

# **KINGS COUNTY LABOR FORCE ANALYSIS**

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Prepared for:

**KINGS COUNTY  
WORKFORCE INVESTMENT BOARD**

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# INTRODUCTION AND SUMMARY

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## INTRODUCTION

This report presents information on growing industry clusters in Kings County and related business demand for selected occupational skills. The report describes characteristics of the labor force and in particular focuses on the skills and employment needs of key population segments such as unemployed and underemployed workers, veterans, the disabled and workers in major ethnic groups.

The industry cluster analysis updates the recent work completed by the CSU Fresno Office of Community and Economic Development, in the report, "San Joaquin Valley Regional Industry Cluster Analysis and Action Plan," published in September 2012. In that report, six major industry clusters were identified and evaluated, including:

- Agriculture
- Energy
- Logistics
- Health Care
- Manufacturing
- Water Technology

The present report updates the analysis of the cluster beyond 2010 and provides projection of job growth and occupational demand to the year 2017, based on data provided by Employment Management Systems Inc. (EMSI).

In addition, the report provides a detailed demographic analysis of the workforce using the Public UMS data, which permits cross-tabulations of survey data collected through the American Community Survey (ACS). The resulting analysis is consistent with published ACS population totals for Kings County, but provides greater detail on the employment status and skills levels of selected demographic groups.

## SUMMARY

**Economic Conditions.** The Kings County unemployment rate improved to 8.4% just prior to the recession in 2006, but reached a high of 16.5% by 2010. It has since declined to an annual average level of about 15.3% in 2012.

**Industry Clusters.** Agriculture is the largest industry cluster in Kings County, with more than 10,700 jobs and a concentration 5.5 times the statewide average. Agricultural Processing and Production sub-clusters have grown over the past decade but are projected to decline over the next five years. Health Care is the second largest cluster with 3,903 jobs. Health care is projected to add another 1,090 jobs between 2012 and 2017. Logistics, as the third largest cluster in Kings County, had 739 jobs in 2010,

but EMSI projects a loss of 181 jobs by 2017. The Energy and Manufacturing clusters provided close to 500 jobs in 2010 and EMSI projects slight changes between 2012 and 2017. Water Technology does not play a significant role in Kings County. Retail and tourism jobs are projected to grow between 2012 and 2017.

**Labor Force Demographics and Skills.** The report documents the correlation between education and employment, with unemployment rates much higher for non-college graduates. Whites and other non-Latino groups have higher rates of college graduation.

**Under-utilized Workers.** Non-college graduates also tend to be underutilized more often in the workforce and again, Latinos have lower full time utilization rates (65.3 percent) than do Whites (71.7 percent). Differences in unemployment rates between persons with a college degree and those without are also pronounced along sectoral lines. This is especially true in sectors having to do with housing. In construction (NAICS 23), the unemployment rate for persons without a degree is 25 percent, versus 0 percent for those with a degree, although the latter may be due to sampling error on the part of the US Census. There are a few sectors in which jobless rates are higher for persons with a college degree versus for those without, such as durable goods manufacturing (NAICS 33), finance and insurance (NAICS 52), and food services retail (NAICS 72).

**Veterans.** Based on the most recent ACS data, there are about 6,428 veterans in the labor force in the Kings County, representing about 9.9 percent of the labor force. It is estimated that 9.1 percent of veterans were unemployed in 2011, compared to 12.6 percent for the non-veterans labor force. Among the unemployed veterans, the largest group is in the 30-34 age group, which contains 322 out of a total of 585 unemployed veterans of all ages.

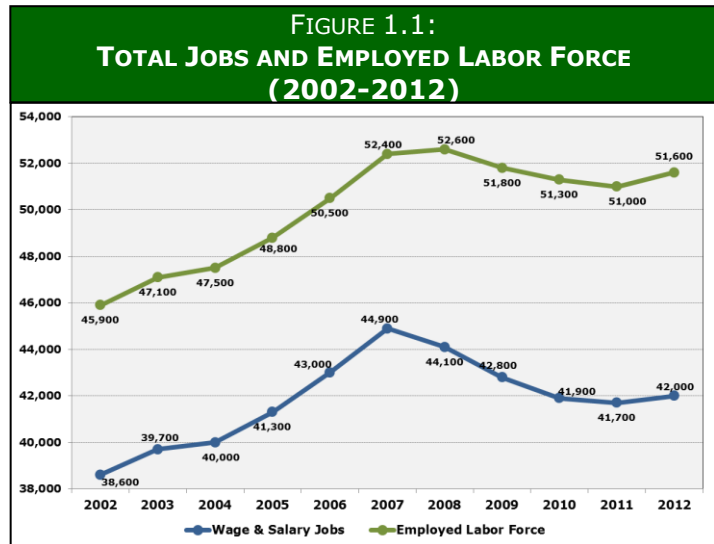
**Disabled Workers.** There are an estimated 3,076 disabled workers in the labor force, comprising 4.7 percent of all workers in the County. The unemployment rate for disabled workers in 2011 is estimated at 11.2 percent, compared to 12.4 percent for the non-disabled labor force. Among the unemployed disabled, two age-related clusters emerge, with the largest group in the 35-54 age group, who comprise of 170 unemployed disabled persons out of a total of 345 unemployed disabled persons. There are 101 unemployed disabled persons in the 20-29 age group. Across all ages, those who did not earn at least a high school diploma exhibit high rates of unemployment, with the overall unemployment rate for disabled persons without a high school diploma at 27.5 percent.

**Training Programs.** The report screens all of the projected growth occupations against the list of WIB-approved training vendors and identifies which occupations appear to have available training programs in Kings County where there are gaps. Of the County's clusters, Health and Wellness is projected to grow the most new jobs between 2012 and 2017, at 1,090 over a five year period, or 217 per year on average. The bulk of the 1,090 new jobs are in the lower-middle and middle education and training categories consisting of relevant work experience (201) and an Associate's degree (625) respectively. There are approximately 11 occupations that are expected to increase in numbers within the Health and Welfare cluster. For 4 of these occupations, there are no job training programs, according to the California EDD ETPL database. There are 9 growing occupations within Logistics; for 3 of these growing occupations, there are no job training programs.

# 1. LOCAL ECONOMIC CONDITIONS

## EMPLOYMENT TRENDS

Employment growth in Kings County was on upward trend until 2007, after which it plummeted. Between 2002 and 2007, the County added 6,300 jobs, reaching a peak of 44,900 wage and salary jobs. Job losses from the recession began to occur in 2008 and continued until 2011, when employment declined to less than 41,700 jobs. Employers struggled to add new jobs but ended with 42,000 Jobs in 2012 which is 3,200 jobs lower than the peak in 2007. The employed labor force, which includes self employed and out-commuters, followed a similar pattern (Figure 1.1).



Source: ADE, Inc., California Economic Development Department

The county had 52,600 employed residents in 2008 but during the recession, employment dropped and the number of employed residents declined by 1,600 reaching of 51,000 people in 2011. However, between 2011 and 2012 about 600 residents found employment (Figure 1.1).

**TABLE 1.1:  
DEMOGRAPHIC AND LABOR FORCE TRENDS**

|                      | 2002    | 2012    | 2002-2012<br>change % |
|----------------------|---------|---------|-----------------------|
| Population Estimates | 134,664 | 150,843 | 12.0%                 |
| Labor Force          | 52,000  | 60,900  | 17.1%                 |
| Employed Labor Force | 45,900  | 51,600  | 12.4%                 |
| Wage and Salary Jobs | 38,600  | 42,000  | 8.8%                  |

Source: ADE, Inc., Department of Finance, California Economic Development Department

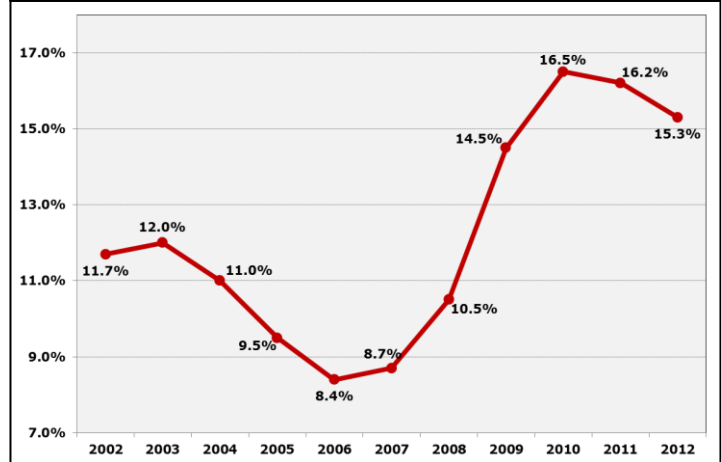
Population increased by 12.0 percent between 2002 and 2012, while labor force had an increase of 17.1 percent (Table 1.1). The number of wage and salary jobs is almost 30 percent below the size of the labor force in Kings County. Some of this difference would be due to self-employment, but it is also clear that there is a large out-commute for workers from the county to employment centers elsewhere in the Central Valley. The increase in unemployment rate is highly correlated to the increasing gap between labor force and available job opportunities. The unemployment rate was as low as 8.4 percent in 2006 but increased to 10.5 percent in 2008 and 16.5 percent in 2010 (Figure 1.2).

Agriculture is the largest cluster with 10,712 employees (Figure 1.3). The Health Care cluster with 3,903 employees is the second largest cluster in Kings County. Water Technology is the smallest industry with 15 employees. Logistics, Energy, and Manufacturing clusters have 739, 578, and 545 employees, respectively. The Health Care and logistics clusters have shown the highest growth rate over the past ten years. The Manufacturing, Energy and Water Technology clusters, on the other hand, have declined within the last decade.

Agriculture is not only the largest industry but also the highest concentrated job sector at 5.5 times the State average.

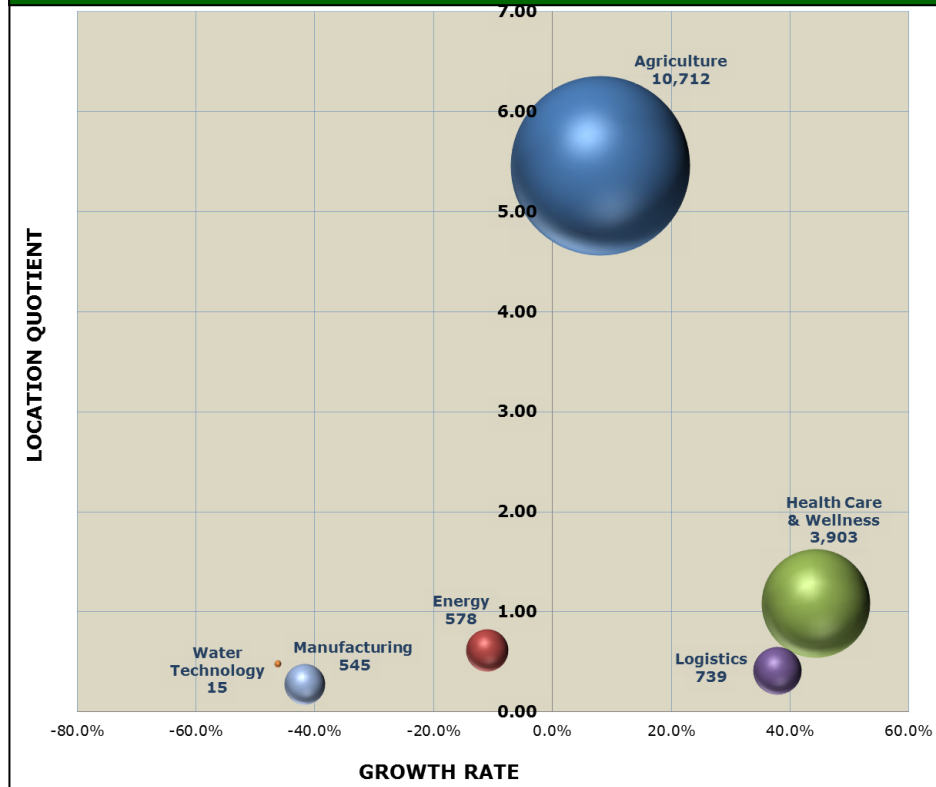
The Health Care concentration matches the State average in Kings County, but the other clusters are all below average (see Appendix A for industry cluster definitions by NAICS code).

**FIGURE 1.2:  
UNEMPLOYMENT RATE (2002-2012)**



Source: ADE, Inc., California Economic Development Department

**FIGURE 1.3:  
TULARE CLUSTERS (2001 - 2010)**



Source: IMPLAN CEW

# 2. KEY DEMOGRAPHIC GROUPS

This chapter provides data on the educational levels and employment status for key demographic groups in the population. Data comes from the US Census’ American Community Survey (“ACS”) one-year sample for years 2009, 2010, and 2011, the most-current data available at the time of this analysis.

## EDUCATIONAL ATTAINMENT BY RACE/ETHNIC AND AGE CATEGORY

ACS estimates that there are 64,787 persons in the county labor force, with 26,678 in the 35 to 54 prime working-age category (Table 2.1)<sup>1</sup>. Of the 26,678, 10,992 (or 41.2 percent) are White, 12,138 (45.5 percent) are Latino, and the 3,548 (13.3 percent) are some other race (e.g. Black, Asian-Pacific Islander, Other, and/or Two or More). Of the 10,992 persons who are White, 2,461 (22.4 percent) earned at least a Bachelor’s degree. In comparison, 8.1 percent of all prime working-age Latino adults in the labor force earned at least a Bachelor’s, or 978 out of 12,138. For persons in the Other category, an estimated 756 (21.4 percent) prime working-age adults out of a labor force of 3,548 earned at least a Bachelor’s degree.

**TABLE 2.1:  
LABOR FORCE BY RACE/ETHNICITY, AGE AND EDUCATIONAL ATTAINMENT:  
KINGS COUNTY (2009-2011)  
ALL PERSONS 16 IN KINGS COUNTY -- IN LABOR FORCE**

|   | 16 - 19      | 20 - 29      | 30 - 34      | 35 - 54       | 55 - 64      | 65 & over    | Kings County  |
|---|--------------|--------------|--------------|---------------|--------------|--------------|---------------|
|   | 3,350        | 17,923       | 7,760        | 26,678        | 7,154        | 1,922        | 64,787        |
| <b>01 White</b>                                   | <b>1,052</b> | <b>6,598</b> | <b>3,019</b> | <b>10,992</b> | <b>3,523</b> | <b>1,124</b> | <b>26,308</b> |
| Did not earn HS dipl/GED or degree: not in school | 134          | 403          | 7            | 529           | 313          | 193          | 1,579         |
| High school graduate (includes equivalency)       | 260          | 1,595        | 794          | 2,911         | 861          | 305          | 6,725         |
| Some college - no degree & not attending          | 57           | 1,773        | 629          | 3,326         | 1,012        | 335          | 7,132         |
| Associates degree/still attending college         | 410          | 1,688        | 717          | 1,765         | 379          | 59           | 5,018         |
| Bachelor's degree or higher                       | 0            | 1,140        | 872          | 2,461         | 958          | 232          | 5,662         |
| NA  | 191          | 0            | 0            | 0             | 0            | 0            | 191           |

<sup>1</sup>As noted in Table 1.1, EDD estimates a labor force figure of 60,900 in 2012. We use the ACS figure in this chapter in order to present the demographic characteristics that are not available from EDD. For a detailed difference in methodology for estimating labor force between the US ACS and US Census CPS (on which California EDD’s findings are based), go to [//www.bls.gov/lau/acsqa.htm#Q08](http://www.bls.gov/lau/acsqa.htm#Q08) and [//www.bls.gov/lau/acsqa.htm#Q09](http://www.bls.gov/lau/acsqa.htm#Q09). It is also important to note that while the US Census CPS is the federal government’s official survey for purposes of tracking monthly and annual unemployment, the US ACS is based on a significantly larger sample of survey respondents.

|   | 16 - 19      | 20 - 29      | 30 - 34      | 35 - 54       | 55 - 64      | 65 & over  | Kings County  |
|---|--------------|--------------|--------------|---------------|--------------|------------|---------------|
| <b>02 Latino</b>                                  | <b>1,766</b> | <b>9,719</b> | <b>4,073</b> | <b>12,138</b> | <b>2,751</b> | <b>561</b> | <b>31,007</b> |
| Did not earn HS dipl/GED or degree: not in school | 306          | 2,539        | 1,295        | 5,498         | 1,580        | 294        | 11,512        |
| High school graduate (includes equivalency)       | 489          | 2,439        | 1,222        | 3,102         | 337          | 236        | 7,825         |
| Some college - no degree & not attending          | 75           | 3,053        | 856          | 1,576         | 380          | 0          | 5,940         |
| Associates degree/still attending college         | 704          | 1,247        | 346          | 948           | 186          | 4          | 3,435         |
| Bachelor's degree or higher                       | 0            | 419          | 354          | 978           | 268          | 26         | 2,044         |
| NA  | 192          | 23           | 0            | 36            | 0            | 0          | 251           |
| <b>03 Other</b>                                   | <b>532</b>   | <b>1,606</b> | <b>669</b>   | <b>3,548</b>  | <b>881</b>   | <b>237</b> | <b>7,473</b>  |
| Did not earn HS dipl/GED or degree: not in school | 0            | 180          | 66           | 82            | 54           | 141        | 524           |
| High school graduate (includes equivalency)       | 102          | 425          | 46           | 619           | 337          | 34         | 1,563         |
| Some college - no degree & not attending          | 216          | 611          | 230          | 1,361         | 95           | 0          | 2,513         |
| Associates degree/still attending college         | 172          | 179          | 174          | 729           | 51           | 0          | 1,305         |
| Bachelor's degree or higher                       | 0            | 121          | 152          | 756           | 344          | 62         | 1,435         |
| NA  | 43           | 90           | 0            | 0             | 0            | 0          | 133           |

Source: Applied Development Economics, Inc., based on US Census PUMS One-year Sample for Years 2009, 2010, and 2011 {Data Source: Steven Ruggles, J. Trent Alexander, Katie Genadek, Ronald Goeken, Matthew B. Schroeder, and Matthew Sobek. Integrated Public Use Microdata Series: Version 5.0 [Machine-readable database]. Minneapolis: University of Minnesota, 2010.}

The educational attainment gap between the Latinos and either the White or Other labor force is present across the various age cohorts. Starting with the 20s age cohort, we see that an estimated 419 out of 9,719 Latinos earned at least a Bachelor's degree, or 4.3 percent, which is less than rates estimated for Whites (17.3 percent, or 1,140 out of 6,598) and Others (7.5 percent, or 121 out of 1,606). Across all age categories, approximately 19-to-21 percent of Other and/or White persons in the labor force earned at least a Bachelor's degree, versus 6.6 percent for Latinos.

The importance of a college degree becomes evident in the following table. While the overall annual unemployment rate for the historic downturn three-year period of 2009-2011 averaged a relatively low 12.3 percent, for persons with at least a Bachelor's degree, the jobless rate was significantly lower (Table 2.2). Across all age categories, White persons in the labor force with at least a Bachelor's experienced an unemployment rate of 2.4 percent, and Others experienced a 2.2 percent jobless rate. At 14.8 percent, Latinos with at least a Bachelor's degree exhibited an unemployment rate higher than the County average. Interestingly, in most other Central Valley counties, Latinos with at least a Bachelor's degree exhibited unemployment rates lower than the County average. The employment premium associated with a Bachelor's degree is not evident for Latinos as it is elsewhere in the Central valley region: for prime working-age Latinos with at least a Bachelor's, the joblessness rate was still an unusually high 11.7 percent, versus 3.0 percent of Whites and 1.9 percent for Others.



**TABLE 2.2:  
UNEMPLOYMENT RATE BY RACE/ETHNICITY, AGE AND EDUCATIONAL ATTAINMENT:  
KINGS COUNTY (2009-2011)  
ALL PERSONS 16 IN KINGS COUNTY -- IN LABOR FORCE**

|  | <b>16 - 19</b> | <b>20 - 29</b> | <b>30 - 34</b> | <b>35 - 54</b> | <b>55 - 64</b> | <b>65 &amp; over</b> | <b>Kings County</b> |
|--|----------------|----------------|----------------|----------------|----------------|----------------------|---------------------|
|  | <b>32.2%</b>   | <b>9.4%</b>    | <b>16.1%</b>   | <b>11.6%</b>   | <b>8.7%</b>    | <b>13.1%</b>         | <b>12.3%</b>        |
| <b>01 White</b>                                      | <b>33.1%</b>   | <b>5.6%</b>    | <b>8.4%</b>    | <b>8.7%</b>    | <b>3.4%</b>    | <b>9.2%</b>          | <b>8.2%</b>         |
| Did not earn HS dipl/GED or degree:<br>not in school | 58.1%          | 3.5%           | 0.0%           | 5.3%           | 0.0%           | 23.7%                | 10.5%               |
| High school graduate (includes<br>equivalency)       | 20.7%          | 4.3%           | 28.8%          | 6.3%           | 9.2%           | 12.1%                | 9.7%                |
| Some college - no degree & not attending             | 0.0%           | 7.1%           | 0.0%           | 17.8%          | 0.0%           | 6.2%                 | 10.3%               |
| Associates degree/still attending college            | 36.1%          | 8.2%           | 3.5%           | 4.2%           | 0.0%           | 0.0%                 | 7.7%                |
| Bachelor's degree or higher                          | 0.0%           | 1.8%           | 0.0%           | 3.0%           | 4.4%           | 0.0%                 | 2.4%                |
| NA   | 35.9%          | 0.0%           | 0.0%           | 0.0%           | 0.0%           | 0.0%                 | 35.9%               |
| <b>02 Latino</b>                                     | <b>34.5%</b>   | <b>12.4%</b>   | <b>21.9%</b>   | <b>15.3%</b>   | <b>17.3%</b>   | <b>18.6%</b>         | <b>16.6%</b>        |
| Did not earn HS dipl/GED or degree:<br>not in school | 11.8%          | 23.0%          | 21.8%          | 15.6%          | 23.6%          | 29.7%                | 19.3%               |
| High school graduate (includes<br>equivalency)       | 43.2%          | 10.9%          | 30.4%          | 20.5%          | 26.5%          | 7.2%                 | 20.3%               |
| Some college - no degree & not attending             | 35.1%          | 5.3%           | 15.1%          | 4.8%           | 3.2%           | 0.0%                 | 6.8%                |
| Associates degree/still attending college            | 38.2%          | 2.2%           | 19.1%          | 18.5%          | 0.0%           | 0.0%                 | 15.7%               |
| Bachelor's degree or higher                          | 0.0%           | 34.8%          | 12.1%          | 11.7%          | 0.0%           | 0.0%                 | 14.8%               |
| NA   | 34.5%          | 100.0%         | 0.0%           | 0.0%           | 0.0%           | 0.0%                 | 35.5%               |
| <b>03 Other</b>                                      | <b>23.0%</b>   | <b>7.0%</b>    | <b>16.1%</b>   | <b>7.8%</b>    | <b>2.8%</b>    | <b>18.8%</b>         | <b>9.2%</b>         |
| Did not earn HS dipl/GED or degree:<br>not in school | 0.0%           | 50.1%          | 0.0%           | 0.0%           | 8.0%           | 31.7%                | 26.6%               |
| High school graduate (includes<br>equivalency)       | 64.1%          | 0.0%           | 0.0%           | 26.8%          | 1.7%           | 0.0%                 | 15.1%               |
| Some college - no degree & not attending             | 0.0%           | 1.4%           | 21.4%          | 0.0%           | 15.1%          | 0.0%                 | 2.9%                |
| Associates degree/still attending college            | 13.6%          | 0.0%           | 31.2%          | 13.1%          | 0.0%           | 0.0%                 | 13.3%               |
| Bachelor's degree or higher                          | 0.0%           | 11.6%          | 2.4%           | 1.9%           | 0.0%           | 0.0%                 | 2.2%                |
| NA   | 78.3%          | 0.0%           | 0.0%           | 0.0%           | 0.0%           | 0.0%                 | 25.3%               |

Source: Applied Development Economics, Inc., based on US Census PUMS One-year Sample for Years 2009, 2010, and 2011 {Data Source: Steven Ruggles, J. Trent Alexander, Katie Genadek, Ronald Goeken, Matthew B. Schroeder, and Matthew Sobek. Integrated Public Use Microdata Series: Version 5.0 [Machine-readable database]. Minneapolis: University of Minnesota, 2010.}

## LABOR FORCE UTILIZATION

Here, we present data illustrating to what extent, if any, Kings County's labor force, including those who are employed, is not being fully utilized. This discussion underscores the importance of a college degree in obtaining more steady employment. Of the 64,787 persons in the county labor force, 40,494 were employed full-time and all-year, (i.e., 62.5 percent) (Table 2.3). On average, an estimated 71.7 percent (7,884 out of 10,992) of all prime working-age persons in the labor force who are White are fully utilized, versus the rate for Latinos, or 65.3 percent (7,923 out of 12,138). In other words, almost 35 percent of all prime working-age Latinos are either unemployed or under-employed, versus approximately 29 percent of prime working-age Whites, rates that are relatively low compared to other counties in the region such as Merced and Stanislaus. However, a college degree makes a significant impact for prime working-age Latinos, as 73.6 percent (701 out of 948) of all prime working-age Latinos with at least a Bachelor's degree work full-time and all-year, a rate surpassing the 71.9 percent (1,771 out of 2,461) rate for prime working-age Whites with at least a Bachelor's degree.

**TABLE 2.3:  
FULLY UTILIZED LABOR FORCE: FULL-TIME AND ALL-YEAR WORKERS BY RACE/ETHNICITY, AGE AND  
EDUCATIONAL ATTAINMENT: KINGS COUNTY (2009-2011)  
ALL PERSONS 16 IN KINGS COUNTY -- IN LABOR FORCE**

|   | 16 - 19    | 20 - 29       | 30 - 34      | 35 - 54       | 55 - 64      | 65 & over  | Kings County  |
|---|------------|---------------|--------------|---------------|--------------|------------|---------------|
|   | <b>376</b> | <b>10,692</b> | <b>5,251</b> | <b>18,433</b> | <b>5,054</b> | <b>687</b> | <b>40,494</b> |
| <b>01 White</b>                                   | <b>0</b>   | <b>4,359</b>  | <b>2,422</b> | <b>7,884</b>  | <b>2,686</b> | <b>373</b> | <b>17,725</b> |
| Did not earn HS dipl/GED or degree: not in school | 0          | 269           | 0            | 422           | 287          | 19         | 997           |
| High school graduate (includes equivalency)       | 0          | 1,109         | 495          | 2,290         | 512          | 53         | 4,459         |
| Some college - no degree & not attending          | 0          | 1,133         | 629          | 2,100         | 807          | 102        | 4,771         |
| Associates degree/still attending college         | 0          | 1,042         | 526          | 1,302         | 366          | 24         | 3,259         |
| Bachelor's degree or higher                       | 0          | 806           | 772          | 1,771         | 715          | 176        | 4,239         |
| NA  | 0          | 0             | 0            | 0             | 0            | 0          | 0             |
| <b>02 Latino</b>                                  | <b>343</b> | <b>5,354</b>  | <b>2,386</b> | <b>7,923</b>  | <b>1,788</b> | <b>196</b> | <b>17,991</b> |
| Did not earn HS dipl/GED or degree: not in school | 122        | 1,409         | 732          | 3,420         | 900          | 163        | 6,745         |
| High school graduate (includes equivalency)       | 61         | 1,349         | 709          | 1,763         | 229          | 29         | 4,140         |
| Some college - no degree & not attending          | 49         | 1,907         | 517          | 1,284         | 310          | 0          | 4,067         |
| Associates degree/still attending college         | 106        | 449           | 203          | 701           | 123          | 4          | 1,586         |
| Bachelor's degree or higher                       | 0          | 240           | 226          | 719           | 226          | 0          | 1,411         |
| NA  | 6          | 0             | 0            | 36            | 0            | 0          | 42            |
| <b>03 Other</b>                                   | <b>33</b>  | <b>979</b>    | <b>443</b>   | <b>2,626</b>  | <b>581</b>   | <b>118</b> | <b>4,779</b>  |
| Did not earn HS dipl/GED or degree: not in school | 0          | 0             | 24           | 52            | 50           | 54         | 180           |
| High school graduate (includes equivalency)       | 0          | 369           | 0            | 408           | 154          | 16         | 947           |
| Some college - no degree & not attending          | 33         | 461           | 181          | 1,155         | 53           | 0          | 1,884         |
| Associates degree/still attending college         | 0          | 76            | 89           | 430           | 34           | 0          | 629           |
| Bachelor's degree or higher                       | 0          | 73            | 148          | 580           | 289          | 48         | 1,139         |
| NA  | 0          | 0             | 0            | 0             | 0            | 0          | 0             |

Source: Applied Development Economics, Inc., based on US Census PUMS One-year Sample for Years 2009, 2010, and 2011 {Data Source: Steven Ruggles, J. Trent Alexander, Katie Genadek, Ronald Goeken, Matthew B. Schroeder, and Matthew Sobek. Integrated Public Use Microdata Series: Version 5.0 [Machine-readable database]. Minneapolis: University of Minnesota, 2010.}

Differences in unemployment rates between persons with a college degree and those without are also more pronounced along sectoral lines. This is especially true in sectors having to do with housing. In construction (NAICS 23), the unemployment rate for persons without a degree is 25 percent, versus 0 percent for those with a degree, although the latter may be due to sampling error on the part of the US Census (Table 2.4). There are a few sectors in which jobless rates are higher for persons with a college degree versus for those without, such as durable goods manufacturing (NAICS 33), finance and insurance (NAICS 52), and food services retail (NAICS 72).

**TABLE 2.4:  
LABOR FORCE AND UNEMPLOYMENT TRENDS BY ECONOMIC SECTOR AND BY COLLEGE DEGREE STATUS: KINGS COUNTY (2009-2011)**

|   | Degree   |              |                                       | No Degree |              |   | Degree or No Degree |              |                   |
|---|----------|--------------|---------------------------------------|-----------|--------------|---|---------------------|--------------|-------------------|
|   | Employed | Not Employed | Unemployment rate of persons w/degree | Employed  | Not Employed | Unemployment rate of persons with no degree | Employed            | Not Employed | Unemployment Rate |
| 11 Ag, Forestry, etc.                     | 740      | 128          | 15%                                   | 7,687     | 1,526        | 17%   | 8,427               | 1,654        | 16%               |
| 21 Mining, oil, gas                       | 0        | 0            | 0%                                    | 78        | 40           | 34%   | 78                  | 40           | 34%               |
| 22 Utilities                              | 0        | 0            | 0%                                    | 396       | 0            | 0%  | 396                 | 0            | 0%                |
| 23 Construction                           | 311      | 0            | 0%                                    | 1,549     | 511          | 25%   | 1,859               | 511          | 22%               |
| 31 Manufacturing                          | 425      | 20           | 5%                                    | 2,441     | 183          | 7%  | 2,867               | 204          | 7%                |
| 32 Manufacturing                          | 63       | 0            | 0%                                    | 429       | 19           | 4%  | 492                 | 19           | 4%                |
| 33 Manufacturing                          | 155      | 16           | 9%                                    | 371       | 272          | 42%   | 526                 | 288          | 35%               |
| 42 Wholesale                              | 327      | 0            | 0%                                    | 1,645     | 649          | 28%   | 1,973               | 649          | 25%               |
| 44 Retail                                 | 445      | 20           | 4%                                    | 2,370     | 546          | 19%   | 2,815               | 566          | 17%               |
| 45 Retail                                 | 434      | 0            | 0%                                    | 1,324     | 173          | 12%   | 1,758               | 173          | 9%                |
| 48 Transportation/Warehousing             | 130      | 0            | 0%                                    | 960       | 310          | 24%   | 1,090               | 310          | 22%               |
| 49 Transportation/Warehousing             | 120      | 0            | 0%                                    | 159       | 0            | 0%  | 279                 | 0            | 0%                |
| 51 Information                            | 107      | 0            | 0%                                    | 290       | 75           | 21%   | 397                 | 75           | 16%               |
| 52 Finance and Insurance                  | 244      | 44           | 15%                                   | 479       | 38           | 7%  | 723                 | 82           | 10%               |
| 53 Real Estate and Leasing                | 184      | 0            | 0%                                    | 625       | 32           | 5%  | 809                 | 32           | 4%                |
| 54 Professional, Scientific and Technical | 379      | 19           | 5%                                    | 453       | 114          | 20%   | 832                 | 133          | 14%               |
| 55 Mgt. of Companies and Enterprises      | 0        | 0            | 0%                                    | 46        | 0            | 0%  | 46                  | 0            | 0%                |
| 56 Administrative and Support             | 430      | 0            | 0%                                    | 1,574     | 297          | 16%   | 2,004               | 297          | 13%               |
| 56 Waste Management                       | 75       | 0            | 0%                                    | 197       | 18           | 8%  | 272                 | 18           | 6%                |
| 61 Education                              | 2,887    | 103          | 3%                                    | 1,429     | 0            | 0%  | 4,317               | 103          | 2%                |
| 62 Health Care                            | 1,684    | 172          | 9%                                    | 3,211     | 131          | 4%  | 4,895               | 302          | 6%                |
| 62 Social Assistance                      | 415      | 83           | 17%                                   | 1,220     | 47           | 4%  | 1,635               | 131          | 7%                |
| 71 Arts, Entertainment and Rec.           | 201      | 0            | 0%                                    | 743       | 73           | 9%  | 943                 | 73           | 7%                |
| 72 Accommodations                         | 95       | 0            | 0%                                    | 563       | 226          | 29%   | 659                 | 226          | 26%               |
| 72 Food Services                          | 302      | 96           | 24%                                   | 2,578     | 305          | 11%   | 2,880               | 400          | 12%               |
| 81 Other Services                         | 302      | 0            | 0%                                    | 1,786     | 139          | 7%  | 2,088               | 139          | 6%                |
| 92 Public Administration                  | 3,604    | 126          | 3%                                    | 7,977     | 82           | 1%  | 11,582              | 208          | 2%                |
| 99 Unclassified                           | 0        | 0            | 0%                                    | 0         | 1,243        | 100%  | 0                   | 1,243        | 100%              |

Source: Applied Development Economics, Inc., based on US Census PUMS One-year Sample for Years 2009, 2010, and 2011 {Data Source: Steven Ruggles, J. Trent Alexander, Katie Genadek, Ronald Goeken, Matthew B. Schroeder, and Matthew Sobek. Integrated Public Use Microdata Series: Version 5.0 [Machine-readable database]. Minneapolis: University of Minnesota, 2010.}

## VETERANS

Based on the most recent ACS data, there are about 6,428 veterans in the labor force in Kings County, representing about 9.9 percent of the labor force. It is estimated that 9.1 percent of veterans were unemployed in 2011, compared to 12.6 percent for the non-veterans labor force (Table 2.5). Among the unemployed veterans, the largest group is in the 30-34 age group, who comprise of 332 unemployed veterans out of a total of 585 unemployed veterans. In most counties in the Central Valley region, most unemployed veterans are in the 35-54 age group. The unemployment rate for Kings County's 30-34 age cohort is 38.1 percent, with those with college degrees such as an AA (73.1) and a Bachelor's (52.7) exhibiting high rates of unemployment.

**TABLE 2.5:  
UNEMPLOYED PERSONS AND UNEMPLOYMENT RATES OF ALL PERSONS 16 AND OVER BY VETERAN STATUS  
AND EDUCATIONAL ATTAINMENT KINGS COUNTY  
PERSONS IN THE LABOR FORCE AND NOT EMPLOYED (US CENSUS ACS 3-YEAR 2009-2011)**

|  | 16 - 19      | 20 - 29      | 30 - 34      | 35 - 54      | 55 - 64     | 65 & over    | Kings County |
|--|--------------|--------------|--------------|--------------|-------------|--------------|--------------|
| <b>Total Number of Unemployed Persons</b>                  | <b>1,080</b> | <b>1,688</b> | <b>1,252</b> | <b>3,085</b> | <b>620</b>  | <b>252</b>   | <b>7,977</b> |
| <b>Unemployment Rates</b>                                  | <b>32.2%</b> | <b>9.4%</b>  | <b>16.1%</b> | <b>11.6%</b> | <b>8.7%</b> | <b>13.1%</b> | <b>12.3%</b> |
| <b>01 Not a Veteran</b>                                    |              |              |              |              |             |              |              |
| <b>Number of Unemployed Persons Who Are Not Veterans</b>   | <b>1,012</b> | <b>1,662</b> | <b>930</b>   | <b>2,999</b> | <b>527</b>  | <b>195</b>   | <b>7,324</b> |
| <b>Unemployment Rates for Persons Who Are Not Veterans</b> | <b>31.3%</b> | <b>9.8%</b>  | <b>13.5%</b> | <b>12.6%</b> | <b>9.0%</b> | <b>13.1%</b> | <b>12.6%</b> |
| Did not earn HS dipl/GED or degree: not in school          | 25.9%        | 22.6%        | 13.2%        | 14.6%        | 19.6%       | 29.6%        | 18.1%        |
| High school graduate (includes equivalency)                | 38.8%        | 8.0%         | 32.1%        | 16.3%        | 9.6%        | 4.3%         | 16.2%        |
| Some college -- no degree and not attending                | 7.6%         | 6.0%         | 7.8%         | 12.3%        | 2.5%        | 0.0%         | 8.3%         |
| Associates degree/still attending college                  | 34.3%        | 4.8%         | 7.9%         | 11.1%        | 0.0%        | 0.0%         | 11.4%        |
| Bachelor's degree or higher                                | 0.0%         | 10.7%        | 0.3%         | 5.4%         | 0.0%        | 0.0%         | 4.8%         |
| NA   | 32.4%        | 20.1%        | 0.0%         | 0.0%         | 0.0%        | 0.0%         | 26.8%        |
| <b>02 Veterans</b>   |              |              |              |              |             |              |              |
| <b>Number of Unemployed Persons Who Are Veterans</b>       | <b>0</b>     | <b>26</b>    | <b>322</b>   | <b>86</b>    | <b>93</b>   | <b>58</b>    | <b>585</b>   |
| <b>Unemployment Rates for Persons Who Are Veterans</b>     | <b>0.0%</b>  | <b>2.6%</b>  | <b>38.1%</b> | <b>3.0%</b>  | <b>7.2%</b> | <b>13.4%</b> | <b>9.1%</b>  |
| Did not earn HS dipl/GED or degree: not in school          | 0.0%         | 0.0%         | 100.0%       | 0.0%         | 0.0%        | 0.0%         | 38.2%        |
| High school graduate (includes equivalency)                | 0.0%         | 0.0%         | 13.2%        | 5.5%         | 20.4%       | 20.1%        | 9.5%         |
| Some college -- no degree and not attending                | 0.0%         | 0.0%         | 26.6%        | 2.0%         | 0.0%        | 20.3%        | 4.7%         |
| Associates degree/still attending college                  | 0.0%         | 13.5%        | 73.1%        | 3.8%         | 0.0%        | 0.0%         | 9.9%         |
| Bachelor's degree or higher                                | 0.0%         | 0.0%         | 52.7%        | 0.0%         | 10.9%       | 0.0%         | 8.3%         |
| NA   | 0.0%         | 0.0%         | 0.0%         | 0.0%         | 0.0%        | 0.0%         | 0.0%         |

Source: Applied Development Economics, Inc., based on US Census PUMS One-year Sample for Years 2009, 2010, and 2011 {Data Source: Steven Ruggles, J. Trent Alexander, Katie Genadek, Ronald Goeken, Matthew B. Schroeder, and Matthew Sobek. Integrated Public Use Microdata Series: Version 5.0 [Machine-readable database]. Minneapolis: University of Minnesota, 2010.}

## DISABLED WORKERS

There are an estimated 3,076 disabled persons in the labor force, comprising 4.7 percent of all workers in the County. The unemployment rate for disabled workers in 2011 is estimated at 11.2 percent, compared to 12.4 percent for the non-disabled labor force (Table 2.6). Among the unemployed disabled, two age-related clusters emerge, with the largest group in the 35-54 age group, who comprise of 170 unemployed disabled persons out of a total of 345 unemployed disabled persons. There are 101 unemployed disabled persons in the 20-29 age group. Across all ages, those who did not earn at least a high school diploma exhibit high rates of unemployment, with the overall unemployment rate for disabled persons without a high school diploma at 27.5 percent.

**TABLE 2.6:  
NUMBER OF UNEMPLOYED PERSONS AND UNEMPLOYMENT RATES OF ALL PERSONS 16 AND OVER BY DISABILITY STATUS AND EDUCATIONAL ATTAINMENT IN KINGS COUNTY  
PERSONS IN THE LABOR FORCE AND NOT EMPLOYED (US CENSUS ACS 3-YEAR 2009-2011)**

|   | 16 - 19      | 20 - 29      | 30 - 34      | 35 - 54      | 55 - 64     | 65 & over    | Kings County |
|---|--------------|--------------|--------------|--------------|-------------|--------------|--------------|
| <b>Total Number of Unemployed Persons</b>                       | <b>1,080</b> | <b>1,688</b> | <b>1,252</b> | <b>3,085</b> | <b>620</b>  | <b>252</b>   | <b>7,977</b> |
| <b>Unemployment Rates</b>                                       | <b>32.2%</b> | <b>9.4%</b>  | <b>16.1%</b> | <b>11.6%</b> | <b>8.7%</b> | <b>13.1%</b> | <b>12.3%</b> |
| <b>01 No Known Disability</b>                                   |              |              |              |              |             |              |              |
| <b>Number of Unemployed Persons w/No Known Disability</b>       | <b>1,046</b> | <b>1,586</b> | <b>1,252</b> | <b>2,915</b> | <b>620</b>  | <b>212</b>   | <b>7,632</b> |
| <b>Unemployment Rates for Persons w/No Known Disability</b>     | <b>31.9%</b> | <b>9.0%</b>  | <b>17.2%</b> | <b>11.3%</b> | <b>9.7%</b> | <b>14.0%</b> | <b>12.4%</b> |
| Did not earn HS dipl/GED or degree: not in school               | 19.8%        | 20.3%        | 22.4%        | 13.9%        | 20.5%       | 29.1%        | 18.0%        |
| High school graduate (includes equivalency)                     | 38.8%        | 7.6%         | 31.3%        | 14.8%        | 13.0%       | 9.5%         | 15.8%        |
| Some college -- no degree and not attending                     | 8.3%         | 5.4%         | 10.7%        | 10.0%        | 2.0%        | 7.1%         | 7.6%         |
| Associates degree/still attending college                       | 34.3%        | 5.4%         | 12.6%        | 10.5%        | 0.0%        | 0.0%         | 11.7%        |
| Bachelor's degree or higher                                     | 0.0%         | 10.7%        | 3.7%         | 4.9%         | 3.0%        | 0.0%         | 5.4%         |
| NA  | 40.4%        | 20.1%        | 0.0%         | 0.0%         | 0.0%        | 0.0%         | 36.1%        |
| <b>02 At Least One Disability</b>                               |              |              |              |              |             |              |              |
| <b>Number of Unemployed Persons w/at Least One Disability</b>   | <b>33</b>    | <b>101</b>   | <b>0</b>     | <b>170</b>   | <b>0</b>    | <b>40</b>    | <b>345</b>   |
| <b>Unemployment Rates for Persons w/at Least One Disability</b> | <b>46.7%</b> | <b>26.3%</b> | <b>0.0%</b>  | <b>17.9%</b> | <b>0.0%</b> | <b>10.0%</b> | <b>11.2%</b> |
| Did not earn HS dipl/GED or degree: not in school               | 100.0%       | 45.0%        | 0.0%         | 28.8%        | 0.0%        | 23.6%        | 27.5%        |
| High school graduate (includes equivalency)                     | 0.0%         | 0.0%         | 0.0%         | 18.2%        | 0.0%        | 9.1%         | 6.4%         |
| Some college -- no degree and not attending                     | 0.0%         | 8.8%         | 0.0%         | 23.2%        | 0.0%        | 0.0%         | 11.6%        |
| Associates degree/still attending college                       | 0.0%         | 0.0%         | 0.0%         | 0.0%         | 0.0%        | 0.0%         | 0.0%         |
| Bachelor's degree or higher                                     | 0.0%         | 0.0%         | 0.0%         | 0.0%         | 0.0%        | 0.0%         | 0.0%         |
| NA  | 0.0%         | 0.0%         | 0.0%         | 0.0%         | 0.0%        | 0.0%         | 0.0%         |

Source: Applied Development Economics, Inc., based on US Census PUMS One-year Sample for Years 2009, 2010, and 2011 {Data Source: Steven Ruggles, J. Trent Alexander, Katie Genadek, Ronald Goeken, Matthew B. Schroeder, and Matthew Sobek. Integrated Public Use Microdata Series: Version 5.0 [Machine-readable database]. Minneapolis: University of Minnesota, 2010.}

# 3. EMPLOYMENT AND OCCUPATION PROJECTIONS

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This section of the report provides the employment projections by cluster for the 2012 to 2017 period, as well as the related occupational demand by employers. The employment and occupational projections have been prepared by EMSI. The industry cluster definitions follow the Regional San Joaquin Valley 19analysis completed in 2012 (see Appendix B).<sup>2</sup>

- Agriculture
- Energy
- Health and Wellness
- Logistics
- Manufacturing
- Water Technology

The value of industry clusters is that they generally represent the economic base of the region, in which products and services are exported out of the county and draw income into the county. In this way, they create worker incomes that then support local serving industries such as retail and services businesses, which may also see employment growth. In the case of health and wellness, this cluster is not an export sector, but it is a growing industry with many high paid jobs and warrants attention on that basis.

## EMPLOYMENT PROJECTIONS

Kings County had a job total of 40,919 in 2012. EMSI projects an additional 3,578 new jobs by 2017, with the total employment count reaching 44,497 during the 2012 to 2017 projection period (Table 3.1). While Table 3.1 presents the jobs projections in major NAICS sectors, the following points highlight the cluster projections which are provided in later tables of this chapter.

- Health and Wellness is the only cluster in Kings County with a considerable projected employment growth between 2012 and 2017.
- Health and Wellness had 4,306 employees in total by 2012 and EMSI foresees an additional 1,090 workers by the end of the projection period in 2017 (Table 3.7). This cluster does not include the Social Assistance jobs included in the major sector shown in Table 3.1. As part of this super-sector, EMSI expects 1,035 new jobs for the Health Care delivery sub-cluster (Table 3.7).
- The Logistics cluster with 181 new jobs is the second growing cluster (Table 3.6). Freight and Warehousing is the top hiring sub-cluster with a projected 120 new workers.
- The growing sub-clusters for Agriculture are the Distribution and Support. The Distribution sub-cluster will provide 176 new jobs and Support is estimated to grow by 131 jobs. Production and Processing present negative changes of 582 jobs and 166 jobs (Table 3.2).

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<sup>2</sup> Applied Development Economics. *San Joaquin Valley Regional Industry Cluster Analysis and Action Plan*. CSU Fresno Office of Community and Economic Development. September 2012.

- The Energy and Manufacturing clusters in Kings County are projected to decline by 2017.
- Non-cluster related employment with projected gains include retail, government, and tourism (accommodations, food services, and arts and entertainment) (Table 3.1).

**TABLE 3.1:  
EMPLOYMENT PROJECTIONS BY MAJOR INDUSTRIES, KINGS COUNTY**

| NAICS Code   | Description  | 2012 Jobs     | 2017 Jobs     | Change       | % Change    |
|--------------|--|---------------|---------------|--------------|-------------|
| 62           | Health Care and Social Assistance  | 4,565         | 5,795         | 1,230        | 26.9%       |
| 44           | Retail Trade   | 4,000         | 4,731         | 731          | 18.3%       |
| 90           | Government   | 12,391        | 13,059        | 668          | 5.4%        |
| 72           | Accommodation and Food Services  | 2,545         | 2,989         | 444          | 17.4%       |
| 54           | Professional, Scientific, and Technical Services                             | 704           | 1,111         | 407          | 57.8%       |
| 23           | Construction   | 783           | 1,013         | 230          | 29.4%       |
| 81           | Other Services (except Public Administration)                                | 1,372         | 1,576         | 204          | 14.9%       |
| 42           | Wholesale Trade  | 595           | 680           | 85           | 14.3%       |
| 48           | Transportation and Warehousing   | 714           | 795           | 81           | 11.3%       |
| 53           | Real Estate and Rental and Leasing   | 481           | 547           | 66           | 13.7%       |
| 61           | Educational Services (Private)   | 266           | 315           | 49           | 18.4%       |
| 71           | Arts, Entertainment, and Recreation  | 206           | 244           | 38           | 18.4%       |
| 99           | Unclassified Industry  | 76            | 92            | 16           | 21.1%       |
| 52           | Finance and Insurance  | 605           | 620           | 15           | 2.5%        |
| 55           | Management and Remediation Services  | 121           | 129           | 8            | 6.6%        |
| 51           | Information  | 205           | 201           | (4)          | (2.0%)      |
| 22           | Utilities  | 84            | 78            | (6)          | (7.1%)      |
| 56           | Administrative and Support and Waste Management of Companies and Enterprises | 499           | 480           | (19)         | (3.8%)      |
| 31           | Manufacturing  | 4,394         | 4,348         | (46)         | (1.0%)      |
| 11           | Agriculture, Forestry, Fishing and Hunting                                   | 6,314         | 5,694         | (620)        | (9.8%)      |
| <b>TOTAL</b> |  | <b>40,919</b> | <b>44,497</b> | <b>3,578</b> | <b>8.7%</b> |

Source: EMSI 2013.2 Class of Worker Dataset QCEW Employees

## AGRICULTURE CLUSTER

Agriculture oriented jobs include activities such as farm production, food processing, distribution, and support services. We have grouped the agriculture related industries into these four categories based on the significant role they play in the agriculture economy.

Food and farm product-related wholesale trade activities, transportation services, and warehousing jobs are grouped as Distribution. Retail related jobs in grocery and supermarkets establishments are also part of the Distribution group. The Distribution sub-cluster will add net 176 positions by 2017 with a 17 percent growth rate. In this group, EMSI reports that supermarkets, grocery stores, and convenience stores are expected to increase employment by 105 jobs (Table 3.2).



**TABLE 3.2:  
JOB PROJECTIONS BY CLUSTER – DISTRIBUTION**

| NAICS Code   | Description                           | 2012 Jobs    | 2017 Jobs    | Change     | % Change   |
|--------------|---------------------------------------|--------------|--------------|------------|------------|
| 445110       | Supermarkets and Other Grocery Stores | 636          | 718          | 82         | 13%        |
| 424910       | Farm Supplies Merchant Wholesalers    | 229          | 288          | 59         | 26%        |
| 445120       | Convenience Stores                    | 93           | 116          | 23         | 25%        |
| 445310       | Beer, Wine, and Liquor Stores         | 49           | 61           | 12         | 24%        |
| <b>TOTAL</b> |                                       | <b>1,007</b> | <b>1,183</b> | <b>176</b> | <b>17%</b> |

Source: EMSI 2013.2 Class of Worker Dataset QCEW Employees

In the Processing group we have included activities related to manufacturing, packaging, and food and beverage processing, all of which are classified as manufacturing (NAICS 31). In Kings County the fruit and vegetable canning (NAICS 311421) includes the highest employment loss, at 199 workers in 2017. Overall, EMSI estimates this component of the Agricultural cluster will lose 166 jobs by 2017 (Table 3.3).

**TABLE 3.3:  
JOB PROJECTIONS BY CLUSTER – PROCESSING**

| NAICS Code   | Description                                | 2012 Jobs    | 2017 Jobs    | Change       | % Change    |
|--------------|--|--------------|--------------|--------------|-------------|
| 311513       | Cheese Manufacturing                       | 1,434        | 1,519        | 85           | 6%          |
| 311611       | Animal (except Poultry) Slaughtering       | 400          | 468          | 68           | 17%         |
| 311911       | Roasted Nuts & Peanut Butter Manufacturing | 433          | 487          | 54           | 12%         |
| 311615       | Poultry Processing                         | 71           | 82           | 11           | 15%         |
| 311119       | Other Animal Food Manufacturing            | 62           | 27           | (35)         | (56%)       |
| 311613       | Rendering and Meat Byproduct Processing    | 67           | 12           | (55)         | (82%)       |
| 311223       | Other Oilseed Processing                   | 209          | 114          | (95)         | (45%)       |
| 311421       | Fruit and Vegetable Canning                | 1,143        | 944          | (199)        | (17%)       |
| <b>TOTAL</b> |  | <b>3,819</b> | <b>3,653</b> | <b>(166)</b> | <b>(4%)</b> |

Source: EMSI 2013.2 Class of Worker Dataset QCEW Employees

The Production group includes animal and crop production. Similar to the Processing group, the Production group is also expected to reduce employment by 582 jobs, although there is projected to be 205 increase in animal production activities. In contrast, the crop production industry will decline by 400 jobs. In addition, 306 of farm labor contractors and crew leaders will lose employment by 2017 as well (Table 3.4).

**TABLE 3.4:  
JOB PROJECTIONS BY CLUSTER – PRODUCTION**

| NAICS Code   | Description                                 | 2012 Jobs    | 2017 Jobs    | Change       | % Change    |
|--------------|---|--------------|--------------|--------------|-------------|
| 112          | Animal Production                           | 1,917        | 2,122        | 205          | 11%         |
| 115116       | Farm Management Services                    | 44           | 54           | 10           | 23%         |
| 115111       | Cotton Ginning                              | 44           | 30           | (14)         | (32%)       |
| 115112       | Soil Preparation, Planting, and Cultivating | 228          | 212          | (16)         | (7%)        |
| 115113       | Crop Harvesting, Primarily by Machine       | 275          | 247          | (28)         | (10%)       |
| 115114       | Postharvest Crop Activities                 | 458          | 425          | (33)         | (7%)        |
| 115115       | Farm Labor Contractors and Crew Leaders     | 1,378        | 1,072        | (306)        | (22%)       |
| 111          | Crop Production                             | 1,988        | 1,588        | (400)        | (20%)       |
| <b>TOTAL</b> |   | <b>6,332</b> | <b>5,750</b> | <b>(582)</b> | <b>(9%)</b> |

Source: EMSI 2013.2 Class of Worker Dataset QCEW Employees

The final group of industries under the Agriculture cluster includes all establishments that support agriculture related activities. A diverse set of services from water utilities, construction, business support services, professional services, fertilizer and chemicals, and repair services are included under the supporting services group. Altogether, EMSI projects a modest 87 job increase between 2012 and 2017. Water and Sewer Line and Related Structures Construction (NAICS 237110) would gain 91 jobs while temporary help services (NAICS 561320) would lose 47 jobs (Table 3.5).

| TABLE 3.5:<br>JOB PROJECTIONS BY CLUSTER – SUPPORT |   |            |            |           |            |
|--|---|------------|------------|-----------|------------|
| NAICS Code   | Description   | 2012 Jobs  | 2017 Jobs  | Change    | % Change   |
| 237110   | Water and Sewer Line and Related Structures Construction  | 161        | 252        | 91        | 57%        |
| 811310   | Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance | 77         | 102        | 25        | 32%        |
| 561730   | Landscaping Services  | 67         | 87         | 20        | 30%        |
| 221310   | Water Supply and Irrigation Systems   | 29         | 43         | 14        | 48%        |
| 541940   | Veterinary Services   | 42         | 55         | 13        | 31%        |
| 561710   | Exterminating and Pest Control Services   | 13         | 12         | (1)       | (8%)       |
| 333294   | Food Product Machinery Manufacturing  | 22         | 15         | (7)       | (32%)      |
| 423820   | Farm and Garden Machinery and Equipment Merchant Wholesalers  | 54         | 46         | (8)       | (15%)      |
| 444220   | Nursery, Garden Center, and Farm Supply Stores  | 28         | 15         | (13)      | (46%)      |
| 561320   | Temporary Help Services   | 70         | 23         | (47)      | (67%)      |
| <b>TOTAL</b>                                       |   | <b>563</b> | <b>650</b> | <b>87</b> | <b>15%</b> |

Source: EMSI 2013.2 Class of Worker Dataset QCEW Employees

## ENERGY CLUSTER

Energy cluster will lose 10 jobs by 2017. This cluster is comprised of establishments engaged in alternative energy generation, production, and distribution, energy efficiency, equipment manufacturing, petroleum production and distribution, and power generation and transmission. EMSI estimates that water and sewer line and related structures construction establishments add 91 jobs while other oilseed processing establishments decrease their size by 95 employees. As a result the job growth in one sector is evened out by the job loss in another sector (Table 3.6).

| TABLE 3.6:<br>JOB PROJECTIONS BY CLUSTER – ENERGY |   |           |           |        |          |             |
|---|---|-----------|-----------|--------|----------|-------------|
| NAICS Code  | Description   | 2012 Jobs | 2017 Jobs | Change | % Change | Sub-Cluster |
| 238160  | Water and Sewer Line and Related Structures Construction  | 161       | 252       | 91     | 57%      | 1           |
| 811310  | Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance | 77        | 102       | 25     | 32%      | 7           |
| 533110  | Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)  | 25        | 43        | 18     | 72%      | 7           |
| 423610  | Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers             | 20        | 28        | 8      | 40%      | 2           |
| 23821   | Electrical Contractors and Other Wiring Installation Contractors  | 67        | 61        | (6)    | (9%)     | 3           |
| 424720  | Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)                  | 21        | 11        | (10)   | (48%)    | 5           |

| NAICS Code  | Description   | 2012 Jobs  | 2017 Jobs  | Change      | % Change    | Sub-Cluster |
|---|---|--|------------|-------------|-------------|-------------|
| 221112  | Fossil Fuel Electric Power Generation               | 36   | 24         | (12)        | (33%)       | 6           |
| 23822   | Plumbing, Heating, and Air-Conditioning Contractors | 84   | 55         | (29)        | (35%)       | 3           |
| 325193  | Other Oilseed Processing                            | 209  | 114        | (95)        | (45%)       | 1           |
| <b>TOTAL</b>  |   | <b>700</b>   | <b>690</b> | <b>(10)</b> | <b>(1%)</b> |             |
| <b>Energy Sub-Clusters</b>                          |   |  |            |             |             |             |
| <b>1</b> - Alternative Energy Generation/Production |   | <b>5</b> - Petroleum Production & Petroleum Distribution |            |             |             |             |
| <b>2</b> - Alternative Energy Distribution          |   | <b>6</b> - Power Generation and Transmission             |            |             |             |             |
| <b>3</b> - Energy Efficiency                        |   | <b>7</b> - Research & Services                           |            |             |             |             |
| <b>4</b> - Equipment Manufacturing                  |   |  |            |             |             |             |

Source: EMSI 2013.2 Class of Worker Dataset QCEW Employees

## HEALTH AND WELLNESS CLUSTER

This cluster is projected to have a positive increase in its employment by adding 1,090 additional employees. Ambulatory and health care services (NAICS 621) and Hospitals (NAICS 622) are covered under this cluster. Other sectors such as medical device manufacturing, pharmaceuticals, supplies and services, and wellness and fitness services are also part of this cluster. For Kings County, General Medical and Surgical Hospitals (NAICS 622110) provide 756 employment opportunities (Table 3.7).

| TABLE 3.7:<br>JOB PROJECTIONS BY CLUSTER – HEALTH AND WELLNESS |  |                                  |              |              |            |             |
|--|--|----------------------------------|--------------|--------------|------------|-------------|
| NAICS Code   | Description  | 2012 Jobs                        | 2017 Jobs    | Change       | % Change   | Sub-Cluster |
| 622110   | General Medical and Surgical Hospitals (Private)         | 2,376                            | 3,132        | 756          | 32%        | 1           |
| 624310   | Vocational Rehabilitation Services                       | 236                              | 376          | 140          | 59%        | 1           |
| 621498   | All Other Outpatient Care Centers                        | 115                              | 193          | 78           | 68%        | 1           |
| 621111   | Offices of Physicians (except Mental Health Specialists) | 421                              | 466          | 45           | 11%        | 1           |
| 446110   | Pharmacies and Drug Stores                               | 201                              | 242          | 41           | 20%        | 5           |
| 623110   | Nursing Care Facilities                                  | 377                              | 410          | 33           | 9%         | 1           |
| 621210   | Offices of Dentists                                      | 245                              | 268          | 23           | 9%         | 1           |
| 446191   | Food (Health) Supplement Stores                          | 17                               | 31           | 14           | 82%        | 5           |
| 621492   | Kidney Dialysis Centers                                  | 57                               | 70           | 13           | 23%        | 1           |
| 621420   | Outpatient Mental Health and Substance Abuse Centers     | 109                              | 94           | (15)         | (14%)      | 1           |
| 623312   | Homes for the Elderly                                    | 70                               | 54           | (16)         | (23%)      | 1           |
| 623210   | Residential Mental Retardation Facilities                | 82                               | 60           | (22)         | (27%)      | 1           |
| <b>TOTAL</b>   |  | <b>4,306</b>                     | <b>5,396</b> | <b>1,090</b> | <b>25%</b> |             |
| <b>Health and Wellness Sub-Clusters</b>                        |  |                                  |              |              |            |             |
| <b>1</b> - Health Care Delivery                                |  | <b>4</b> - Supplies and Services |              |              |            |             |
| <b>2</b> - Medical Device Manufacturing                        |  | <b>5</b> - Wellness and Fitness  |              |              |            |             |
| <b>3</b> - Pharmaceuticals                                     |  |                                  |              |              |            |             |

Source: EMSI 2013.2 Class of Worker Dataset QCEW Employees

## LOGISTICS CLUSTER

Under the logistics cluster, in Kings County, local specialized freight (except used goods) trucking industries (NAICS 484220) will add 59 jobs. This sub cluster included the most number of employees since 2010 compared to other sectors under logistics (Table 3.8).

TABLE 3.8:  
JOB PROJECTIONS BY CLUSTER – LOGISTICS

| NAICS Code                                 | Description  | 2012 Jobs                 | 2017 Jobs  | Change     | % Change   | Sub-Cluster |
|--|--|---------------------------|------------|------------|------------|-------------|
| 484220                                     | Specialized Freight (except Used Goods) Trucking, Local      | 239                       | 298        | 59         | 25%        | 2           |
| 493110                                     | General Warehousing and Storage                              | 49                        | 75         | 26         | 53%        | 2           |
| 485111                                     | Mixed Mode Transit Systems                                   | 69                        | 93         | 24         | 35%        | 4           |
| 484122                                     | General Freight Trucking, Long-Distance, Less Than Truckload | 57                        | 78         | 21         | 37%        | 2           |
| 485410                                     | School and Employee Bus Transportation                       | 24                        | 38         | 14         | 58%        | 4           |
| 488410                                     | Motor Vehicle Towing   | 25                        | 38         | 13         | 52%        | 3           |
| 484210                                     | Used Household and Office Goods Moving                       | 20                        | 32         | 12         | 60%        | 2           |
| 493130                                     | Farm Product Warehousing and Storage                         | 76                        | 87         | 11         | 14%        | 2           |
| 485991                                     | Special Needs Transportation                                 | 23                        | 33         | 10         | 43%        | 4           |
| 484110                                     | General Freight Trucking, Local                              | 58                        | 49         | (9)        | (16%)      | 2           |
| <b>TOTAL</b>                               |  | <b>652</b>                | <b>833</b> | <b>181</b> | <b>28%</b> | <b>652</b>  |
| <b>Logistics Sub-Clusters</b>              |  |                           |            |            |            |             |
| <b>1</b> - Air, Rail, Water Transportation |  | <b>3</b> - Other Services |            |            |            |             |
| <b>2</b> - Freight & Warehousing           |  | <b>4</b> - Transit        |            |            |            |             |

Source: EMSI 2013.2 Class of Worker Dataset QCEW Employees

## WATER TECHNOLOGY CLUSTER

In Kings County, the only sector under the Water Technology cluster that is expected to have an employment increase is related to wholesalers of farm supplies; however, it is unclear if it is related to irrigation or other water-related activities, so we have included the jobs in the broader manufacturing and agricultural clusters instead.

## OCCUPATIONAL DEMAND BY CLUSTER

To assess the projected occupational demand created by employment increase in any of the above clusters, we tabulated the occupational staffing patterns for each of clusters. EMSI gives us the ability to identify specific occupations that will create the highest number of jobs between 2012 and 2017.

Analyzing the staffing pattern for the county provides knowledge of the future demand for workforce training and educational requirements. Please note that at this stage of the report we are gathering a list of growing occupations at the cluster level and not at the sub-groups level under each cluster.

### AGRICULTURE CLUSTER

Heavy & tractor-trailer truck drivers (SOC 53-3032) and laborers & freight, stock & material movers (SOC 53-7062) are two of the largest growing agriculture related occupations in the county with an anticipated 47 persons by 2017. On the contrary, farmworkers and laborers, crop, nursery, and greenhouse occupations (SOC 45-2092) is projected to decline by 287 persons. This table shows that occupational estimates are corresponding with the employment projection tables presented in the previous section (Table 3.10).

| SOC     | OCCUPATION  | EMPLOYED IN INDUSTRY GROUP (2012) | EMPLOYED IN INDUSTRY GROUP (2017) | CHANGE | % CHANGE | MEDIAN HOURLY EARNINGS | EDUCATION LEVEL* |
|---------|---|-----------------------------------|-----------------------------------|--------|----------|------------------------|------------------|
| 53-3032 | Heavy and Tractor-Trailer Truck Drivers                 | 167                               | 197                               | 30     | 18%      | \$16.80                | 1                |
| 47-2061 | Construction Laborers                                   | 42                                | 62                                | 20     | 48%      | \$11.91                | 1                |
| 53-7062 | Laborers and Freight, Stock, and Material Movers, Hand  | 53                                | 70                                | 17     | 32%      | \$11.10                | 1                |
| 37-3011 | Landscaping and Groundskeeping Workers                  | 56                                | 71                                | 15     | 27%      | \$14.95                | 1                |
| 19-4011 | Agricultural and Food Science Technicians               | 111                               | 101                               | (10)   | (9%)     | \$16.86                | 6                |
| 51-3092 | Food Batchmakers  | 296                               | 286                               | (10)   | (3%)     | \$17.54                | 1                |
| 51-9198 | Helpers--Production Workers                             | 171                               | 158                               | (13)   | (8%)     | \$8.91                 | 1                |
| 53-7051 | Industrial Truck and Tractor Operators                  | 145                               | 132                               | (13)   | (9%)     | \$14.94                | 1                |
| 45-2093 | Farmworkers, Farm, Ranch, and Aquacultural Animals      | 248                               | 234                               | (14)   | (6%)     | \$10.61                | 1                |
| 45-2041 | Graders and Sorters, Agricultural Products              | 133                               | 114                               | (19)   | (14%)    | \$8.65                 | 1                |
| 51-2092 | Team Assemblers   | 203                               | 184                               | (19)   | (9%)     | \$13.40                | 2                |
| 45-2091 | Agricultural Equipment Operators                        | 282                               | 255                               | (27)   | (10%)    | \$10.77                | 1                |
| 51-9111 | Packaging and Filling Machine Operators and Tenders     | 436                               | 409                               | (27)   | (6%)     | \$16.00                | 2                |
| 45-2041 | Graders and Sorters, Agricultural Products              | 487                               | 408                               | (79)   | (16%)    | \$8.65                 | 1                |
| 45-2092 | Farmworkers and Laborers, Crop, Nursery, and Greenhouse | 3,044                             | 2,757                             | (287)  | (9%)     | \$8.16                 | 1                |

**1** - Short-term on-the-job training

**2** - Moderate-term on-the-job training

**3** - Long-term on-the-job training

**4** - Work experience in a related occupation

**5** - Postsecondary non-degree award

**6** - Associate's degree

**7** - Bachelor's degree

**8** - Bachelor's or higher degree, plus work

**9** - First professional degree

**10** - Masters

Source: EMSI 2013.2 Class of Worker Dataset-QCEW Employees

## ENERGY CLUSTER

Unlike the Agriculture cluster, the Energy cluster shows an increase of 139 persons by 2017. Under this cluster, most growing occupations are related to the research and services sub-cluster (Table 3.11). However, most of these occupations are not directly related to the Energy cluster and can provide services to any of the other clusters as well.

**TABLE 3.11:  
ENERGY CLUSTER**

| SOC     | OCCUPATION  | EMPLOYED IN INDUSTRY GROUP (2012) | EMPLOYED IN INDUSTRY GROUP (2017) | 2012-2017 CHANGE | % CHANGE | MEDIAN HOURLY EARNINGS | EDUCATION LEVEL* |
|---------|---|-----------------------------------|-----------------------------------|------------------|----------|------------------------|------------------|
| 13-2011 | Accountants and Auditors  | 69                                | 132                               | 63               | 91%      | \$24.44                | 7                |
| 47-2061 | Construction Laborers   | 40                                | 60                                | 20               | 50%      | \$11.91                | 1                |
| 43-3021 | Billing and Posting Clerks  | 33                                | 50                                | 17               | 52%      | \$13.18                | 1                |
| 43-9061 | Office Clerks, General  | 37                                | 53                                | 16               | 43%      | \$15.66                | 1                |
| 13-2082 | Tax Preparers   | 20                                | 33                                | 13               | 65%      | \$18.29                | 2                |
| 43-6014 | Secretaries and Administrative Assistants, Except Legal, Medical, and Executive | 26                                | 36                                | 10               | 38%      | \$14.48                | 1                |

**1** - Short-term on-the-job training  
**2** - Moderate-term on-the-job training  
**3** - Long-term on-the-job training  
**4** - Work experience in a related occupation  
**5** - Postsecondary non-degree award  
**6** - Associate's degree  
**7** - Bachelor's degree  
**8** - Bachelor's or higher degree, plus work experience  
**9** - First professional degree  
**10** - Masters  
**11** - Doctoral degree

Source: EMSI 2013.2 Class of Worker Dataset-QCEW Employees

## HEALTH AND WELLNESS CLUSTER

The occupations under Health and Wellness cluster show the highest change in workers being hired between 2012 and 2017. Registered nurses occupation (SOC 29-1111) is estimated to grow by 282 persons. The second largest growing occupation is the nursing aides (SOC 31-1012) by 61 new employees (Table 3.12).

**TABLE 3.12:  
HEALTH AND WELLNESS CLUSTER**

| SOC     | OCCUPATION  | EMPLOYED IN INDUSTRY GROUP (2012) | EMPLOYED IN INDUSTRY GROUP (2017) | 2012-2017 CHANGE | % CHANGE | MEDIAN HOURLY EARNINGS | EDUCATION LEVEL* |
|---------|---|-----------------------------------|-----------------------------------|------------------|----------|------------------------|------------------|
| 29-1111 | Registered Nurses                                 | 795                               | 1,077                             | 282              | 35%      | \$48.82                | 6                |
| 31-1012 | Nursing Aides, Orderlies, and Attendants          | 339                               | 400                               | 61               | 18%      | \$12.44                | 5                |
| 43-6013 | Medical Secretaries                               | 172                               | 216                               | 44               | 26%      | \$15.14                | 2                |
| 29-2061 | Licensed Practical and Licensed Vocational Nurses | 297                               | 330                               | 33               | 11%      | \$24.78                | 5                |
| 31-9092 | Medical Assistants                                | 196                               | 228                               | 32               | 16%      | \$12.37                | 2                |
| 39-9021 | Personal Care Aides                               | 122                               | 150                               | 28               | 23%      | \$8.31                 | 1                |
| 29-2037 | Radiologic Technologists and Technicians          | 89                                | 117                               | 28               | 31%      | \$31.34                | 6                |
| 43-4171 | Receptionists and Information Clerks              | 106                               | 123                               | 17               | 16%      | \$11.71                | 1                |
| 43-9061 | Office Clerks, General                            | 72                                | 89                                | 17               | 24%      | \$15.66                | 1                |

| SOC     | OCCUPATION  | EMPLOYED IN INDUSTRY GROUP (2012) | EMPLOYED IN INDUSTRY GROUP (2017) | 2012-2017 CHANGE | % CHANGE | MEDIAN HOURLY EARNINGS | EDUCATION LEVEL* |
|---------|---|-----------------------------------|-----------------------------------|------------------|----------|------------------------|------------------|
| 37-2012 | Maids and Housekeeping Cleaners   | 121                               | 136                               | 15               | 12%      | \$9.24                 | 1                |
| 11-9111 | Medical and Health Services Managers  | 42                                | 57                                | 15               | 36%      | \$41.45                | 7                |
| 37-2011 | Janitors and Cleaners, Except Maids and Housekeeping Cleaners                   | 44                                | 58                                | 14               | 32%      | \$13.63                | 1                |
| 29-1126 | Respiratory Therapists  | 33                                | 47                                | 14               | 42%      | \$32.49                | 6                |
| 31-9091 | Dental Assistants   | 133                               | 146                               | 13               | 10%      | \$19.67                | 5                |
| 29-2071 | Medical Records and Health Information Technicians                              | 66                                | 79                                | 13               | 20%      | \$21.43                | 5                |
| 29-2055 | Surgical Technologists  | 58                                | 71                                | 13               | 22%      | \$20.62                | 5                |
| 31-9799 | Healthcare Support Workers, All Other   | 57                                | 70                                | 13               | 23%      | \$15.80                | 1                |
| 29-2011 | Medical and Clinical Laboratory Technologists                                   | 47                                | 59                                | 12               | 26%      | \$38.72                | 7                |
| 43-3021 | Billing and Posting Clerks  | 65                                | 75                                | 10               | 15%      | \$13.18                | 1                |
| 43-4111 | Interviewers, Except Eligibility and Loan                                       | 31                                | 41                                | 10               | 32%      | \$19.50                | 1                |
| 21-1015 | Rehabilitation Counselors   | 17                                | 27                                | 10               | 59%      | \$19.21                | 10               |
| 43-1011 | First-Line Supervisors of Office and Administrative Support Workers             | 43                                | 52                                | 9                | 21%      | \$24.63                | 4                |
| 29-2052 | Pharmacy Technicians  | 30                                | 39                                | 9                | 30%      | \$18.21                | 2                |
| 21-1022 | Healthcare Social Workers   | 28                                | 37                                | 9                | 32%      | \$37.99                | 10               |
| 29-2012 | Medical and Clinical Laboratory Technicians                                     | 20                                | 29                                | 9                | 45%      | \$25.31                | 6                |
| 29-1123 | Physical Therapists   | 27                                | 35                                | 8                | 30%      | \$48.66                | 9                |
| 29-1051 | Pharmacists   | 21                                | 29                                | 8                | 38%      | \$61.31                | 9                |
| 43-6014 | Secretaries and Administrative Assistants, Except Legal, Medical, and Executive | 36                                | 43                                | 7                | 19%      | \$14.48                | 1                |
| 21-1091 | Health Educators  | 31                                | 38                                | 7                | 23%      | \$26.35                | 7                |
| 33-9032 | Security Guards   | 27                                | 34                                | 7                | 26%      | \$12.85                | 1                |
| 19-1042 | Medical Scientists, Except Epidemiologists                                      | 20                                | 27                                | 7                | 35%      | \$38.05                | 11               |
| 29-2032 | Diagnostic Medical Sonographers   | 15                                | 22                                | 7                | 47%      | \$45.78                | 6                |
| 29-1071 | Physician Assistants  | 33                                | 39                                | 6                | 18%      | \$50.11                | 10               |
| 21-1093 | Social and Human Service Assistants   | 13                                | 19                                | 6                | 46%      | \$11.42                | 1                |
| 29-2031 | Cardiovascular Technologists and Technicians                                    | 12                                | 18                                | 6                | 50%      | \$36.05                | 6                |
| 29-2021 | Dental Hygienists   | 35                                | 40                                | 5                | 14%      | \$43.07                | 6                |
| 43-3031 | Bookkeeping, Accounting, and Auditing Clerks                                    | 31                                | 36                                | 5                | 16%      | \$16.77                | 2                |
| 49-9071 | Maintenance and Repair Workers, General   | 21                                | 26                                | 5                | 24%      | \$17.12                | 2                |
| 31-9093 | Medical Equipment Preparers   | 20                                | 25                                | 5                | 25%      | \$11.65                | 2                |
| 43-6011 | Executive Secretaries and Executive Administrative Assistants                   | 16                                | 21                                | 5                | 31%      | \$20.35                | 4                |
| 29-1062 | Family and General Practitioners  | 17                                | 21                                | 4                | 24%      | \$90.11                | 9                |
| 35-3041 | Food Servers, Nonrestaurant   | 16                                | 20                                | 4                | 25%      | \$10.52                | 1                |
| 11-1021 | General and Operations Managers   | 15                                | 19                                | 4                | 27%      | \$40.30                | 8                |
| 43-3011 | Bill and Account Collectors   | 15                                | 19                                | 4                | 27%      | \$13.88                | 2                |
| 43-5081 | Stock Clerks and Order Fillers  | 14                                | 18                                | 4                | 29%      | \$9.56                 | 1                |

| SOC  | OCCUPATION   | EMPLOYED IN INDUSTRY GROUP (2012)                            | EMPLOYED IN INDUSTRY GROUP (2017) | 2012-2017 CHANGE | % CHANGE | MEDIAN HOURLY EARNINGS | EDUCATION LEVEL* |
|--|--|--|-----------------------------------|------------------|----------|------------------------|------------------|
| 29-1031  | Dietitians and Nutritionists                                   | 13   | 17                                | 4                | 31%      | \$24.36                | 7                |
| 29-9799  | Healthcare Practitioners and Technical Workers, All Other      | 12   | 16                                | 4                | 33%      | \$19.45                | 7                |
| 13-1199  | Business Operations Specialists, All Other                     | 12   | 16                                | 4                | 33%      | \$25.10                | 3                |
| 35-2012  | Cooks, Institution and Cafeteria                               | 32   | 35                                | 3                | 9%       | \$19.48                | 1                |
| 31-9094  | Medical Transcriptionists                                      | 11   | 14                                | 3                | 27%      | \$14.04                | 5                |
| 29-1021  | Dentists, General  | 43   | 45                                | 2                | 5%       | \$95.29                | 9                |
| 29-1061  | Anesthesiologists  | 18   | 20                                | 2                | 11%      | \$102.88               | 9                |
| 35-2021  | Food Preparation Workers                                       | 15   | 17                                | 2                | 13%      | \$9.18                 | 1                |
| 29-1127  | Speech-Language Pathologists                                   | 12   | 14                                | 2                | 17%      | \$33.78                | 10               |
| 37-1011  | First-Line Supervisors of Housekeeping and Janitorial Workers  | 11   | 13                                | 2                | 18%      | \$20.80                | 4                |
| 21-1013  | Marriage and Family Therapists                                 | 20   | 21                                | 1                | 5%       | \$24.31                | 10               |
| 39-9032  | Recreation Workers   | 13   | 14                                | 1                | 8%       | \$9.30                 | 7                |
| 35-1012  | First-Line Supervisors of Food Preparation and Serving Workers | 11   | 12                                | 1                | 9%       | \$11.14                | 4                |
| 21-1023  | Mental Health and Substance Abuse Social Workers               | 16   | 16                                | 0                | 0%       | \$32.53                | 10               |
| 43-2011  | Switchboard Operators, Including Answering Service             | 12   | 12                                | 0                | 0%       | \$9.35                 | 1                |
| 19-3031  | Clinical, Counseling, and School Psychologists                 | 11   | 11                                | 0                | 0%       | \$51.37                | 11               |
| 21-1014  | Mental Health Counselors                                       | 20   | 19                                | (1)              | (5%)     | \$19.23                | 10               |
| 31-1011  | Home Health Aides  | 53   | 51                                | (2)              | (4%)     | \$9.02                 | 1                |
| <b>1</b> - Short-term on-the-job training          |  | <b>6</b> - Associate's degree                                |                                   |                  |          |                        |                  |
| <b>2</b> - Moderate-term on-the-job training       |  | <b>7</b> - Bachelor's degree                                 |                                   |                  |          |                        |                  |
| <b>3</b> - Long-term on-the-job training           |  | <b>8</b> - Bachelor's or higher degree, plus work experience |                                   |                  |          |                        |                  |
| <b>4</b> - Work experience in a related occupation |  | <b>9</b> - First professional degree                         |                                   |                  |          |                        |                  |
| <b>5</b> - Postsecondary non-degree award          |  | <b>10</b> - Masters  |                                   |                  |          |                        |                  |

Source: EMSI 2013.2 Class of Worker Dataset-QCEW Employees



## LOGISTICS CLUSTER

The heavy tractor-trailer truck driver (SOC 53-3032) occupation is estimated to add 51 employees in 2017, growing from 218 persons to an estimated 269 persons in 2017 (Table 3.13). This table corresponds to the Logistics related jobs projection reported in Table 3.6.

| TABLE 3.13:<br>LOGISTICS CLUSTER                   |  |  |   |                         |             |                              |                          |
|--|--|--|---|-------------------------|-------------|------------------------------|--------------------------|
| SOC  | OCCUPATION   | EMPLOYED<br>IN<br>INDUSTRY<br>GROUP<br>(2012)                | EMPLOYED<br>IN<br>INDUSTRY<br>GROUP<br>(2017) | 2012-<br>2017<br>CHANGE | %<br>CHANGE | MEDIAN<br>HOURLY<br>EARNINGS | EDU-<br>CATION<br>LEVEL* |
| 53-3032  | Heavy and Tractor-Trailer Truck Drivers  | 218  | 269   | 51                      | 23%         | \$16.80                      | 1                        |
| 53-3021  | Bus Drivers, Transit and Intercity   | 65   | 86  | 21                      | 32%         | \$14.43                      | 2                        |
| 53-3022  | Bus Drivers, School or Special Client  | 20   | 33  | 13                      | 65%         | \$18.89                      | 2                        |
| 53-7062  | Laborers and Freight, Stock, and Material Movers, Hand                                     | 42   | 56  | 14                      | 33%         | \$11.10                      | 1                        |
| 53-3033  | Light Truck or Delivery Services Drivers   | 24   | 28  | 4                       | 17%         | \$11.93                      | 1                        |
| 53-1021  | First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand                     | 21   | 25  | 4                       | 19%         | \$21.76                      | 4                        |
| 53-7051  | Industrial Truck and Tractor Operators   | 18   | 22  | 4                       | 22%         | \$14.94                      | 1                        |
| 43-9061  | Office Clerks, General   | 18   | 21  | 3                       | 17%         | \$15.66                      | 1                        |
| 49-3031  | Bus and Truck Mechanics and Diesel Engine Specialists                                      | 17   | 20  | 3                       | 18%         | \$20.23                      | 5                        |
| 43-5081  | Stock Clerks and Order Fillers   | 15   | 18  | 3                       | 20%         | \$9.56                       | 1                        |
| 53-1031  | First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators | 12   | 15  | 3                       | 25%         | \$25.59                      | 4                        |
| 43-3031  | Bookkeeping, Accounting, and Auditing Clerks   | 12   | 14  | 2                       | 17%         | \$16.77                      | 2                        |
| <b>1</b> - Short-term on-the-job training          |  | <b>6</b> - Associate's degree                                |   |                         |             |                              |                          |
| <b>2</b> - Moderate-term on-the-job training       |  | <b>7</b> - Bachelor's degree                                 |   |                         |             |                              |                          |
| <b>3</b> - Long-term on-the-job training           |  | <b>8</b> - Bachelor's or higher degree, plus work experience |   |                         |             |                              |                          |
| <b>4</b> - Work experience in a related occupation |  | <b>9</b> - First professional degree                         |   |                         |             |                              |                          |
| <b>5</b> - Postsecondary non-degree award          |  | <b>10</b> - Masters  |   |                         |             |                              |                          |

Source: EMSI 2013.2 Class of Worker Dataset-QCEW Employees

## 4. SKILLS ANALYSIS

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In this section of the report we focus on analyzing the unemployed labor force who had previously worked in any one of the industry clusters in an effort to analyze the match (or mismatch) between the labor force and future jobs. In general, it does appear that the educational profile of the County's underutilized labor force matches the educational and training requirements of future jobs.

Of the County's clusters, Health and Wellness is projected to grow the most new jobs between 2012 and 2017, at 1,090 over a five year period, or 217 per year on average (Table 4.1). The bulk of the 1,090 new jobs are in the lower-middle and middle education and training categories consisting of relevant work experience (201) and an Associate's degree (625) respectively. There are slightly over 250 jobs in the lowest educational requirement category consisting of moderate-term OJT (181) and short-term OJT (71). On the labor force side, there are only 93 persons who are unemployed and who previously worked in Health and Wellness industries. Of the 93 unemployed persons, the bulk is in the lower -middle educational attainment rung of some college (72) and high school diploma (7). While the discrete number of anticipated new jobs over a five year period is considerably higher than the number of unemployed persons with backgrounds in Health and Wellness, the unemployed labor force with previous experience in this cluster matches the educational and training requirements of anticipated jobs within the Health and Wellness cluster, as both tend to be lower-middle rungs of educational ladder.

**TABLE 4.1:  
COMPARISON OF UNEMPLOYED LABOR FORCE BY CLUSTER BY EDUCATIONAL ATTAINMENT TO NEW JOBS  
BY SAME CLUSTER BY EDUCATION AND TRAINING: KINGS COUNTY  
(HEALTH AND WELLNESS - ALL SUB CLUSTERS)**

| Educational Attainment | Unemployed Labor Force in Sub-Cluster |              |                                 | Education and Training Requirements      | Job Projections By Educational Attainment |              |              |
|------------------------|---------------------------------------|--------------|---------------------------------|--|---|--------------|--------------|
|                        | Mgrs/ Supervisors                     | Not Managers | Total Underutilized Labor Force |  | Mgrs/ Supervisors                         | Not Managers | Total        |
| 01 Advanced degree     | 0                                     | 0            | <b>0</b>                        | 01 Advanced degree                       | 12  | 0            | <b>12</b>    |
| 02 Bachelor's          | 0                                     | 14           | <b>14</b>                       | 02 Bachelor's                            | 0   | 0            | <b>0</b>     |
| 03 Associate's         | 0                                     | 0            | <b>0</b>                        | 03 Associate's                           | 0   | 625          | <b>625</b>   |
| 04 Some college        | 0                                     | 72           | <b>72</b>                       | 04 Work experience in related occupation | 135                                       | 66           | <b>201</b>   |
| 05 HS diploma/GED      | 7                                     | 0            | <b>7</b>                        | 05 Long-term OJT                         | 0   | 0            | <b>0</b>     |
| 06 No HS diploma/GED   | 0                                     | 0            | <b>0</b>                        | 06 Moderate-term OJT                     | 0   | 181          | <b>181</b>   |
| 99 NA                  | 0                                     | 0            | <b>0</b>                        | 07 Short-term OJT                        | 0   | 71           | <b>71</b>    |
|                        | <b>7</b>                              | <b>86</b>    | <b>93</b>                       |  | <b>147</b>                                | <b>943</b>   | <b>1,090</b> |

Source: ADE, Inc. based on US Census PUMS One-year Sample for years 2009–2011 and EMSI Occupational Projections.

The second fastest growing cluster is Logistics, which is projected to grow by 181 new jobs, most of which are in the lower educational/training category, i.e. short-term OJT (118 new jobs between 2012 and 2017) and moderate-term OJT (53) (Table 4.2). Regarding the underutilized labor force with experience in Logistics, all are in the lower-middle educational attainment rung, as there are 26 persons with some college who are unemployed. On the surface, there is a slight mismatch between educational backgrounds of the labor force and educational requirements of the new jobs in Kings County's Logistics cluster, as the labor force tends to be in the lower-middle rung while anticipated new jobs are in the lowest educational rung.

**TABLE 4.2:  
COMPARISON OF UNEMPLOYED LABOR FORCE BY CLUSTER BY EDUCATIONAL ATTAINMENT TO NEW JOBS BY SAME CLUSTER  
BY EDUCATION AND TRAINING: KINGS COUNTY  
(LOGISTICS - ALL SUB CLUSTERS)**

| Educational Attainment | Unemployed Labor Force in Sub-Cluster |              |                                 | Education and Training Requirements      | Job Projections By Educational Attainment |              |            |
|------------------------|---------------------------------------|--------------|---------------------------------|--|---|--------------|------------|
|                        | Mgrs/ Supervisors                     | Not Managers | Total Underutilized Labor Force |  | Mgrs/ Supervisors                         | Not Managers | Total      |
| 01 Advanced degree     | 0                                     | 0            | 0                               | 01 Advanced degree                       | 0   | 0            | 0          |
| 02 Bachelor's          | 0                                     | 0            | 0                               | 02 Bachelor's                            | 0   | 0            | 0          |
| 03 Associate's         | 0                                     | 0            | 0                               | 03 Associate's                           | 0   | 0            | 0          |
| 04 Some college        | 0                                     | 26           | 26                              | 04 Work experience in related occupation | 6   | 5            | 11         |
| 05 HS diploma/GED      | 0                                     | 0            | 0                               | 05 Long-term OJT                         | 0   | 0            | 0          |
| 06 No HS diploma/GED   | 0                                     | 0            | 0                               | 06 Moderate-term OJT                     | 0   | 53           | 53         |
| 99 NA                  | 0                                     | 0            | 0                               | 07 Short-term OJT                        | 0   | 118          | 118        |
|                        | <b>0</b>                              | <b>26</b>    | <b>26</b>                       |  | <b>6</b>                                  | <b>175</b>   | <b>181</b> |

Source: ADE, Inc. based on US Census PUMS One-year Sample for years 2009–2011 and EMSI Occupational Projections.

# 5. TRAINING RESOURCES

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This section identifies whether training programs exist for the occupations in the growing industry clusters, which are Health and Welfare and Logistics. In Table 5.1 below, occupations under any of the five clusters that are assigned a dash (“---”) are not expected to grow. Occupations assigned a number including zero (“0”) are expected to grow and the assigned number reflects the number of job training programs whose services are relevant to the corresponding occupation. For example, registered nurses (OCCSOC 29-1111) is an occupation within the Health and Wellness cluster that requires an AA; this occupation is expected to increase in number, and there are six job training programs that are specific to this occupation. There will be an increase in the number of radiologic technicians (OCCSOC 29-2037) within Health and Welfare in the near future but in Kings County there are no job training programs specifically targeting this occupation, according to the California EDD ETPL database.

There are approximately 11 occupations that are expected to increase in numbers within the Health and Welfare cluster (Table 5.1). For 4 of these occupations, there are no job training programs, according to the California EDD ETPL database. There are 9 occupations within Logistics; for 3 of these growing occupations, there are no job training programs.

**TABLE 5.1:  
NUMBER OF JOB TRAINING PROGRAMS FOR OCCUPATIONS IN TOP GROWING CLUSTERS: KINGS COUNTY**

| <b>OCCSOC</b> | <b>Description</b>   | <b>Health and Welfare (11/4)</b> | <b>Logistics (9/3)</b> | <b>Required Education/Training</b>    |
|---------------|--|----------------------------------|------------------------|---------------------------------------|
| 29-1051       | Pharmacists  | 0                                | ---                    | Advanced degree                       |
| 29-1111       | Registered Nurses  | 6                                | ---                    | Associate's                           |
| 29-2037       | Radiologic Technologists and Technicians   | 0                                | ---                    | Associate's                           |
| 29-2052       | Pharmacy Technicians   | 5                                | ---                    | Moderate-term OJT                     |
| 29-2061       | Licensed Practical and Licensed Vocational Nurses  | 6                                | ---                    | Work experience in related occupation |
| 31-1012       | Nursing Aides, Orderlies, and Attendants   | 4                                | ---                    | Work experience in related occupation |
| 31-9092       | Medical Assistants   | 11                               | ---                    | Moderate-term OJT                     |
| 39-9021       | Personal Care Aides  | 0                                | ---                    | Short-term OJT                        |
| 41-1011       | First-Line Supervisors of Retail Sales Workers   | 0                                | ---                    | Work experience in related occupation |
| 41-2011       | Cashiers   | 1                                | ---                    | Short-term OJT                        |
| 41-4012       | Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products | ---                              | ---                    | Moderate-term OJT                     |
| 43-3031       | Bookkeeping, Accounting, and Auditing Clerks   | ---                              | ---                    | Moderate-term OJT                     |
| 43-5081       | Stock Clerks and Order Fillers   | ---                              | ---                    | Short-term OJT                        |
| 43-6013       | Medical Secretaries  | 10                               | ---                    | Moderate-term OJT                     |
| 43-9061       | Office Clerks, General   | ---                              | 4                      | Short-term OJT                        |
| 49-3031       | Bus and Truck Mechanics and Diesel Engine Specialists  | ---                              | 0                      | Work experience in related occupation |
| 53-1021       | First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand                       | ---                              | 0                      | Work experience in related occupation |
| 53-3021       | Bus Drivers, Transit and Intercity   | ---                              | 2                      | Moderate-term OJT                     |
| 53-3022       | Bus Drivers, School or Special Client  | ---                              | 1                      | Moderate-term OJT                     |
| 53-3032       | Heavy and Tractor-Trailer Truck Drivers  | ---                              | 5                      | Short-term OJT                        |
| 53-3033       | Light Truck or Delivery Services Drivers   | ---                              | 3                      | Short-term OJT                        |
| 53-7051       | Industrial Truck and Tractor Operators   | ---                              | 1                      | Short-term OJT                        |
| 53-7062       | Laborers and Freight, Stock, and Material Movers, Hand                                       | ---                              | 0                      | Short-term OJT                        |

Source: Applied Development Economics, based on EMSI and California EDD LMID

Below we identify the WIA-approved job training providers that correspond to the occupational needs in the table above. There are 3 job training providers providing services that are relevant to growing occupations in the Health and Welfare cluster, and 2 providers whose services are relevant to Logistics occupations (Table 5.2).

| TABLE 5.2:<br>SPECIFIC JOB TRAINING PROVIDERS OFFERING TRAINING FOR<br>OCCUPATIONS IDENTIFIED IN TOP GROWING CLUSTERS |  |
|---|--|
| Health and Welfare (3)  | Logistics (2)                                    |
| BOSTON REED<br>HANFORD CA 93230   | DASMESH TRUCK DRIVING SCHOOL<br>HANFORD CA 95230 |
| HANFORD ADULT SCHOOL<br>HANFORD CA 93230  | WEST HILLS COLLEGE LEMOORE<br>LEMOORE CA 93245   |
| WEST HILLS COMM. COLL. DIST.<br>LEMOORE CA 93245  |  |
| BOSTON REED<br>HANFORD CA 93230   |  |

*Source: Applied Development Economics, based on California EDD WIB ("Eligible Training Provider List")*

# APPENDIX A: CLUSTER DEFINITIONS

## AGRICULTURE CLUSTER

| CLUSTER COMPONENTS BY NAICS CODE          |  |
|---|--|
| <b>Agriculture Cluster - Production</b>   |  |
| 111                                       | Crop Production  |
| 112                                       | Animal Production  |
| 1141                                      | Fishing  |
| 115112                                    | Soil Preparation, Planting, Cultivating                            |
| 115113                                    | Crop Harvesting, Primarily by Machine                              |
| 115114                                    | Postharvest Crop Activities  |
| 115115                                    | Farm Labor Contractors and Crew Leaders                            |
| 115116                                    | Farm Mgmt Svcs   |
| 115210                                    | Support Activities for Animal Production                           |
| <b>Agriculture Cluster - Processing</b>   |  |
| 311                                       | Food Manufacturing   |
| 312                                       | Beverage and Tobacco Product Manufacturing                         |
| 321920                                    | Wood Container and Pallet Mfg                                      |
| 322211                                    | Corrugated and Solid Fiber Box Mfg                                 |
| <b>Agriculture Cluster - Distribution</b> |  |
| 424410                                    | General Line Grocery Merchant Wholesalers                          |
| 424430                                    | Dairy Product Wholesalers  |
| 424450                                    | Confectionery Wholesalers  |
| 424470                                    | Meat & Meat Product Wholesalers                                    |
| 424480                                    | Fresh Fruit/Veg Wholesalers  |
| 424490                                    | Other Grocery Wholesalers  |
| 424820                                    | Wine, Alcoholic Beverage Wholesalers                               |
| 424910                                    | Farm Supplies Wholesalers  |
| 424930                                    | Flower, Nursery Stock, and Florists' Supplies Merchant Wholesalers |
| 445110                                    | Supermarkets, Other Grocery  |
| 445120                                    | Convenience Stores   |
| 445210                                    | Meat Markets   |
| 445230                                    | Fruit and Vegetable Markets  |
| 445291                                    | Baked Goods Stores   |
| 445292                                    | Confectionery and Nut Stores                                       |
| 445299                                    | All Other Specialty Food Stores                                    |
| 445310                                    | Beer, Wine, and Liquor Stores                                      |
| 481111                                    | Scheduled Passenger Air Transportation                             |
| 481211                                    | Nonscheduled Chartered Passenger Air Trans                         |
| 482                                       | Rail Transportation  |
| 484110                                    | General Freight Trucking, Local                                    |
| 484121                                    | General Freight Trucking, Long-Distance, Truckload                 |
| 484122                                    | General Freight Trucking, Long-Distance, Less Than Truckload       |
| 484220                                    | Specialized Freight Trucking, Local                                |
| 484230                                    | Specialized Freight Trucking, Long-Dist.                           |
| 488119                                    | Other Airport Operations   |
| 488190                                    | Other Support Activities for Air Transportation                    |
| 488510                                    | Freight Transportation Arrangement                                 |
| 493110                                    | General Warehousing & Storage                                      |
| 493120                                    | Refrigerated Warehousing and Storage                               |



# APPENDIX A: CONTINUED

## AGRICULTURE CLUSTER (CONTINUED)

| CLUSTER COMPONENTS BY NAICS CODE     |   |
|--------------------------------------|---|
| <b>Agriculture Cluster - Support</b> |   |
| 221310                               | Water Supply and Irrigation Systems   |
| 237110                               | Water & Sewer Line & Related Construction   |
| 325314                               | Fertilizer (Mixing Only) Manufacturing  |
| 325320                               | Pesticide and Other Agricultural Chemical Manufacturing   |
| 333111                               | Farm Machinery, Equip Mfg   |
| 423820                               | Farm, Garden Machinery, Equip Wholesalers   |
| 423830                               | Industrial Machinery and Equipment Merchant Wholesalers   |
| 423840                               | Industrial Supplies Merchant Wholesalers  |
| 423850                               | Service Establishment Equipment and Supplies Merchant Wholesalers   |
| 444220                               | Nursery, Garden Ctr, Farm Supply Stores   |
| 522292                               | Real Estate Credit  |
| 532490                               | Other Commercial and Industrial Machinery and Equipment Rental and Leasing                                  |
| 541380                               | Testing Laboratories  |
| 541613                               | Marketing Consulting Services   |
| 541840                               | Media Representatives   |
| 541870                               | Advertising Material Distribution Services  |
| 541890                               | Other Services Related to Advertising   |
| 541940                               | Veterinary Services   |
| 551114                               | Corporate, Subsidiary, Regional Offices   |
| 561110                               | Office Administrative Services  |
| 561311                               | Employment Placement Agencies   |
| 561320                               | Temporary Help Services   |
| 561710                               | Exterminating and Pest Control Services   |
| 561730                               | Landscaping Services  |
| 562920                               | Materials Recovery Facilities   |
| 811310                               | Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance |

Source: ADE, Inc.; data from EMSI.

Notes: Industries included in the cluster each account for a minimum of 10 jobs.

# APPENDIX A: CONTINUED

## ENERGY CLUSTER

| CLUSTER COMPONENTS BY NAICS CODE                         |   |        |   |
|--|---|--------|---|
| <b>ALTERNATIVE ENERGY GENERATION/PRODUCTION</b>          |   |        |   |
| 23711  | Water and Sewer Line and Related Structures Construction  | 311223 | Other Oilseed Processing  |
| 23816  | Roofing Contractors   | 325193 | Ethyl Alcohol Manufacturing   |
| <b>ALTERNATIVE ENERGY DISTRIBUTION</b>                   |   |        |   |
| 423610   | Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers | 423720 | Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers                                |
| 423690   | Other Electronic Parts and Equipment Merchant Wholesalers                                       |        |   |
| <b>ENERGY EFFICIENCY</b>                                 |   |        |   |
| 23821  | Electrical Contractors and Other Wiring Installation Contractors                                | 23831  | Drywall and Insulation Contractors  |
| 23822  | Plumbing, Heating, and Air-Conditioning Contractors   |        |   |
| <b>EQUIPMENT MANUFACTURING</b>                           |   |        |   |
| 333132   | Oil and Gas Field Machinery and Equipment Manufacturing   | 335110 | Electric Lamp Bulb and Part Manufacturing   |
| 333414   | Heating Equipment (except Warm Air Furnaces) Manufacturing                                      | 335121 | Residential Electric Lighting Fixture Manufacturing   |
| 333611   | Turbine and Turbine Generator Set Units Manufacturing   | 335122 | Commercial, Industrial, and Institutional Electric Lighting Fixture Manufacturing                           |
| 334512   | Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use    | 335129 | Other Lighting Equipment Manufacturing  |
| 334515   | Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals           | 335311 | Power, Distribution, and Specialty Transformer Manufacturing  |
| 334517   | Irradiation Apparatus Manufacturing   |        |   |
| <b>PETROLEUM PRODUCTION &amp; PETROLEUM DISTRIBUTION</b> |   |        |   |
| 211111   | Crude Petroleum and Natural Gas Extraction  | 424710 | Petroleum Bulk Stations and Terminals   |
| 211112   | Natural Gas Liquid Extraction   | 424720 | Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)                  |
| 212399   | All Other Nonmetallic Mineral Mining  | 486110 | Pipeline Transportation of Crude Oil  |
| 213111   | Drilling Oil and Gas Wells  | 486210 | Pipeline Transportation of Natural Gas  |
| 324110   | Petroleum Refineries  | 486910 | Pipeline Transportation of Refined Petroleum Products   |
| 324199   | All Other Petroleum and Coal Products Manufacturing   |        |   |
| <b>POWER GENERATION AND TRANSMISSION</b>                 |   |        |   |
| 221111   | Hydroelectric Power Generation  | 221122 | Electric Power Distribution   |
| 221112   | Fossil Fuel Electric Power Generation   | 221210 | Natural Gas Distribution  |
| 221113   | Nuclear Electric Power Generation   | 237120 | Oil and Gas Pipeline and Related Structures Construction  |
| 221119   | Other Electric Power Generation   | 237130 | Power and Communication Line and Related Structures Construction  |
| 221121   | Electric Bulk Power Transmission and Control  |        |   |
| <b>RESEARCH &amp; SERVICES</b>                           |   |        |   |
| 541  | Professional, Scientific, and Technical Services  | 533110 | Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)  |
| 523910   | Miscellaneous Intermediation  | 811219 | Other Electronic and Precision Equipment Repair and Maintenance   |
| 523999   | Miscellaneous Financial Investment Activities   | 811310 | Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance |

# APPENDIX A: CONTINUED

## HEALTH AND WELLNESS CLUSTER

| CLUSTER COMPONENTS BY NAICS CODE    |   |        |  |
|-------------------------------------|---|--------|--|
| <b>HEALTH CARE DELIVERY</b>         |   |        |  |
| 621111                              | Offices of Physicians (except Mental Health Specialists)                  | 621512 | Diagnostic Imaging Centers                                   |
| 621112                              | Offices of Physicians, Mental Health Specialists                          | 621512 | Diagnostic Imaging Centers                                   |
| 621210                              | Offices of Dentists   | 621610 | Home Health Care Services                                    |
| 621310                              | Offices of Chiropractors  | 621910 | Ambulance Services   |
| 621320                              | Offices of Optometrists   | 621991 | Blood and Organ Banks  |
| 621330                              | Offices of Mental Health Practitioners (except Physicians)                | 622110 | General Medical and Surgical Hospitals                       |
| 621340                              | Offices of Physical, Occupational and Speech Therapists, and Audiologists | 622210 | Psychiatric and Substance Abuse Hospitals                    |
| 621391                              | Offices of Podiatrists  | 622310 | Specialty (except Psychiatric and Substance Abuse) Hospitals |
| 621410                              | Family Planning Centers   | 623110 | Nursing Care Facilities                                      |
| 621420                              | Outpatient Mental Health and Substance Abuse Centers                      | 623210 | Residential Mental Retardation Facilities                    |
| 621491                              | HMO Medical Centers   | 623220 | Residential Mental Health and Substance Abuse Facilities     |
| 621492                              | Kidney Dialysis Centers   | 623311 | Continuing Care Retirement Communities                       |
| 621493                              | Freestanding Ambulatory Surgical and Emergency Centers                    | 623312 | Homes for the Elderly  |
| 621498                              | All Other Outpatient Care Centers   | 623990 | Other Residential Care Facilities                            |
| 621511                              | Medical Laboratories  | 624310 | Vocational Rehabilitation Services                           |
| <b>MEDICAL DEVICE MANUFACTURING</b> |   |        |  |
| 339112                              | Surgical and Medical Instrument Manufacturing                             | 339115 | Ophthalmic Goods Manufacturing                               |
| 339113                              | Surgical Appliance and Supplies Manufacturing                             | 339116 | Dental Laboratories  |
| 339114                              | Dental Equipment and Supplies Manufacturing                               |        |  |
| <b>PHARMACEUTICALS</b>              |   |        |  |
| 325411                              | Medicinal and Botanical Manufacturing                                     | 325413 | In-Vitro Diagnostic Substance Manufacturing                  |
| 325412                              | Pharmaceutical Preparation Manufacturing                                  | 325414 | Biological Product (except Diagnostic) Manufacturing         |
| <b>SUPPLIES AND SERVICES</b>        |   |        |  |
| 423450                              | Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers | 424210 | Drugs and Druggists' Sundries Merchant Wholesalers           |
| 423460                              | Ophthalmic Goods Merchant Wholesalers                                     | 813212 | Voluntary Health Organizations                               |
| 423490                              | Other Professional Equipment and Supplies Merchant Wholesalers            |        |  |
| <b>WELLNESS AND FITNESS</b>         |   |        |  |
| 446110                              | Pharmacies and Drug Stores  | 532291 | Home Health Equipment Rental                                 |
| 446130                              | Optical Goods Stores  | 621399 | Offices of All Other Miscellaneous Health Practitioners      |
| 446191                              | Food (Health) Supplement Stores   | 621999 | All Other Miscellaneous Ambulatory Health Care Services      |
| 446199                              | All Other Health and Personal Care Stores                                 | 812191 | Diet and Weight Reducing Centers                             |

# APPENDIX A: CONTINUED

## LOGISTICS CLUSTER

| CLUSTER COMPONENTS BY NAICS CODE       |   |        |   |
|--|---|--------|---|
| <b>AIR, RAIL, WATER TRANSPORTATION</b> |   |        |   |
| 481111                                 | Scheduled Passenger Air Transportation                          | 483211 | Inland Water Freight Transportation                               |
| 481112                                 | Scheduled Freight Air Transportation                            | 483212 | Inland Water Passenger Transportation                             |
| 481211                                 | Nonscheduled Chartered Passenger Air Transportation             | 488111 | Air Traffic Control   |
| 481212                                 | Nonscheduled Chartered Freight Air Transportation               | 488119 | Other Airport Operations  |
| 481219                                 | Other Nonscheduled Air Transportation                           | 488190 | Other Support Activities for Air Transportation                   |
| 482                                    | Rail Transportation   | 488210 | Support Activities for Rail Transportation                        |
| 483111                                 | Deep Sea Freight Transportation                                 | 488310 | Port and Harbor Operations  |
| 483112                                 | Deep Sea Passenger Transportation                               | 488320 | Marine Cargo Handling   |
| 483113                                 | Coastal and Great Lakes Freight Transportation                  | 488330 | Navigational Services to Shipping                                 |
| 483114                                 | Coastal and Great Lakes Passenger Transportation                | 488390 | Other Support Activities for Water Transportation                 |
| <b>FREIGHT &amp; WAREHOUSING</b>       |   |        |   |
| 484110                                 | General Freight Trucking, Local                                 | 493110 | General Warehousing and Storage                                   |
| 484121                                 | General Freight Trucking, Long-Distance, Truckload              | 493120 | Refrigerated Warehousing and Storage                              |
| 484122                                 | General Freight Trucking, Long-Distance, Less Than Truckload    | 493130 | Farm Product Warehousing and Storage                              |
| 484210                                 | Used Household and Office Goods Moving                          | 493190 | Other Warehousing and Storage                                     |
| 484220                                 | Specialized Freight (except Used Goods) Trucking, Local         | 541614 | Process, Physical Distribution, and Logistics Consulting Services |
| 484230                                 | Specialized Freight (except Used Goods) Trucking, Long-Distance | 561910 | Packaging and Labeling Services                                   |
| <b>OTHER SERVICES</b>                  |   |        |   |
| 488410                                 | Motor Vehicle Towing  | 488999 | All Other Support Activities for Transportation                   |
| 488490                                 | Other Support Activities for Road Transportation                | 492110 | Couriers and Express Delivery Services                            |
| 488510                                 | Freight Transportation Arrangement                              | 492210 | Local Messengers and Local Delivery                               |
| 488991                                 | Packing and Crating   |        |   |
| <b>RELATED MANUFACTURING</b>           |   |        |   |
| 336120                                 | Heavy Duty Truck Manufacturing                                  | 336611 | Ship Building and Repairing                                       |
| 336510                                 | Railroad Rolling Stock Manufacturing                            | 336612 | Boat Building   |
| <b>TRANSIT</b>                         |   |        |   |
| 485111                                 | Mixed Mode Transit Systems                                      | 485310 | Taxi Service  |
| 485112                                 | Commuter Rail Systems   | 485410 | School and Employee Bus Transportation                            |
| 485113                                 | Bus and Other Motor Vehicle Transit Systems                     | 485510 | Charter Bus Industry  |
| 485119                                 | Other Urban Transit Systems                                     | 485991 | Special Needs Transportation                                      |
| 485210                                 | Interurban and Rural Bus Transportation                         | 485999 | All Other Transit and Ground Passenger Transportation             |

# APPENDIX A: CONTINUED

## MANUFACTURING CLUSTER (CROSS-CLUSTER)

| CLUSTER COMPONENTS BY NAICS CODE           |  |        |  |
|--|--|--------|--|
| <b>HEALTH &amp; WELLNESS MANUFACTURING</b> |  |        |  |
| 339112                                     | Surgical and Medical Instrument Manufacturing              | 325411 | Medicinal and Botanical Manufacturing                        |
| 339113                                     | Surgical Appliance and Supplies Manufacturing              | 325412 | Pharmaceutical Preparation Manufacturing                     |
| 339114                                     | Dental Equipment and Supplies Manufacturing                | 325413 | In-Vitro Diagnostic Substance Manufacturing                  |
| 339115                                     | Ophthalmic Goods Manufacturing                             | 325414 | Biological Product (except Diagnostic) Manufacturing         |
| 339116                                     | Dental Laboratories  |        |  |
| <b>FOOD PROCESSING</b>                     |  |        |  |
| 311111                                     | Dog and Cat Food Manufacturing                             | 311920 | Coffee and Tea Manufacturing                                 |
| 311119                                     | Other Animal Food Manufacturing                            | 311930 | Flavoring Syrup and Concentrate Manufacturing                |
| 311211                                     | Flour Milling  | 311941 | Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing |
| 311212                                     | Rice Milling   | 311942 | Spice and Extract Manufacturing                              |
| 311213                                     | Malt Manufacturing   | 311991 | Perishable Prepared Food Manufacturing                       |
| 311221                                     | Wet Corn Milling   | 311999 | All Other Miscellaneous Food Manufacturing                   |
| 311222                                     | Soybean Processing   | 312111 | Soft Drink Manufacturing                                     |
| 311223                                     | Other Oilseed Processing                                   | 312112 | Bottled Water Manufacturing                                  |
| 311225                                     | Fats and Oils Refining and Blending                        | 312113 | Ice Manufacturing  |
| 311230                                     | Breakfast Cereal Manufacturing                             | 312120 | Breweries  |
| 311311                                     | Sugarcane Mills  | 312130 | Wineries   |
| 311312                                     | Cane Sugar Refining  | 312140 | Distilleries   |
| 311313                                     | Beet Sugar Manufacturing                                   | 312210 | Tobacco Stemming and Redrying                                |
| 311320                                     | Chocolate and Confectionery Manufacturing from Cacao Beans | 312221 | Cigarette Manufacturing                                      |
| 311330                                     | Confectionery Manufacturing from Purchased Chocolate       | 312229 | Other Tobacco Product Manufacturing                          |
| 311340                                     | Nonchocolate Confectionery Manufacturing                   | 313111 | Yarn Spinning Mills  |
| 311411                                     | Frozen Fruit, Juice, and Vegetable Manufacturing           | 313112 | Yarn Texturizing, Throwing, and Twisting Mills               |
| 311412                                     | Frozen Specialty Food Manufacturing                        | 313113 | Thread Mills   |
| 311421                                     | Fruit and Vegetable Canning                                | 313210 | Broadwoven Fabric Mills                                      |
| 311422                                     | Specialty Canning  | 313221 | Narrow Fabric Mills  |
| 311423                                     | Dried and Dehydrated Food Manufacturing                    | 313230 | Nonwoven Fabric Mills  |
| 311511                                     | Fluid Milk Manufacturing                                   | 313241 | Weft Knit Fabric Mills                                       |
| 311512                                     | Creamery Butter Manufacturing                              | 313249 | Other Knit Fabric and Lace Mills                             |
| 311513                                     | Cheese Manufacturing                                       | 316110 | Leather and Hide Tanning and Finishing                       |
| 311514                                     | Dry, Condensed, and Evaporated Dairy Product Manufacturing | 321113 | Sawmills   |
| 311520                                     | Ice Cream and Frozen Dessert Manufacturing                 | 321920 | Wood Container and Pallet Manufacturing                      |
| 311611                                     | Animal (except Poultry) Slaughtering                       | 322211 | Corrugated and Solid Fiber Box Manufacturing                 |
| 311612                                     | Meat Processed from Carcasses                              | 322212 | Folding Paperboard Box Manufacturing                         |
| 311613                                     | Rendering and Meat Byproduct Processing                    | 322213 | Setup Paperboard Box Manufacturing                           |
| 311615                                     | Poultry Processing   | 322214 | Fiber Can, Tube, Drum, and Similar Products Manufacturing    |

# APPENDIX A: CONTINUED

## MANUFACTURING CLUSTER (CROSS-CLUSTER) (CONTINUED)

| CLUSTER COMPONENTS BY NAICS CODE      |  |        |  |
|---------------------------------------|--|--------|--|
| <b>FOOD PROCESSING (CONTINUED)</b>    |  |        |  |
| 311711                                | Seafood Canning  | 322215 | Nonfolding Sanitary Food Container Manufacturing                         |
| 311712                                | Fresh and Frozen Seafood Processing  | 322291 | Sanitary Paper Product Manufacturing                                     |
| 311811                                | Retail Bakeries  | 325411 | Medicinal and Botanical Manufacturing                                    |
| 311812                                | Commercial Bakeries  | 325414 | Biological Product (except Diagnostic) Manufacturing                     |
| 311813                                | Frozen Cakes, Pies, and Other Pastries Manufacturing   | 326111 | Plastics Bag and Pouch Manufacturing                                     |
| 311821                                | Cookie and Cracker Manufacturing   | 326160 | Plastics Bottle Manufacturing  |
| 311822                                | Flour Mixes and Dough Manufacturing from Purchased Flour                                     | 327213 | Glass Container Manufacturing  |
| 311823                                | Dry Pasta Manufacturing  | 332115 | Crown and Closure Manufacturing  |
| 311830                                | Tortilla Manufacturing   | 332431 | Metal Can Manufacturing  |
| 311911                                | Roasted Nuts and Peanut Butter Manufacturing   | 332439 | Other Metal Container Manufacturing                                      |
| 311919                                | Other Snack Food Manufacturing   | 339112 | Surgical and Medical Instrument Manufacturing                            |
| <b>ENERGY RELATED MANUFACTURING</b>   |  |        |  |
| 333132                                | Oil and Gas Field Machinery and Equipment Manufacturing                                      | 311225 | Fats and Oils Refining and Blending                                      |
| 333414                                | Heating Equipment (except Warm Air Furnaces) Manufacturing                                   | 311613 | Rendering and Meat Byproduct Processing                                  |
| 333611                                | Turbine and Turbine Generator Set Units Manufacturing  | 322299 | All Other Converted Paper Product Manufacturing                          |
| 334512                                | Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use | 333298 | All Other Industrial Machinery Manufacturing                             |
| 334515                                | Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals        | 334413 | Semiconductor and Related Device Manufacturing                           |
| 334517                                | Irradiation Apparatus Manufacturing  | 334519 | Other Measuring and Controlling Device Manufacturing                     |
| 335110                                | Electric Lamp Bulb and Part Manufacturing  | 335312 | Motor and Generator Manufacturing  |
| 335121                                | Residential Electric Lighting Fixture Manufacturing  | 335314 | Relay and Industrial Control Manufacturing                               |
| 335122                                | Commercial, Industrial, and Institutional Electric Lighting Fixture Manufacturing            | 335999 | All Other Miscellaneous Electrical Equipment and Component Manufacturing |
| 335129                                | Other Lighting Equipment Manufacturing   | 311223 | Other Oilseed Processing   |
| 335311                                | Power, Distribution, and Specialty Transformer Manufacturing                                 | 325193 | Ethyl Alcohol Manufacturing  |
| 311225                                | Fats and Oils Refining and Blending  | 324110 | Petroleum Refineries   |
| 335311                                | Power, Distribution, and Specialty Transformer Manufacturing                                 | 324199 | All Other Petroleum and Coal Products Manufacturing                      |
| <b>LOGISTICS MANUFACTURING</b>        |  |        |  |
| 336120                                | Heavy Duty Truck Manufacturing   | 336611 | Ship Building and Repairing  |
| 336510                                | Railroad Rolling Stock Manufacturing   |        |  |
| <b>WATER TECHNOLOGY MANUFACTURING</b> |  |        |  |
| 326122                                | Plastics Pipe and Pipe Fitting Manufacturing   | 333319 | Other Commercial and Service Industry Machinery Manufacturing            |
| 333111                                | Farm Machinery and Equipment Manufacturing   | 333911 | Pump and Pumping Equipment Manufacturing                                 |

# APPENDIX A: CONTINUED

## MANUFACTURING CLUSTER (CROSS-CLUSTER) (CONTINUED)

| CLUSTER COMPONENTS BY NAICS CODE           |   |        |  |
|--|---|--------|--|
| <b>HEALTH &amp; WELLNESS MANUFACTURING</b> |   |        |  |
| 339112                                     | Surgical and Medical Instrument Manufacturing | 325411 | Medicinal and Botanical Manufacturing                |
| 339113                                     | Surgical Appliance and Supplies Manufacturing | 325412 | Pharmaceutical Preparation Manufacturing             |
| 339114                                     | Dental Equipment and Supplies Manufacturing   | 325413 | In-Vitro Diagnostic Substance Manufacturing          |
| 339115                                     | Ophthalmic Goods Manufacturing                | 325414 | Biological Product (except Diagnostic) Manufacturing |
| 339116                                     | Dental Laboratories                           |        |  |
| <b>OTHER</b>                               |   |        |  |
| 31-33                                      | All Manufacturing Industries not listed above |        |  |

## WATER TECHNOLOGY CLUSTER

| CLUSTER COMPONENTS BY NAICS CODE |   |        |   |
|----------------------------------|---|--------|---|
| <b>2007 NAICS U.S. TITLE</b>     |   |        |   |
| 326122                           | Plastic Pipe and Pipe Fitting Manufacturing                   | 333911 | Pump and Pumping Equipment Manufacturing                |
| 333111                           | Farm Machinery and Equipment Manufacturing                    | 423830 | Industrial Machinery and Equipment Merchant Wholesalers |
| 333319                           | Other Commercial and Service Industry Machinery Manufacturing | 424910 | Farm Supplies Merchant Wholesalers                      |