California appears to be particularly well positioned to take advantage of increased federal investment in fuel efficiency and green technologies.

### **Current and Projected Demographics of the Available Labor Pool**

California is the nation's most populous state, with the California Department of Finance estimating 38.3 million state residents as of January 1, 2009. Not surprisingly, California also has the nation's largest labor force and working-age population. In April 2009, the EDD reported a working-age population (civilian, non-institutional, persons age 16 years and over) of 28.1 million, of which over 18.5 million were in the labor force – 16.9 million employed and 1.6 million unemployed (all figures are 12-month moving averages, not seasonally-adjusted). This translates into a labor force participation rate of just under 66 percent.

Other demographic information worth noting:

- California's population is slightly younger than the national population, and more diverse—with a substantially larger percentage of Hispanics.
- Despite the "slightly younger" population, like the rest of the nation, California faces an aging workforce, and the loss of skilled workers due to retirement. While California's working-age population is projected to grow by 4.1 million from 2008 to 2018, only 247,000 of this increase (or 6 percent) is from people aged 16-24, whereas almost 3 million of the increase (or 72 percent) is from people aged 55 years and older.

- The California labor force is highly skilled—over 60 percent of the working population has some post-secondary education, with almost one-third of workers having a bachelor’s degree or higher.
- In contrast, 16 percent of workers 25-64 years had not received a high school diploma or GED.
- The 2007 American Community Survey reported that 20 percent of all Californians speak English less than “very well.”

### **Skills Gaps Facing California Employers**

Despite economic changes, the foundation skills needed by most occupations in the 2009 growth industries—for example, health care and social assistance, and educational services—are skills many workers already possess.

These skills include:

- *Active listening* – Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
- *Coordination* – Adjusting actions in relation to others' actions.
- *Critical thinking* – Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems.
- *Instructing* – Teaching others how to do something.
- *Learning strategies* - Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
- *Judgment and decision-making* – Considering the relative costs and benefits of potential actions to choose the most appropriate one.
- *Mathematics* – Using mathematics to solve problems.
- *Reading comprehension* – Understanding written sentences and paragraphs in work-related documents.
- *Social perceptiveness* -- Being aware of others' reactions and understanding why they react as they do.
- *Speaking* – Talking to others to convey information effectively (in most instances, the ability to communicate in English is explicitly stated or inferred).
- *Time management* – Managing one's own time and the time of others.

### **Demand Occupations**

The top 50 occupations with the most job openings will generate over half of all job openings in California during the forecast period. These 50 occupations are

expected to generate over 3.3 million total job openings consisting of 1.3 million openings from new jobs and 2 million openings due to net replacements. Net replacements measure the number of workers needed to replace those that have left the labor force or have changed occupations.

The top ten occupations with the most job openings will provide over 1.4 million job opportunities. Job opportunities in lower-skilled occupations include Retail Salespersons, Cashiers, and Waiters and Waitresses. Higher-skilled occupations such as Registered Nurses and Elementary School Teachers are also forecasted to have a substantial number of openings.

The top 50 fastest growing occupations are each expected to grow at a rate of 24 percent or more over the ten-year period. These occupations are concentrated in the healthcare, education, and computer related fields.

### **Skills Demanded by Growth Industries and Occupations**

Industries expected to grow, including those receiving temporary American Recovery and Reinvestment Act funding, are health care and social assistance, education, construction, and “green” industries. Skills identified as important in all four industry sectors include:

- Active Listening
- Reading Comprehension
- Critical Thinking
- Speaking

### **Dissemination and Integration of Workforce Information into Planning and Decision Making at the State and Local Levels**

Public access to the full range of state labor market information is available through the California Employment Development Department labor market information Web site – [www.labormarketinfo.edd.ca.gov](http://www.labormarketinfo.edd.ca.gov).

Major workforce information categories available on the Web site include career information as an aid to jobseekers, data on the economy in the context of the labor market, a data library with access to labor force, employment, and occupational and industry figures and analysis for the State, Metropolitan Statistical Area (MSA), county, and sub-county levels. There is also a customer center section with workforce information organized by user group to include employers, economic developers, educators, workforce partners, and researchers.

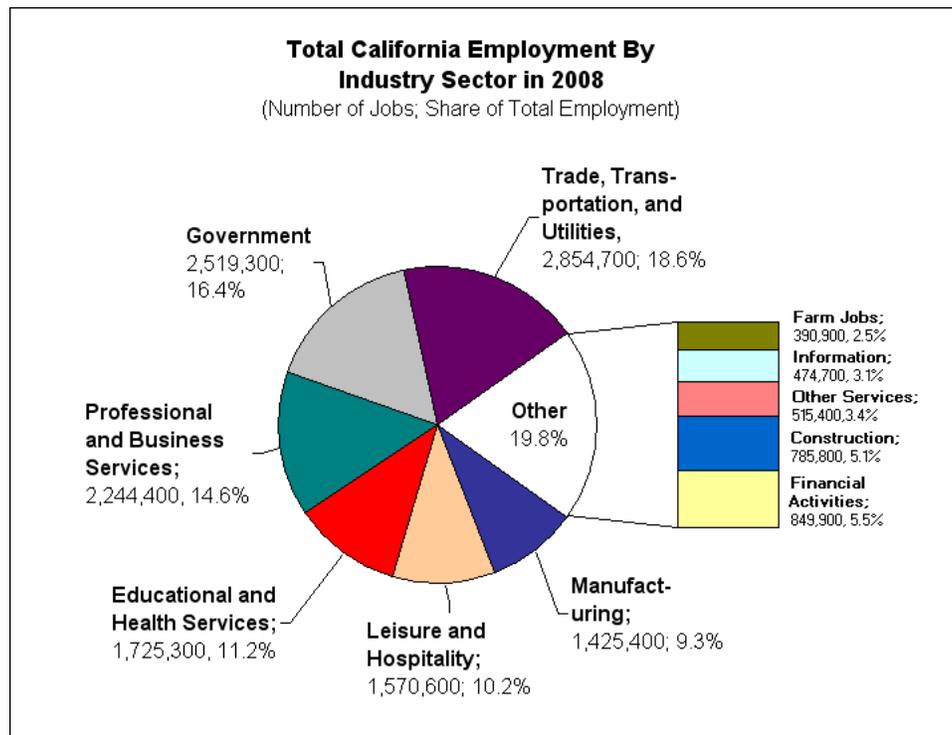
Ongoing support is supplied to Local Workforce Boards and the public by regional LMID labor market consultants stationed throughout the State and through planning tools such as Planning Information Packets, an annual

publication provided to each local workforce planning agency, and both the short-term (two year) and long-term (10 year) projections of employment.

# Labor Market and Economic Analysis

## Overview of Current California Industry Employment

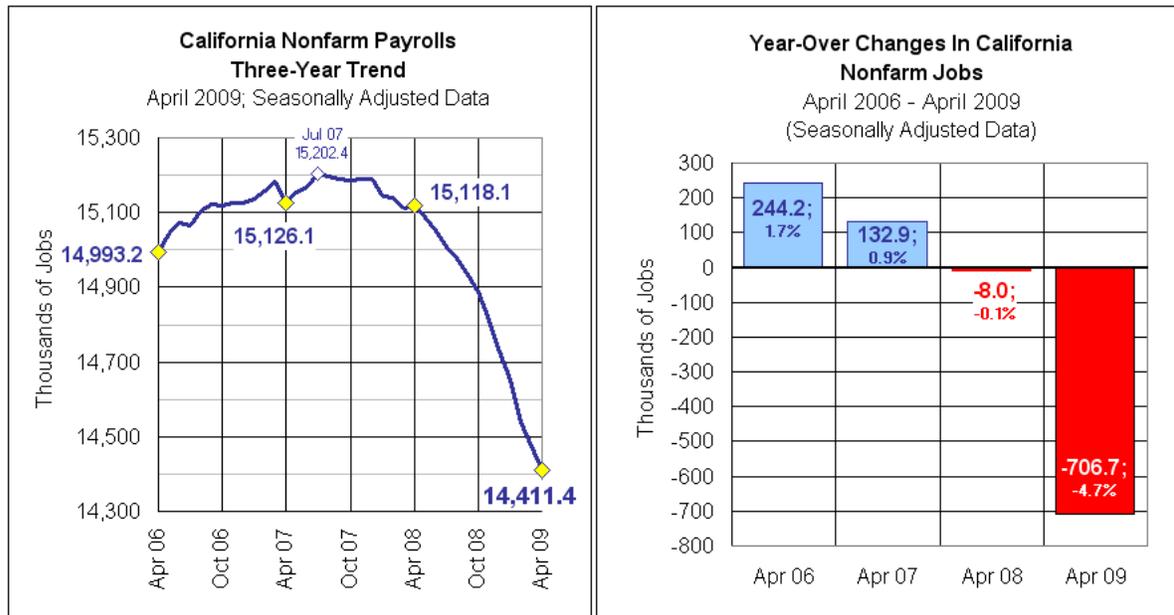
- California has the largest labor market in the U.S. In 2008, nonfarm payrolls totaled 14,994,100 jobs, comprising 10.9 percent of the nation's nonfarm jobs. In addition, California had 390,900 jobs in the farm sector (2.5 percent of all California jobs), for a total of 15,385,000 jobs in 2008.
- In 2008, employment in three California industry sectors totaled more than 2 million jobs: trade, transportation, and utilities (2,854,700); government (2,519,300), and professional and business services (2,244,400). Half of the State's jobs were located in these three industries in 2008.
- Payrolls in three additional California industries totaled more than 1.4 million jobs in 2008: educational and health services (1,725,300), leisure and hospitality (1,570,600), and manufacturing (1,425,400).
- Only two of California's remaining six industry sectors comprised more than 5 percent of total employment in 2008: financial activities (5.5 percent), and construction (5.1 percent).



## HOW HAS THE ECONOMIC DOWNTURN AFFECTED THE STATE'S ECONOMY?

### Economic Conditions in California<sup>1</sup>

In the second quarter of 2009, the California economy was gripped by a severe recession characterized by deepening job losses and rapidly rising unemployment. From their peak in July 2007 through April 2009, California nonfarm payrolls fell by 791,000 jobs (5.2 percent). This constituted the largest job loss in number and percent of any economic downturn since World War II.



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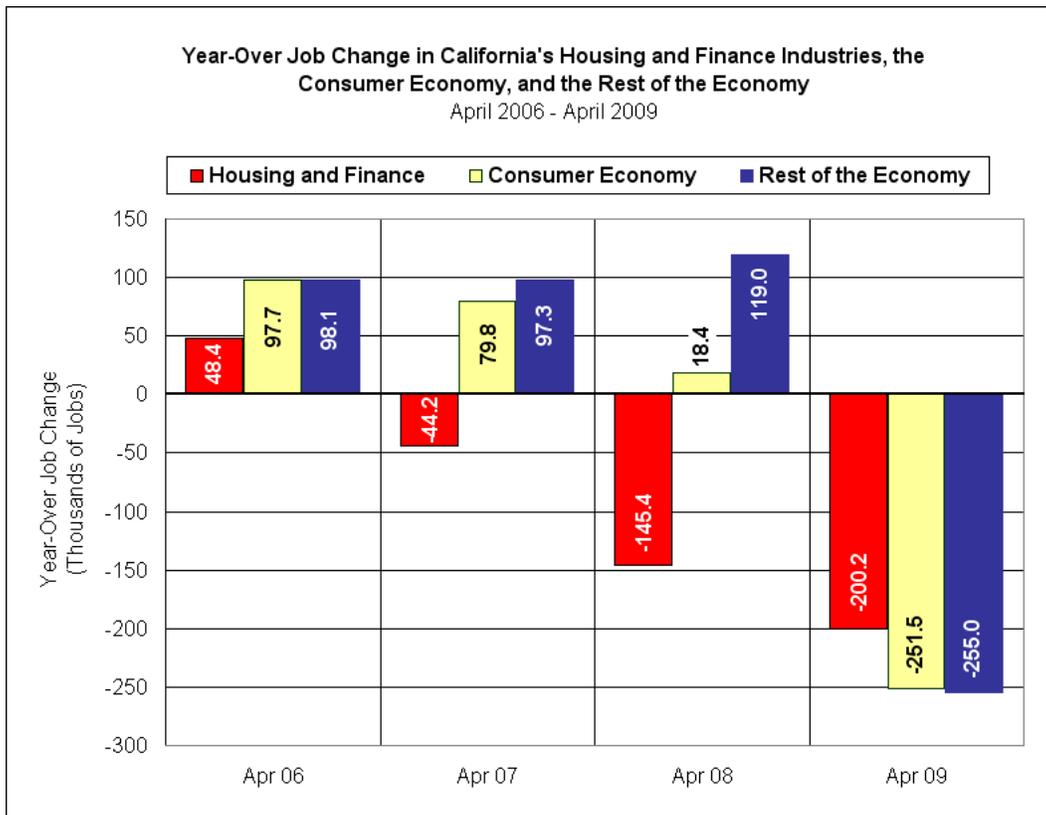
These three categories are defined as follows:

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<sup>1</sup> This section summarizes California economic conditions using employment and unemployment data available through April 2009 (preliminary).

2. The consumer economy includes the trade, transportation, and utilities; and leisure and hospitality sectors,
3. The rest of the economy includes all other industry sectors.

Even though the housing and finance sector had already begun losing jobs, California's year-over job gains totaled 244,200 jobs in April 2006, with housing and finance contributing nearly one-fifth of this gain.<sup>2</sup> Year-over job growth slowed to 132,900 in April 2007 as the consequences from the bursting of the housing bubble deepened. This slowdown was primarily attributable to year-over job losses totaling 44,200 jobs in housing and finance. In contrast, year-over job growth in the consumer economy slowed only slightly from the previous year, and was largely unchanged in the rest of the economy.

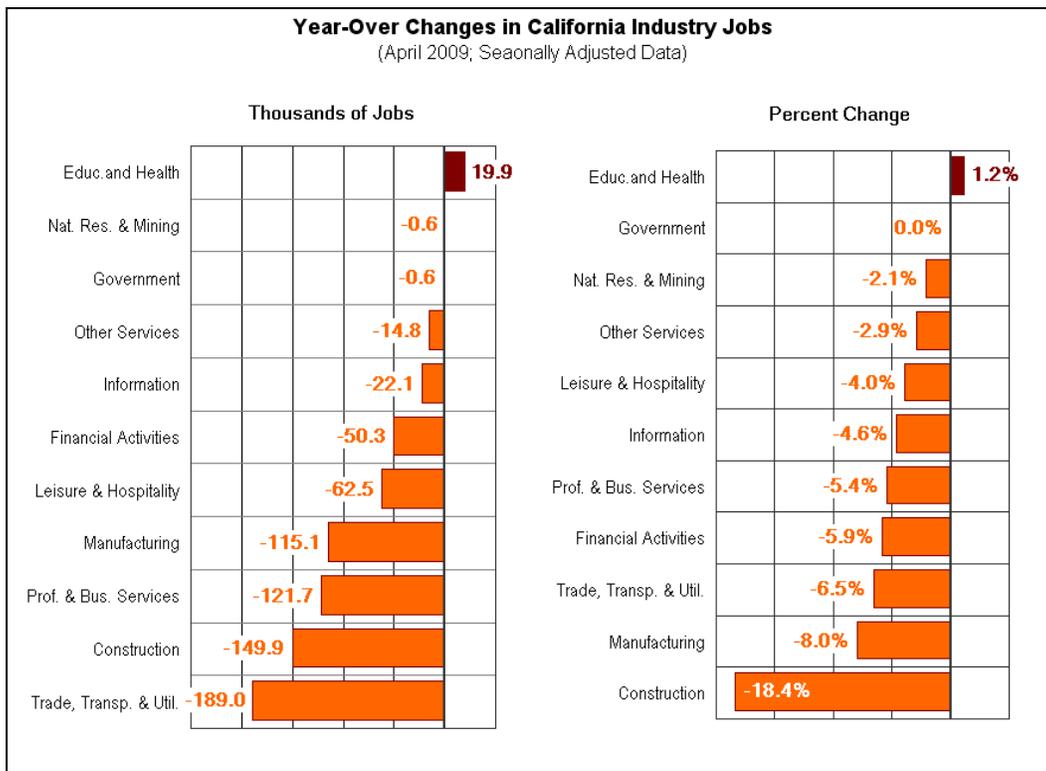


In April 2008, California experienced a year-over nonfarm payroll loss totaling 8,000 jobs. Year-over job losses in housing and finance were more than triple those of April 2007, and year-over job growth in the consumer economy slowed to less than one-quarter of its April 2007 total. In contrast, year-over job growth in the rest of the economy was stronger in April 2008 than in April 2007.

<sup>2</sup> Year-over gains in housing and finance peaked in January 2006 at 108,200 jobs. Despite accounting for a little over 12 percent of total nonfarm jobs, housing and finance accounted for more than 35 percent of California's 307,400 year-over gain in total nonfarm payroll jobs in January 2006.

California's job losses mushroomed to 706,700 over the year-ending in April 2009. While job losses in housing and finance deepened to 200,200, job losses in the consumer economy, and the rest of the economy totaled 251,500 and 255,000 jobs, respectively. The large majority of job losses in the rest of the economy were in the manufacturing and professional and business services sectors.

California's job losses over the last year have been widespread across industry sectors. Educational and health services, which added 19,900 jobs, was the only one of California's 11 major industry sectors to gain jobs over the year ending in April 2009. However, educational and health services' year-over job gain in April 2009 was only about one-quarter that of April 2008.



Trade, transportation, and utilities (189,000) experienced the largest job loss of any industry sector over the year ending in April 2009. These losses were concentrated in retail trade, but transportation, warehousing, and utilities; and wholesale trade both exhibited deepening job losses.

Three additional California industry sectors lost more than 100,000 jobs over the year ending in April 2009: construction (149,900), professional and business services (121,700), and manufacturing (115,100). Leisure and hospitality (62,500), and financial activities (50,300) were the other California industry sectors that lost more than 50,000 jobs over the year ending in April 2009.

On a percentage basis, construction had far and away the largest year-over job losses of any California industry sector in April 2009. Job losses in construction were distributed across construction industries and in both residential and commercial construction.

Nearly two-thirds of the professional and business services sector year-over job losses, 121,700 in total, were in administrative and support and waste services, and more particularly, employment services. However, California's high-wage and high growth professional, scientific, and technical services subsector lost 31,000 jobs over the year ending in April 2009, and the subsector exhibited a trend of increasing monthly job losses.

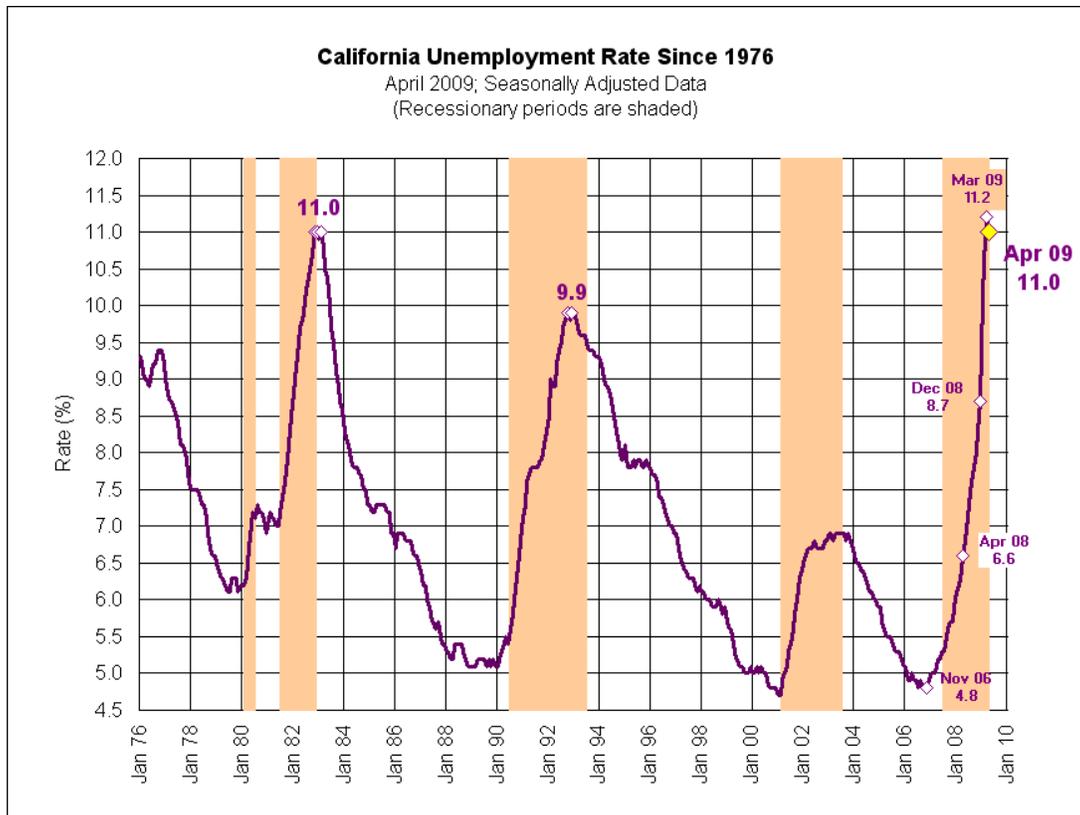
Job losses in manufacturing were widespread across both durable and nondurable goods manufacturing industries. In fact, 20 of the 21 major manufacturing industries experienced a year-over job loss in April 2009. Only petroleum and coal product manufacturing showed a year-over job gain, totaling 200 jobs.

Year-over job losses in financial activities were widespread across most industries. Leisure and hospitality's jobs losses were heavily concentrated in the consumer-oriented accommodation and food services industry subsector.

Although government experienced a small year-over loss of 600 jobs in April 2009, this reflected an 11,500 job gain in federal government jobs in April, led in particular by the hiring of U.S. census workers in preparation for the 2010 Census. Prior to April, there was a trend of deepening government job losses—particularly in local government. Government job losses are expected to mount over the next couple years due to the severe budgetary constraints facing the State and local governments.

## **Unemployment**

Unemployment has risen at a sustained and rapid pace in the current economic downturn. In March 2009, the California unemployment rate rose to 11.2 percent, which was the highest rate on record (i.e., since January 1976).



Although California's unemployment rate fell to 11.0 percent in April 2009, this was only the first decrease in 31 months. The April 2009 unemployment rate matched the highest unemployment on record prior to March 2009, which occurred in the recession of the early 1980s. California's unemployment rate rose by 4.4 percentage points over the last year, trailing only March 2009's year-over increase of 4.8 percentage points as the highest on record. The April 2009 unemployment rate was 6.2 percentage points higher than its most recent low of 4.8 percent in November 2006.

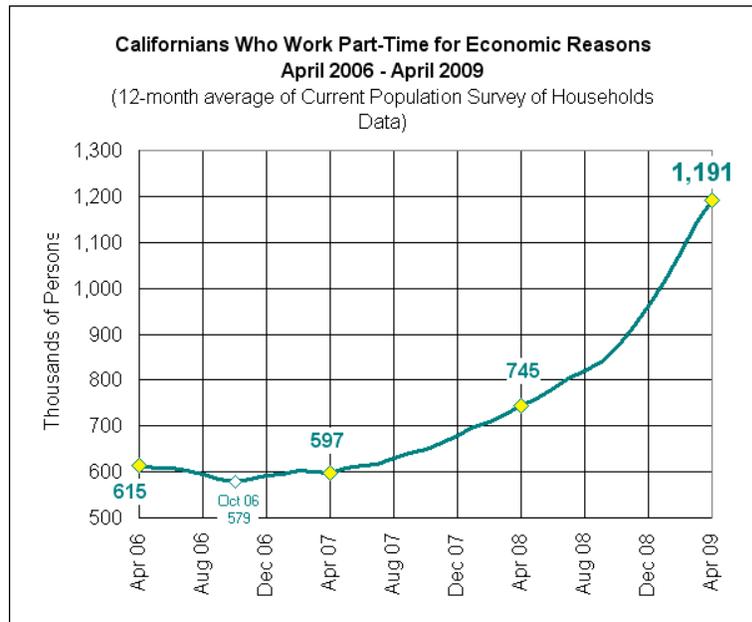
There were 2,057,000 unemployed Californians in April 2009. There were 843,000 (69.4 percent) more unemployed Californians in April 2009 than in April 2008, and 1,198,000 (or 140 percent) more than in November 2006, the recent low.

There were 16,526,000 employed Californians in April 2009. There were 544,000 (3.2 percent) fewer employed Californians in April 2009 than in April 2008, and 571,000 (3.3 percent) less than in July 2007, when employment peaked.

The current economic slump has led to a sharp increase in the number of Californians who work part-time for economic reasons, a category that is also referred to as "involuntary part-time employment" or "underemployment." These are workers who would like to work full-time hours, but can't because their hours

have been reduced by their employers or because they can't find work with full-time hours.

According to a 12-month average of Current Population Survey of household's data, 1,191,000 California workers worked part-time for economic reasons in April 2009. This was an increase of 446,000 persons (63.0 percent) from February 2008. The number of Californians who worked part-time for economic reasons more than doubled from the recent low of 579,000 in October 2006 through April 2009. Californians who worked part-time for economic reasons made up 7.0 percent of all employed California workers in April 2009, compared to just 3.4 percent of workers in October 2006.



Rising unemployment in California has affected all gender, age, and race/ethnicity groups. However, some demographic groups such as men, individuals age 25 to 44, and Hispanics have been affected disproportionately.

| <b>Twelve-Month Moving Average Unemployment Rates<br/>by Gender, Age, and Race/Ethnicity</b><br>(Source: Current Population Survey; 12-Month Average) |          |          |        |                   |
|---|----------|----------|--------|-------------------|
|   | April-08 | April-09 | Change | Percent<br>Change |
| Unemployment rate by:   |          |          |        |                   |
| All Workers   | 5.7%     | 8.6%     | 2.9%   | 50.9%             |
| Gender:   |          |          |        |                   |
| Men   | 5.8%     | 9.2%     | 3.4%   | 58.6%             |
| Women   | 5.6%     | 7.9%     | 2.3%   | 41.1%             |
| Age:  |          |          |        |                   |
| 16-19   | 18.7%    | 26.8%    | 8.1%   | 43.3%             |
| 20-24   | 9.7%     | 13.9%    | 4.2%   | 43.3%             |
| 25-34   | 5.5%     | 9.0%     | 3.5%   | 63.6%             |
| 35-44   | 4.3%     | 7.2%     | 2.9%   | 67.4%             |
| 45-54   | 4.3%     | 6.3%     | 2.0%   | 46.5%             |
| 55-64   | 3.7%     | 5.6%     | 1.9%   | 51.4%             |
| 65 and over   | 5.0%     | 6.6%     | 1.6%   | 32.0%             |
| Race/Ethnicity:   |          |          |        |                   |
| White   | 5.5%     | 8.5%     | 3.0%   | 54.5%             |
| Black   | 9.6%     | 13.1%    | 3.5%   | 36.5%             |
| Hispanic  | 7.2%     | 11.4%    | 4.2%   | 58.3%             |

Rising unemployment has also affected workers of all educational backgrounds and occupations. All educational groups experienced rising unemployment over the year ending in April 2009. However, the increase in unemployment disproportionately affected the less educated. The unemployment rate increase among those with a Bachelor's degree or higher was significantly less than that of other educational groups.

| <b>Twelve-Month Moving Average Unemployment Rates<br/>by Educational Attainment and Major Occupational Groups</b><br>(Source: Current Population Survey; 12-Month Average) |          |          |        |                   |
|--|----------|----------|--------|-------------------|
|  | April-08 | April-09 | Change | Percent<br>Change |
| Unemployment rate by:  |          |          |        |                   |
| All Workers  | 5.7%     | 8.6%     | 2.9%   | 50.9%             |
| Educational Attainment:  |          |          |        |                   |
| Less than a high school diploma  | 10.3%    | 15.7%    | 5.4%   | 53.0%             |
| High school graduates, no college  | 7.5%     | 11.0%    | 3.5%   | 46.1%             |
| Some college, no degree  | 5.6%     | 8.4%     |        |                   |
| Associate degree   | 3.6%     | 6.6%     | 3.1%   | 85.3%             |
| Bachelor's degree or higher  | 2.8%     | 4.5%     | 1.7%   | 60.3%             |
| Major Occupational Group:  |          |          |        |                   |
| Management, business, and financial occupations  | 2.6%     | 4.8%     | 2.2%   | 82.9%             |
| Professional and related occupations   | 2.8%     | 4.3%     | 1.6%   | 56.5%             |
| Service occupations  | 6.3%     | 7.7%     | 1.4%   | 23.2%             |
| Sales and related occupations  | 5.3%     | 8.3%     | 3.0%   | 57.4%             |
| Office and administrative support occupations  | 5.1%     | 8.9%     | 3.8%   | 73.5%             |
| Farming, fishing, and forestry occupations   | 13.6%    | 23.5%    | 9.9%   | 72.6%             |
| Construction and extraction occupations  | 10.4%    | 18.1%    | 7.7%   | 73.3%             |
| Installation, maintenance, and repair occupations  | 4.1%     | 7.9%     | 3.8%   | 92.8%             |
| Production occupations   | 6.8%     | 10.5%    | 3.7%   | 53.8%             |
| Transportation and material moving occupations   | 7.1%     | 11.4%    | 4.2%   | 59.3%             |

California workers in each major occupational group also experienced rising unemployment over the last year. Generally speaking, unemployment rates were lowest among workers in skilled occupations and highest in less skilled occupations. Workers in less skilled occupations also experienced a more rapid rise in unemployment than workers in skilled occupations.

## Mass Layoff Statistics

Mass Layoff Statistics (MLS) provide additional insight into recent economic trends. These data identify, describe, and track large job cutbacks by individual establishments. A potential mass layoff event occurs when an establishment has 35 initial unemployment compensation claims filed against it within a five-week period. A verified mass layoff event occurs when an employer verifies that 50 or more employees were separated from their jobs for more 30 days.

The California MLS data underscore that the effects of the current economic downturn have been widely felt across major industry sectors and subsectors. Industry data show that there were 5,393 potential mass layoff events in California in 2008, an increase of 24 percent over 2007. The rate of increase in the number of mass layoffs in California in 2008 was twice that of 2007.

| <b>Number of Potential Mass Layoff Events in California By Industry, 2006 - 2008</b>                  |                         |              |              |                         |                     |                        |
|---|-------------------------|--------------|--------------|-------------------------|---------------------|------------------------|
| <small>(Source: California Employment Development Department, Mass Layoff Statistics Program)</small> |                         |              |              |                         |                     |                        |
| <b>Industry Sector</b>  | <b>Number of Events</b> |              |              | <b>Year-Over Change</b> |                     | <b>Two-Year Change</b> |
|   | <b>2006</b>             | <b>2007</b>  | <b>2008</b>  | <b>2006 to 2007</b>     | <b>2007 to 2008</b> | <b>2006 to 2008</b>    |
| Agriculture, Forestry, Fishing and Hunting  | 529                     | 541          | 563          | 2.2%                    | 3.9%                | 6.4%                   |
| Mining, Quarrying, and Oil and Gas Extract.   | (-)                     | (-)          | (-)          | (-)                     | (-)                 | (-)                    |
| Utilities   | 6                       | 6            | 11           | 0.0%                    | 45.5%               | 83.3%                  |
| Construction  | 482                     | 558          | 729          | 13.6%                   | 23.5%               | 51.2%                  |
| Manufacturing   | 395                     | 400          | 600          | 1.3%                    | 33.3%               | 51.9%                  |
| Wholesale Trade   | 60                      | 65           | 106          | 7.7%                    | 38.7%               | 76.7%                  |
| Retail Trade  | 326                     | 369          | 510          | 11.7%                   | 27.6%               | 56.4%                  |
| Transportation and Warehousing  | 94                      | 114          | 175          | 17.5%                   | 34.9%               | 86.2%                  |
| Information   | 217                     | 251          | 328          | 13.5%                   | 23.5%               | 51.2%                  |
| Finance and Insurance   | 158                     | 240          | 210          | 34.2%                   | -14.3%              | 32.9%                  |
| Real Estate and Rental and Leasing  | 27                      | 36           | 62           | 25.0%                   | 41.9%               | 129.6%                 |
| Professional, Scientific, and Tech. Services  | 102                     | 149          | 223          | 31.5%                   | 33.2%               | 118.6%                 |
| Management of Companies and Enterprises   | (-)                     | (-)          | (-)          | (-)                     | (-)                 | (-)                    |
| Admin. and Support and Waste Management   | 558                     | 580          | 743          | 3.8%                    | 21.9%               | 33.2%                  |
| Educational Services  | 23                      | 26           | 36           | 11.5%                   | 27.8%               | 56.5%                  |
| Health Care and Social Services   | 101                     | 119          | 164          | 15.1%                   | 27.4%               | 62.4%                  |
| Arts, Entertainment and Recreation  | 98                      | 103          | 124          | 4.9%                    | 16.9%               | 26.5%                  |
| Accommodation and Food Services   | 193                     | 222          | 309          | 13.1%                   | 28.2%               | 60.1%                  |
| Other Services  | 18                      | 24           | 43           | 25.0%                   | 44.2%               | 138.9%                 |
| Government  | 296                     | 313          | 457          | 5.4%                    | 31.5%               | 54.4%                  |
| <b>Total</b>  | <b>3,683</b>            | <b>4,116</b> | <b>5,393</b> | <b>11.8%</b>            | <b>23.7%</b>        | <b>46.4%</b>           |

**Notes:**

- 1) The symbol (-) indicates that the data do not meet federal or State disclosure standards.
- 2) A potential mass layoff event occurs when an establishment has at least 35 initial unemployment compensation claims filed against it within a five-week period.

From 2006 through 2008, all California industry sectors and subsectors experienced an increase in the number of potential mass layoff events. The number of mass layoff events in other services; real estate and rental and leasing; and professional, scientific, and technical services more than doubled from 2006 through 2008. Three additional industries experienced an increase in potential mass layoff events of more than 75 percent from 2006 through 2008: transportation and warehousing, utilities, and wholesale trade. In contrast, agriculture, forestry, fishing, and hunting experienced the mildest increase.

The mass layoff events in California from 2006 through 2008 affected workers throughout the labor force. The number of workers affected by mass layoffs nearly tripled from 2006 to 2008. However, their number increased at a faster rate in 2007 than in 2008. The verified mass layoffs events in California over the 2006 to 2008 period affected workers from different demographic groups more or less equally, as seen in the table below.

| <b>Demographic Characteristics of Californians Affected by Verified Mass Layoffs, 2006-2008</b><br>(Source: California Employment Development Department, Mass Layoff Statistics Program)  |                                   |                |                |                         |                     |                        |
|--|-----------------------------------|----------------|----------------|-------------------------|---------------------|------------------------|
|  | <b>Number of Affected Workers</b> |                |                | <b>Year-Over Change</b> |                     | <b>Two-Year Change</b> |
|  | <b>2006</b>                       | <b>2007</b>    | <b>2008</b>    | <b>2006 to 2007</b>     | <b>2007 to 2008</b> | <b>2006 to 2008</b>    |
| <b>All Workers</b>   | <b>128,800</b>                    | <b>237,363</b> | <b>371,357</b> | <b>84%</b>              | <b>56%</b>          | <b>188.3%</b>          |
| <b><u>Gender</u></b>   |                                   |                |                |                         |                     |                        |
| Male   | 75,191                            | 145,360        | 228,490        | 48%                     | 36%                 | 67%                    |
| Female   | 53,609                            | 92,003         | 142,867        | 42%                     | 36%                 | 62%                    |
| <b><u>Age</u></b>  |                                   |                |                |                         |                     |                        |
| Under 30   | 33,149                            | 61,349         | 100,569        | 46%                     | 39%                 | 67%                    |
| 30 to 44   | 45,173                            | 86,363         | 129,625        | 48%                     | 33%                 | 65%                    |
| 45 to 54   | 30,869                            | 55,750         | 85,187         | 45%                     | 35%                 | 64%                    |
| 55 and over  | 19,503                            | 33,771         | 55,671         | 42%                     | 39%                 | 65%                    |
| <b><u>Race/Ethnicity</u></b>   |                                   |                |                |                         |                     |                        |
| White/Non-Hispanic   | 50,831                            | 94,642         | 140,152        | 46%                     | 32%                 | 64%                    |
| Black/Non-Hispanic   | 12,211                            | 21,021         | 33,241         | 42%                     | 37%                 | 63%                    |
| Hispanic origin  | 46,572                            | 90,145         | 141,700        | 48%                     | 36%                 | 67%                    |
| American Indian or Alaskan Native  | 1,056                             | 1,957          | 2,923          | 46%                     | 33%                 | 64%                    |
| Asian or Pacific Islander  | 6,391                             | 11,835         | 19,965         | 46%                     | 41%                 | 68%                    |
| <b>Notes:</b>  |                                   |                |                |                         |                     |                        |
| 1) This table summarizes the demographic characteristics of workers who filed unemployment claims against employers that were involved in a verified mass layoffs. A verified mass layoff event occurs whenever 50 or more employees are laid off for more than 30 days. |                                   |                |                |                         |                     |                        |
| 2) Workers who were not classified by demographic characteristic are not shown in this table.  |                                   |                |                |                         |                     |                        |

## **WHAT ARE THE CURRENT AND ANTICIPATED EFFECTS ON EMPLOYMENT BY SECTOR?**

### **Outlook**

With severe job losses and rapidly rising unemployment continuing, the outlook for the California economy, and particularly its labor markets, remained uncertain at the beginning of the second quarter of 2009. The emerging consensus was that job losses were expected to continue into first or second quarter of 2010, but gradually diminish in magnitude over time. The pace of job growth was expected to gradually strengthen through the first half of 2011. In turn, the unemployment rate was expected to remain high through the end of 2011, and not fall below double digits until sometime in 2012. Consumers were not expected to drive economic growth as they did in the last expansion, but were instead expected to increase savings and spend more modestly.

Job losses in California's hard hit construction industry were expected to begin abating in the second half of 2009 and into 2010 as the State's housing markets finally hit bottom and began to recover gradually. On the positive side, State and federal stimulus spending for infrastructure was expected to bolster construction employment, particularly in heavy construction. In addition, stimulus monies for energy conservation were expected to boost employment in certain specialty trade contracting industries. However, commercial construction was expected to remain weak through much of 2010.

Educational and health services were expected to continue to be a source of strong job growth into the foreseeable future due to demographic factors such as the aging baby boom population. State and federal investments in education and health care were expected to further bolster job growth.

Over the longer term, it is important to note that the current economic downturn, although severe, is a cyclical event. California's comparative economic advantage, primarily its entrepreneurial and innovative spirit and highly skilled and educated workforce, remains strong but must be nurtured and expanded over the long run. Also, California appears to be particularly well positioned to take advantage of increased federal investment in fuel efficiency and green technologies.

## **WHAT ARE THE CURRENT AND PROJECTED DEMOGRAPHICS OF THE AVAILABLE LABOR POOL?**

### **Demographic Overview**

California is the nation's most populous state, with the California Department of Finance estimating 38.3 million state residents as of January 1, 2009. California no longer has one ethnic group comprising a majority of its population. The 2000 census reported that 47 percent of residents were white, 33 percent Hispanic, 11 percent Asian, and 6.5 percent black. Not surprisingly, California also has the nation's largest labor force and working-age population. In April 2009, the EDD reported a working-age population (civilian, non-institutional, persons age 16 years and over) of 28.1 million, of which 18.5 million were in the labor force – 16.9 million employed and 1.6 million unemployed (all figures are 12-month moving averages, not seasonally-adjusted). This translates into a labor force participation rate of just under 66 percent.

### **Age, Ethnicity, and Educational Characteristics of the California Labor Pool**

The demographic composition of California's labor pool differs in two main respects from the nation as a whole. First, it is slightly younger and second, it has a substantially larger percentage of Hispanics. These two differences are projected to continue into the next decade. California also has a highly skilled labor force, but one that contains a large number of foreign born and non-English speaking residents.

#### **Age**

In April 2009, 37.3 percent of the California labor force was 34 years old or younger, compared to 35.3 percent for the entire nation. Conversely, 39.5 percent of the California labor force was 45 years of age and older, compared to 42.3 percent for the nation (all April 2009 figures are not seasonally-adjusted). However, while slightly younger, California's labor force will still experience the national phenomenon of an aging labor force. California's working-age population is projected to grow by 4.1 million, from approximately 29.5 million in 2008 to 33.6 million in 2018 (see Table 1). Only 247,000 of this 4.1 million increase (or 6 percent) is from people aged 16-24, while almost 3 million of the 4.1 million (or 72 percent) is from people aged 55 years and older. Labor force participation rates are generally highest in the 25-54 years age category, usually around 80 percent, whereas the rates are much lower for the youngest and oldest workers, around 40 percent for those ages 16-24 and 30 percent for those 55 years and older.

## Ethnicity

California has a highly diverse population and labor force, especially compared to the nation as a whole. For example, Hispanics comprised 34.5 percent of the California labor force in April 2009, compared to 14.5 percent for the nation. Broken out by the most prevalent ethnicity and race, the California labor force was 43.8 percent white, 34.5 percent Hispanic, 12.2 percent Asian, and 6.1 percent black. For the nation, it was 67.0 percent white, 14.5 percent Hispanic, 11.5 percent black, and 4.6 percent Asian (all April 2009 figures are not seasonally-adjusted). In 2018, the projected California working-aged population will have an even greater representation of Hispanic persons, with 37.3 percent projected to be Hispanic, a little less than the 41.1 percent figure for Whites. The Asian working-aged population is forecast to be 12.9 percent and the Black population 5.5 percent (see Table 1).

**Table 1**

| <b>DEMOGRAPHICS OF CALIFORNIA LABOR POOL<br/>WORKING-AGE POPULATION (AGE 16 &amp; OVER)<br/>2008 AND 2018</b> |  |                                  |  |                                  |
|---|--|----------------------------------|--|----------------------------------|
| <b>Demographic</b>  | <b>Number of<br/>Persons-<br/>2008</b> | <b>Percentage<br/>of Persons</b> | <b>Number of<br/>Persons-<br/>2018</b> | <b>Percentage<br/>of Persons</b> |
| <i>Ethnicity/Race</i>   |  |                                  |  |                                  |
| White   | 13,741,806                             | 46.6%                            | 13,825,604                             | 41.1%                            |
| Hispanic  | 9,526,152                              | 32.3%                            | 12,527,316                             | 37.3%                            |
| Asian   | 3,664,014                              | 12.4%                            | 4,348,481                              | 12.9%                            |
| Black   | 1,769,651                              | 6.0%                             | 1,860,422                              | 5.5%                             |
| All Others  | 761,641                                | 2.6%                             | 1,043,453                              | 3.1%                             |
| Total   | 29,463,264                             | 100%                             | 33,605,276                             | 100%                             |
| <i>Age</i>  |  |                                  |  |                                  |
| 16-24   | 5,163,617                              | 17.5%                            | 5,410,375                              | 16.1%                            |
| 25-54   | 16,155,407                             | 54.8%                            | 17,075,274                             | 50.8%                            |
| 55 and older  | 8,144,240                              | 27.6%                            | 11,119,627                             | 33.1%                            |
| Total   | 29,463,264                             | 100%                             | 33,605,276                             | 100%                             |

SOURCE: California Department of Finance. Percentages do not always equal 100 percent because of rounding.

## Education

The California labor force is highly skilled. Based on results from the 2005-2007 American Community Survey (ACS), one-third (33.4 percent) of employed Californians 25 to 64 years old had a bachelor's degree or higher and another 29.3 percent had some college or an associate's degree. On the other hand,

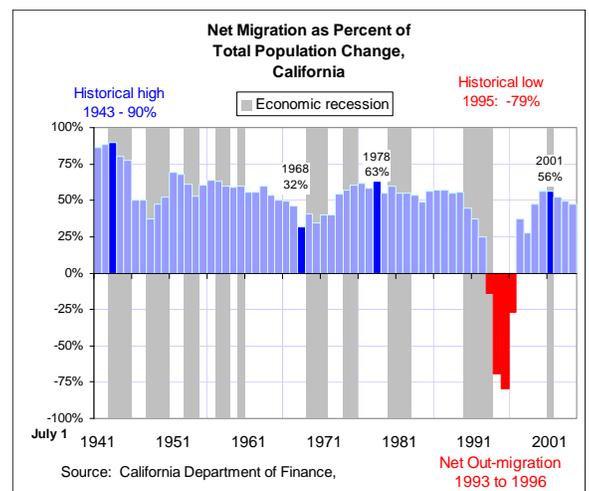
there were a large number of California adults with little education (15.9 percent of workers 25 to 64 years had not received a high school diploma or GED). The employment opportunities of many adults may also be limited by poor English skills. The 2007 ACS reported that 20 percent of all Californians speak English less than “very well.”

### Effects of “in migration” or “out migration” on the labor pool

California experiences migrant flows that impact the labor pool. From 1975 to 2004, net migration (in-migration less out-migration) exceeded 200,000 persons per year in 23 out of the 30 years. Net migration accounted for more than half of the State’s population growth in 17 of the 30 years and for at least a quarter of the total change in 26 of these 30. However, net migration has slowed since 2005 due to increased domestic out-migration.

Historically, net in-migration has contributed to half of the State’s labor force growth. Net in-migration (in-migration less out-migration) has been an engine of California labor force growth since the settlers and gold miners of the 1800s.

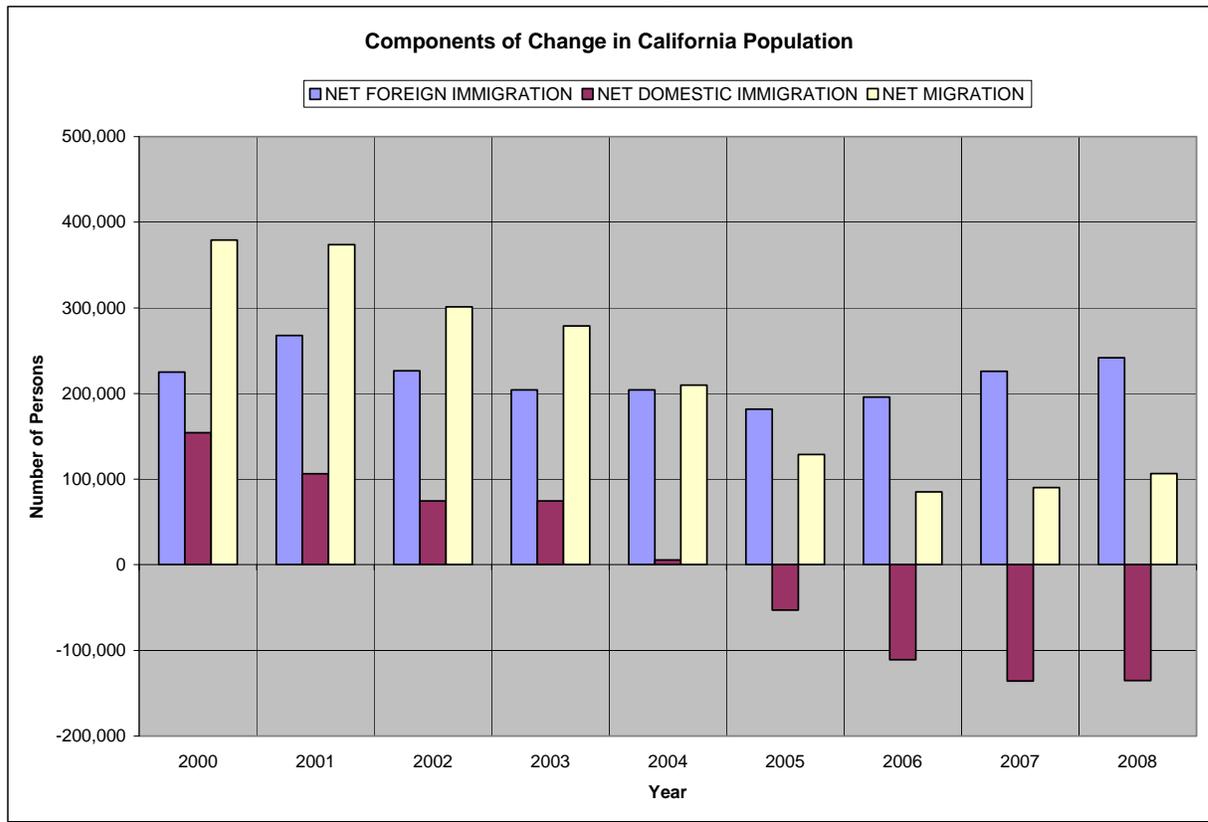
As recently as 2004 (July 1, 2003 to July 1, 2004) net in-migration contributed 210,000 new California residents. This was 41 percent of the total population increase of 510,000. This estimate includes all legal and unauthorized foreign immigrants, residents who left the State to live abroad, and the balance of people moving to and from California within the United States. However, California’s rate of net in-migration has slowed in recent years due to domestic out-migration. In 2008 (July 1, 2007 to July 1, 2008), net in-migration contributed 107,000 new California residents. This was 24.5 percent of the total population increase of 436,000.



Net migration<sup>3</sup> accounted for the majority of California population increases throughout its history. The above graph depicts State population change from 1941 to 2004. Net migration was the majority source of population change in 42 of these 64 years.

<sup>3</sup> As opposed to natural increase, births less deaths.

Traditionally, international and domestic net migrations to the State have been



Source: California Department of Finance.

positive, with international net migration the larger of the two. However, domestic net migration, which varies more year-by-year according to economic conditions, turned negative in recent years.

From July 2007 to July 2008, net immigration, the sum of movements between California, other states, and foreign countries, contributed 107,000 persons, or 24.5 percent of the overall population growth. Whereas net international immigration contributed 242,000 new Californians, domestic net out-migration totaled 135,000.

As the chart above illustrates, net international immigration has been relatively stable, hovering around 200,000 persons in most years since 2000. In contrast, domestic migration has varied considerably, from a net out-migration of 135,000 to net in-migration of 154,000.

California experienced seven years of domestic net out-migration from 1992 through 1998, following the 1990-93 recession. That recession was more severe and protracted in California than in any other state in the nation. California's high costs of living, and more particularly, its high housing costs, were a key

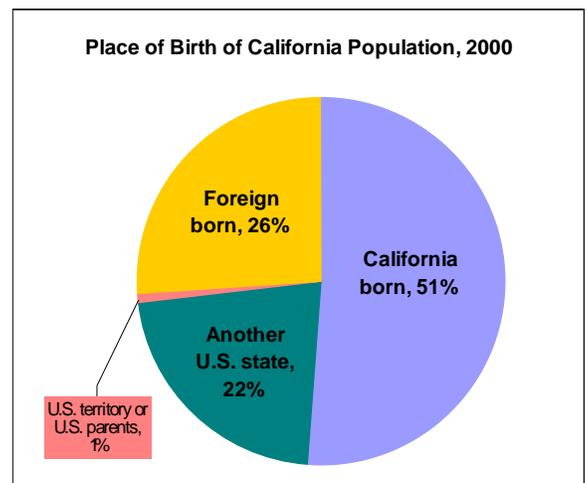
contributing factor to the domestic out-migration in 2005 and 2006. And given the current recession, which formally began in December 2007, we should expect to see continuing high levels of domestic out-migration in the foreseeable future.

**Compared to the existing population, migrants are more likely to be in the ages of high labor force participation.**

In April 2009, over one-quarter of Californians who lived here in the preceding year were 55 years and older – an age when labor force participation is very low. Just under two-thirds of this population was ages 20 to 54 years. On the other hand, 72 percent of Californians who moved from other countries were ages 20 to 54 years. This age group made up a similarly large share of Californians who had moved from another state in the last year.

**As a result of high annual in-migration, almost half of the California population was born outside the state.**

Migration is a flow concept. The cumulative affect of the large numbers of migrants is seen in data relating to the entire population – a stock concept. As the chart at right illustrates, as of the 2000 Census, 22 percent of California residents had been born in another state and 26 percent had been born in another country.



**California is a diverse state where the in-migration and out-migration of the labor force varies from area to area.**

Forty-seven of California's 58 counties experienced population growth from 2007 to 2008. International in-migration contributed to population growth in all 58 counties. By contrast, 34 of California's 58 counties experienced net domestic out-migration. Both coastal, highly urban counties and interior, rural regions lost domestic migrants. However, Los Angeles County somewhat distorts the results, accounting for 74 percent of all domestic out-migration (100,000 out of 136,000 persons). Conversely, Los Angeles County accounted for 34 percent of all foreign in-migration (82,000 out of 242,000). Because of differences in local area labor markets, Local Boards should address the needs of their migrant populations individually.

**Implications/Issues**

A number of implications or issues arise when examining California's available labor pool both now and over the next decade. These relate both to age and ethnicity. While California will likely have a younger labor pool than other states in the next decade, it will still have to deal with an aging labor force, and the

challenges that it can produce. More specifically, how does California replace aging workers? Some possible answers are to: 1) ask or provide incentives for older workers to work longer, 2) target training of younger workers to industries especially threatened by an aging labor force, 3) encourage more immigration from other states, and 4) mobilize and develop underemployed or undereducated Californians to replace the aging workforce.

Regarding ethnicity, California's diverse population presents both challenges and opportunities. Its diverse population reflects the fact that many people throughout the world see California as a "land of opportunity," one that welcomes outsiders and offers them chances to succeed that are difficult to match elsewhere. Therefore, California starts out with a natural recruitment advantage that can be tapped if needed. On the other hand, there are challenges that a diverse labor force uniquely presents. For example, foreign immigrants often lack English-language skills, which can initially limit their opportunities. Moreover, they sometimes have difficulties adapting to American culture.

What steps does the State need to take to address these challenges? Two easy to suggest, but not always easy to implement, answers are to: 1) offer more English-as-a-Second Language courses, and 2) develop and employ managers, supervisors, and trainers who are culturally attuned or sensitive to their diverse labor force.

**DESCRIBE ANY SKILLS GAPS THAT CALIFORNIA EMPLOYERS MAY EXPERIENCE BASED ON SKILLS HELD BY CURRENT AND EXPECTED DISLOCATED WORKERS.**

Despite economic changes, the foundation skills needed by most occupations in the 2009 growth industries—for example, health care and social assistance, and educational services—are skills many workers already possess.

**Top Skills Required in Growth Industries**

| Health Care and Social Assistance | Educational Services           |
|-----------------------------------|--------------------------------|
| Reading Comprehension             | Active Listening               |
| Active Listening                  | Reading Comprehension          |
| Instructing                       | Speaking                       |
| Speaking                          | Critical Thinking              |
| Social Perceptiveness             | Social Perceptiveness          |
| Writing                           | Instructing                    |
| Critical Thinking                 | Learning Strategies            |
| Coordination                      | Writing                        |
| Learning Strategies               | Monitoring                     |
| Time Management                   | Active Learning                |
| Active Learning                   | Coordination                   |
| Monitoring                        | Time Management                |
| Service Orientation               | Service Orientation            |
| Judgment and Decision Making      | Persuasion                     |
| Persuasion                        | Complex Problem Identification |

Source: EDD/Labor Market Information Division. Ranked in order of importance.

These same skills also dominate the skills required for occupations showing the highest unemployment levels between February 2008 and February 2009. (See Attachment A)

- *Active listening* – Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
- *Coordination* – Adjusting actions in relation to others' actions.
- *Critical thinking* – Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems.
- *Instructing* – Teaching others how to do something.
- *Learning strategies* - Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
- *Judgment and decision-making* – Considering the relative costs and benefits of potential actions to choose the most appropriate one.
- *Mathematics* – Using mathematics to solve problems.

- *Reading comprehension* – Understanding written sentences and paragraphs in work-related documents.
- *Social perceptiveness* -- Being aware of others' reactions and understanding why they react as they do.
- *Speaking* – Talking to others to convey information effectively (in most instances, the ability to communicate in English is explicitly stated or inferred).
- *Time management* – Managing one's own time and the time of others.

Being more specific, the health care industry offers an occupational spectrum few industries match, from dishwasher to plumber to medical records technicians. While many positions require advanced degrees, workers from diverse occupations and industries possess foundation skills for a successful transition to health care services. Individuals enhancing their present skills with additional training may find their skills foundation already well laid. Opportunities exist in health care for all levels of education. See [Health Care Industry Careers--Room to Learn and Grow.](#)

| Education and Training Range<br>Health Care and Social Assistance Workers<br>California 2006 |                          |
|--|--------------------------|
| <u>Training Levels</u>   | <u>Number of Workers</u> |
| Short-term on-the-job training   | 248,700                  |
| Moderate on-the-job training   | 158,700                  |
| Long-term on-the-job training  | 8,400                    |
| Work experience  | 38,000                   |
| Post-secondary vocational training   | 154,200                  |
| Associate degree   | 249,000                  |
| Bachelor's degree  | 89,100                   |
| Work experience plus a Bachelor's degree or higher   | 39,300                   |
| Master's degree  | 52,300                   |
| Doctoral degree  | 4,500                    |
| LLD/MD degree  | 24,800                   |

Source: EDD/Labor Market Information Division.

Skills gap identification calls for specificity—occupation to occupation and worker to occupation. Individuals offer skills developed over their composite work history, education, and training. Occupational information available from the EDD's Labor Market Information Division and the U.S. Department of Labor assists assessment and identification of skills gaps for both individuals and employers.

### **The Constantly Churning Labor Market**

It should also be pointed out that even economies in recession create job opportunities. Job search workshop leaders often remind job seekers to look beyond the headlined unemployment statistics because each person needs only to find a single job. Even in times of high unemployment, like the times we are

experiencing now, the labor market constantly churns. Workers leave jobs for personal reasons, better opportunities, health, or retirement, leaving a void that needs to be filled.

Labor market churning is evidenced by contrasting Attachment A, *Top Five Skills of High Unemployment Occupations, February 2008-February 2009*, with Attachment H, *Comparison of Growing Occupations in California, 2006-2016*. Nine of the same occupations appear in both tables; one table reflecting high layoffs in the past year, and the other high employment opportunities projected in the 2006-2016 ten-year period.

## **Industry and Occupational Employment Projections**

Describing skills gaps facing California employers also requires a detailed discussion of which industries and occupations are currently experiencing growth or decline, as well as which ones are projected to grow or decline. The following pages present both short-term and long-term industry and occupational projections.

### **What industries and occupations are projected to grow and/or decline in the short term and over the next decade?**

The EDD's Labor Market Information Division (LMID) currently produces California short-term (two-year) projections annually and ten-year projections for California and local areas biennially. In 2008, LMID produced California 2007-2009 and 2006-2016 industry and employment projections.

#### **A. California 2007-2009 Projections**

##### **Industry**

For the short-term projection period, EDD forecasted nonfarm employment to reach approximately 15.3 million jobs by 2009. About 75 percent of nonfarm job growth was forecasted to occur in Professional and Business Services, Education and Health Services, and Leisure and Hospitality. Based on the various effects on the economy in evidence at the time, jobs losses were forecasted in Construction, Financial Activities, Manufacturing, and Retail Trade. (See Attachment B, *California 2007-2009 Industry Projections, Industry Sector Growth/Decline*.)

##### **Occupations**

The top 50 occupations with the most job openings are expected to contribute about 63 percent of all job openings during the forecast period. Forty four occupations are forecasted to have more job openings from replacements than

from employment growth. Net replacements measure the number of workers needed to replace those that have left the labor force or have changed occupations. An aging workforce combined with slow economic growth is shifting openings from new jobs to replacements. Even occupations with no growth, such as Cashiers and General Managers, are forecasted to have thousands of job openings due to replacement needs.

*The 20 Occupations with the Most Openings.* Each occupation is expected to generate over 9,000 job openings. Fifteen of the twenty occupations require short-term on-the-job training with median hourly wages ranging from \$8.36 to \$13.17. Entry level occupations include Cashiers, Retail Salespersons, Waiters and Waitresses, and Counter Attendants. Higher skilled and higher paying occupations such as Registered Nurses, Teachers, and Managers are also forecasted to have a substantial number of job openings. (See Attachment C, *California 2007-2009 Occupational Projections, Top Twenty Occupations with the Most Openings.*)

## **B. California 2006-2016 Projections**

### **Industry**

Over the longer term, EDD forecasts California's nonfarm employment to grow at an average annual rate of about 1.5 percent to reach 17.4 million by 2016. Attachment D, *California 2006-2016 Industry Projections, Industry Sector Growth/Decline* shows the long term distribution of new jobs across industries. About 87 percent of all new nonfarm jobs are expected to occur in the following industry sectors:

- Professional and Business Services
- Government (includes public education)
- Health Care and Social Assistance
- Accommodation and Food Services
- Retail Trade
- Construction
- Wholesale Trade
- Educational Services (Private)

Professional, Scientific and Technical Services is the fastest growing sector and is expected to gain over 293,000 jobs, representing an annual growth rate of almost 2.9 percent, well over the annual average growth rate for all nonfarm jobs. The largest component within this sector is the Computer Systems Design and Related Services industry, which is anticipating growth of over 87,000 new jobs or about 4.7 percent per year based on annual averages.

Health Care and Social Assistance is expected to grow at about 2.3 percent annually as this sector expands, in large part due to the increased demand for

these services from an aging population. Health-related industries with the fastest annual growth rates include home health care services (4.5 percent), community care facilities for the elderly (4 percent), offices of other health practitioners (3.6 percent), and outpatient care centers (3.5 percent). Anticipated federal funding to preserve and improve affordable healthcare may add to this sector's growth.

Within the Government sector, Local Government is expected to add the most new jobs, about 323,000, largely driven by gains in Local Education employment as the California population expands, resulting in increased demand for public education.

The Construction industry experienced exceptional growth from 1996-2006, averaging approximately 8 percent annual growth rate during the building boom. The 2006-2016 forecast calls for more modest growth as the mortgage crisis and economic slump continue to adversely affect the housing market and construction employment. However, California's share of the federal stimulus package may bolster construction employment growth as funds are received to improve highways, roads, and bridges, and perform modernization and weatherization repairs. In addition, the infrastructure bonds recently approved by California voters are expected to infuse funds into the construction industry, in particular the Heavy and Civil Engineering Construction sector.

Manufacturing, one of California's largest industry sectors (1.5 million jobs), is expected to continue to decline during the outlook period after a steady string of job losses that began most recently in 2000 and has continued through 2006. Declining manufacturing industries include apparel, computer and electronic products, printing and related support activities, and plastic and rubber product production.

## **Occupations**

Many employment opportunities exist in California for workers, regardless of their level of education and training. In California two out of every five jobs only require short-term on-the-job training. Conversely, one out of every five jobs require a bachelor's degree or higher. Attachment E, *California 2006-2016 Occupation Projections, Average Annual Job Openings by Education and Training Level*, provides the number of California's job openings by education and training level.

The top 50 occupations with the most job openings will generate over half of all job openings in California during the forecast period. These 50 occupations are expected to generate over 3.3 million total job openings consisting of 1.3 million openings from new jobs and 2 million openings due to net replacements. Net replacements measure the number of workers needed to replace those that have left the labor force or have changed occupations.

The top ten occupations with the most job openings will provide over 1.4 million job opportunities. Job opportunities in lower-skilled occupations include Retail Salespersons, Cashiers, and Waiters and Waitresses. Higher-skilled occupations such as Registered Nurses and Elementary School Teachers are also forecasted to have a substantial number of openings. Attachment F, *California 2006-2016 Occupation Projections, Top Ten Occupations with the Most Job Openings*, illustrates the total job opportunities generated by new jobs and replacement needs for each occupation.

The top 50 fastest growing occupations are each expected to grow at a rate of 24 percent or more over the ten-year period. These occupations are concentrated in the healthcare, education, and computer related fields. Examples of wages and training levels for these occupations include:

- Over \$15.00 an hour for Dental Assistants and Pharmacy Technicians requiring moderate-term on-the-job training,
- Over \$37.00 an hour for Registered Nurses and Dental Hygienists requiring an associate's degree,
- Over \$40.00 an hour for Physician Assistants and Computer Software Engineers requiring a bachelor's degree, and
- Over \$58,000 per year for Elementary School, Middle School, and Special Education Teachers requiring a bachelor's degree.

The ten fastest growing occupations are growing at rates ranging from 32.8 to 58.8 percent over the ten-year period and represent 172,000 total job opportunities. Half of these occupations require a bachelor's degree or higher. Occupations that do not require a college degree include Home Health Aides, Dental Assistants and Medical Assistants. Attachment G, *California 2006-2016 Occupation Projections, Ten Fastest Growing Occupations*, displays the occupations by growth rate.

### **In what industries and occupations is there a demand for skilled workers and available jobs, both today and projected over the next decade?**

The U.S. Bureau of Labor Statistics (BLS) facilitates occupational analysis as it classifies occupations in three ways:

- By an occupational code (the Standard Occupational Code) – The occupational code links an occupation with other similar occupations;
- By the industry (the North American Industry Classification System code) – The industry code points to the industry or industries that employ workers in the occupation; and

- By the education/training level typically required for each occupation (one of 11 levels).

These 11 training levels allow for general comparisons of occupational skill requirements across occupations and industries. This analysis uses occupational growth trends for the occupations with higher training levels as a proxy for a demand for skilled workers. The 11 training levels, from most- to least-skilled, are:

- First professional degree,
- Doctoral degree,
- Master’s degree,
- Bachelor’s degree or higher plus work experience,
- Bachelor’s degree,
- Associate degree,
- Post-secondary vocational training,
- Work experience in a related occupation,
- Long-term On-the-Job Training [OJT] (12 months or more),
- Moderate-term OJT (one to 12 months), and
- Short-term OJT (one month or less).

Selecting a training level to serve as the bottom-most proxy for skilled workers is a judgment call; California proposes to define the skilled floor at the “long-term OJT” level. This brings in skilled crafts and trades workers such as carpenters, who often serve an apprenticeship, as well as law enforcement personnel who attend extensive peace officer standards training.

Attachment H, *Comparison of Growing Occupations in California, 2006-2016*, provides a detailed listing of the projected top growing occupations sorted by training level, and includes forecasted numerical growth and growth rate across all industries. An analysis of the top occupations by training level is provided below.

**Work experience in a related occupation.** The largest growth occupations at this level are first line supervisors/managers, broken out by the industry in which they work, such as retail sales, food preparation, office and administrative, or construction trades. Detectives and criminal investigators, construction and building inspectors, and self-enrichment teachers join first-line supervisors/managers on the list of fastest growing occupations at this level.

**Post-secondary vocational training.** Top-growth occupations at this level are automotive service technicians and mechanics (automotive industry); preschool teachers (education); hairdressers, hairstylists, and cosmetologists (personal care services); medical secretaries; and licensed practical and licensed vocational nurses (health care). The fastest growth occupations at this level also include vocational education teachers, postsecondary, (education); manicurists

and pedicurists (personal care services); surgical technologists (health care); and massage therapists (personal care services).

**Associate degree.** Occupations in the health care industry, for example, registered nurses and dental hygienists, dominate the list of largest growth occupations at this level. Computer support specialists, paralegals and legal assistants, and insurance sales agents round out the list of the largest growth occupations. Three of the five fastest growing occupations are in health care—veterinary technologists and technicians, dental hygienists, and registered nurses. Biological technicians and paralegal and legal assistants round out the list of fastest growing occupations requiring an associate degree.

**Bachelor's degree.** Occupations in the education and information technology industries dominate both the largest and fastest growth occupations requiring a bachelor's degree. Elementary school and secondary school teachers are among the top five largest growth occupations, along with computer software engineers, applications; network systems and data communications analysts, and accountants and auditors. All of the fastest growing occupations are in either education or information technology – network systems and data communications analysts; computer software engineers, applications; graduate teaching assistants; special education teachers; and multi-media artists and animators.

**Bachelor's degree or higher plus work experience.** Based upon the top five occupations, this tends to be a “management” level, which spans a variety of industries. The top five largest growth occupations at this level include management analysts, general and operations managers, financial managers, sales managers, and computer and information systems managers. The top five fastest growth occupations overlap this largest growth list, with computer and information systems managers, and management analysts on the list. Natural sciences managers and education administrators complete the fastest growing occupations at this level.

**Master's degree.** The top largest growth occupation at this level is market research analyst. The remaining top four largest growth occupations requiring a master's degree are professional occupations in the educational or health care industry – educational, vocational, and school counselors; physical therapists; instructional coordinators; and substance abuse and behavioral disorder counselors. The fastest growth occupations requiring this educational level are also in the health care and educational industries. The top five fastest growth occupations are substance abuse and behavioral disorder counselors; postsecondary health specialties teachers; postsecondary art, drama, and music teachers; physical therapists; and instructional coordinators.

**Doctoral degree.** The three occupations with both the largest and fastest growth requiring a doctoral degree are medical scientists, except epidemiologists

(health sciences); clinical counseling and school psychologists (education); and computer and information scientists, research (information technology).

**First professional degree.** At this level, most of the same occupations appear in both the largest and fastest growth list. Lawyers, pharmacists, dentists, veterinarians, and family and general practitioners are the top growing occupations at this skill level. Four of these five occupations are in the health care industry. Lawyers are employed across various industries. The fastest growing occupations include veterinarians, pharmacists, psychiatrists, lawyers, and dentists. Again, these occupations are found predominately in the health care industry.

For the most part, occupations projected to grow in the next decade are in demand today and in the immediate future. Of these, the top ten largest-growth skilled occupations in California are expected to generate approximately 296,000 new jobs in the forecast period. One occupation requires long-term on-the-job training, one requires an associate degree, and the remaining occupations require a bachelor's degree. Table 2 lists these top-growth skilled occupations.

**Table 2**

| <b>Skilled Occupations with the Most Growth</b>  |                         |  |
|--|-------------------------|--|
| <b>Occupational Title</b>                        | <b>2006-2016 Growth</b> | <b>Education/Training Level</b>        |
| Registered Nurses                                | 59,600                  | Associate Degree                       |
| Elementary School Teachers                       | 51,300                  | Bachelor's Degree                      |
| Computer Software Engineers, Applications        | 41,100                  | Bachelor's Degree                      |
| Accountants and Auditors                         | 33,200                  | Bachelor's Degree                      |
| Carpenters                                       | 25,700                  | Long Term OJT                          |
| Secondary School Teachers                        | 21,500                  | Bachelor's Degree                      |
| Network Systems and Data Communications Analysts | 17,000                  | Bachelor's Degree                      |
| Management Analysts                              | 16,800                  | Bachelor's Degree plus Work Experience |

|  |        |                   |
|--|--------|-------------------|
| Computer Systems Analysts                        | 15,200 | Bachelor's Degree |
| Computer Software Engineers,<br>Systems Software | 14,700 | Bachelor's Degree |

Source: State of California, Labor Market Information Division  
California 2006-2016 Occupation Projections

## What Jobs/Occupations are Most in Demand?

While demand exists for many jobs, the largest demand continues for health care and education workers to serve California's growing population. Further, as the economy begins its inevitable rebound, a growing number of aging workers will retire, requiring the need for replacement workers across all industries.

Online job boards still abound with requests for workers, notably managers and computer professionals required to do work that will subsequently fuel the need for manufacturing, sales, and office workers. *WANTED Analytics 2.0*, a data research tool that compiles, analyzes, and categorizes job listings from many online job boards including JobCentral, Monster, CareerBuilder, and Craigslist, ranks occupations by the most job openings within a 90-day period. California's recent top job listings are reported in Table 3 below.

**Table 3**

| <b>Top 25 Occupations in California with the Most Online Job Openings</b> |                               |
|---|-------------------------------|
| <i>Last 90 Days ending April 13, 2009</i>                                 |                               |
| <b>Occupation</b>   | <b>Number of Job Openings</b> |
| Registered Nurses   | 35,057                        |
| Computer Specialists  | 21,116                        |
| Computer Software Engineers, Applications                                 | 17,614                        |
| Executive Secretaries and Administrative Assistants                       | 16,206                        |
| Computer Systems Analysts   | 15,196                        |
| Sales Managers  | 13,630                        |
| Customer Service Representatives  | 13,467                        |
| Marketing Managers  | 12,934                        |
| Financial Managers  | 12,692                        |
| Accountants   | 12,098                        |
| Retail Salespersons   | 11,978                        |
| First-Line Supervisors/Managers of Retail Sales Workers                   | 11,957                        |
| Sales Representatives, Except Technical and Scientific Products           | 11,912                        |
| Medical and Health Services Managers                                      | 10,317                        |
| Telemarketers   | 9,429                         |
| Computer Support Specialists  | 9,254                         |
| Bookkeeping, Accounting, and Auditing Clerks                              | 8,885                         |
| Office Clerks, General  | 8,126                         |
| Physical Therapists   | 7,779                         |
| Tellers   | 7,757                         |
| Insurance Sales Agents  | 7,648                         |
| Office and Administrative Support Supervisors/Managers                    | 7,594                         |
| Securities, Commodities, and Financial Services Sales Agents              | 7,528                         |
| Industrial Engineers  | 7,389                         |
| General and Operations Managers   | 7,177                         |

Source: WANTED Technologies

Occupations listed on job boards somewhat reflect the workforce demand; however, many job openings are not advertised or are circulated off-line to a limited audience such as union members.

Newly allocated stimulus funding is expected to create jobs for workers in other industries, most notably construction, clean technology, and manufacturing. For example, the California education sector will receive over \$2 billion in American Recovery and Reinvestment Act (ARRA) monies to fund school construction, rehabilitation, repair, or site acquisition. This will provide jobs to a variety of crafts and trades workers who may be currently unemployed or in danger of losing their jobs.

#### **A. Jobs in Health Care and Social Assistance**

Health care is the ultimate “social service” industry, reflecting the demands of a growing and aging population, both in California and across the nation. California is facing a nursing shortage that is expected to widen over the next two decades, along with a growing demand for other health caregivers and social service assistants. The top five highest growth occupations in this industry include registered nurses, medical secretaries, medical assistants, licensed vocational nurses, and home health aides.

The demographics of an aging baby boom population will continue to drive employment growth in health care and social assistance occupations. Also, federal stimulus funds of approximately \$15 billion for health and human services are expected to further enhance health care and social assistance industry employment in California. (See Table 4).

Stimulus funding is anticipated to expand job growth across the health care and social assistance industry sector, including occupations not usually associated with Health and Human Services, such as those in information technology and construction.

**Table 4**

| <b>Projected Federal Stimulus Funding Related to Jobs in Health<br/>Health and Human Services: California's Estimated Share,<br/>Approximately \$15 Billion</b> |   |
|---|---|
| <b>Programs</b>   | <b>Possible Occupations Positively Affected</b>   |
| TANF Contingency Fund   | Social and Human Service Assistants and Government Program Eligibility Interviewers.  |
| Community Services Block Grant  |   |
| Legal Immigrants Medicaid/Healthy Families Program  |   |
| Social Security Disability Case Processing  |   |
| Transitional Medical Assistance   |   |
| Medicaid Eligibility Determinations for Indians   |   |
| Prevention and Wellness Fund  | Registered Nurses; Nursing Aides; Medical and Public Health Social Workers; Rehabilitation Counselors; Vocational Education Teachers, Postsecondary; and Occupational Therapists. |
| Vocational Rehabilitation Services  |   |
| Disproportionate Share Hospital Funding   |   |
| Disabilities Education Act  |   |
| Independent Living Centers  |   |
| HITECH Act  | Computer Software Engineers, Applications; Computer Systems Analysts; and Computer Software Engineers, Systems Software.  |
| USDA-WIC  |   |
| Department of Energy Weatherization Assistance Program (Medical Centers)  | Construction Managers, Carpenters, Construction Laborers, Insulation Workers, Hazardous Materials Removal Workers, and Environmental Compliance Inspectors.                       |
| Community Health Centers/Construction Modernization   |   |
| Healthy Homes and Lead Hazard Control Program   |   |
| Child Care and Development Block Grant  | Child Care Workers; and Education Administrators, Preschool and Childcare Center Programs.  |
| Meals on Wheels   | Cooks, and Light Truck and Delivery Drivers.  |

**B. Jobs in Education Services – Private and Public**

Education is a powerful tool to lay a foundation for sustained economic growth. Education includes instruction and training in a wide variety of subjects. Private education is expected to continue to be a source of job growth.

Nearly \$12 billion of the ARRA funding is slated for public education. Some of the monies will be used to restore state funding to public education 2008 levels for kindergarten through 12<sup>th</sup> grade, higher education, and early childhood development. In addition, monies are expected to fund school construction, repair, or site acquisition. It is also anticipated that Title 1 schools will receive funding to meet the educational needs of low-achieving children, close the achievement gap between high- and low-performing children, and improve the academic achievement of all students. Individuals with Disabilities Education Act

(IDEA) funds will improve outcomes for infants, toddlers, children, and youths with disabilities. IDEA funds will also establish pre-kindergarten to college and career data systems that track progress.

Federal stimulus funds for education may create and retain employment in occupations such as teachers (elementary, secondary, special education, and vocational), as well as teacher assistants, office and administrative support workers, and food service workers.

Table 5 displays some of the Education-related programs funded by the ARRA and jobs that may be created or retained from such funding.

**Table 5**

| <b>Projected Federal Stimulus Funding Related to Jobs in Education</b>  |  |
|---|--|
| <b>Education: California's Estimated Share, Approximately \$12 Billion</b>  |  |
| <b>Programs</b>   | <b>Possible Occupations Positively Affected</b>  |
| State Fiscal Stabilization Fund – State Allocations – Restoration of K-12 and CSU/UC                                    | Teachers (Preschool, Elementary, Secondary, Postsecondary, and Vocational Education), Teacher Assistants, Education Administrators, Office Clerks, Administrative and Office Support Workers, and Food Service Workers.  |
| Tax Credit Bonds (school restoration and acquisition)   | Construction Managers, Carpenters, Construction Laborers, Insulation Workers, Hazardous Materials Removal Workers, Environmental Compliance Inspectors, Electricians, Glaziers, Heating and Air Conditioning Mechanics, Plumbers, Roofers, Associated Trades Helpers, and Office and Administrative Support Workers. |
| Title 1 - Grants to LEAs and School Improvement (Targeted Grant, Finance Incentive Grant, and School Improvement Grant) | Teachers (Preschool, Elementary, Secondary, Postsecondary, and Vocational Education), Teacher Assistants, Education Administrators, Office Clerks, Administrative and Office Support Workers, and Food Service Workers.  |
| IDEA – Part B – Special Education Grants  | Special Education Teachers, All levels; Occupational Therapists; Speech-Language Pathologists; Computer Programmers; Computer Software Engineers, Applications; Computer Systems Analysts; and Computer Software Engineers, Systems Software.  |

### **C. Green Jobs**

A continuing theme in the federal stimulus package is the goal for greater energy efficiency and energy independence. Four areas of the green economy that stand to see job growth and savings are smart grid transmission and research, renewable energy, energy efficiency, and weatherization.

### ***Smart Grid***

Stimulus funding is available for research and development to continue in this “nearly-there” technology. This will require electrical and mechanical engineers, as well as computer scientists and programmers. Additionally, transmission line workers, electricians, electrician’s helpers, and meter installers will be needed to get residences and businesses linked to the system. Meters and other possible add-ons at consumer sites will eventually lead to secondary occupations to include team assemblers for manufactured goods.

### ***Renewable Energy***

Rising energy costs and global warming increase the urgency to find renewable energy sources and bring them to California. Stimulus funding in the form of renewable energy transmission projects, tax credits, and other sources such as monies from California Assembly Bill (AB) 118 [Chapter 750, Statutes of 2007], will provide job opportunities for workers at many training levels in this sector. Professional and skilled jobs include electrical, chemical, and environmental engineers, urban planners, and chemical and engineering technicians. For example, the energy sector of the stimulus package provides for continued research into advanced battery technologies, as well as energy efficiency innovations and renewable energy products.

Considerable resources in the form of incentives are now offered to those who purchase natural gas vehicles for their fleets of buses or trucks as provided through AB 118. While most of these vehicles are manufactured outside of the state, the downstream job needs will include bus and truck mechanics skilled in alternative fuels, as well as fueling station workers and crafts and trades workers needed include solar panel installers, wind turbine technicians, electricians, roofers, plumbers, and the associated trades helpers necessary for project installations and clean-up. Vocational education teachers are also needed to ready workers with the new technologies.

### ***Weatherization***

The stimulus plan calls for no-charge or low-cost weatherization work to low-income households and other facilities. This should offer respite to skilled workers currently dislocated from the construction industry. Professional jobs will include energy auditors and construction managers (who can quickly be re-skilled to lead these large projects). Team members will include heating and air conditioning mechanics, insulation workers, roofers, glaziers, and associated trades helpers. Secondary occupations to benefit may include hazardous waste removal workers, and refuse and recyclable material collectors.

### ***Energy Efficiency***

The energy efficiency sector of “green” covers a broad spectrum of activities, from the design, manufacturing, and installation of green products, to the construction of energy-efficient high rises powered by renewable energy.

Federal stimulus and other funding exist for some of this “green” sector and is available in the housing, education, and energy sectors. For example, housing and education funds provide for projects to retrofit and repair schools and other publicly-owned structures. Today’s retrofit projects are all about energy efficiency, which will require engineers and construction managers with knowledge in sustainability planning and practices. Training in Leadership in Energy and Environmental Design (LEED) certification and other methods of sustainable building will be necessary for some of these workers. In addition to opportunities for construction workers, management and support jobs will be needed to administer large projects. These may include business operations specialists, secretaries, and office clerks.

The energy sector in the stimulus package provides funding for “electrification” projects, which includes the building of vehicle-charging stations along highways and designated locations. Another project funded through AB 118 involves bringing electrical power sources to California ports so that diesel-powered ships need not idle their engines while docked in order to maintain needed power. These projects will require power line installers, electricians, programmers, and construction jobs.

Table 6 summarizes green jobs available in the sectors described above.

**Table 6**

***Projected Federal Stimulus Funding  
Related to Green Jobs***

| <b>Green Sector</b>                       | <b>Stimulus Programs</b>  | <b>Possible Occupations Created or Saved</b>   |
|---|---|--|
| <b><i>Renewable Energy</i></b>            | Research and development of alternative energy sources and technologies   | Biomass Collectors, Chemical Engineers , Computer Programmers, Electrical Engineers, Engineering Technicians, Plumbers and Pipefitters, Software Engineers, Solar Technicians (PV and Thermal), Team Assemblers, and Wind Turbine Technicians. |
|   | Advanced battery manufacturing and development of related supporting software   |  |
|   | Research in electric technologies for use in vehicles   |  |
|   | Projects to install fuel cells and solar, wind, and biomass power in government buildings   |  |
| <b><i>Smart Grid and Transmission</i></b> | Research and development of smart grid technologies   | Computer Engineers, Computer Programmers, Electrical Engineers, Electricians, and Electrical Power Line Installers.  |
|   | Transmission system upgrade projects to facilitate the delivery of power from renewable energy facilities.                          |  |
|   | Loan guarantees to businesses involved in smart grid technologies   |  |
|   | Establishment of information clearinghouse to share data from demonstration smart grid projects such as solar and wind farms        |  |
| <b><i>Weatherization</i></b>              | Weatherization Assistance Program for private and public housing  | Insulation Workers, Glaziers, and Heating and Air Conditioning Mechanics.  |
| <b><i>Energy Efficiency</i></b>           | Rehabilitation and retrofit projects for public and private housing, including homes maintained by Native American housing programs | Energy Auditors, Construction Managers, Sustainability Coordinators, Electricians, Hazardous Waste Removal Workers, Environmental Engineers, And Wastewater Treatment Workers.   |
|   | Brownfields assessment and cleanup projects of old industrial and commercial sites needing remediation                              |  |
|   | Funds to assist communities upgrade wastewater treatment systems  |  |
|   | Tax credit projects to build and rehabilitate low income housing using green technologies   |  |
|   | Development of energy efficiency and conservation strategies and programs, including energy audit programs.                         |  |
|   | Shipside electrification of vehicles; truck stop electrification, and cargo-handling equipment                                      |  |

|  |   |  |
|--|---|--|
|  | <p>Funding to increase the energy efficiency of information and communications technologies</p>   |  |
|  | <p>National Science Foundation funding for research related to improvements in energy efficiency, transmission, regulation and storage of electricity for use on military installations, including research on renewable energy</p>   |  |
|  | <p>Funding to local governments to reduce energy use and reduce emissions. Allowable uses include strategic planning, consultant services, energy audits, implementing building codes and inspection services, energy efficiency retrofits, and installing onsite renewable energy technologies</p> |  |

#### **D. Construction (Heavy and Specialty Trades)**

It is still difficult to evaluate the impact of the federal stimulus program on the construction industry sector. Ideally, the new stimulus money will have a positive effect in the short-term outlook period and will change from job losses to gains. Construction job opportunities will come from stimulus-funded contracts that require heavy construction and specialty trades workers. Specifically, these include infrastructure projects such as highway, road, and bridge construction and repair, and school building and remodeling projects. Office and administrative occupations that support construction projects may also see growth. Jobs needed for energy efficient retrofits and repairs are discussed in the *Green* section above.

California will receive stimulus monies for highways, local streets and roads, freight and passenger rail, port infrastructure projects, and transit projects. Table 7 lists possible occupations that could be positively affected by these funds.

**Table 7**

| <b>Projected Federal Stimulus Funding Related to Construction</b>                            |  |  |
|--|--|--|
| <b>Program</b>   | <b>Stimulus monies</b>   | <b>Possible Occupations Positively Affected</b>  |
| Highways, Roads, and Bridges (\$2.6 billion)   | Funds for highways, roads, and bridges. Funds for bicycle lanes and landscaping projects                           | <b>Professional (BA or advanced degree)</b>  |
| Airport Improvement Project  | Projects that would improve safety and reduce congestion   | Construction Managers<br>Cost Estimators   |
| High Speed Rail and Intercity Rail Transit (\$1.1 billion)                                   | Funds for transit projects   | General and Operations Managers  |
| Tax credit bonds for schools (\$2.2 billion)   | Tax credit bonds funding school construction, rehabilitation, repair, or site acquisition                          | <b>Crafts and Trades Workers (On-the-job training or work experience)</b>                            |
| Construction of Research Facilities (\$18 million)   | Grants for construction and modernization of research science buildings  | Bookkeeping, Accounting, and Auditing Clerks<br>Carpenters   |
| National Science Foundation (\$30 million) and National Institutes of Health (\$130 million) | Grants for construction, renovation, and repair of existing university research facilities                         | Cement Masons and Concrete Finishers<br>Construction Laborers<br>Drywall and Ceiling Tile Installers |
| Bonneville Power Administration and Western Area Power Administration                        | Borrowing authority for new construction and upgrading of electric power transmission lines and related facilities | Electricians<br>Executive Secretaries and Administrative Assistants                                  |
| Health Resources and Services  | Grants for construction, renovation, and equipment in health care facilities                                       | First-Line Supervisors/Managers of Construction Trades and Extraction Workers                        |
| Operation and  | Funds to improve, restore, repair,   |  |

|                         |  |   |
|-------------------------|--|---|
| Maintenance, Army       | and modernize Department of Defense facilities, including barracks   | Heating, Air Conditioning, and Refrigeration Mechanics and Installers   |
| Army Corps of Engineers | Funds for construction of water-related environmental infrastructure, including energy and water development projects and flood control projects | Office Clerks, General<br>Operating Engineers and Other<br>Construction Equipment Operators<br>Painters, Construction and Maintenance<br>Plasterers and Stucco Masons<br>Plumbers, Pipefitters, and Steamfitters<br>Roofers<br>Sheet Metal Workers<br>Tile and Marble Setters |

## **DESCRIBE THE SKILLS DEMANDED BY INDUSTRIES AND OCCUPATIONS THAT ARE EXPECTED TO GROW THROUGH ECONOMIC RECOVERY**

This section discusses which skills are needed by workers in industries and occupations expected to grow both through economic recovery and into the foreseeable future. As noted above, these industries include health care and social assistance, education, construction, and the newly emerging “green” industries.

### **What are the skill needs for the available, critical, and projected jobs?**

#### **A. Health Care and Social Assistance**

The growth of an aging population will continue to strengthen the increasing demand for nurses, related health care givers, and social service workers. Also, California’s critical nursing shortage is projected to expand over the next two decades. These factors ensure a robust employment outlook for the health care and social assistance industry sector. In California, employment in the top 20 high-growth occupations in health care and social assistance is expected to increase by 23 percent or more than 164,000 workers between 2006 and 2016.

The top ten high-growth occupations in this industry include registered nurses, medical secretaries, medical assistants, licensed vocational nurses, home health aides, office clerks, receptionists and information clerks, preschool teachers, child care workers, and supervisors of office and administrative support workers. Other top occupations in the industry include social and human service assistants, medical and health services managers, teacher assistants, and physical therapists. Employment in the top ten occupations is expected to grow by approximately 129,000 workers.

Educational requirements vary widely among the health care and social assistance occupations. For example, registered nurse positions require a bachelor’s or associate degree. Nursing aides and home health aides may need a high school diploma or General Equivalency Diploma (GED) certificate and vocational or job-related course work to obtain State certification. Social and Human Service Assistant jobs involve 1-12 months of on the job training. Child care workers and office clerk positions call for 30-day on the job training. Health care and social assistance occupations require workers to have high skill levels in:

- Reading comprehension,
- Active listening,
- Instructing,
- Speaking,
- Social perceptiveness,

- Writing,
- Critical thinking,
- Coordination,
- Learning strategies, and
- Time management.

## **B. Education**

Population growth will sustain the demand for educational service workers. It is likely that a surge in baby-boomer retirements will create job openings in addition to those due to employment growth and jobs created or retained from ARRA funds. In California, employment in the top 20 occupations in education is expected to increase by 21 percent or more than 126,000 workers between 2006 and 2016.

The top ten occupations in this industry include teacher assistants; secondary school teachers, except special and vocational education; office clerks, general; janitors and cleaners, except maids and housekeeping cleaners; executive secretaries and administrative assistants; educational, vocational, and school counselors; education administrators, elementary and secondary school; kindergarten teachers, except special education; special education teachers, preschool, kindergarten, and elementary school; and graduate teaching assistants. Other top occupations in this industry include child care workers; preschool teachers, except special education; instructional coordinators; and office and administrative support supervisors/managers. Employment in the top ten occupations is expected to grow by approximately 99,000 workers during the projections period.

Educational requirements vary widely among education occupations. For example, educational, vocational, and school counselors require a master's degree. Education administrators and most teachers need a bachelor's degree. Executive secretary and administrative assistant jobs involve 1-12 months of on-the-job training. Teacher assistant and office clerk positions require 30-day on-the-job training. Education occupations require workers to have high skill levels in:

- Active listening,
- Reading comprehension,
- Speaking,
- Critical thinking,
- Social perceptiveness,
- Instructing,
- Learning strategies,
- Writing,
- Monitoring, and
- Active learning.

## C. Green

Skills and knowledge needs vary in the green economy due to the diverse nature of activities performed in the various sectors. Across the board, green workers must be knowledgeable of their firm's goals and values related to energy efficiency and conservation, as well as its sustainability practices.

In 2008, several hundred Silicon Valley area employers were surveyed to determine skills and values necessary to work in various green and cleantech sectors.<sup>4</sup> The findings show the following skills and knowledge are needed to do the innovative work behind renewable energy and energy efficiency:

- Energy
- Electricity
- Power systems
- Engineering
- Chemistry
- Biology
- Solar technology
- Biofuels
- Fuel cells and batteries, and
- Automotive systems.

In addition, electrical, mechanical, chemical, computer, and environmental engineers, as well as agricultural and environmental scientists, all must perform these basic skills at a high level of competency:

- Active Learning
- Active Listening
- Complex Problem Identification
- Coordination
- Critical Thinking
- Judgment and Decision Making
- Reading Comprehension
- Time Management
- Writing, and
- Mathematics

Technicians in the research and development sector of the green economy, such as chemical technicians, environmental engineering technicians, biological technicians, and forest and conservation technicians, must also understand the concepts of energy, and be skilled in the following areas:

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<sup>4</sup> Cormia, Robert, Clean Technology Job Skills Inventory; (Bay Area Community College Consortium, 2008).

- Active Learning
- Mathematics
- Reading Comprehension
- Coordination
- Instructing
- Active Listening
- Critical Thinking
- Speaking
- Science
- Writing

For the many construction and specialty trades workers moving into the green building workforce, re-skilling in the form of certificate or customized programs will be required. Two of these occupations include solar PV installers and wind turbine technicians. Other jobs, such as insulation workers and biomass collectors, can be trained on the job.

Construction Managers, contractors, and architects entering this emerging sector need training in LEED certification requirements and other sustainable building practices, as well as knowledge of state and local energy efficiency requirements, in order to compete.

In 2009, the San Francisco Bay and Greater Silicon Valley Centers of Excellence surveyed over 700 employers about eight energy efficiency occupations considered most relevant to community colleges training.<sup>5</sup> Occupations studied included project managers (construction and design work), heating and air conditioning mechanics and technicians, retrofitting specialists, energy auditors, compliance analysts, and energy efficiency managers. According to respondents, the top three skills needed for these jobs include the following:

- Ability to communicate with customers, in writing and in person
- Understanding of local and state energy efficiency requirements and incentives for new and existing buildings
- General understanding of the mechanics and engineering of energy systems, including HVAC, lighting, and renewable energy systems

Some skill and knowledge requirements for green jobs will likely change to meet the innovations, changing technologies, and policies that continue to transform the way we do business and live.

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<sup>5</sup> California Centers of Excellence; Energy Efficiency Occupations in the Bay Region; 2009

## D. Construction

Job opportunities are expected to continue as more construction workers will be needed to build new highways, bridges and non-residential structures to meet the demands of a growing population. Stimulus monies will also be used to fund jobs that are needed to repair aging highways, bridges, and structures. Many employers report difficulty finding potential workers with the right qualifications. Employment opportunities will be best for individuals who have completed courses or training through technical schools or apprenticeship programs. In addition, many people currently working in the construction trades are expected to retire over the next 10 years, which will create additional job openings.

Employment in the construction industry is sensitive to the fluctuations of the economy. Workers in these trades may experience periods of unemployment when the overall level of construction falls. On the other hand, shortages of these workers may occur in some areas during peak periods of building activity.

The top ten high-growth occupations in the construction industry include carpenters, construction laborers, first line supervisors/managers of construction trades, electricians, plumbers, pipefitters, and steamfitters, drywall and ceiling tile installers, painters, construction and maintenance, cement masons and concrete finishers, operating engineers, equipment operators, and office clerks.

Educational requirements for most construction occupations involve on the job training or work experience. For example, carpenter positions require 12 months of on the job training. Construction laborer positions require 1-12 months on-the-job training while office clerk positions call for 30-day on the job training. First line supervisors/managers of construction trades require work experience. Construction occupations require workers to have high skill levels in:

- Critical Thinking
- Active Learning
- Coordination
- Active Listening
- Monitoring
- Equipment Selection
- Reading Comprehension
- Mathematics
- Equipment Maintenance
- Instructing
- Operation Monitoring
- Speaking
- Time Management
- Operation and Control
- Judgment and Decision Making

## **INTEGRATION OF WORKFORCE INFORMATION INTO PLANNING AND DECISION MAKING**

In the detailed analysis provided to the California Workforce Investment Board, the California LMID has prepared an assessment of the State's economy that anticipates near-term effects on employment, identifies demand occupations and occupational skills gaps, and outlines skills in occupations that are likely to be affected through economic recovery and through resources applied by dedicated recovery funds and efforts.

Ongoing support is supplied to Local Workforce Boards and the public by regional LMID labor market consultants stationed throughout the State and through planning tools such as Planning Information Packets, an annual publication provided to each local workforce planning agency, and both the short-term (two year) and long-term (10 year) projections of employment.

### **Approach the State will Use to Disseminate Workforce Information -**

Public access to the full range of state labor market information is available through the California Employment Development Department labor market information Web site – [www.labormarketinfo.edd.ca.gov](http://www.labormarketinfo.edd.ca.gov)

Major workforce information categories available on the Web site include career information as an aid to jobseekers, data on the economy in the context of the labor market, a data library with access to labor force, employment, and occupational and industry figures and analysis for the State, Metropolitan Statistical Area (MSA), county, and sub-county levels. There is also a customer center section with workforce information organized by user group to include employers, economic developers, educators, workforce partners, and researchers.

A representative list of electronic products available on the State Web site consists of -

Occupational Guides - includes job description and requirements, local job outlook, local benefits and wages, licensing, education, training, links to possible employers, how to find a job, and links to additional resources.

Projections of Employment - projections of employment by occupation are future projections or "outlook" for employment. These projections are provided for periods of two and ten years. Two year, or short-term, projections are available at state-wide level only.

Staffing Patterns by Industry and Occupation - A matrix of industries and occupations that list what industries employ an occupation and what the staffing pattern is for an industry.

Occupational Profile - wages, outlook, licensing, and more for a single occupation.

Local Area Profile - unemployment rates, industry employment, economic indicators, and more for the State or a county

Economic Indicators - income, Consumer Price Index, taxable sales, median home price, layoff statistics, commute patterns, and mass layoff statistics.

Industry Employment - employment by industry, size and number of businesses, data for "industry clusters" studies, and major employers by county. Data are by place of work.

Labor Force and Unemployment - labor force, employment, unemployment, and rates (current and historical). Data are by place of residence.

As noted earlier, LMID also has labor market consultants stationed in regions throughout the State. These analysts offer training and analytical support to local workforce development staff. A public access phone line is staffed to provide assistance in locating labor market information on the State Web site and in the applicability of various workforce information products to specific customer needs.

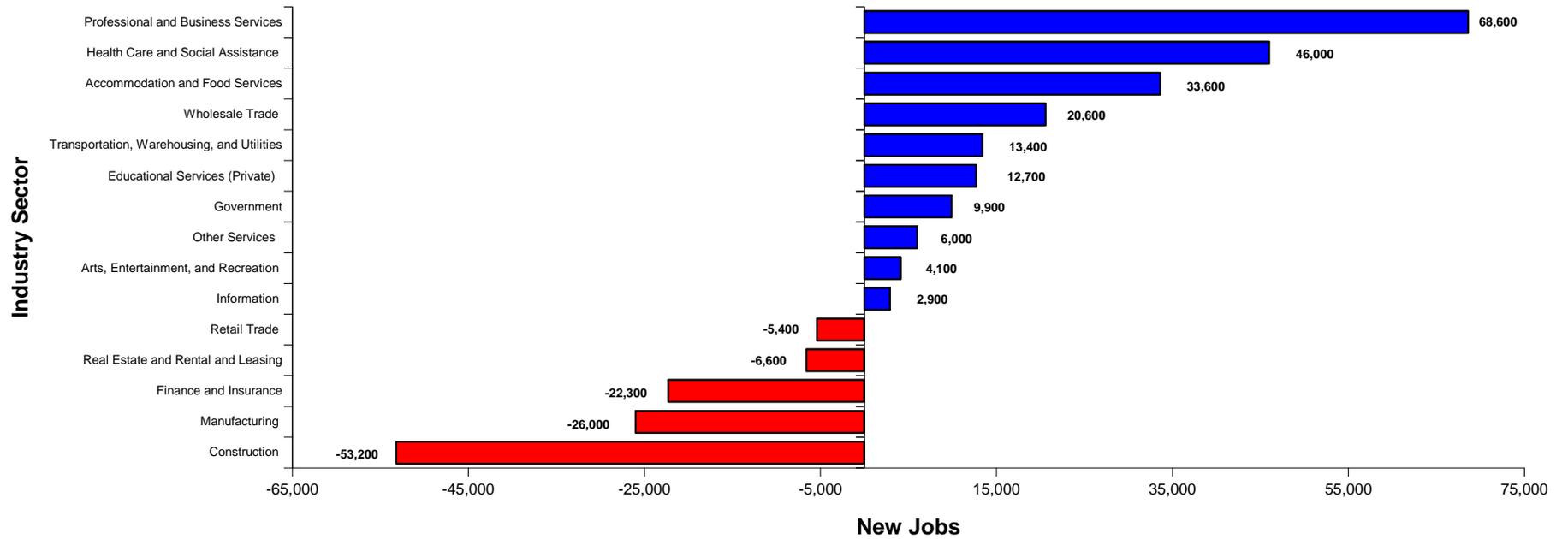
### Top Five Skills of High Unemployment Occupations, February 2008 - February 2009

Occupational data based on unemployment insurance claims are not available. Current Population Survey data reports at major group level *Standard Occupational Classification* (SOC). Occupations below are largest in the SOC group based on Projections of Employment 2006-2016 data.

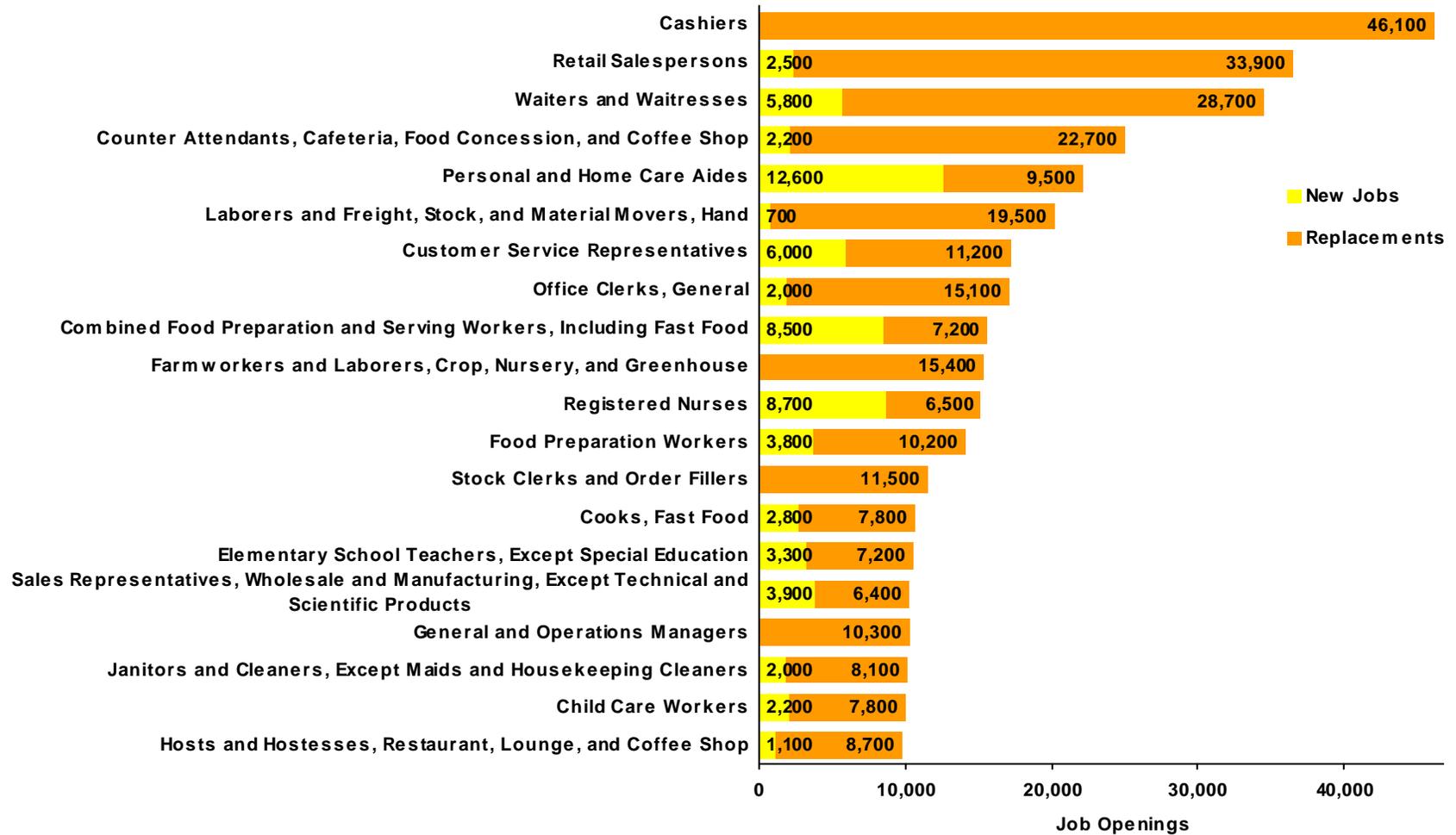
| High Unemployment Occupations<br>Year Ending<br>February 2009              | BLS Educ. Level | Active Learning | Active Listening | Coordination | Critical Thinking | Equipment Maintenance | Equipment Selection | Judgment and Decision Making | Instructing | Learning Strategies | Management of Personnel Resources | Mathematics | Monitoring | Operation Monitoring | Persuasion | Quality Control Analysis | Reading comprehension | Service Orientation | Social Perceptiveness | Speaking | Time Management | Writing |
|--|-----------------|-----------------|------------------|--------------|-------------------|-----------------------|---------------------|------------------------------|-------------|---------------------|-----------------------------------|-------------|------------|----------------------|------------|--------------------------|-----------------------|---------------------|-----------------------|----------|-----------------|---------|
| General and Operations Managers  | 4               |                 | ●                | ●            | ●                 |                       |                     |                              |             |                     |                                   |             |            |                      |            |                          |                       |                     |                       | ●        | ●               |         |
| Loan Officers  | 5               |                 | ●                |              |                   |                       |                     |                              |             |                     |                                   |             |            |                      | ●          |                          | ●                     |                     |                       | ●        | ●               |         |
| First-Line Supervisors/<br>Managers of Production<br>and Operating Workers | 8               |                 | ●                |              |                   |                       |                     |                              | ●           |                     | ●                                 |             | ●          |                      |            |                          | ●                     |                     |                       |          |                 |         |
| Carpenters   | 9               |                 | ●                |              | ●                 |                       |                     | ●                            |             |                     |                                   | ●           |            |                      |            |                          |                       |                     |                       |          |                 | ●       |
| Construction Laborers  | 10              |                 | ●                | ●            |                   |                       | ●                   |                              | ●           |                     |                                   |             |            |                      |            |                          |                       |                     |                       | ●        |                 |         |
| Bookkeeping, Accounting<br>& Auditing Clerks                               | 10              |                 | ●                |              | ●                 |                       |                     |                              |             |                     |                                   | ●           |            |                      |            |                          | ●                     |                     |                       |          | ●               |         |
| Executive Secretaries &<br>Administrative Assistants                       | 10              |                 | ●                |              |                   |                       |                     |                              |             |                     |                                   |             |            |                      |            |                          | ●                     |                     |                       | ●        | ●               | ●       |
| Truck Drivers, Heavy &<br>Tractor-Trailer                                  | 10              |                 | ●                | ●            |                   | ●                     |                     | ●                            |             |                     |                                   |             |            |                      |            |                          |                       |                     |                       |          | ●               |         |
| Team Assemblers  | 10              | ●               | ●                |              |                   |                       |                     |                              | ●           | ●                   |                                   |             |            |                      |            | ●                        |                       |                     |                       |          |                 |         |
| Sewing Machine<br>Operators  | 10              |                 | ●                |              |                   | ●                     |                     |                              | ●           | ●                   |                                   |             |            |                      |            | ●                        |                       |                     |                       |          |                 |         |
| Inspectors, Testers,<br>Sorters, Samplers, and<br>Weighers                 | 10              |                 | ●                |              |                   |                       |                     |                              | ●           |                     |                                   |             |            | ●                    |            | ●                        | ●                     |                     |                       |          |                 |         |
| Retail Salespersons  | 11              |                 | ●                |              | ●                 |                       |                     |                              |             |                     |                                   | ●           |            |                      |            |                          |                       |                     | ●                     | ●        |                 |         |
| Office Clerks, General   | 11              |                 | ●                |              |                   |                       |                     |                              |             |                     |                                   |             |            |                      |            |                          | ●                     |                     | ●                     | ●        |                 | ●       |
| Laborers & Freight,<br>Stock, & Material Movers<br>Hand                    | 11              |                 | ●                | ●            |                   |                       |                     |                              | ●           | ●                   |                                   |             |            |                      |            |                          | ●                     |                     |                       |          |                 |         |
| Waiters and Waitresses   | 11              |                 | ●                | ●            |                   |                       |                     |                              |             |                     |                                   |             |            |                      |            |                          |                       | ●                   | ●                     | ●        |                 |         |
| Combined Food Prep.<br>and Serving Workers,<br>Including Fast Food         | 11              |                 | ●                |              |                   |                       |                     |                              | ●           |                     |                                   | ●           |            |                      |            |                          |                       | ●                   |                       | ●        |                 |         |
| Landscaping and<br>Groundskeeping Workers                                  | 11              |                 | ●                |              |                   | ●                     | ●                   |                              |             |                     |                                   |             |            |                      |            |                          | ●                     |                     |                       | ●        |                 |         |
| Personal and Home Care<br>aides  | 11              |                 | ●                | ●            |                   |                       |                     |                              |             |                     |                                   |             | ●          |                      |            |                          |                       | ●                   | ●                     |          |                 |         |
| Child Care Workers   | 11              |                 | ●                |              |                   |                       |                     |                              | ●           | ●                   |                                   |             |            |                      |            |                          |                       |                     | ●                     | ●        |                 |         |
| Loan Interviewers  | 11              |                 | ●                |              |                   |                       |                     |                              |             |                     |                                   | ●           |            |                      |            |                          | ●                     |                     |                       | ●        | ●               |         |

Source: Occupational Information Network (O\*NET) 13.0, 2009

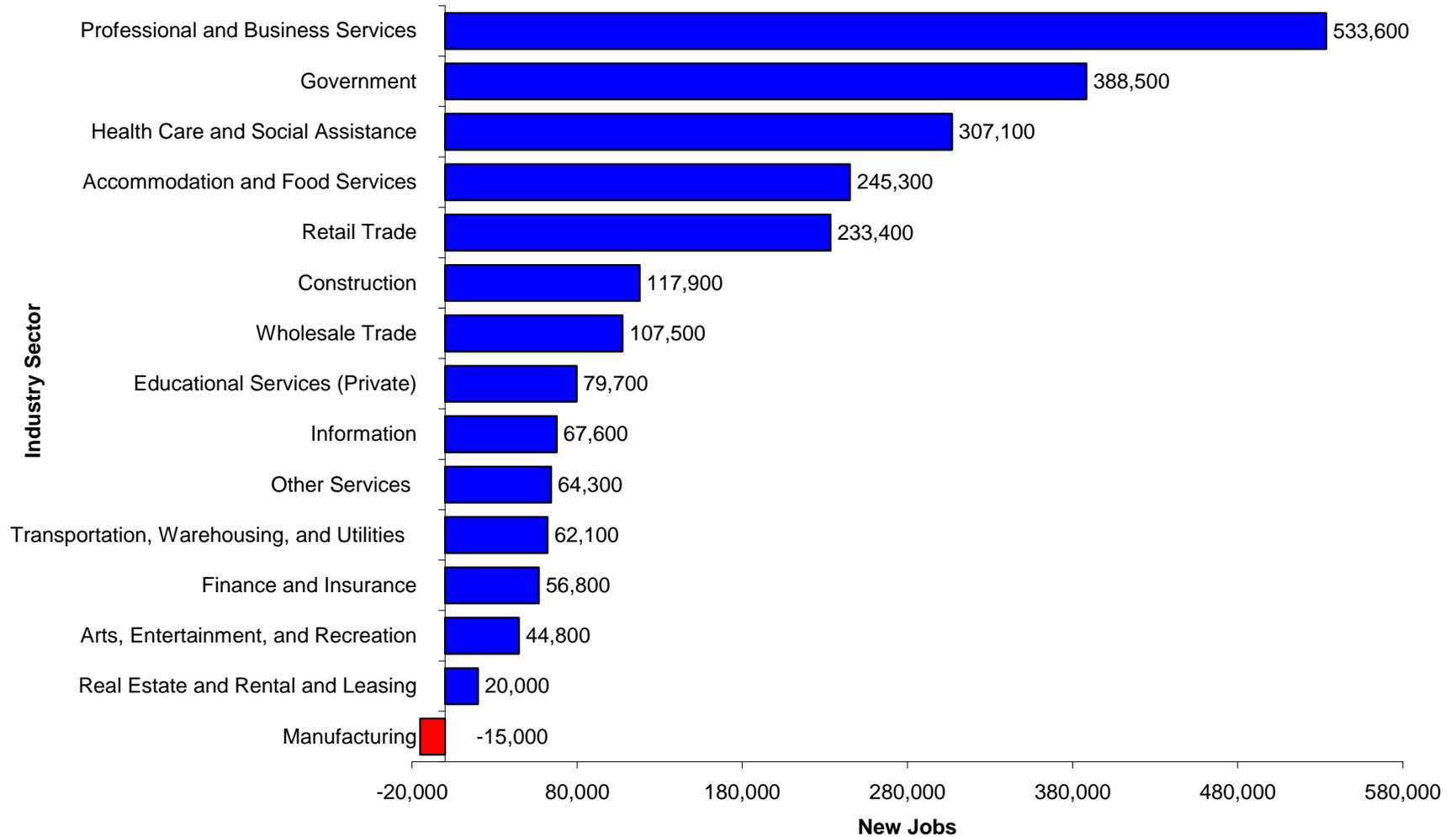
**California 2007-2009 Industry Projections  
Industry Sector Growth/Decline**



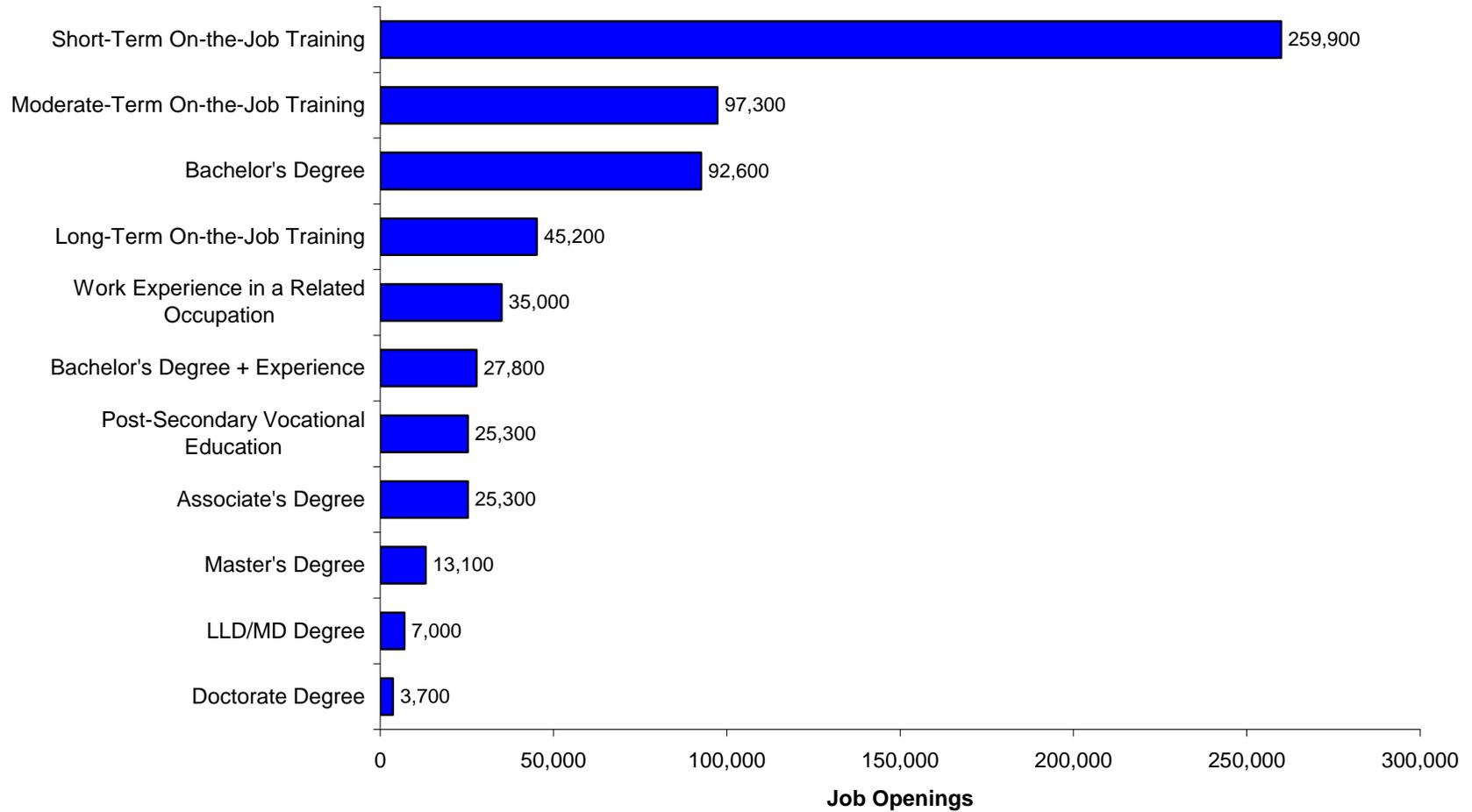
### California 2007-2009 Occupational Projections Top Twenty Occupations with the Most Job Openings



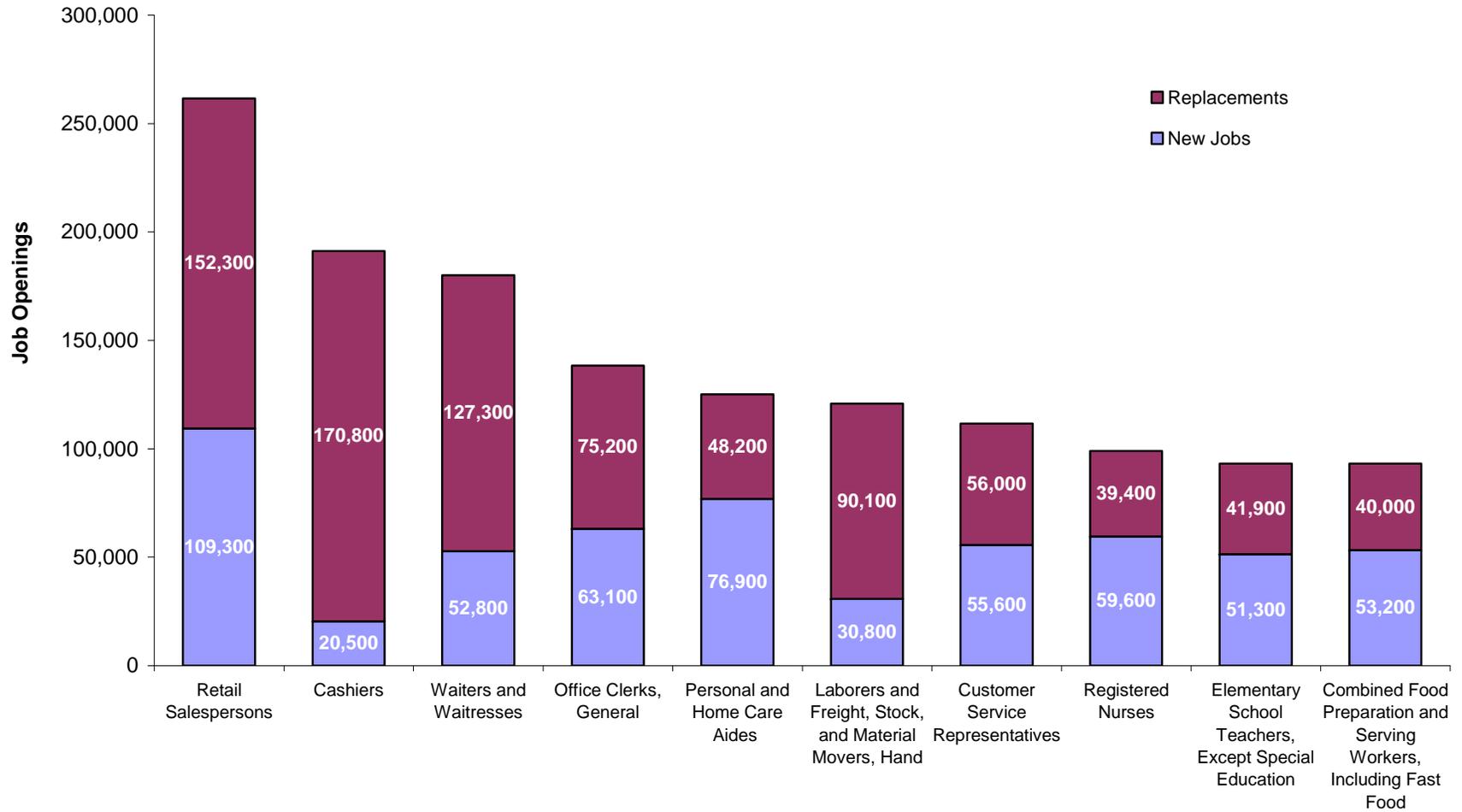
**California 2006-2016 Industry Projections  
Industry Sector Growth/Decline**



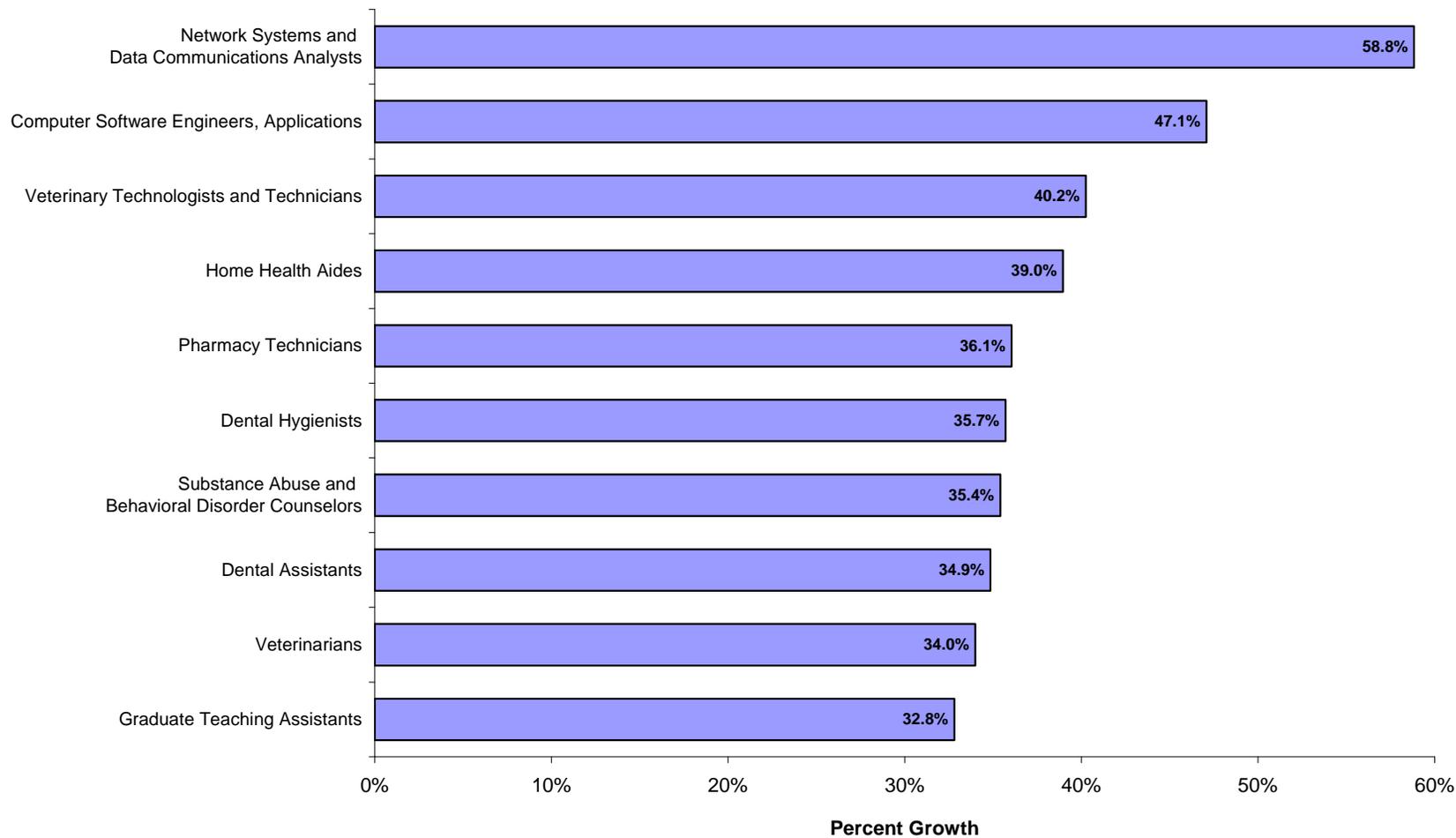
**California 2006-2016 Occupation Projections  
Average Annual Job Openings by Education and Training Level**



### California 2006-2016 Occupation Projections Top Ten Occupations with the Most Job Openings



**California 2006-2016 Occupation Projections  
Ten Fastest Growing Occupations\***



## Comparison of Growing Occupations in California, 2006-2016

| Fastest Growing*<br>(Percentage Growth)  | Education / Training<br>Level                                       | Largest Growing*<br>(Adding the Most Jobs)  |
|--|---|---|
| <ul style="list-style-type: none"> <li>Home Health Aides (39.0% or 18,700 jobs)</li> <li>Physical Therapist Aides (31.4% or 1,600 jobs)</li> <li>Personal and Home Care Aides (27.1% or 76,900 jobs)</li> <li>Combined Food Preparation and Serving Workers, Including Fast Food (25.2% or 53,200 jobs)</li> <li>Food Preparation Workers (23.5% or 26,000 jobs)</li> </ul>  | <b>Short-term<br/>on-the-job training<br/>(one month or less)</b>   | <ul style="list-style-type: none"> <li>Retail Salespersons (109,300 jobs)</li> <li>Personal and Home Care Aides (76,900 jobs)</li> <li>Office Clerks, General (63,100 jobs)</li> <li>Combined Food Preparation and Serving Workers, Including Fast Food (53,200 jobs)</li> <li>Waiters and Waitresses (52,800 jobs)</li> </ul>  |
| <ul style="list-style-type: none"> <li>Pharmacy Technicians (36.1% or 8,400 jobs)</li> <li>Dental Assistants (34.9% or 14,500 jobs)</li> <li>Medical Assistants (30.8% or 18,300 jobs)</li> <li>Customer Service Representatives (27.6% or 55,600 jobs)</li> <li>Social and Human Service Assistants (27.1% or 7,900 jobs)</li> </ul>  | <b>Moderate-term<br/>on-the-job training<br/>(one to 12 months)</b> | <ul style="list-style-type: none"> <li>Customer Service Representatives (55,600 jobs)</li> <li>Executive Secretaries and Administrative Assistants (38,400 jobs)</li> <li>Bookkeeping, Accounting, and Auditing Clerks (35,000 jobs)</li> <li>Construction Laborers (28,500 jobs)</li> <li>Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products (27,300 jobs)</li> </ul>  |
| <ul style="list-style-type: none"> <li>Interpreters and Translators (29.6% or 2,100 jobs)</li> <li>Cooks, Restaurant (24.3% or 23,100 jobs)</li> <li>Audio and Video Equipment Technicians (23.2% or 1,900 jobs)</li> <li>Industrial Machinery Mechanics (21.1% or 3,000 jobs)</li> <li>Water and Liquid Waste Treatment Plant and System Operators (19.3% or 1,600 jobs)</li> </ul>   | <b>Long-term<br/>on-the-job training<br/>(12 months or more)</b>    | <ul style="list-style-type: none"> <li>Carpenters (25,700 jobs)</li> <li>Cooks, Restaurant (23,100 jobs)</li> <li>Maintenance and Repair Workers, General (16,300 jobs)</li> <li>Police and Sheriff's Patrol Officers (10,900 jobs)</li> <li>Actors (8,900 jobs)</li> </ul>   |
| <ul style="list-style-type: none"> <li>Detectives and Criminal Investigators (26.5% or 3,000 jobs)</li> <li>Construction and Building Inspectors (20.8% or 2,600 jobs)</li> <li>Self-Enrichment Education Teachers (20.3% or 6,100 jobs)</li> <li>First-Line Supervisors/Managers of Food Preparation and Serving Workers (18.8% or 16,300 jobs)</li> <li>First-Line Supervisors/Managers of Helpers, Laborers, and Material Movers, Hand (18.1% or 4,100 jobs)</li> </ul> | <b>Work experience<br/>in a related occupation</b>                  | <ul style="list-style-type: none"> <li>First-Line Supervisors/Managers of Retail Sales Workers (21,700 jobs)</li> <li>First-Line Supervisors/Managers of Food Preparation and Serving Workers (16,300 jobs)</li> <li>First-Line Supervisors/Managers of Office and Administrative Support Workers (12,900 jobs)</li> <li>First-Line Supervisors/Managers of Construction Trades and Extraction Workers (10,300 jobs)</li> <li>Food Service Managers (6,400 jobs)</li> </ul> |
| <ul style="list-style-type: none"> <li>Vocational Education Teachers, Postsecondary (30.5% or 3,600 jobs)</li> <li>Manicurists and Pedicurists (27.2% or 4,100 jobs)</li> <li>Surgical Technologists (26.8% or 2,200 jobs)</li> <li>Massage Therapists (25.6% or 5,100 jobs)</li> <li>Hairdressers, Hairstylists, and Cosmetologists (23.1% or 10,400 jobs)</li> </ul>   | <b>Postsecondary<br/>vocational training</b>                        | <ul style="list-style-type: none"> <li>Automotive Service Technicians and Mechanics (11,200 jobs)</li> <li>Preschool Teachers, Except Special Education (10,800 jobs)</li> <li>Hairdressers, Hairstylists, and Cosmetologists (10,400 jobs)</li> <li>Medical Secretaries (10,400 jobs)</li> <li>Licensed Practical and Licensed Vocational Nurses (10,100 jobs)</li> </ul>  |
| <ul style="list-style-type: none"> <li>Veterinary Technologists and Technicians (40.2% or 3,300 jobs)</li> <li>Dental Hygienists (35.7% or 8,000 jobs)</li> <li>Biological Technicians (29.8% or 3,100 jobs)</li> <li>Paralegals and Legal Assistants (26.3% or 6,500 jobs)</li> <li>Registered Nurses (25.0% or 59,600 jobs)</li> </ul>   | <b>Associate degree</b>   | <ul style="list-style-type: none"> <li>Registered Nurses (59,600 jobs)</li> <li>Computer Support Specialists (10,500 jobs)</li> <li>Dental Hygienists (8,000 jobs)</li> <li>Paralegals and Legal Assistants (6,500 jobs)</li> <li>Insurance Sales Agents (5,600 jobs)</li> </ul>  |
| <ul style="list-style-type: none"> <li>Network Systems and Data Communications Analysts (58.8% or 17,000 jobs)</li> <li>Computer Software Engineers, Applications (47.1% or 41,000 jobs)</li> <li>Graduate Teaching Assistants (32.8% or 6,300 jobs)</li> <li>Special Education Teachers, Preschool, Kindergarten, and Elementary School (32.3% or 6,400 jobs)</li> <li>Multi-Media Artists and Animators (31.9% or 8,900 jobs)</li> </ul>                                 | <b>Bachelor's degree</b>  | <ul style="list-style-type: none"> <li>Elementary School Teachers, Except Special Education (51,300 jobs)</li> <li>Computer Software Engineers, Applications (41,100 jobs)</li> <li>Accountants and Auditors (33,200 jobs)</li> <li>Secondary School Teachers, Except Special and Vocational Education (21,500 jobs)</li> <li>Network Systems and Data Communications Analysts (17,000 jobs)</li> </ul>   |
| <ul style="list-style-type: none"> <li>Natural Sciences Managers (27.8% or 2,000 jobs)</li> <li>Education Administrators, Postsecondary (22.8% or 3,300 jobs)</li> <li>Education Administrators, Elementary and Secondary School (20.5% or 4,300 jobs)</li> <li>Computer and Information Systems Managers (19.2% or 7,000 jobs)</li> <li>Management Analysts (18.9% or 16,800 jobs)</li> </ul>   | <b>Bachelor's degree or higher<br/>plus work experience</b>         | <ul style="list-style-type: none"> <li>Management Analysts (16,800 jobs)</li> <li>General and Operations Managers (10,500 jobs)</li> <li>Financial Managers (9,200 jobs)</li> <li>Sales Managers (7,800 jobs)</li> <li>Computer and Information Systems Managers (7,000 jobs)</li> </ul>  |
| <ul style="list-style-type: none"> <li>Substance Abuse and Behavioral Disorder Counselors (35.4% or 3,400 jobs)</li> <li>Health Specialties Teachers, Postsecondary (31.8% or 2,700 jobs)</li> <li>Art, Drama, and Music Teachers, Postsecondary (29.7% or 2,200 jobs)</li> <li>Physical Therapists (29.7% or 4,400 jobs)</li> <li>Instructional Coordinators (29.0% or 4,200 jobs)</li> </ul>   | <b>Master's degree</b>  | <ul style="list-style-type: none"> <li>Market Research Analysts (6,300 jobs)</li> <li>Educational, Vocational, and School Counselors (5,700 jobs)</li> <li>Physical Therapists (4,400 jobs)</li> <li>Instructional Coordinators (4,200 jobs)</li> <li>Substance Abuse and Behavioral Disorder Counselors (3,400 jobs)</li> </ul>  |
| <ul style="list-style-type: none"> <li>Medical Scientists, Except Epidemiologists (26.6% or 4,600 jobs)</li> <li>Computer and Information Scientists, Research (24.5% or 1,300 jobs)</li> <li>Clinical, Counseling, and School Psychologists (20.1% or 4,200 jobs)</li> </ul>  | <b>Doctoral degree</b>  | <ul style="list-style-type: none"> <li>Medical Scientists, Except Epidemiologists (4,600 jobs)</li> <li>Clinical, Counseling, and School Psychologists (4,200 jobs)</li> <li>Computer and Information Scientists, Research (1,300 jobs)</li> </ul>  |
| <ul style="list-style-type: none"> <li>Veterinarians (34.0% or 1,700 jobs)</li> <li>Pharmacists (26.1% or 6,200 jobs)</li> <li>Psychiatrists (16.4% or 1,000 jobs)</li> <li>Lawyers (15.2% or 12,900 jobs)</li> <li>Dentists, General (13.7% or 2,100 jobs)</li> </ul>   | <b>First professional degree</b>                                    | <ul style="list-style-type: none"> <li>Lawyers (12,900 jobs)</li> <li>Pharmacists (6,200 jobs)</li> <li>Dentists, General (2,100 jobs)</li> <li>Veterinarians (1,700 jobs)</li> <li>Family and General Practitioners (1,400 jobs)</li> </ul>  |

\* Excludes "All Other" categories and occupations with employment less than 5,000 in 2006.

Source: State of California, Employment Development Department