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# Regional Economic Sector and Skills Gap Analysis: Merced County

**Prepared for:** 

**Merced County Workforce Investment Board** 

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## INTRODUCTION

Prepared under the auspices of the Central California Workforce Collaborative (CCWC), this report provides trend information and projections for jobs in Merced County by industry sector, industry clusters, and occupational openings. The analysis also provides a description of key labor force characteristics in the County and discusses the match between education and occupational background for the unemployed and part time workforce in relation to projected job openings.

## SUMMARY OF FINDINGS

### JOB GROWTH

- The County unemployment rate has declined to 11.1% in 2015, down from the peak of 18.0% in 2010, but still well above the low point before the recession of 9.4% in 2006.
- Before the recession, total jobs in the County peaked at 70,629 in 2007 and managed to regain that level in 2012. Jobs have grown to 75,282 (annual average) in 2015.
- Health Care is projected to see the highest growth in jobs between 2015 and 2025 (2,620 new jobs), followed by Education (1,727 new jobs), Retail (1,524 new jobs), and Food Service (781 new jobs).
- Merced County is also expected to see relatively strong growth in the logistics sectors, including Wholesale (469 new jobs), Warehousing (489 new jobs), and Transportation (136 new jobs).
- The manufacturing sector is projected to add 454 net new jobs, led by fruit and vegetable canning, fluid milk and cheese production and wine.
- In terms of industry clusters, the Agriculture cluster is projected to have the highest employment growth between 2015 and 2025. Much of the growth in this cluster is in distribution and farm labor, although the food processing sector has a number of growing industries as indicated above for manufacturing. In addition, there are nearly 250 new jobs projected in a number of more technical agriculture related fields such as scientific, operations and other technical consulting, testing labs, and surveying.
- The Health and Wellness cluster projects the second highest job growth (2,778 new jobs), with about half of the new jobs focused on care for the elderly and disabled.
- Retail, Accommodations and Food Services are the other major industry groups or clusters with job growth potential, reflecting both local serving commercial growth as well as expansion of the tourism sector.
- The projections of job openings show a concentration in food services and sales (672 combined annual openings), but also transportation and materials handling (244 annual openings), and office and administrative support (314 annual openings).

#### LABOR FORCE CHARACTERISTICS

- The labor force in Merced County is generally concentrated in the younger age groups, with 18 percent in the 16-24 age group and nearly 25 percent of the 25-34 age group. The prime working age group of 35-54 has 42 percent of the workforce, which is less concentrated on a year to year basis than the younger age groups. Workers over 55 constitute about 15 percent of the workforce and a number of employers report that impending retirements are a significant issue for them in terms of anticipated openings in the future.
- Non-citizen workers constitute 23.9 percent of the workforce in Merced County, though the rate varies with age (Figure 4). At 27.6 percent of the millennial labor force (25-34) and 29.4 percent of the prime working age (35 to 54) labor force, non-citizens are more concentrated in these two age cohorts relative to their overall concentration level, i.e. 23.9 percent.
- The Merced County workforce exhibits comparable educational attainment to the rest of the San Joaquin Valley region, which is below state averages. About 73 percent of workers 25 years and older have received at least a high school diploma or equivalent and 24 percent have a college degree.
- Non-citizens 25 and over exhibit high rates of less than high school attainment level, at 68 percent. Seventeen-percent of non-citizens in the labor force have earned a high school diploma or equivalent, although this rate is almost ten percentage points lower than the rate for citizens (i.e. 27 percent). This accounts in part for the differences in educational attainment between Latino workers and other workers in the labor force, as the non-citizen group is 86 percent Latino. It is also important to note that Latinos have earned high school diplomas and GEDs at rates similar to all other races, at 23.9 percent versus 25.0 percent.
- Veterans in Merced County tend to have high levels of overall educational attainment, with slightly over two percent not achieving a high school diploma. For the workforce as a whole, 27.4 percent do not have a high school diploma or equivalent degree. Among disabled workers, however, nearly 35 percent do not have a high school diploma.

## CONCLUSION

At 1.4 percent a year, Merced County is expected to grow modestly from now to 2025, although analysts project a number of sectors including Health and Logistics, to exhibit steady growth at rates that double the overall annual growth rate of 1.4 percent. However, qualified workers are in short supply for certain key job categories. Based on the analysis presented in this report and discussions with key employers and workforce training organizations, the following can be identified as potential priorities for additional training efforts.

- Medical Technicians
- Electricians
- Maintenance Mechanics
- Ability to use computer operated processing controls and instruments (and related English competency)
- Workers with supervisory, management and business skills

## **ECONOMIC TRENDS**

## **POPULATION AND EMPLOYMENT TRENDS**

The County unemployment rate has declined to 11.1 percent in 2015, down from the peak of 18.0 percent in 2010, but still well above the low point before the recession of 9.4% in 2006 (Table 1). While employment levels have been increasing since 2010, the size of the labor force has oscillated somewhat, from 113,300 in 2010 to 115,100 in 2012, slightly down the following year to 115,000 in 2013, and finally to 114,990 in 2015.

PERIOD	Labor Force Trends	EMPLOYED LABOR FORCE	UNEMPLOY -MENT RATE
08-15 Ann. Growth Rate	1.7%	2.0%	15.3%
00-08 Ann. Growth Rate	1.5%	1.1%	10.7%
2015	114,992	102,300	11.1%
2014	115,400	100,600	12.8%
2013	115,000	98,300	14.5%
2012	115,100	96,300	16.4%
2011	114,500	94,300	17.7%
2010	113,300	92,900	18.0%
2009	105,400	87,900	16.6%
2008	102,200	89,200	12.6%
2007	99,800	89,800	10.1%
2006	97,900	88,700	9.4%
2005	98,700	88,900	10.0%
2004	97,600	87,000	10.9%
2003	96,800	85,800	11.4%
2002	95,700	85,300	10.9%
2001	91,700	82,400	10.2%
2000	90,400	81,700	9.6%

### Table 1 — Annual Labor Force Trends, 2000-2015: Merced County

Source: Applied Development Economics, based on CA EDD LMID. Note: Unemployment rates for 2000-2008 and 2008-2015 in the table above are annual averages, not annual growth rate.

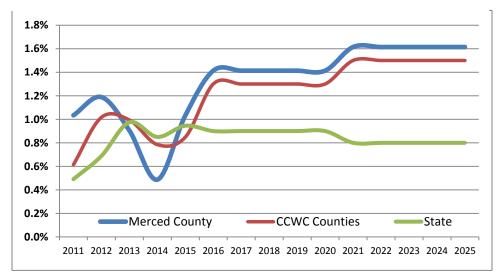
The household population has increased by 0.9 percent between 2010 and 2015 – a rate on par with the annual growth rate for the multi-county CCWC region as a whole (Table 2). In addition, group quarters population increased by 1,600 since 2010 due in part to students at University of California at Merced. Household population growth in the San Joaquin Valley exceeded statewide growth rates between 2011 and 2013, but has slowed in the past two years. As shown in Figure 1, Merced County is projected to grow slightly faster than the CCWC region as a whole over the next five years (2015-2020), which will have implications for some employment sectors, as discussed below.

	Household Population						
Year	Merced County	Growth Rate	CCWC Counties	Growth Rate	State ('000)	Growth Rate	
2010	250,897		3,888,941		36,412		
2011	253,491	1.0%	3,912,829	0.6%	36,591	0.5%	
2012	256,504	1.2%	3,952,595	1.0%	36,843	0.7%	
2013	258,824	0.9%	3,991,868	1.0%	37,202	1.0%	
2014	260,085	0.5%	4,023,198	0.8%	37,518	0.9%	
2015	262,770	1.0%	4,057,322	0.8%	37,873	0.9%	
10-15	11,873	0.9%	168,381	0.9%	1,461	0.8%	

 
 Table 2 – Total and Household Population Trends: Merced County, CCWC Region, and California

	Total Population							
Year	Merced County	Annual Growth Rates	CCWC Counties	Growth Rate	State ('000)	Growth Rate		
2010	255,793		4,004,407		37,254			
2011	258,852	1.2%	4,025,282	0.5%	37,428	0.5%		
2012	262,147	1.3%	4,058,833	0.8%	37,681	0.7%		
2013	264,502	0.9%	4,094,785	0.9%	38,031	0.9%		
2014	266,592	0.8%	4,129,749	0.9%	38,357	0.9%		
2015	269,280	1.0%	4,165,560	0.9%	38,715	0.9%		
10-15	13,487	1.0%	161,153	0.8%	1,461	0.8%		

Figure 1 – Household Population Annual Growth Rates



Before the recession, total jobs in the County peaked at 70,629 in 2007 and reached that level again as early as 2012. The annual average number of jobs in 2015 is estimated at 75,282 (Table 3). Through 2008, total jobs in the County were growing at a 1.1 annual percentage rate.

Period	TOTAL EMPLOYMENT
08-15 Ann. Growth Rate	1.1%
00-08 Ann.l Growth Rate	1.0%
2015	75,282
2014	74,370
2013	72,432
2012	70,776
2011	68,843
2010	67,995
2009	68,827
2008	69,893
2007	70,629
2006	69,783
2005	68,625
2004	67,700
2003	66,250
2002	66,352
2001	64,170
2000	64,611

Table 1- Trends in Total Number of Jobs: 2000-2015: Merced County

Source: Applied Development Economics, based on CA EDD LMID

Farm employment grew at a 5.1 percent annual rate between 2010 and 2015 but is projected to increase at a more tepid rate of 0.9 percent over the next ten years (Table 4). Despite these overall trends, some job growth is projected in farm support (NAICS 115), especially within farm labor contracting (NAICS 115115) (Table 5). A number of factors affect farm employment including availability of water and continued mechanization of farming operations. In addition, employers interviewed for this study indicated that the new state minimum wage law will affect employment opportunities in both farming and food processing and related industries. In addition, current efforts in the State Assembly to limit the agricultural work day are seen as a threat to employment growth.

Manufacturing industries in Merced County are mainly in food processing. Manufacturing jobs increased by more than 1,200 jobs between 2010 and 2015, from 7,988 in 2010 to 9,205 in 2015. While this sector grew by 2.9 percent a year between 2010 and 2015, it is expected to grow at a slower rate of 0.9 percent per year over the ten years. Within manufacturing, food processing (NAICS 311-312) is expected to grow annually by 0.4 percent between 2015 and 2025. Manufacturing industries such as fruit and vegetable canning (NAICS 311421), fluid milk manufacturing (NAICS 311511), and wineries (NAICS 312130) are expected to increase by 150 new jobs respectively between 2015 and 2025 (Table 5).

The construction industry continued to grow coming out of the recession over the past five years, and is projected to increase over the next ten years with the assistance of the California High Speed Rail project, which is projected to add 687 jobs in the county between 2015 and 2025 (Table 4). In addition, UC Merced's Project 2020 will add 10,000 construction jobs over its four-year construction period between 2016 and 2020. These job figures are not included in Table 4, but the project will provide a major boost to the regional construction industry. Residential construction (NAICS 236116) and water and sewer line construction (NAICS 237110) are also expected to grow during this period, which is consistent with expected population growth for the county over the next ten years (Table 5).

				Change	Ann. Growth Rate		
		2010	2015	2025 proj.	15-25	10-15	15-25
		70,029	77,329	89,117	11,789	2.0%	1.4%
11	Agriculture	11,070	14,166	15,453	1,287	5.1%	0.9%
21	Mining	17	3	10	7	-29.3%	13.3%
22	Utilities	369	292	230	-62	-4.5%	-2.4%
23	Construction	1,654	2,014	2,575	561	4.0%	2.5%
31-33	Manufacturing	7,988	9,205	9,658	454	2.9%	0.5%
42	Wholesale	2,004	1,894	2,363	469	-1.1%	2.2%
44-45	Retail	7,145	8,056	9,579	1,524	2.4%	1.7%
48	Warehousing	1,540	1,427	1,917	489	-1.5%	3.0%
49	Transportation	559	841	977	136	8.5%	1.5%
51	Information	1,225	271	250	-21	-26.1%	-0.8%
52	Finance and Insurance	1,047	1,064	1,220	156	0.3%	1.4%
53	Real Estate and Leasing	603	526	536	10	-2.7%	0.2%
54	Prof., Scientific, Technical	1,375	1,357	1,772	415	-0.3%	2.7%
55	Mgt.of Companies	773	862	857	-5	2.2%	-0.1%
561	Admin Support	1,384	1,428	1,895	467	0.6%	2.9%
562	Waste Mgt.	106	123	207	84	3.1%	5.3%
61	Education <sup>1</sup>	11,226	12,590	14,318	1,727	2.3%	1.3%
62	Health <sup>2,3</sup>	7,413	8,333	10,953	2,620	2.4%	2.8%
71	Arts, Rec., and Enter.	425	558	711	152	5.6%	2.4%
721	Accommodations	230	303	404	101	5.7%	2.9%
722	Food and Drinking Services	4,366	4,689	5,470	781	1.4%	1.6%
81	Other Services <sup>2</sup>	1,460	1,603	1,586	-18	1.9%	-0.1%
92	Public Admin (excl. Military)	5,543	5,098	5,567	469	-1.7%	0.9%
98	Military	415	418	369	-48	0.1%	-1.2%
99	Misc.	95	207	241	34	16.8%	1.6%

Table 4 - Employment Trends and Projections by Sectors: Merced County: 2010, 2015 and
2025 (proj.)

Source: ADE, Inc., based on EMSI Industry Employment trends 2010, 2015, 2025 QCEW and non-QCEW Q4 Data Series. Note 1: Public education moved out of NAICS 92 and placed in NAICS 61. Note 2: Public sector health care moved out of NAICS 92 and placed in NAICS 62. Note 3: NAICS 814110 [Private households] and NAICS 624120 [Service for elderly and others] were adjusted, which are reflected in sector-level employment data for NAICS 62 [Health] and NAICS 81 [Other Services] accordingly. Prior to 2013, persons assisting the elderly were categorized under NAICS 814110 [Private households] – starting in 2013, these jobs were re-categorized under NAICS 624120 [Service for elderly and others]. The Health Services sector is projected to see strong employment growth over the next ten years. This is a consistent finding throughout the San Joaquin Valley as well as nationally and reflects both demographic trends with the aging Baby Boomer population as well as industry trends to institute managed care with more outpatient and home health care. Employment in Health Services is projected to grow to 10,953 in 2025 from 8,333 in 2015, for an annual rate of growth of 2.8 percent (Table 4). In an effort to accurately characterize the state of employment in the sector in Merced County, employment in Health Services includes employed persons in the public sector, who for purposes of analysis were moved out of NAICS 92 (Public Administration) and into NAICS 62 (Health Services). Another population based trend is the increase in retail and food services jobs. Both these sectors have been recovering from the recession over the past five years, and are projected to see more moderate growth over the next ten years.

Table 5 provides more detail on projected fast growing industries in Merced County.

Table 52 — Employment Projections for Industries Expected to grow by 50 or more Jobsbetween 2015 and 2025: Merced County

NAICS	Industry	2015	2025 proj.	Change	Ann.Per. Chg.
	Total (Only Industries 50+ Job Growth)	29,755	41,043	11,288	3.3%
115113	Crop Harvesting, Primarily by Machine	475	632	157	2.9%
115115	Farm Labor Contractors and Crew Leaders	3,912	5,271	1,359	3.0%
	11 Agric.	4,386	5,903	1,516	3.0%
236116	New Multifamily Housing Construction (except For- Sale Builders)	53	106	53	7.1%
237110	Water and Sewer Line and Related Structures Construction	242	361	119	4.1%
237990	Other Heavy and Civil Engineer. Const.	33	749	716	36.7%
	23 Const.	328	1,216	171	4.7%
311421	Fruit and Vegetable Canning	1,233	1,387	155	1.2%
311511	Fluid Milk Manufacturing	417	616	198	4.0%
311513	Cheese Manufacturing	811	880	69	0.8%
312130	Wineries	414	580	166	3.4%
325314	Fertilizer (Mixing Only) Manufacturing	90	157	68	5.8%
326111	Plastics Bag and Pouch Manufacturing	83	181	98	8.1%
327320	Ready-Mix Concrete Manufacturing	206	300	94	3.8%
332311	Prefabricated Metal Building and Component Manufacturing	165	288	122	5.7%
332323	Ornamental and Architectural Metal Work Manufacturing	78	149	71	6.7%
333111	Farm Machinery and Equipment Manufacturing	184	251	68	3.2%
	31-33 Man.	3,680	4,788	1,108	2.7%
424410	General Line Grocery Merchant Wholesalers	425	508	83	1.8%
424480	Fresh Fruit and Vegetable Merchant Wholesalers	476	662	187	3.4%
424910	Farm Supplies Merchant Wholesalers	198	277	80	3.5%
	42 Wholesale	1,098	1,448	349	2.8%

NAICS	Industry	2015	2025 proj.	Change	Ann.Per. Chg.
443142	Electronics Stores	199	301	102	4.2%
446110	Pharmacies and Drug Stores	386	500	115	2.6%
447190	Other Gasoline Stations	329	390	61	1.7%
448140	Family Clothing Stores	226	384	159	5.5%
452112	Discount Department Stores	1,244	1,880	636	4.2%
452910	Warehouse Clubs and Supercenters	644	990	346	4.4%
452990	All Other General Merchandise Stores	351	506	156	3.7%
	44-45 Retail	3,378	4,952	1,575	3.9%
484110	General Freight Trucking, Local	319	463	144	3.8%
484220	Specialized Freight (except Used Goods) Trucking, Local	614	858	243	3.4%
485113	Bus and Other Motor Vehicle Transit Systems	48	99	51	7.5%
485410	School and Employee Bus Transportation	212	288	77	3.1%
	48 Trans.	1,192	1,707	515	3.7%
493110	General Warehousing and Storage	503	666	163	2.9%
	49 Warehousing	503	666	163	2.9%
522130	Credit Unions	222	313	90	3.5%
	52 Fin. And Insr.	222	313	90	3.5%
531311	Residential Property Managers	113	174	61	4.4%
	53 R.E. and Leasing	113	174	61	4.4%
541380	Testing Laboratories	83	151	67	6.1%
541690	Other Scientific and Technical Consulting Services	176	322	146	6.2%
541720	Research and Development in the Social Sciences and Humanities	334	491	157	3.9%
	54 Prof.,Sci., Tech.	593	964	370	5.0%
561311	Employment Placement Agencies	332	509	177	4.4%
561421	Telephone Answering Services	71	140	68	7.0%
561422	Telemarketing Bureaus and Other Contact Centers	123	346	223	10.9%
	56 Admin,Support,Waste	526	994	468	6.6%
621111	Offices of Physicians (except Mental Health Specialists)	1,172	1,378	206	1.6%
621340	Offices of Physical, Occupational and Speech Therapists, and Audiologists	153	220	67	3.7%
621492	Kidney Dialysis Centers	142	223	81	4.6%
621498	All Other Outpatient Care Centers	170	293	123	5.6%
621910	Ambulance Services	159	219	59	3.2%
623110	Nursing Care Facilities (Skilled Nursing Facilities)	831	1,094	264	2.8%
623220	Residential Mental Health and Substance Abuse Facilities	304	433	130	3.6%
623311	Continuing Care Retirement Communities	133	215	81	4.9%
623990	Other Residential Care Facilities	282	453	172	4.9%
624110	Child and Youth Services	75	126	51	5.4%
624120	Services for the Elderly and Persons with Disabilities	2,107	3,576	1,469	5.4%

NAICS	Industry	2015	2025 proj.	Change	Ann.Per. Chg.
	62 Health	5,527	8,231	2,703	4.1%
713990	All Other Amusement and Recreation Industries	105	169	64	4.9%
	71 Arts, Enter., Rec.	105	169	64	4.9%
721110	Hotels (except Casino Hotels) and Motels	294	386	92	2.8%
722513	Limited-Service Restaurants	2,851	3,567	716	2.3%
722515	Snack and Nonalcoholic Beverage Bars	377	455	78	1.9%
	72 Accomodations and Food	3,522	4,408	886	2.3%
902999	State Government, Excluding Education and Hospitals	472	576	104	2.0%
903999	Local Government, Excluding Education and Hospitals	4,109	4,533	424	1.0%
	90 Public	4,582	5,110	528	1.1%

Source: ADE, based on EMSI 2015 Q4 QCEW and Non QCEW Industry Employment Trends (note: p = projections / CAGR = compound annual growth rate)

## **INDUSTRY CLUSTERS**

The San Joaquin Valley has defined a number of regional industry clusters that are significant components of the regional economic base, which are listed in Table 6 below. Industry clusters represent traded sectors in the regional economy and typically are the source of most of the income and wealth for the region as well as the areas where innovation occurs most frequently. In Merced County, Agriculture and Health Care are the two largest industry clusters. For this study, we have also included the retail sector and the accommodations and food services sector to reflect job opportunities in the local-serving and tourism industries.

The Agriculture cluster includes not only farm production, but also food processing, related distribution and logistics, and a variety of agricultural services that include fertilizers, irrigation, soil testing, veterinary services, and marketing among others (Detailed cluster and sub-cluster employment data are in the Appendix at "Detailed Industry Cluster Employment Projections"). This cluster cuts across several of the major industry groups shown in Table 4 above. In addition, several agricultural support industries closely related to field operations are also projected to reduce jobs, as shown in Table 7 below. However, within the broader Agricultural cluster, several food processing industries are projected to increase employment, including fruit and vegetable canning, fluid milk manufacturing, and wineries. In addition, the agriculture related distribution (logistics) sector is projected to add about 1,000 jobs over the next ten years.

The Health and Wellness cluster is projected to add almost 2,800 jobs by 2025 (Table 6). About 53 percent of the new jobs in this cluster are projected for services to elderly and disabled persons. Some of the new jobs will occur in hospital settings but many will be in outpatient facilities and various types of nursing and residential care facilities. (see Appendix Table A-6 and A-7 for detail on industries with lower job projections).

	Emplo	yment	Change	
	2015	2025 proj.	15-25	Ann.Per. Chg.
	56,391	66,556	10,165	1.7%
Energy	2,597	2,926	330	1.2%
Manufacturing	1,759	1,820	61	0.3%
Health and Wellness	9,124	11,902	2,778	2.7%
Agriculture	28,776	31,919	3,143	1.0%
Water Flow Technology	391	532	140	3.1%
Logistics	2,226	2,768	541	2.2%
Retail	8,056	9,579	1,524	1.7%
Accommodations and Food Svc.	3,154	3,970	816	2.3%
Heavy Construction	308	1,140	832	14.0%

### Table 6 — Employment Projections by Industry Clusters: Merced County: 2015 - 2025

Source: Applied Development Economics, based on EMSI Q4 2015 QCEW and Non-QCEW. Note: Energy Cluster excludes employment data for NAICS 541 (Professional, Scientific and Technical), Health and Wellness Cluster excludes employment data for NAICS 9012(Military); Manufacturing Cluster is only for "manufacturing – other" industries (i.e., not included in other clusters such as Agriculture).

## **PROJECTED JOB OPENINGS**

Labor force demand is not only affected by new jobs growth but also by changes in the labor force. As discussed in the next chapter, as the Baby Boomer generation ages out of the labor force, there will be an increasing need for replacement workers. In addition, job turnover occurs for a number of other reasons. As shown in Table 8, nearly 26,300 openings are projected between 2015 and 2025, of which approximately 11,100 would be due to new job growth.

## Table 3 - Industries within Various Clusters that are Expected to Decline Significantly Between 2015 and 2025: Merced County

			Employment		Change	Ann. Growth Rate
Cluster	NAICS	Industry	2015	2025 p	15	-25
Ag and Food Processing	311422	Specialty Canning	55	0	-55	-100%
Ag and Food Processing	311911	Roasted Nuts and Peanut Butter Manufacturing	196	128	-68	-4%
Ag and Food Processing	311615	Poultry Processing	2209	2111	-98	-0.5%
Ag and Food Processing	311423	Dried and Dehydrated Food Manufacturing	195	21	-174	-20%
Ag and Food Production	111000	Crop Production	5112	5048	-64	0%
Ag and Food Production	112000	Animal Production and Aquaculture	3261	3100	-161	-1%
Energy Cluster and Sub- Clusters	221210	Natural Gas Distribution	142	77	-65	-6%
Energy Cluster and Sub- Clusters	238310	Drywall and Insulation Contractors	77	6	-71	-23%

			Emplo	oyment	Change	Ann. Growth Rate
Cluster	NAICS	Industry	2015 2025 p		15	-25
Health and Wellness Health		Assisted Living Facilities for				
Care - Delivery	623312	the Elderly	108	21	-87	-15%
Health and Wellness Health		General Medical and				
Care - Delivery	622110	Surgical Hospitals	1288	1190	-97	-1%
Logistics	336612	Boat Building	173	3	-170	-33%
		Commercial Printing (except				
Manufacturing Other	323111	Screen and Books)	629	357	-272	-5%

The Agricultural cluster will see a large number of these job openings in occupations related to transportation, production, installation, maintenance, repair, and farming. The retail and food services sectors are also expected to see a high rate of job availability. For the Health and Wellness cluster, direct health care occupations reflect only a portion of the labor force demand. Health practitioners and support, including personal care services, represent about 1,300 total opening over the ten years to 2025.<sup>1</sup> Other occupational categories will also be needed by this industry, including community and social services, office and administrative support, business and financial operations and management.

Based on our analysis of the labor force in Merced County, ADE has estimated the numbers of unemployed and part time employed workers who meet the minimum educational requirements for the projected job openings (Table 8). We include part time employed workers as an expression of the potentially under-employed workforce in the County, although some workers seek part time work out of choice.

Occupation	Annual Openings	Unemployed Whose Education Match Occupational Requirement	Part-Time Labor Force Whose Education Match Occupational Requirement
Total	2,703	7,257	13,163
53 Transportation and Material Moving	244	1,247	2,446
51 Production	157	637	278
49 Installation, Maintenance, and Repair	75	56	148
47 Construction and Extraction	87	929	1,389
45 Farming, Fishing, and Forestry	453	1,628	751
43 Office and Administrative Support	314	602	2,147
41 Sales and Related	347	485	875
39 Personal Care and Service	91	257	498
37 Building and Grounds Cleaning and Maint.	49	472	733
35 Food Preparation and Serving Related	325	443	1,717

Table 8 — Annual Opening to Number of Unemployed and Part-Time Workers Who Satisfy
Minimum Educational Requirements by Occupation (Persons 25 and Over): Merced County

 $<sup>^{1}</sup>$ 1,300 = (68 annual openings<sub>31 Healthcare Support</sub> + 63 annual openings<sub>29 Healthcare Practitioners and Technical</sub>) \* 10 years

Occupation	Annual Openings	Unemployed Whose Education Match Occupational Requirement	Part-Time Labor Force Whose Education Match Occupational Requirement
33 Protective Service	45	0	0
31 Healthcare Support	68	148	239
29 Healthcare Practitioners and Technical	63	19	33
27 Arts, Design, Entertainment, Sports, and Media	0	0	0
25 Education, Training, and Library	239	169	1,547
23 Legal	0	0	0
21 Community and Social Services	30	83	91
19 Life, Physical, and Social Science	13	19	0
17 Architecture and Engineering	4	0	0
15 Computer and Mathematical	0	0	0
13 Business and Financial Operations	27	22	74
11 Management	72	40	196

# LABOR FORCE CHARACTERISTICS

The analysis of labor force characteristics includes details about the following groups:<sup>2</sup>

- Race and Ethnicity: White, Latino, Other
- Gender
- Veteran Status
- Disability Status
- Citizenship

The characteristics include:

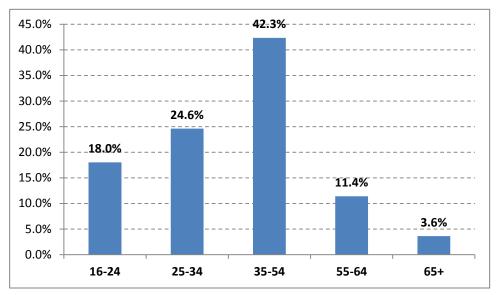
- Age
- Educational Attainment
- Employment status: full time, part time, unemployed
- Occupation

The discussion is organized around a number of graphical charts that summarize the information; however, Tables 9-24 at the end of the Chapter provide more detail for these groups and demographic characteristics.

### AGE DEMOGRAPHICS

The labor force in Merced County is generally concentrated in the younger age groups, with 18 percent in the 16-24 age group, nearly 25 percent of the 25-34 age group (Figure 2). The prime working age group of 35-54 has 42 percent of the workforce, which is less concentrated on a year to year basis than the younger age groups. Workers over 55 constitute about 15 percent of the workforce and a number of employers report that impending retirements are a significant issue for them in terms of anticipated openings in the future.

 $<sup>^2</sup>$  The analysis of labor force characteristics is based on census data for the 2012 to 2014 period, reflecting a three year average.



#### Figure 2 – Labor Force Age Distribution (Persons 16 and Over)

Source: ADE, Inc., based on US Census ACS PUMS 2012-2014 from iPUMS

As shown in Figure 3, younger age groups tend to have a higher proportion of Latino workers while older age groups have higher percentages of white workers. Of the labor force between 16 and 24, almost 59 percent are Latino, while slightly over 28 percent White. Similarly for the 25-34 age cohort, 57 percent are Latino and 32 percent are White. At 48 percent of the 35 to 54 workforce, White comprise the largest segment of prime working-age adults in the labor force, though Latinos are close behind at 40 percent.

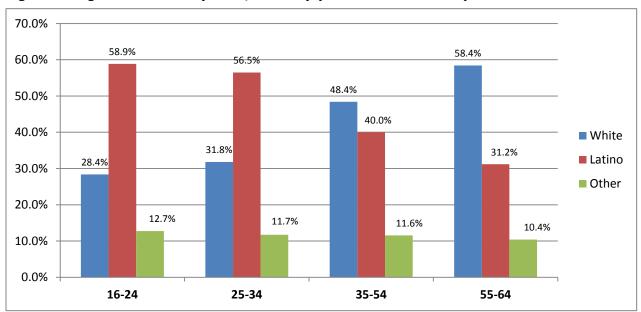


Figure 3 – Age Distribution by Race/Ethnicity (Persons 16 and Over)

Non-citizen workers constitute 23.9 percent of the workforce in Merced County, though the rate varies with age (Figure 4). At 27.6 percent of the millennial labor force (25-34) and 29.4 percent of the prime working age (35 to 54) labor force, non-citizens are more concentrated in these two sub-populations relative to their overall concentration level, i.e. 23.9 percent. In contrast, non-citizens comprise only 13.4 percent of the labor force between 16 and 24.

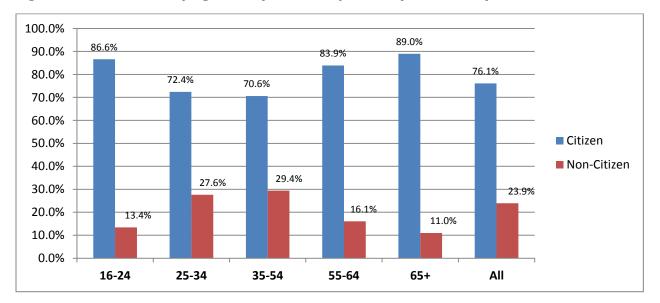


Figure 4 – Labor Force By Age and By Citizenship Status (16 and over)

Source: ADE, Inc., based on US Census ACS PUMS 2012-2014 from iPUMS

### UNEMPLOYMENT

In Merced County, almost 56 percent of the labor force is Latino, at 63,970 persons out of a labor force of 114,650 (see Table 9 at the end of the Chapter). Thirty-two percent is White. Unemployment for Latino workers is 19.2 percent compared to 11.4 percent for Whites. However, unemployment is 21.8 percent for workers in other racial and ethnic groups. Unemployment affects workers with no college degree much more, at 14.9 percent, than those with a college degree (7.5 percent). Veterans' unemployment level is at 8.7 percent. Disabled workers have relatively high unemployment, at nearly 23.9 percent.

### EDUCATIONAL ATTAINMENT

The Merced County workforce exhibits comparable educational attainment to the rest of the San Joaquin Valley region. Among US citizens in the workforce, only 13 percent do not have a high school diploma or GED and 60 percent have some college experience or an AA degree or higher. However, it is important to recognize that many non-citizens have not had the same educational opportunities in their home countries and many have not achieved the equivalent of a high school diploma. As shown in Figure 5, 68 percent of the non-citizens 25 and over in the labor force have not obtained a high school diploma or a GED. Seventeen-percent of non-citizens in the labor force have earned a high school diploma or equivalent, although this rate is almost ten percentage points lower than the rate for citizens (i.e. 27 percent). This accounts in part for the differences in educational attainment

between Latino workers and other workers in the labor force (Figure 6), as the non-citizen group is 86 percent Latino. It is also important to note that Latinos have earned high school diplomas and GEDs at rates similar to all other races, at 23.9 percent versus 25.0 percent. However, those of other races are over three times more likely than Latinos to have earned a college degree: 11.3 percent of the Latinos in the labor force have earned a college degree versus 39 percent for Whites and Others (Figure 6).

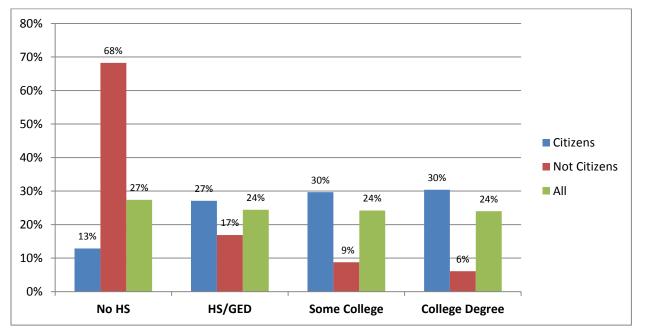
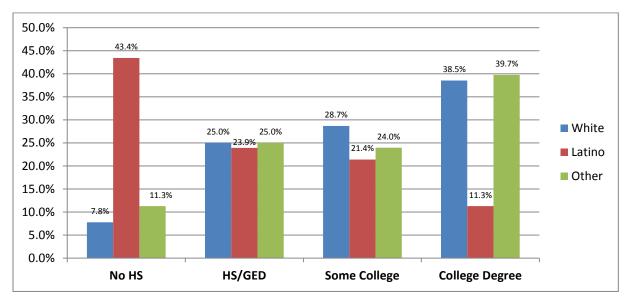


Figure 5 – Labor Force Educational Attainment by Citizenship Status (25 and over)

Source: ADE, Inc., based on US Census ACS PUMS 2012-2014 from iPUMS



### Figure 6 – Educational Attainment by Race/Ethnicity

Educational attainment also affects employment status. Persons with no high school diploma exhibit rates of unemployment that more than double unemployment levels for persons with a college degree, or 16.6 percent versus 7.5 percent. Of the persons with a college degree, over 68 percent work full-time, resulting in a full-time employment rate that is 16 percentage points greater than the rate for persons without a high school diploma (i.e. 68.2 percent versus 52.1 percent).

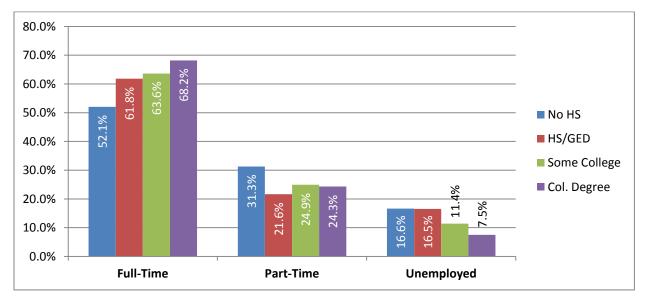


Figure 7 – Employment Status By Educational Attainment

Source: ADE, Inc. based on US Census ACS PUMS 2012-2014 from iPUMS

Veterans in Merced County tend to have high levels of overall educational attainment, with slightly over two percent not achieving a high school diploma (Figure 8). For the workforce as a whole, 27.4 percent do not have a high school diploma or equivalent degree. Among disabled workers, however, nearly 35 percent do not have a high school diploma.

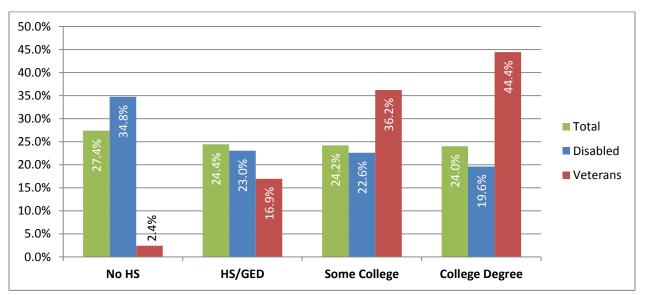
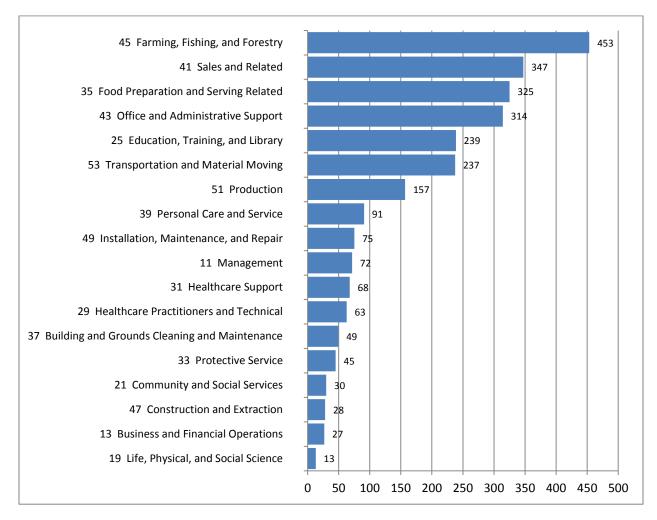


Figure 8 – Educational Attainment for Disabled Workers and Veterans

Source: ADE, Inc., based on US Census ACS PUMS 2012-2014 from iPUMS

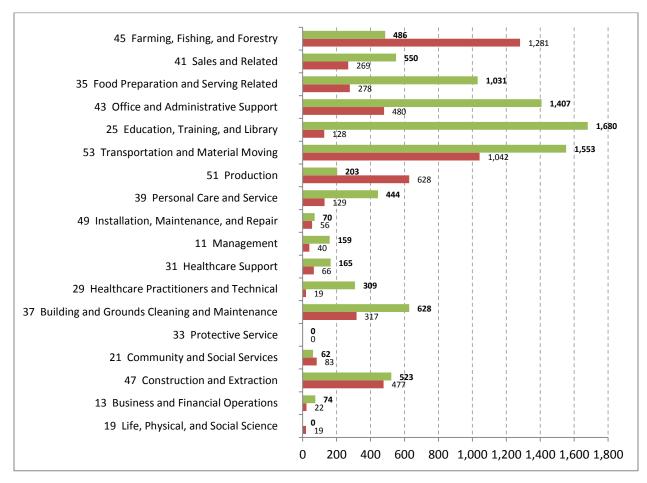
### **UNDERUTILIZED WORKFORCE**

The report provides a focus on part time and unemployment workers in terms of how their educational attainment and prior occupational background matches projected annual job openings. This part of the analysis addresses the underutilized segments of the Merced County workforce. Figure 9 reproduces the major categories of job openings listed earlier in Table 8. The largest numbers of openings are in lower skilled occupations such as farming, food service, sales and administrative office occupations. However, significant number so openings are also projected in education, production, and installation and maintenance mechanics, which followed closely by management and healthcare positions. Comparing these categories to the availability of currently unemployed and part time workers in Figure 10, there are substantial numbers of workers who would seemingly be available to fill these positions. However, they may need training to help upgrade their sill sets or they may need other services to help them be available for full time employment.



#### Figure 9 – Annual Openings By Major Occupational Groups

Source: ADE, Inc., based on US Census ACS PUMS 2012-2014 from iPUMS



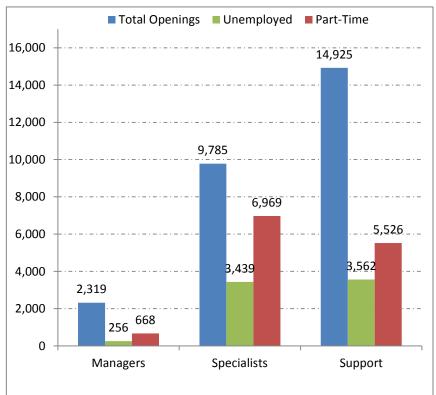
#### Figure 10 - Number of Unemployed and Part-Time Labor Force by Major Occupational Group

Source: ADE, Inc., based on US Census ACS PUMS 2012-2014 from iPUMS

Figure 11 groups job openings by three main categories of occupational level: managers and supervisory personnel; workers with specialty or higher level skills; and support positions that are more entry level or have a lower required skill set.<sup>3</sup> At this level, the unemployed and part time workforce exceeds the available openings (shown in green) for each category, reinforcing the notion that retraining and skills transfer may help improve the availability of workers for positions in demand by employers.

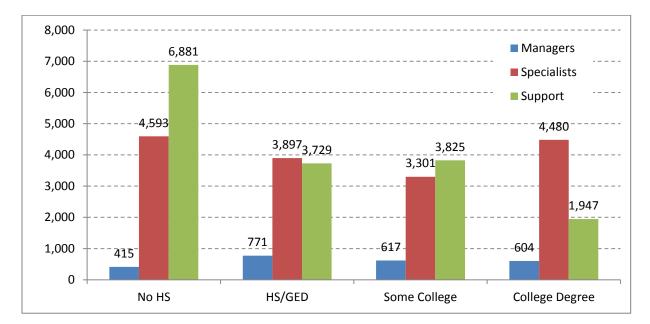
<sup>&</sup>lt;sup>3</sup>In Figure 11, we match unemployed and part-time workers by their respective occupations with openings positions whose 6-digit occupational code corresponds to the unemployed and part-time workers. Moreover, we further narrow the available labor force by matching persons whose educational attainment levels are commensurate with minimum educational level required for each opening position.

Figure 11 – Part Time and Unemployment Workers By Occupational Class Compared To Annual Openings (Persons 25 and Over): Only Persons Whose Educational Attainment Commensurate With Opening Position: Merced County



Source: ADE, Inc., based on US Census ACS PUMS 2012-2014 from iPUMS

Figure 12 shows the educational level for the unemployed and part time workforce, categorized by occupational background. This figure tracks all unemployed and part-time workers, not just those who minimally qualify for the annually open positions. There are relatively few managers who have not achieved a high school diploma and the greatest number do have a high school diploma (771), followed closely by those with some college education (617) and with a college degree (604). Among mid-level workers with some special skills, most have either a high school diploma (3,897) or a college degree (4,480). Almost 2,000 workers who most recently worked in support positions also have a college degree.



## Figure 12 – Part Time and Unemployed Workers By Educational Attainment and Occupational Class (Persons 25 and Over): Merced County

Source: ADE, Inc., based on US Census ACS PUMS 2012-2014 from iPUMS

The following tables provide more detail for the population and labor force for the groups described in this chapter.

	Labor Force Trends By Race and Ethnicity (Persons 16 and Over)	Labor Force Trends By Gender (Persons 16 and Over)	Labor Force Trends By Citizenship Status (Persons 16 and Over)	Labor Force Trends By Educational Attainment (Persons 25 and Over)	Labor Force Trends By Veteran Status (Persons 16 and Over)	Labor Force Trends By Disability Status (Persons 16 and Over)
	White	Women	Citizens	Persons with College Degree	Veterans	Persons with at least One Disability
Labor Force	36,631	49,485	87,247	22,565	4,951	13,352
Unemployed	4,171	8,627	14,689	1,700	430	3,187
Unemployment Rate	11.4%	17.4%	16.8%	7.5%	8.7%	23.9%
	Latino	Men	Not Citizens	Persons with No College Degree	Not Veterans	Persons with No Reported Disability
Labor Force	63,970	65,165	27,403	71,425	109,424	101,298
Unemployed	12,283	10,887	4,824	10,678	18,906	16,326
Unemployment Rate	19.2%	16.7%	17.6%	14.9%	17.3%	16.1%
	Other					
Labor Force	14,049					
Unemployed	3,060					
Unemployment Rate	21.8%					
	Total	Total	Total	Total	Total	Total
Labor Force	114,650	114,650	114,650	93,991	114,650	114,650
Unemployed	19,513	19,513	19,513	12,378	19,513	19,513
Unemployment Rate	17.0%	17.0%	17.0%	13.2%	17.0%	17.0%

Table 9 – Summary of Overall Labor Force Trends For Select Demographic Categories Merced County

	0-15	16-19	20-24	25-29	30-34	35-54	55-64	65+	Total
Total	71,334	18,773	21,597	18,483	17,871	63,944	24,992	27,169	264,162
White	13,232	3,956	4,816	4,693	4,678	20,407	11,961	15,300	79,043
Did not earn HSD\GED	10,899	2,160	438	277	487	2,145	1,597	2,636	20,640
HSD\GED		861	1,418	1,440	669	6,051	3,356	4,857	18,651
Some college not attending		8	890	979	1,338	5,821	3,220	3,797	16,053
Some college attending		926	1,747	383	376	353	31	45	3,862
AA			104	208	739	1,790	1,444	1,004	5,288
BA+			220	1,406	1,068	4,247	2,314	2,962	12,217
NA	2,332								2,332
Latino	49,390	11,468	13,583	11,517	10,657	35,280	9,759	8,226	149,879
Did not earn HSD\GED	40,631	6,858	1,380	3,293	4,754	18,277	5,715	5,234	86,143
HSD\GED		1,392	4,073	4,145	2,333	7,451	1,557	1,221	22,172
Some college not attending		353	2,653	2,343	1,691	6,082	1,475	1,200	15,798
Some college attending		2,865	4,311	529	827	185	38		8,755
AA			696	549	357	1,577	505	394	4,078
BA+			469	658	694	1,708	468	178	4,176
NA	8,759								8,759
Other	8,713	3,349	3,198	2,273	2,536	8,257	3,272	3,643	35,240
Did not earn HSD\GED	7,567	1,358	326	147	244	1,352	680	1,415	13,089
HSD\GED		568	760	627	869	2,048	925	664	6,460
Some college not attending		176	366	248	444	2,172	571	631	4,608
Some college attending		1,128	1,462	103	98	201	17	14	3,023
AA		119	134	176	349	718	522	264	2,281
BA+			151	971	532	1,766	557	656	4,632
NA	1,146								1,146

#### Table 10 – Population by Age, Race Ethnicity, and Educational Attainment Merced County

Source: ADE, Inc., based on US Census ACS PUMS 2012-2014 from iPUMS (Note: "NA" refers to infants not yet enrolled in school or pre-school)

	16-19	20-24	25-29	30-34	35-54	55-64	65+	Labor Force (25+)	Total Labor Force
Total	5,293	15,366	14,183	14,046	48,530	13,077	4,154	93,991	114,650
White	1,244	3,191	3,993	4,017	15,427	6,332	2,427	32,196	36,631
Did not earn HSD\GED	NA	NA	121	426	1,145	685	124	2,502	NA
HSD\GED	NA	NA	1,053	545	4,341	1,603	521	8,063	NA
Some college not attending	NA	NA	884	1,046	4,267	1,588	538	8,323	NA
Some college attending	NA	NA	365	329	181	31	0	906	NA
AA	NA	NA	174	645	1,481	811	332	3,443	NA
BA+	NA	NA	1,397	1,025	4,012	1,613	912	8,959	NA
Latino	3,035	10,367	8,329	8,291	27,418	5,234	1,295	50,567	63,970
Did not earn HSD\GED	NA	NA	2,030	3,493	12,871	2,790	779	21,964	NA
HSD\GED	NA	NA	2,851	1,938	6,169	896	232	12,086	NA
Some college not attending	NA	NA	2,043	1,290	5,292	807	146	9,578	NA
Some college attending	NA	NA	478	608	153	0	0	1,239	NA
AA	NA	NA	269	268	1,353	322	109	2,321	NA
BA+	NA	NA	658	694	1,581	418	29	3,380	NA
Other	1,014	1,808	1,860	1,738	5,685	1,512	432	11,227	14,049
Did not earn HSD\GED	NA	NA	83	45	706	204	227	1,265	NA
HSD\GED	NA	NA	515	383	1,343	537	32	2,810	NA
Some college not attending	NA	NA	135	368	1,459	279	46	2,287	NA
Some college attending	NA	NA	103	98	201	0	0	402	NA
AA	NA	NA	150	349	504	163	32	1,197	NA
BA+	NA	NA	874	494	1,472	329	95	3,265	NA

Table 11 — Labor Force by Age, Race\Ethnicity, and Educational Attainment (Persons 16 and Over): Merced County

	16-19	20-24	25-29	30-34	35-54	55-64	65+	Labor Force (25+)	Total Labor Force
Total	2,405	6,866	3,256	2,996	12,463	3,257	1,685	24,175	33,446
White	565	1,766	876	1,007	3,241	1,417	1,074	7,616	9,947
Did not earn HSD\GED	NA	NA	0	0	242	157	71	470	NA
HSD\GED	NA	NA	117	81	705	456	291	1,650	NA
Some college not attending	NA	NA	257	321	888	221	214	1,902	NA
Some college attending	NA	NA	98	220	137	0	0	455	NA
AA	NA	NA	120	47	309	141	128	744	NA
BA+	NA	NA	284	338	960	442	370	2,394	NA
Latino	1,460	4,344	2,380	1,678	7,771	1,344	413	13,586	19,390
Did not earn HSD\GED	NA	NA	509	869	4,727	901	139	7,144	NA
HSD\GED	NA	NA	650	302	1,300	261	107	2,620	NA
Some college not attending	NA	NA	634	261	1,161	87	66	2,210	NA
Some college attending	NA	NA	209	100	98	0	0	407	NA
AA	NA	NA	67	43	210	38	101	458	NA
BA+	NA	NA	310	104	275	56	0	745	NA
Other	380	756	0	311	1,451	496	198	2,973	4,109
Did not earn HSD\GED	NA	NA	0	0	216	97	126	439	NA
HSD\GED	NA	NA	236	95	140	197	32	699	NA
Some college not attending	NA	NA	26	0	467	141	10	644	NA
Some college attending	NA	NA	0	51	0	0	0	51	NA
AA	NA	NA	64	0	260	5	0	328	NA
BA+	NA	NA	192	165	368	57	30	813	NA

Table 12 — Part-Time Employed Labor Force by Age, Race\Ethnicity, and Educational Attainment (Persons 16 and Over): Merced County

	16-19	20-24	25-29	30-34	35-54	55-64	65+	Labor Force (25+)	Total Labor Force
Total	2,517	4,619	2,197	2,404	5,656	1,134	590	12,378	19,513
White	614	792	649	563	1,170	248	135	2,765	4,171
Did not earn HSD\GED	NA	NA	0	81	142	0	28	251	NA
HSD\GED	NA	NA	312	49	541	0	0	902	NA
Some college not attending	NA	NA	52	229	283	95	10	670	NA
Some college attending	NA	NA	123	87	33	0	0	244	NA
AA	NA	NA	9	26	115	35	54	239	NA
BA+	NA	NA	153	91	54	119	42	458	NA
Latino	1,387	3,155	1,548	1,489	3,666	627	410	7,740	12,283
Did not earn HSD\GED	NA	NA	401	657	2,036	344	380	3,818	NA
HSD\GED	NA	NA	866	284	924	248	0	2,322	NA
Some college not attending	NA	NA	138	136	428	35	22	760	NA
Some college attending	NA	NA	21	228	55	0	0	304	NA
AA	NA	NA	98	79	41	0	8	226	NA
BA+	NA	NA	24	104	183	0	0	311	NA
Other	516	671	0	352	820	259	45	1,873	3,060
Did not earn HSD\GED	NA	NA	83	0	100	31	0	214	NA
HSD\GED	NA	NA	57	159	267	88	0	571	NA
Some college not attending	NA	NA	70	118	87	108	27	411	NA
Some college attending	NA	NA	103	31	77	0	0	211	NA
АА	NA	NA	0	25	27	15	0	68	NA
BA+	NA	NA	83	19	263	16	18	398	NA

Table 13 — Unemployed Labor Force by Age, Race\Ethnicity, and Educational Attainment (Persons 16 and Over): Merced County

Table 14 — Unemployment Rates by Age, Race\Ethnicity, and Educational Attainment (Persons 16 and Over): Merced	
County	

	16-19	20-24	25-29	30-34	35-54	55-64	65+	Labor Force (25+)	Total Labor Force
Total	47.6%	30.1%	18.3%	17.1%	11.7%	8.7%	14.2%	13.2%	17.0%
White	49.4%	24.8%	16.3%	14.0%	7.6%	3.9%	5.5%	8.6%	11.4%
Did not earn HSD\GED	NA	NA	0.0%	18.9%	12.4%	0.0%	22.8%	10.0%	NA
HSD\GED	NA	NA	29.6%	9.0%	12.5%	0.0%	0.0%	11.2%	NA
Some college not attending	NA	NA	5.9%	21.9%	6.6%	6.0%	1.9%	8.0%	NA
Some college attending	NA	NA	33.8%	26.5%	18.4%	0.0%	NA	26.9%	NA
AA	NA	NA	5.2%	4.0%	7.8%	4.3%	16.3%	6.9%	NA
BA+	NA	NA	10.9%	8.9%	1.4%	7.4%	4.6%	5.1%	NA
Latino	45.7%	30.4%	18.6%	18.0%	13.4%	12.0%	31.7%	15.3%	19.2%
Did not earn HSD\GED	NA	NA	19.8%	18.8%	15.8%	12.3%	48.8%	17.4%	NA
HSD\GED	NA	NA	30.4%	14.7%	15.0%	27.6%	0.0%	19.2%	NA
Some college not attending	NA	NA	6.8%	10.6%	8.1%	4.4%	15.3%	7.9%	NA
Some college attending	NA	NA	4.3%	37.5%	35.8%	NA	NA	24.5%	NA
AA	NA	NA	36.5%	29.5%	3.0%	0.0%	7.3%	9.7%	NA
BA+	NA	NA	3.6%	15.0%	11.6%	0.0%	0.0%	9.2%	NA
Other	<b>50.9</b> %	37.1%	21.3%	20.3%	14.4%	17.1%	10.3%	16.7%	21.8%
Did not earn HSD\GED	NA	NA	100.0%	0.0%	14.1%	15.2%	0.0%	16.9%	NA
HSD\GED	NA	NA	11.1%	41.5%	19.9%	16.4%	0.0%	20.3%	NA
Some college not attending	NA	NA	52.2%	32.1%	6.0%	38.8%	58.3%	18.0%	NA
Some college attending	NA	NA	100.0%	31.3%	38.3%	NA	NA	52.4%	NA
АА	NA	NA	0.0%	7.3%	5.4%	9.4%	0.0%	5.7%	NA
BA+	NA	NA	9.5%	3.8%	17.8%	4.8%	18.5%	12.2%	NA

	16-19	20-24	25-29	20.24	35-54	55-64	6E I	Labor Force	Total
Total	16-19 5,293	20-24 15,366	25-29 14,183	30-34 14,046	35-54 48,530	55-64 13,077	65+ 4,154	(25+) 93,991	Total 114,650
Citizen	4,493	13,401	10,819	9,616	34,249	10,973	3,697	69,353	87,247
Did not earn HSD\GED	NA	NA	802	905	4,518	2,008	686	8,919	NA
HSD\GED	NA	NA	3,311	1,988	9,841	2,873	785	18,797	NA
Some college not attending	NA	NA	2,528	2,502	9,826	2,506	730	18,093	NA
Some college attending	NA	NA	931	981	535	31	0	2,478	NA
AA	NA	NA	500	1,242	3,116	1,270	465	6,593	NA
BA+	NA	NA	2,747	1,998	6,411	2,286	1,030	14,473	NA
Not Citizen	800	1,965	3,364	4,430	14,282	2,105	457	24,638	27,403
Did not earn HSD\GED	NA	NA	1,433	3,059	10,204	1,671	444	16,812	NA
HSD\GED	NA	NA	1,108	878	2,011	164	0	4,162	NA
Some college not attending	NA	NA	534	202	1,191	168	0	2,095	NA
Some college attending	NA	NA	15	55	0	0	0	69	NA
AA	NA	NA	92	19	222	26	8	368	NA
BA+	NA	NA	181	216	654	75	5	1,132	NA

Table 15 – Labor Force by Age, Citizenship Status, and Educational Attainment (Persons 16 and Over): Merced County

	16-19	20-24	25-29	30-34	35-54	55-64	65+	Labor Force (25+)	Total Labor Force
Total	2,517	4,619	2,594	2,404	5,656	1,134	590	12,378	19,513
Citizen	2,010	3,993	2,274	1,802	3,529	742	341	8,686	14,689
Did not earn HSD\GED	NA	NA	430	353	576	107	167	1,634	NA
HSD\GED	NA	NA	1,111	293	1,444	263	0	3,111	NA
Some college not attending	NA	NA	119	484	776	203	60	1,642	NA
Some college attending	NA	NA	247	346	165	0	0	758	NA
AA	NA	NA	107	111	183	50	54	506	NA
BA+	NA	NA	260	214	384	119	59	1,036	NA
Not Citizen	507	626	320	602	2,127	393	249	3,691	4,824
Did not earn HSD\GED	NA	NA	54	384	1,702	268	241	2,650	NA
HSD\GED	NA	NA	124	199	288	73	0	684	NA
Some college not attending	NA	NA	141	0	22	35	0	199	NA
Some college attending	NA	NA	0	0	0	0	0	0	NA
AA	NA	NA	0	19	0	0	8	27	NA
BA+	NA	NA	0	0	115	16	0	131	NA

Table 16 — Unemployed Labor Force by Age, Citizenship Status, and Educational Attainment (Persons 16 and Over): Merced County

	16-19	20-24	25-29	30-34	35-54	55-64	65+	Labor Force (25+)	Total Labor Force
Total	47.6%	30.1%	18.3%	17.1%	11.7%	8.7%	14.2%	13.2%	17.0%
Citizen	44.7%	29.8%	21.0%	18.7%	10.3%	6.8%	9.2%	12.5%	16.8%
Did not earn HSD\GED	NA	NA	53.6%	39.0%	12.7%	5.3%	24.4%	18.3%	NA
HSD\GED	NA	NA	33.6%	14.7%	14.7%	9.1%	0.0%	16.6%	NA
Some college not attending	NA	NA	4.7%	19.3%	7.9%	8.1%	8.2%	9.1%	NA
Some college attending	NA	NA	26.5%	35.3%	30.8%	0.0%	NA	30.6%	NA
AA	NA	NA	21.4%	8.9%	5.9%	3.9%	11.7%	7.7%	NA
BA+	NA	NA	9.5%	10.7%	6.0%	5.2%	5.8%	7.2%	NA
Not Citizen	63.4%	31.8%	9.5%	13.6%	14.9%	18.7%	54.4%	15.0%	17.6%
Did not earn HSD\GED	NA	NA	3.8%	12.6%	16.7%	16.1%	54.3%	15.8%	NA
HSD\GED	NA	NA	11.2%	22.7%	14.3%	44.6%	NA	16.4%	NA
Some college not attending	NA	NA	26.5%	0.0%	1.9%	21.0%	NA	9.5%	NA
Some college attending	NA	NA	0.0%	0.0%	NA	NA	NA	0.0%	NA
AA	NA	NA	0.0%	100.0%	0.0%	0.0%	100.0%	7.3%	NA
BA+	NA	NA	0.0%	0.0%		17.6%	21.0%	0.0%	NA

Table 17 — Unemployment Rates by Age, Citizenship Status, and Educational Attainment (Persons 16 and Over): Merced County

	16-19	20-24	25-29	30-34	35-54	55-64	65+	Labor Force (25+)	Total Labor Force
Total	5,293	15,366	14,183	14,046	48,530	13,077	4,154	93,991	114,650
Persons W\ No Reported Disability	4,876	13,619	13,253	12,743	42,159	11,415	3,233	82,803	101,298
Did not earn HSD\GED	NA	NA	2,047	3,378	12,408	3,066	943	21,842	NA
HSD\GED	NA	NA	3,974	2,746	10,224	2,847	591	20,383	NA
Some college not attending	NA	NA	2,959	2,430	9,483	2,406	508	17,785	NA
Some college attending	NA	NA	898	958	535	31	0	2,422	NA
AA	NA	NA	538	1,142	3,039	1,046	376	6,141	NA
BA+	NA	NA	2,838	2,089	6,470	2,020	814	14,231	NA
Persons W\At Least One Disability	417	1,748	930	1,303	6,372	1,662	921	11,187	13,352
Did not earn HSD\GED	NA	NA	188	586	2,314	613	187	3,888	NA
HSD\GED	NA	NA	445	120	1,628	190	193	2,577	NA
Some college not attending	NA	NA	103	275	1,534	268	223	2,403	NA
Some college attending	NA	NA	48	77	0	0	0	125	NA
AA	NA	NA	54	120	300	250	97	820	NA
BA+	NA	NA	91	125	596	341	221	1,374	NA

Table 18 – Labor Force by Age, Disability Status, and Educational Attainment (Persons 16 and Over): Merced County

Table 19 — Unemployed Labor Force by Age, Disability Status, and Educational Attainment (Persons 16 and Over): Merced County

	16-19	20-24	25-29	30-34	35-54	55-64	65+	Labor Force (25+)	Total Labor Force
Total	2,517	4,619	2,594	2,404	5,656	1,134	590	12,378	19,513
Persons W\ No Reported Disability	2,185	3,750	2,421	2,071	4,491	903	504	10,391	16,326
Did not earn HSD\GED	NA	NA	484	613	1,777	253	380	3,507	NA
HSD\GED	NA	NA	1,111	427	1,327	319	0	3,184	NA
Some college not attending	NA	NA	260	458	547	225	33	1,523	NA
Some college attending	NA	NA	199	286	165	0	0	650	NA
AA	NA	NA	107	117	176	31	32	463	NA
BA+	NA	NA	260	170	500	76	59	1,065	NA
Persons W\At Least One Disability	332	869	172	333	1,165	231	85	1,986	3,187
Did not earn HSD\GED	NA	NA	0	125	501	122	28	777	NA
HSD\GED	NA	NA	124	65	405	17	0	611	NA
Some college not attending	NA	NA	0	26	251	14	27	318	NA
Some college attending	NA	NA	48	60	0	0	0	108	NA
AA	NA	NA	0	13	7	19	30	70	NA
BA+	NA	NA	0	44	0	58	0	102	NA

Table 20 — Unemployment rates by Age, Disability Status, and Educational Attainment (Persons 16 and Over): Merced	d
County	

	16-19	20-24	25-29	30-34	35-54	55-64	65+	Labor Force (25+)	Total Labor Force
Total	47.6%	30.1%	18.3%	17.1%	11.7%	8.7%	14.2%	13.2%	17.0%
Persons W\ No Reported Disability	44.8%	27.5%	18.3%	16.3%	10.7%	7.9%	15.6%	12.5%	16.1%
Did not earn HSD\GED	NA	NA	23.7%	18.1%	14.3%	8.3%	40.3%	16.1%	NA
HSD\GED	NA	NA	28.0%	15.5%	13.0%	11.2%	0.0%	15.6%	NA
Some college not attending	NA	NA	8.8%	18.9%	5.8%	9.3%	6.4%	8.6%	NA
Some college attending	NA	NA	22.2%	29.8%	30.8%	0.0%	NA	26.8%	NA
AA	NA	NA	19.9%	10.2%	5.8%	2.9%	8.6%	7.5%	NA
BA+	NA	NA	9.2%	8.1%	7.7%	3.8%	7.3%	7.5%	NA
Persons W\At Least One Disability	79.6%	49.7%	18.5%	25.6%	18.3%	13.9%	9.3%	17.8%	23.9%
Did not earn HSD\GED	NA	NA	0.0%	21.3%	21.7%	19.9%	15.2%	20.0%	NA
HSD\GED	NA	NA	27.9%	54.3%	24.9%	8.9%	0.0%	23.7%	NA
Some college not attending	NA	NA	0.0%	9.3%	16.4%	5.2%	12.1%	13.2%	NA
Some college attending	NA	NA	100.0%	78.0%	NA	NA	NA	86.4%	NA
AA	NA	NA	0.0%	10.9%	2.4%	7.7%	30.9%	8.5%	NA
BA+	NA	NA	0.0%	35.3%	0.0%	17.1%	0.0%	7.4%	NA

	16-19	20-24	25-29	30-34	35-54	55-64	65+	Labor Force (25+)	Total Labor Force
Total	5,293	15,366	14,183	14,046	48,530	13,077	4,154	93,991	114,650
Not Veterans	5,274	15,285	13,986	13,614	46,555	11,499	3,485	89,139	109,699
Did not earn HSD\GED	NA	NA	2,235	3,964	14,682	3,679	1,052	25,613	NA
HSD\GED	NA	NA	4,359	2,825	11,571	2,635	747	22,137	NA
Some college not attending	NA	NA	2,994	2,589	10,080	2,280	554	18,496	NA
Some college attending	NA	NA	931	1,017	535	0	0	2,483	NA
AA	NA	NA	538	1,080	3,116	826	382	5,942	NA
BA+	NA	NA	2,929	2,139	6,570	2,079	750	14,467	NA
Veterans	19	81	197	432	1,976	1,578	669	4,852	4,951
Did not earn HSD\GED	NA	NA	0	0	40	0	78	117	NA
HSD\GED	NA	NA	60	41	282	402	38	822	NA
Some college not attending	NA	NA	68	116	937	394	177	1,692	NA
Some college attending	NA	NA	15	19	0	31	0	64	NA
AA	NA	NA	54	182	222	470	91	1,019	NA
BA+	NA	NA	0	75	495	282	286	1,137	NA

Table 21 — Labor Force by Age, Veteran Status, and Educational Attainment (Persons 16 and Over): Merced County

Table 22 — Unemployed Labor Force by Age, Veteran Status, and Educational Attainment (Persons 16 and Over): Merced County

	16-19	20-24	25-29	30-34	35-54	55-64	65+	Labor Force (25+)	Total Labor Force
Total	2,517	4,619	2,594	2,404	5,656	1,134	590	12,378	19,513
Not Veterans	2,517	4,619	2,513	2,325	5,562	1,035	513	11,948	19,083
Did not earn HSD\GED	NA	NA	484	738	2,278	375	408	4,284	NA
HSD\GED	NA	NA	1,182	492	1,712	305	0	3,691	NA
Some college not attending	NA	NA	233	484	767	196	10	1,690	NA
Some college attending	NA	NA	247	327	165	0	0	739	NA
AA	NA	NA	107	130	140	46	47	471	NA
BA+	NA	NA	260	154	500	113	47	1,073	NA
Veterans	0	0	81	79	94	99	77	430	430
Did not earn HSD\GED	NA	NA	0	0	0	0	0	0	NA
HSD\GED	NA	NA	53	0	20	31	0	104	NA
Some college not attending	NA	NA	28	0	31	43	49	151	NA
Some college attending	NA	NA	0	19	0	0	0	19	NA
AA	NA	NA	0	0	43	4	15	62	NA
BA+	NA	NA	0	60	0	21	13	94	NA

	16-19	20-24	25-29	30-34	35-54	55-64	65+	Labor Force (25+)	Total Labor Force
Total	47.6%	30.1%	18.3%	17.1%	11.7%	8.7%	14.2%	13.2%	17.0%
Not Veterans	47.7%	30.2%	18.0%	17.1%	11.9%	9.0%	14.7%	13.4%	17.4%
Did not earn HSD\GED	NA	NA	21.7%	18.6%	15.5%	10.2%	38.8%	16.7%	NA
HSD\GED	NA	NA	27.1%	17.4%	14.8%	11.6%	0.0%	16.7%	NA
Some college not attending	NA	NA	7.8%	18.7%	7.6%	8.6%	1.9%	9.1%	NA
Some college attending	NA	NA	26.5%	32.2%	30.8%	NA	NA	29.8%	NA
AA	NA	NA	19.9%	12.0%	4.5%	5.6%	12.4%	7.9%	NA
BA+	NA	NA	8.9%	7.2%	7.6%	5.4%	6.2%	7.4%	NA
Veterans	0%	0%	40.9%	18.4%	4.8%	6.3%	11.5%	8.9%	8.7%
Did not earn HSD\GED	NA	NA	NA	NA	0.0%	NA	0.0%	0.0%	NA
HSD\GED	NA	NA	88.3%	0.0%	7.1%	7.8%	0.0%	12.7%	NA
Some college not attending	NA	NA	40.5%	0.0%	3.3%	10.8%	27.9%	8.9%	NA
Some college attending	NA	NA	0.0%	100.0%	NA	0.0%	NA	29.5%	NA
AA	NA	NA	0.0%	0.0%	19.4%	0.8%	16.5%	6.1%	NA
BA+	NA	NA	NA	80.4%	0.0%	7.6%	4.4%	8.3%	NA

Table 23 — Unemployment Rates by Age, Veteran Status, and Educational Attainment (Persons 16 and Over): Merced County

Table 24 — Employed and Unemployed Labor Force by College Degree Status and Economic Sector (Persons 25 and Over): Merced County

		College D	egree			No Colleg	e Degree	
	Full- Time	Part- Time	Unemp	UER	Full- Time	Part- Time	Unem	UER
Total	15,383	5,483	1,700	7.5%	42,055	18,692	10,678	14.9%
11 Agriculture	250	84	39	10.5%	7,089	4,246	2,211	16.3%
21 Mining	0	0	0	NA	54	13	79	54.2%
22 Utilities	147	15	0	0.0%	614	62	0	0.0%
23 Construction	582	92	204	23.3%	2,856	1,786	886	16.0%
31 Manufacturing	1,008	224	149	10.8%	7,668	1,590	1,893	17.0%
42 Wholesale	129	31	13	7.4%	1,352	267	437	21.2%
43 Retail	994	611	68	4.1%	4,179	1,917	1,226	16.7%
48 Transportation	207	16	0	0.0%	2,396	619	350	10.4%
49 Warehousing	83	0	0	0.0%	539	384	117	11.2%
51 Information	233	97	26	7.4%	544	147	61	8.1%
52 Finance	534	328	75	8.0%	1,118	282	78	5.3%
53 Real Estate	173	39	80	27.3%	848	132	50	4.9%
54 Prof., Technical	839	191	69	6.3%	823	150	95	8.9%
55 MCE	0	0	0	NA	0	0	0	NA
56 Admin Support	137	74	64	23.2%	1,740	811	627	19.7%
56 Waste Mgt	0	0	0	NA	171	0	24	12.3%
61 Education	4,568	2,139	264	3.8%	1,828	1,648	132	3.7%
62 Health	3,032	1,214	89	2.0%	3,372	1,445	387	7.4%
71 Arts, Entertain.	56	5	13	17.3%	184	74	139	35.1%
72 Accommodations	42	0	0	0.0%	186	58	9	3.4%
72 Food Services	544	72	170	21.6%	1,492	1,883	326	8.8%
81 Other Services	611	89	122	14.8%	1,345	777	118	5.3%
92 Public Sector	1,213	145	105	7.2%	1,604	401	73	3.5%
98 Military	0	16	0	0.0%	56	0	19	25.3%
99 Long Term Unemp.			151	100.0%			1,341	100.0%

Source: Applied Development Economics, based on US Census ACS Public Use Microdata 2012-2014 from iPUMS

## CONCLUSION

At 1.4 percent a year, Merced County is expected to grow modestly from now to 2025, although analysts project a number of sectors (Health [NAICS 61], Logistics [NAICS 42, NAICS 48, and NAICS 49]) to exhibit steady growth at rates that double the overall annual growth rate of 1.4 percent. However, qualified workers are in short supply for certain key job categories. Based on the analysis presented in this report and discussions with key employers and workforce training organizations, the following can be identified as potential priorities for additional training efforts.

- Medical Technicians
- Electricians
- Maintenance Mechanics
- Ability to use computer operated processing controls and instruments (and related English competency)
- Workers with supervisory and management skills
- Business skills

## APPENDIX

### DETAILED INDUSTRY CLUSTER EMPLOYMENT PROJECTIONS

Appendix Table 1 Employment Projections By Industry Clusters: Agriculture: Distribution

Merced Co Ag and Foo	d Distribution	Employ		Change	Ann. Growth Rate
NAICS	Industry	2015	2025p	20	15-2025
	Total	4,534	5,514	980	2.0%
484220	Specialized Freight (except Used Goods) Trucking, Local	614	858	243	3.4%
424480	Fresh Fruit and Vegetable Merchant Wholesalers	476	662	187	3.4%
493110	General Warehousing and Storage	503	666	163	2.9%
484110	General Freight Trucking, Local	319	463	144	3.8%
424410	General Line Grocery Merchant Wholesalers	425	508	83	1.8%
424910	Farm Supplies Merchant Wholesalers	198	277	80	3.5%
445120	Convenience Stores	124	174	50	3.4%
424470	Meat and Meat Product Merchant Wholesalers	98	135	37	3.3%
424590	Other Farm Product Raw Material Merchant Wholesalers	32	62	30	7.0%
445110	Supermarkets and Other Grocery (except Convenience)	1,325	1,346	21	0.2%
445210	Meat Markets	29	47	18	4.8%
424430	Dairy Product (except Dried or Canned) Merch. Wholesalers	24	40	16	5.4%
445310	Beer, Wine, and Liquor Stores	36	46	10	2.6%
445291	Baked Goods Stores	3	11	8	14.3%
482110	Rail transportation	55	60	5	0.9%
488190	Other Support Activities for Air Transportation	17	21	4	2.0%
424510	Grain and Field Bean Merchant Wholesalers	3	3	0	0.0%
424820	Wine and Distilled Alcoholic Beverage Merchant Wholesalers	3	3	0	0.0%
424930	Flower, Nursery Stock, and Florists' Supplies Wholesalers	3	3	0	0.0%
445292	Confectionery and Nut Stores	3	3	0	0.0%
481211	Nonscheduled Chartered Passenger Air Transportation	3	3	0	0.0%
484230	Specialized Freight Trucking, Long-Distance	3	3	0	0.0%
493190	Other Warehousing and Storage	3	3	0	0.0%
424450	Confectionery Merchant Wholesalers	83	79	-4	0.0%
424490	Other Grocery and Related Products Merchant Wholesalers	39	27	-12	0.0%
445299	All Other Specialty Food Stores	16	3	-13	0.0%
424520	Livestock Merchant Wholesalers	24	3	-21	-18.8%
484122	General Freight Trucking, Long-Distance, Less Than Truckload	29	3	-26	-20.2%
484121	General Freight Trucking, Long-Distance, Truckload	47	3	-44	-24.1%

Source: ADE, Inc., based on EMSI QCEW and Non-QCEW 2015 Q4 (note: "p" = projections

Merced Co	Ag and Food Processing	Emplo	yment	Change	Ann. Growth Rate
NAICS	Industry	2015	2025p	201	5-2025
	Total	7,079	7,379	300	0.4%
311511	Fluid Milk Manufacturing	417	616	198	4.0%
312130	Wineries	414	580	166	3.4%
311421	Fruit and Vegetable Canning	1,233	1,387	155	1.2%
326111	Plastics Bag and Pouch Manufacturing	83	181	98	8.1%
311513	Cheese Manufacturing	811	880	69	0.8%
311411	Frozen Fruit, Juice, and Vegetable Manufacturing	869	909	39	0.4%
311119	Other Animal Food Manufacturing	94	123	29	2.7%
311612	Meat Processed from Carcasses	190	218	28	1.4%
311830	Tortilla Manufacturing	28	46	19	5.3%
311212	Rice Milling	3	3	0	unknown
311811	Retail Bakeries	3	3	0	unknown
311812	Commercial Bakeries	3	3	0	unknown
311813	Frozen Cakes, Pies, and Other Pastries Manufacturing	3	3	0	unknown
311941	Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing	3	3	0	unknown
311942	Spice and Extract Manufacturing	3	3	0	unknown
321113	Sawmills	3	3	0	unknown
322211	Corrugated and Solid Fiber Box Manufacturing	111	109	-3	-0.2%
311611	Animal (except Poultry) Slaughtering	56	37	-19	-4.0%
311999	All Other Miscellaneous Food Manufacturing	49	11	-38	-13.9%
332439	Other Metal Container Manufacturing	49	3	-46	-24.4%
311422	Specialty Canning	55	0	-55	-100.0%
311911	Roasted Nuts and Peanut Butter Manufacturing	196	128	-68	-4.1%
311615	Poultry Processing	2,209	2,111	-98	-0.5%
311423	Dried and Dehydrated Food Manufacturing	195	21	-174	-20.1%

#### Appendix Table 2 Employment Projections By Industry Clusters: Agriculture: Processing

#### Appendix Table 3 Employment Projections By Industry Clusters: Agriculture: Production

Merced C	ounty				
	Ag and Food – Production	Emplo	yment	Change	Ann. Growth Rate
NAICS	Industry	2015	2025p	2015-	2025
	Total	8,376	8,150	-226	-0.3%
113210	Forest Nurseries and Gathering of Forest Products	3	3	0	0.0%
111000	Crop Production	5,112	5,048	-64	-0.1%
112000	Animal Production and Aquaculture	3,261	3,100	-161	-0.5%
Source: A	pplied Development Economics, based on EMSI				

### Appendix Table 4 Employment Projections By Industry Clusters: Agriculture: Support Merced County

	Ag and Food Support	Emplo	oyment	Change	Ann. Growth Rate
NAICS	Industry	2015	2025p		2015-2025
	Total	8,787	10,875	2,088	2.2%
115115	Farm Labor Contractors and Crew Leaders	3,912	5,271	1,359	3.0%
115113	Crop Harvesting, Primarily by Machine	475	632	157	2.9%
541690	Other Scientific and Technical Consulting Services	176	322	146	6.2%
332311	Prefabricated Metal Building and Component Manufacturing	165	288	122	5.7%
237110	Water and Sewer Line and Related Structures Construction	242	361	119	4.1%
325314	Fertilizer (Mixing Only) Manufacturing	90	157	68	5.8%
333111	Farm Machinery and Equipment Manufacturing	184	251	68	3.2%
541380	Testing Laboratories	83	151	67	6.1%
115112	Soil Preparation, Planting, and Cultivating	285	312	27	0.9%
541810	Advertising Agencies	58	81	23	3.4%
541614	Process, Physical Distribution, and Logistics Consulting	16	38	23	9.3%
561110	Office Administrative Services	89	107	17	1.8%
423840	Industrial Supplies Merchant Wholesalers	30	47	17	4.7%
221310	Water Supply and Irrigation Systems	30	41	11	3.1%
333993	Packaging Machinery Manufacturing	23	32	9	3.5%
541370	Surveying and Mapping (except Geophysical) Services	3	10	7	12.9%
562920	Materials Recovery Facilities	3	10	7	12.9%
115116	Farm Management Services	104	110	6	0.6%
811310	Commercial and Industrial Machinery Repair and Maintenance	76	82	6	0.7%

	Ag and Food Support	Emplo	yment	Change	Ann. Growth Rate
561730	Landscaping Services	199	202	3	0.2%
541890	Other Services Related to Advertising	3	6	3	7.2%
541940	Veterinary Services	137	140	3	0.2%
541613	Marketing Consulting Services	3	3	0	0.0%
551112	Offices of Other Holding Companies	3	3	0	0.0%
522292	Real Estate Credit	50	48	-2	-0.5%
115111	Cotton Ginning	3	0	-3	-100.0%
115210	Support Activities for Animal Production	59	56	-4	-0.6%
444220	Nursery, Garden Center, and Farm Supply Stores	162	158	-4	-0.3%
551114	Corporate, Subsidiary, and Regional Managing Offices	859	854	-5	-0.1%
532490	Other Commercial, Industrial Machinery Rental and Leasing	28	21	-7	-2.7%
423830	Industrial Machinery and Equipment Merchant Wholesalers	10	3	-7	-11.4%
561710	Exterminating and Pest Control Services	64	53	-11	-1.9%
444210	Outdoor Power Equipment Stores	21	3	-18	-17.6%
561320	Temporary Help Services	22	3	-19	-18.2%
423820	Farm and Garden Machinery and Equipment Wholesalers	124	98	-26	-2.3%
115114	Postharvest Crop Activities (except Cotton Ginning)	949	919	-30	-0.3%
541870	Advertising Material Distribution Services	47	3	-44	-24.0%
Source: A	DE, Inc., based on EMSI QCEW and Non-QCEW 2015 Q4				

#### Appendix Table 5 Employment Projections By Industry Clusters: Energy

Merced County			Employ		Change	Ann. Growth Rate
Energy Cluster and Sub-Clusters	NAICS	Industry	2015	2025 proj.	2015	-2025
		Total	2,597	2,926	330	1.2%
01 Energy Core02 Petroleum						
Distribution	424710	Petroleum Bulk Stations and Terminals	25	38	14	4.6%
01 Energy Core02 Petroleum		Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and				
Distribution	424720	Terminals)	24	3	-21	-18.7%
01 Energy Core03 Power Generation	221210	Natural Gas Distribution	142	77	-65	-6.0%
01 Energy Core04 Alt Energy Production	237110	Water and Sewer Line and Related Structures Construction	242	361	119	4.1%
01 Energy Core04 Alt Energy Production	238160	Roofing Contractors	28	21	-7	-3.0%
01 Energy Core05 Alt Energy Distribution	423610	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	18	24	6	2.9%
01 Energy Core05 Alt Energy Distribution	423720	Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers	13	11	-2	-1.7%
01 Energy Core06 Energy Efficiency	238220	Plumbing, Heating, and Air-Conditioning Contractors	401	421	21	0.5%
01 Energy Core06 Energy Efficiency	238210	Electrical Contractors and Other Wiring Installation Contractors	143	96	-46	-3.8%
01 Energy Core06 Energy Efficiency	238310	Drywall and Insulation Contractors	77	6	-71	-22.6%
01 Energy Core07 Energy Equipment Mfg	335122	Commercial, Industrial, and Institutional Electric Lighting Fixture Manufacturing	48	3	-45	-24.2%
02 Energy related01 Manufacturing	335312	Motor and Generator Manufacturing	3	11	8	13.4%
	011210	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic)	70	02	c.	0.7%
02 Energy related02 Services	811310	Repair and Maintenance	76	82	6	0.7%
02 Energy related03 Research	541	Prof., Tech., and Sci.	1,357	1,772	415	2.7%

#### Appendix Table 6 Employment Projections By Industry Clusters: Health and Wellness: Delivery

Merced C	, Health and Wellness Health Care - Delivery	Employr	nent	Change	Ann. Growth Rate
NAICS	Industry	2015	2025 proj.	2015	-2025
	Total	6,320	7,407	1,087	1.6%
623110	Nursing Care Facilities (Skilled Nursing Facilities)	831	1,094	264	2.8%
621111	Offices of Physicians (except Mental Health Specialists)	1,172	1,378	206	1.6%
623990	Other Residential Care Facilities	282	453	172	4.9%
623220	Residential Mental Health and Substance Abuse Facilities	304	433	130	3.6%
621498	All Other Outpatient Care Centers	170	293	123	5.6%
623311	Continuing Care Retirement Communities	133	215	81	4.9%
621492	Kidney Dialysis Centers	142	223	81	4.6%
621340	Offices of Physical, Occupational and Speech Therapists, and Audiologists	153	220	67	3.7%
621910	Ambulance Services	159	219	59	3.2%
621512	Diagnostic Imaging Centers	51	89	38	5.8%
621210	Offices of Dentists	402	437	34	0.8%
621420	Outpatient Mental Health and Substance Abuse Centers	48	79	31	5.0%
621410	Family Planning Centers	51	77	26	4.2%
621511	Medical Laboratories	60	86	25	3.5%
621493	Freestanding Ambulatory Surgical and Emergency Centers	52	66	14	2.4%
621112	Offices of Physicians, Mental Health Specialists	16	30	13	6.2%
621610	Home Health Care Services	102	113	11	1.0%
621491	HMO Medical Centers	11	18	7	5.2%
621991	Blood and Organ Banks	11	14	3	2.2%
621320	Offices of Optometrists	68	70	2	0.3%
621330	Offices of Mental Health Practitioners (except Physicians)	3	3	0	0.0%
621391	Offices of Podiatrists	3	3	0	0.0%
621310		58	48	-10	-1.8%
623210	Residential Intellectual and Developmental Disability Facilities	22	3	-19	-18.0%
624310	Vocational Rehabilitation Services	203	163	-40	-2.2%
901200	Federal Government, Military	418	369	-48	-1.2%
623312	Assisted Living Facilities for the Elderly	108	21	-87	-15.1%
622110	General Medical and Surgical Hospitals	1,288	1,190	-97	-0.8%

#### Appendix Table 7 Employment Projections By Industry Clusters: Health and Wellness: All Others

Merced County			Emplo	yment	Change	Ann. Growth Rate
Health and Wellness: All Others	NAICS	Industry	2015	2025 proj.	2015-	2025
	MAICS	Total	2,804	4,495	1,691	4.8%
Health Care03 Wellness and Fitness	446110		386	500	115	2.6%
Health Care03 Wellness and Fitness	446191	Food (Health) Supplement Stores	16	30	13	6.1%
Health Care03 Wellness and Fitness	446199	All Other Health and Personal Care Stores	21	31	10	3.9%
Health Care03 Wellness and Fitness	812191	Diet and Weight Reducing Centers	18	21	4	2.0%
Health Care03 Wellness and Fitness	446130	Optical Goods Stores	3	3	0	0.0%
Health Care03 Wellness and Fitness	532291	Home Health Equipment Rental	3	3	0	0.0%
Health Care03 Wellness and Fitness	621399	Offices of All Other Miscellaneous Health Practitioners	3	3	0	0.0%
Health Care04 Medical devices manufact.	339112	Surgical and Medical Instrument Manufacturing	18	27	8	3.9%
Health Care04 Medical devices manufact.	339116	Dental Laboratories	3	3	0	0.0%
Health Care05 Supplies and Services	423450	Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers	16	31	15	6.9%
Health Care05 Supplies and Services	423490	Other Professional Equipment and Supplies Merchant Wholesalers	13	13	0	0.1%
Health Care05 Supplies and Services	424210	Drugs and Druggists' Sundries Merchant Wholesalers	3	3	0	0.0%
Health Care06 Other Services	624120	Services for the Elderly and Persons with Disabilities	2,107	3,576	1,469	5.4%
Health Care06 Other Services	624110	Child and Youth Services	75	126	51	5.4%
Health Care06 Other Services	624190	Other Individual and Family Services	74	87	13	1.6%
Health Care06 Other Services	624210	Community Food Services	24	26	2	1.0%
Health Care06 Other Services	624221	Temporary Shelters	6	6	0	0.0%
Health Care06 Other Services	624229	Other Community Housing Services	16	6	-10	-9.3%
Health Care06 Other Services	624410	Child Day Care Services	126	85	-41	-3.9%

	Logistics	Emplo	oyment	Change	Ann. Growth Rate
NAICS	Industry	2015	2025 proj.	2015·	-2025
	Total	2,226	2,768	541	2.2%
484220	Specialized Freight (except Used Goods) Trucking, Local	614	858	243	3.4%
493110	General Warehousing and Storage	503	666	163	2.9%
484110	General Freight Trucking, Local	319	463	144	3.8%
485410	School and Employee Bus Transportation	212	288	77	3.1%
485113	Bus and Other Motor Vehicle Transit Systems	48	99	51	7.5%
488410	Motor Vehicle Towing	49	79	31	5.0%
541614	Process, Physical Distribution, and Logistics Consulting Services	16	38	23	9.3%
492110	Couriers and Express Delivery Services	91	110	19	1.9%
488999	All Other Support Activities for Transportation	3	22	19	22.1%
561910	Packaging and Labeling Services	15	31	16	7.8%
482110	Rail transportation	55	60	5	0.9%
488190	Other Support Activities for Air Transportation	17	21	4	2.0%
481211	Nonscheduled Chartered Passenger Air Transportation	3	3	0	0.0%
484210	Used Household and Office Goods Moving	3	3	0	0.0%
484230	Specialized Freight (except Used Goods) Trucking, Long- Distance	3	3	0	0.0%
485310	Taxi Service	3	3	0	0.0%
485991	Special Needs Transportation	3	3	0	0.0%
493130	Farm Product Warehousing and Storage	3	3	0	0.0%
493190	Other Warehousing and Storage	3	3	0	0.0%
485510	Charter Bus Industry	17	3	-14	-15.9%
484122	General Freight Trucking, Long-Distance, Less Than Truckload	29	3	-26	-20.2%
484121	General Freight Trucking, Long-Distance, Truckload	47	3	-44	-24.1%
336612	Boat Building	173	3	-170	-33.3%

#### Appendix Table 8 Employment Projections By Industry Clusters: Logistics

	Manufacturing Other	Emplo	yment	Change	Ann. Growth Rate
NAICS	Industry	2015	2025 proj.	2015	-2025
MAICO	Total	1,759	1,820	61	0.3%
	Prefabricated Metal Building and Component	1,735	1,020		0.5 /0
332311	Manufacturing	165	288	122	5.7%
327320	Ready-Mix Concrete Manufacturing	206	300	94	3.8%
	Ornamental and Architectural Metal Work				
332323	Manufacturing	78	149	71	6.7%
325314	Fertilizer (Mixing Only) Manufacturing	90	157	68	5.8%
332312	Fabricated Structural Metal Manufacturing	67	113	46	5.4%
336212	Truck Trailer Manufacturing	126	170	44	3.1%
336211	Motor Vehicle Body Manufacturing	23	54	30	8.7%
323113	Commercial Screen Printing	3	19	16	20.5%
339999	All Other Miscellaneous Manufacturing	3	18	15	19.6%
332710	Machine Shops	38	49	11	2.5%
333993	Packaging Machinery Manufacturing	23	32	9	3.5%
325611	Soap and Other Detergent Manufacturing	15	24	9	4.9%
314999	All Other Miscellaneous Textile Product Mills	14	15	1	0.9%
337215	Showcase, Partition, Shelving, and Locker Manufacturing	41	42	1	0.2%
339950	Sign Manufacturing	3	3	0	0.0%
337110	Wood Kitchen Cabinet and Countertop Manufacturing	3	3	0	0.0%
336412	Aircraft Engine and Engine Parts Manufacturing	3	3	0	0.0%
	All Other Miscellaneous Fabricated Metal Product				
332999	Manufacturing	3	3	0	0.0%
327215	Glass Product Manufacturing Made of Purchased Glass	3	3	0	0.0%
326220	Rubber and Plastics Hoses and Belting Manufacturing	3	3	0	0.0%
326199	All Other Plastics Product Manufacturing	3	3	0	0.0%
321214	Truss Manufacturing	3	3	0	0.0%
333995	Fluid Power Cylinder and Actuator Manufacturing	3	0	-3	-100.0%
321999	All Other Miscellaneous Wood Product Manufacturing	3	0	-3	-100.0%
332721	Precision Turned Product Manufacturing	17	3	-14	-16.1%
336214	Travel Trailer and Camper Manufacturing	19	3	-16	-16.7%
336612	Boat Building	173	3	-170	-33.3%
323111	Commercial Printing (except Screen and Books)	629	357	-272	-5.5%

#### Appendix Table 9 Employment Projections By Industry Clusters: Manufacturing: All Others

	Water Flow Technology	Emplo	yment	Change	Ann. Growth Rate
NAICS	Industry	2015	2025 proj.	2015 <sup>.</sup>	-2025
	Total	391	532	140	3.1%
424910	Farm Supplies Merchant Wholesalers	198	277	72	3.5%
333111	Farm Machinery and Equipment Manufacturing	184	251	68	3.2%
	Industrial Machinery and Equipment Merchant				
423830	Wholesalers	10	3	0	-11.4%

#### Appendix Table 10 Employment Projections By Industry Clusters: Water Technology

Source: Applied Development Economics, based on EMSI

#### Appendix Table 11 Employment Projections By Industry Clusters: Heavy Construction

	Heavy Construction	Emplo	yment	Change	Ann. Growth Rate
NAICS	Industry	2015	2025 proj.	2015	-2025
	Total	308	1,140	832	14.0%
	Water and Sewer Line and Related Structures				
237110	Construction	242	361	119	4.1%
237990	Other Heavy and Civil Engineering Construction	33	749	716	36.7%
237000	Public sector heavy cons.	6	7	1	1.6%
237210	Land Subdivision	27	23	-5	-1.9%

Source: Applied Development Economics, based on EMSI

### Appendix Table 12 Employment Projections By Industry Clusters: Accommodations and Food Services, and Retail

	Accommodations, Food and Retail	Emplo	Employment			Growth Rate
NAICS	Industries	201 5	2025 proj.	20	015-202	25
44-45	Retail	8,056	9,579		1,524	1.7%
721	Accommodations	303	404		101	2.9%
722	Food services	2,851	3,567		716	2.3%

Source: Applied Development Economics, based on EMSI

# **OCCUPATIONAL PROJECTIONS BY EDUCATION AND TRAINING REQUIREMENTS:**

Appendix Table 13 Occupational Projections By Education and Training Requirement: New Jobs (Jobs Expected to Grow By At Least 50)

occcsoc	Occupation	Total	01 Less than high school	02 High school diploma or equivalent	03 Some college, no degree	04 Postsecondary non-degree award	05 Associate's degree	06 Bachelor's degree or higher
		7,296	3,873	1,740	119	630	127	807
11-1021	General and Operations Managers	121	0	0	0	0	0	121
21-1093	Social and Human Service Assistants	86	0	86	0	0	0	0
25-1099	Postsecondary Teachers	286	0	0	0	0	0	286
25-2021	Elementary School Teachers, Except Special Education	184	0	0	0	0	0	184
25-2022	Middle School Teachers, Except Special and Career/Technical Education	87	0	0	0	0	0	87
25-2031	Secondary School Teachers, Except Special and Career/Technical Education	74	0	0	0	0	0	74
25-3098	Substitute Teachers	55	0	0	0	0	0	55
25-9041	Teacher Assistants	119	0	0	119	0	0	0
29-1141	Registered Nurses	127	0	0	0	0	127	0
29-2052	Pharmacy Technicians	50	0	50	0	0	0	0
29-2061	Licensed Practical and Licensed Vocational Nurses	84	0	0	0	84	0	0
31-1011	Home Health Aides	179	179	0	0	0	0	0
31-1014	Nursing Assistants	145	0	0	0	145	0	0
31-9092	Medical Assistants	72	0	0	0	72	0	0
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	109	0	109	0	0	0	0
35-2011	Cooks, Fast Food	66	66	0	0	0	0	0
35-2012	Cooks, Institution and Cafeteria	53	53	0	0	0	0	0
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	558	558	0	0	0	0	0
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	68	68	0	0	0	0	0
37-2012	Maids and Housekeeping Cleaners	55	55	0	0	0	0	0
39-9011	Childcare Workers	61	0	61	0	0	0	0
39-9021	Personal Care Aides	585	585	0	0	0	0	0
41-1011	First-Line Supervisors of Retail Sales Workers	129	0	129	0	0	0	0
41-2011	Cashiers	336	336	0	0	0	0	0
41-2031	Retail Salespersons	512	512	0	0	0	0	0

occcsoc	Occupation	Total	01 Less than high school	02 High school diploma or equivalent	03 Some college, no degree	04 Postsecondary non-degree award	05 Associate's degree	06 Bachelor's degree or higher
	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific							
41-4012	Products	66	0	66	0	0	0	0
43-1011	First-Line Supervisors of Office and Administrative Support Workers	110	0	110	0	0	0	0
43-3031	Bookkeeping, Accounting, and Auditing Clerks	81	0	81	0	0	0	0
43-4051	Customer Service Representatives	244	0	244	0	0	0	0
43-5081	Stock Clerks and Order Fillers	178	178	0	0	0	0	0
43-6013	Medical Secretaries	60	0	60	0	0	0	0
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	130	0	130	0	0	0	0
43-9061	Office Clerks, General	112	0	112	0	0	0	0
45-2041	Graders and Sorters, Agricultural Products	70	70	0	0	0	0	0
45-2091	Agricultural Equipment Operators	140	140	0	0	0	0	0
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	725	725	0	0	0	0	0
49-9041	Industrial Machinery Mechanics	78	0	78	0	0	0	0
49-9071	Maintenance and Repair Workers, General	82	0	82	0	0	0	0
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	57	0	57	0	0	0	0
51-9111	Packaging and Filling Machine Operators and Tenders	85	0	85	0	0	0	0
53-3022	Bus Drivers, School or Special Client	81	0	81	0	0	0	0
53-3031	Driver/Sales Workers	58	0	58	0	0	0	0
53-3032	Heavy and Tractor-Trailer Truck Drivers	330	0	0	0	330	0	0
53-3033	Light Truck or Delivery Services Drivers	59	0	59	0	0	0	0
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	222	222	0	0	0	0	0
53-7064	Packers and Packagers, Hand	125	125	0	0	0	0	0

Source: Applied Development Economics, based on EMSI

### Appendix Table 14 Occupational Projections By Education and Training Requirement: Annual and Cumulative Projected Openings (At Least 50)

Occupation	Occupation	Annual Opening	Projected Annual Opening Over Ten Years (2015-2025)
	Total	2,703	27,029
53-7064	Packers and Packagers, Hand	49	491
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	56	562
53-7061	Cleaners of Vehicles and Equipment	7	67
53-7051	Industrial Truck and Tractor Operators	18	179
53-3030	Light Truck or Delivery Services Drivers	13	133
53-3030	Heavy and Tractor-Trailer Truck Drivers	56	561
53-3030	Driver/Sales Workers	10	105
53-3020	Bus Drivers, School or Special Client	16	162
53-3020	Bus Drivers, Transit and Intercity	5	50
53-1000	First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	7	65
51-9198	HelpersProduction Workers	6	60
51-9111	Packaging and Filling Machine Operators and Tenders	36	360
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	16	162
51-9010	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	7	70
51-8031	Water and Wastewater Treatment Plant and System Operators	5	54
51-4120	Welders, Cutters, Solderers, and Brazers	7	71
51-3092	Food Batchmakers	12	118
51-3020	Slaughterers and Meat Packers	32	320
51-3020	Meat, Poultry, and Fish Cutters and Trimmers	9	85
51-3020	Butchers and Meat Cutters	9	85
51-2090	Team Assemblers	9	88
51-1011	First-Line Supervisors of Production and Operating Workers	10	96
49-9071	Maintenance and Repair Workers, General	25	249
49-904X	Industrial Machinery Mechanics	23	233
49-3090	Tire Repairers and Changers	5	51
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	6	59
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	8	81

Occupation	Occupation	Annual Opening	Projected Annual Opening Over Ten Years (2015-2025)
47-2150	Plumbers, Pipefitters, and Steamfitters	5	50
47-207X	Operating Engineers and Other Construction Equipment Operators	6	57
47-2061	Construction Laborers	12	120
47-2031	Carpenters	5	55
45-20XX	Farmworkers, Farm, Ranch, and Aquacultural Animals	20	196
45-20XX	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	350	3,505
45-20XX	Agricultural Equipment Operators	46	461
45-2041	Graders and Sorters, Agricultural Products	25	252
45-1011	First-Line Supervisors of Farming, Fishing, and Forestry Workers	12	121
43-9XXX	Office and Administrative Support Workers, All Other	11	110
43-9061	Office Clerks, General	36	360
43-6010	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	25	245
43-6010	Medical Secretaries	10	98
43-5111	Weighers, Measurers, Checkers, and Samplers, Recordkeeping	6	64
43-5081	Stock Clerks and Order Fillers	57	574
43-5071	Shipping, Receiving, and Traffic Clerks	16	159
43-5052	Postal Service Mail Carriers	5	50
43-4171	Receptionists and Information Clerks	16	162
43-4111	Interviewers, Except Eligibility and Loan	8	82
43-4051	Customer Service Representatives	51	515
43-3071	Tellers	17	170
43-3051	Payroll and Timekeeping Clerks	5	51
43-3031	Bookkeeping, Accounting, and Auditing Clerks	16	155
43-3021	Billing and Posting Clerks	8	81
43-1011	First-Line Supervisors of Office and Administrative Support Workers	27	268
41-9041	Telemarketers	5	55
41-4010	Sales Representatives, Wholesale and Manufacturing, except Technical and Scientific Products	13	127
41-3099	Sales Representatives, Services, All Other	10	98
41-2031	Retail Salespersons	121	1,214
41-2021	Counter and Rental Clerks	8	78

Occupation	Occupation	Annual Opening	Projected Annual Opening Over Ten Years (2015-2025)
41-2010	Cashiers	162	1,621
41-1011	First-Line Supervisors of Retail Sales Workers	28	281
39-9021	Personal Care Aides	59	592
39-9011	Childcare Workers	19	187
39-5012	Hairdressers, Hairstylists, and Cosmetologists	5	51
39-3090	Amusement and Recreation Attendants	8	78
37-3010	Landscaping and Grounds keeping Workers	14	140
37-2012	Maids and Housekeeping Cleaners	12	118
37-1012	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	24	236
35-9031	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	10	97
35-9021	Dishwashers	11	108
35-3031	Waiters and Waitresses	33	333
35-3022	Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	9	91
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	157	1,566
35-3011	Bartenders	7	66
35-2021	Food Preparation Workers	15	145
35-2010	Cooks, Restaurant	12	118
35-2010	Cooks, Institution and Cafeteria	14	143
35-2010	Cooks, Fast Food	29	286
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	30	295
33-909X	Protective Service Workers, All Other	10	99
33-3050	Police and Sheriff's Patrol Officers	18	177
33-3010	Correctional Officers and Jailers	10	95
33-2011	Firefighters	8	80
31-9092	Medical Assistants	17	169
31-9091	Dental Assistants	5	53
31-1010	Nursing Assistants	24	243
31-1010	Home Health Aides	21	213
29-2061	Licensed Practical and Licensed Vocational Nurses	15	155
29-2050	Pharmacy Technicians	6	65

Occupation	Occupation	Annual Opening	Projected Annual Opening Over Ten Years (2015-2025)
29-2041	Emergency Medical Technicians and Paramedics	6	64
29-1141	Registered Nurses	29	292
29-1051	Pharmacists	5	55
25-9041	Teacher Assistants	46	455
25-3000	Teachers and Instructors, All Other	5	54
25-3000	Substitute Teachers	19	189
25-2030	Secondary School Teachers, Except Special and Career/Technical Education	30	299
25-2020	Middle School Teachers, Except Special and Career/Technical Education	24	238
25-2020	Elementary School Teachers, Except Special Education	50	502
25-2010	Kindergarten Teachers, Except Special Education	10	97
25-2010	Preschool Teachers, Except Special Education	9	86
25-1000	Postsecondary Teachers	47	466
21-1093	Social and Human Service Assistants	14	145
21-1020	Child, Family, and School Social Workers	7	70
21-1010	Educational, Guidance, School, and Vocational Counselors	8	85
19-40YY	Life, Physical, and Social Science Technicians, All Other	13	131
13-2011	Accountants and Auditors	14	140
13-1199	Business Operations Specialists, All Other	6	65
13-1111	Management Analysts	6	63
11-9111	Medical and Health Services Managers	5	55
11-9051	Food Service Managers	5	52
11-9030	Education Administrators, Elementary and Secondary School	7	70
11-9013	Farmers, Ranchers, and Other Agricultural Managers	15	151
11-3031	Financial Managers	5	54
11-2020	Sales Managers	5	51
11-1021	General and Operations Managers	28	284
17-2051	Operating engineers/civil engineers	4	35
47-1011	First-line supervisors/managers of construction trades and extraction workers	10	104
47-2061	Construction laborers	31	312
47-207X	Other construction equipment operators	13	132
47-2031	Carpenters	4	44
53-7051	Truck drivers, heavy and tractor-trailer	6	62

Source: ADE, Inc., based on EMSI 2015 Q4 QCEW and NonQCEW Annual Openings

OCCSOC	Occupation	Annual Openings	Required Education for Openings	Unemployed in Target Occupations	Unemployed Whose Credentials Match Occupational Requirement	01 < HS\GED 4,448	02 HS\GED 3,496	03 Some College- OUT 1,842	04 Some College- Attending	05 AA	06 BA or up
53-7064	Packers and Packagers, Hand	<b>2,703</b> 49	Less than high school	12,886 262	7,257	4,448	<u>3,496</u> 65	1,842	1,614 0	<u>483</u> 0	1,002 0
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	56	Less than high school	645	465	260	205	107	0	73	0
53-7061	Cleaners of Vehicles and Equipment	7	Less than high school	0	0	0	0	0	0	0	0
53-7051	Industrial Truck and Tractor Operators	18	Less than high school	175	86	63	23	89	0	0	0
53-3030	Driver/Sales Workers and Truck Drivers	80	High school diploma or equivalent	492	304	34	187	116	91	20	44
53-3020	Bus Drivers	21	High school diploma or equivalent	44	44	0	0	44	0	0	0
53-1000	Supervisors of Transportation and Material Moving Workers	7	High school diploma or equivalent	0	0	0	0	0	0	0	0
51-9198	HelpersProduction Workers	6	Less than high school	0	0	0	0	0	0	0	0
51-9111	Packaging and Filling Machine Operators and Tenders	36	High school diploma or equivalent	271	224	47	154	70	0	0	0
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	16	High school diploma or equivalent	254	200	54	148	52	0	0	0
51-9010	Chemical Processing Machine Setters, Operators, and Tenders	7	High school diploma or equivalent	26	26	0	26	0	0	0	0
51-8031	Water and Wastewater Treatment Plant and System Operators	5	High school diploma or equivalent	0	0	0	0	0	0	0	0
51-4120	Welding, Soldering, and Brazing Workers	7	High school diploma or equivalent	20	20	0	20	0	0	0	0
51-3092	Food Batchmakers	12	High school diploma or equivalent	38	0	0	0	0	38	0	0
51-3020	Butchers and Other Meat, Poultry, and Fish Processing Workers	49	Less than high school	80	69	69	0	12	0	0	0
51-2090	Miscellaneous Assemblers and Fabricators	9	High school diploma or equivalent	98	98	0	61	37	0	0	0
51-1011	First-Line Supervisors of Production and Operating Workers	10	Postsecondary non- degree award	0	0	0	0	0	0	0	0

#### Appendix Table 15 Unemployed Labor Force-to-Job Openings Skills Match (Labor Force: Persons 16 and Over)

0.000		Annual	Required Education for	Unemployed in Target	Unemployed Whose Credentials Match Occupational	01 <	02	03 Some College-	04 Some College-	05.44	06 BA or
occsoc 49-9071	Occupation Maintenance and Repair Workers, General	Openings 25	Openings High school diploma or equivalent	Occupations 0	Requirement 0	HS\GED	HS\GED 0	о <u></u> т	Attending 0	05 AA 0	up O
49-904X	Industrial and Refractory Machinery Mechanic	23	High school diploma or equivalent	56	56	0	56	0	0	0	0
49-3090	Miscellaneous Vehicle and Mobile Equipment Mechanics, Installers, and Repairers	5	High school diploma or equivalent	0	0	0	0	0	0	0	0
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	6	High school diploma or equivalent	31	0	31	0	0	0	0	0
49-3023	Automotive Service Technicians and Mechanics	8	High school diploma or equivalent	45	0	45	0	0	0	0	0
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	8	High school diploma or equivalent	0	0	0	0	0	0	0	0
47-2150	Pipelayers, Plumbers, Pipefitters, and Steamfitters	5	Less than high school	75	75	75	0	0	0	0	0
47-207X	Construction equipment operators except paving, surfacing, and tamping equipment operators	6	High school diploma or equivalent	18	0	18	0	0	0	0	0
47-2061	Construction Laborers	12	Less than high school	544	394	343	51	52	0	98	0
47-2031	Carpenters	5	High school diploma or equivalent	220	33	147	0	33	0	0	40
45-20XX	Miscellaneous agricultural workers including animal breeders	416	High school diploma or equivalent	1,874	535	1,188	481	54	151	0	0
45-2041	Graders and Sorters, Agricultural Products	25	Less than high school	1,117	1,093	543	551	0	0	0	24
45-1011	First-Line Supervisors of Farming, Fishing, and Forestry Workers	12	High school diploma or equivalent	0	0	0	0	0	0	0	0
43-9XXX	Miscellaneous office and administrative support workers including desktop publishers	11	High school diploma or equivalent	37	7	0	0	7	0	0	30
43-9061	Office Clerks, General	36	High school diploma or equivalent	104	24	22	24	0	0	0	58
43-6010	Secretaries and Administrative Assistants	34	High school diploma or equivalent	61	31	0	0	31	0	30	0
43-5111	Weighers, Measurers, Checkers, and Samplers, Recordkeeping	6	High school diploma or equivalent	70	45	24	45	0	0	0	0
43-5081	Stock Clerks and Order Fillers	57	Less than high school	291	133	55	79	91	67	0	0

		Annual	Required Education for	Unemployed in Target	Unemployed Whose Credentials Match Occupational	01 <	02	03 Some College-	04 Some College-		06 BA or
OCCSOC	Occupation	Openings	Openings	Occupations	Requirement	HS\GED	HS\GED	OUT	Attending	05 AA	up
43-5071	Shipping, Receiving, and Traffic Clerks	16	High school diploma or equivalent	97	33	64	27	6	0	0	0
43-5052	Postal Service Mail Carriers	5	High school diploma or equivalent	0	0	0	0	0	0	0	0
43-4171	Receptionists and Information Clerks	16	High school diploma or equivalent	64	0	0	0	0	0	0	64
43-4111	Interviewers, Except Eligibility and Loan	8	High school diploma or equivalent	0	0	0	0	0	0	0	0
43-4051	Customer Service Representatives	51	High school diploma or equivalent	311	190	0	84	106	72	0	49
43-3071	Tellers	17	High school diploma or equivalent	33	0	33	0	0	0	0	0
43-3051	Payroll and Timekeeping Clerks	5	High school diploma or equivalent	0	0	0	0	0	0	0	0
43-3031	Bookkeeping, Accounting, and		High school diploma	28	28	0	0	28	0	0	0
43-3021	Auditing Clerks	16	or equivalent High school diploma								
43-1011	Billing and Posting Clerks First-Line Supervisors of Office and Administrative Support Workers	<u> </u>	or equivalent High school diploma or equivalent	0	0	0	0 88	0 22	0	0	0 60
41-9041	Telemarketers	5	Less than high school	7	0	0	0	0	0	7	0
41-4010	Sales Representatives, Wholesale and Manufacturing	13	Bachelor's degree	57	0	0	44	0	0	13	0
41-3099	Sales Representatives, Services, All Other	10	High school diploma or equivalent	30	30	0	0	30	0	0	0
41-2031	Retail Salespersons	121	Less than high school	443	257	45	212	35	110	0	42
41-2021	Counter and Rental Clerks	8	Less than high school	0	0	0	0	0	0	0	0
41-2010	Cashiers	162	Less than high school	834	118	0	118	128	505	0	83
41-1011	First-Line Supervisors of Retail Sales Workers	28	High school diploma or equivalent	113	79	0	0	79	0	0	34
39-9021	Personal Care Aides	59	Less than high school	182	129	21	108	26	0	4	24
39-9011	Childcare Workers	19	High school diploma or equivalent	202	129	40	100	112	0		34
39-5012	Hairdressers, Hairstylists, and Cosmetologists	5	Postsecondary non- degree award	0	0	0	0	0	0	0	0

occsoc	Occupation	Annual Openings	Required Education for Openings	Unemployed in Target Occupations	Unemployed Whose Credentials Match Occupational Requirement	01 < HS\GED	02 HS\GED	03 Some College- OUT	04 Some College- Attending	05 AA	06 BA or up
	Miscellaneous Entertainment	Operings	Opennigs	Occupations	Nequilement	TIS (OLD	H3 (OLD	001	Attenuing	UJ AA	up
39-3090	Attendants and Related Workers	8	Less than high school	13	0	0	0	0	0	0	13
37-3010	Grounds Maintenance Workers	14	Less than high school	304	263	186	78	17	24	0	0
37-2012	Maids and Housekeeping Cleaners	12	Less than high school	212	208	208	0	3	0	0	0
37-1012	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	24	Less than high school	0	0	0	0	0	0	0	0
35-9031	Host and Hostesses, Restaurant, Lounge, and Coffee Shop	10	Less than high school	43	43	0	43	0	0	0	0
35-9021	Dishwashers	11	Less than high school	0	0	0	0	0	0	0	0
35-3031	Waiters and Waitresses	33	Less than high school	76	76	0	76	0	0	0	0
35-3022	Counter Attendant, Cafeteria, Food Concession, and Coffee Shop	9	Less than high school	210	0	0	0	0	210	0	0
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	157	Less than high school	30	0	0	0	0	30	0	0
35-3011	Bartenders	7	Less than high school	55	0	0	0	0	55	0	0
35-2021	Food Preparation Workers	15	Less than high school	237	26	0	26	26	98	19	68
35-2010	Cooks	55	Less than high school	272	272	31	240	0	0	0	0
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	30	High school diploma or equivalent	26	26	0	0	26	0	0	0
33-909X	Lifeguards and Other Protective Service Workers	10	High school diploma or equivalent	0	0	0	0	0	0	0	0
33-3050	Police Officers	18	High school diploma or equivalent	0	0	0	0	0	0	0	0
33-3010	Bailiffs, Correctional Officers, and Jailers	10	High school diploma or equivalent	0	0	0	0	0	0	0	0
33-2011	Firefighters	8	Postsecondary non- degree award	0	0	0	0	0	0	0	0
31-9092	Medical Assistants	17	Postsecondary non- degree award	42	19	0	0	0	19	23	0
31-9091	Dental Assistants	5	Postsecondary non- degree award	75	75	0	0	75	0	0	0
31-1010	Nursing, Psychiatric, and Home Health Aides	46	Less than high school	54	54	19	35	0	0	0	0

		Annual	Required Education for	Unemployed in Target	Unemployed Whose Credentials Match Occupational	01 <	02	03 Some College-	04 Some College-		06 BA or
OCCSOC	Occupation	Openings	Openings	Occupations	Requirement	HS\GED	HS\GED	OUT	Attending	05 AA	up
29-2061	Licensed Practical and Licensed Vocational Nurses	15	Postsecondary non- degree award	13	0	0	0	0	0	13	0
29-2050	Health Diagnosing and Treating Practitioner Support Technicians	6	Associate's degree	55	0	0	0	17	38	0	0
29-2041	Emergency Medical Technicians and Paramedics	6	Postsecondary non- degree award	19	19	0	0	19	0	0	0
29-1141	Nurse Practitioners, and Nurse Midwives	29	Associate's degree	89	0	0	0	0	0	0	89
29-1051	Pharmacists	5	Doctoral or professional degree	0	0	0	0	0	0	0	0
25-9041	Teacher Assistants	46	Some college, no degree	101	41	0	19	0	41	41	0
25-3000	Other Teachers and Instructors	24	Bachelor's degree	44	19	0	0	0	25	0	19
25-2030	Secondary School Teachers	30	Bachelor's degree	0	0	0	0	0	0	0	0
25-2020	Elementary and Middle School Teachers	74	Bachelor's degree	43	0	0	0	0	43	0	0
25-2010	Preschool and Kindergarten Teachers	18	Associate's degree	26	0	0	0	12	0	0	14
25-1000	Postsecondary Teachers	47	Doctoral or professional degree	109	109	0	0	0	0	0	109
21-1093	Social and Human Service Assistants	14	High school diploma or equivalent	46	38	0	0	38	0	0	8
21-1020	Social Workers	7	Bachelor's degree	29	0	0	29	0	0	0	0
21-1010	Counselors	8	High school diploma or equivalent	103	45	16	0	45	0	25	17
19-40YY	Miscellaneous Life, Physical, and Social Science Technicians, Including Social Science Research Assistants	13	Associate's degree	19	19	0	0	0	0	19	0
13-2011	Accountants and Auditors	14	Bachelor's degree	0	0	0	0	0	0	0	0
13-1199	Business Operations Specialists, All Other	6	High school diploma or equivalent	22	22	0	0	22	0	0	0
13-1111	Management Analysts	6	Bachelor's degree	0	0	0	0	0	0	0	0
11-9111	Medical and Health Services Managers	5	Bachelor's degree	0	0	0	0	0	0	0	0
11-9051	Food Service Managers	5	High school diploma or equivalent	0	0	0	0	0	0	0	0

occsoc	Occupation	Annual Openings	Required Education for Openings	Unemployed in Target Occupations	Unemployed Whose Credentials Match Occupational Requirement	01 < HS\GED	02 HS\GED	03 Some College- OUT	04 Some College- Attending	05 AA	06 BA or
11-9030	Education Administrators	7	Bachelor's degree	0	0	0	0	0	0	0	0
11-9013	Farmers, Ranchers, and Other Agricultural Managers	15	High school diploma or equivalent	0	0	0	0	0	0	0	0
11-3031	Financial Managers	5	Bachelor's degree	40	40	0	0	0	0	0	40
11-2020	Marketing and Sales Managers	5	Bachelor's degree	0	0	0	0	0	0	0	0
11-1021	General and Operations Managers	28	Bachelor's degree	0	0	0	0	0	0	0	0
17-2051	Operating engineers/civil engineers	4	Bachelor's degree	0	0	0	0	0	0	0	0
47-1011	First-line supervisors/managers of construction trades and extraction workers	10	High school diploma or equivalent	0	0	0	0	0	0	0	0
47-2061	Construction laborers	31	Less than high school	544	394	343	51	52	0	98	0
47-207X	Other construction equipment operators	13	High school diploma or equivalent	18	0	18	0	0	0	0	0
47-2031	Carpenters	4	High school diploma or equivalent	220	33	147	0	33	0	0	40
53-7051	Truck drivers, heavy and tractor- trailer	6	Less than high school	175	86	63	23	89	0	0	0

Source: ADE, Inc. , based on EMSI 2015 Q4 QCEW and Non QCEW, and US Census ACS 2012-2014 PUMS (from iPUMS)

#### Appendix Table 16 Part Time Labor Force-to-Job Openings Skills Match (Labor Force: Persons 16 and Over)

occsoc	Occupation	Annual Openings	Required Education for Openings	Unemployed in Target Occupations	Unemployed Whose Credentials Match Occupational Requirement	01 < HS\GED	02 HS\GED	03 Some College- OUT	04 Some College- Attending	05 AA	06 BA or up
		2,703		27,952	13,163		6,094	2,260	0	0	1,641
53-7064	Packers and Packagers, Hand	49	Less than high school	435	142	128	15	0	0	0	0
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	56	Less than high school	918	683	229	454	0	0	0	0
53-7061	Cleaners of Vehicles and Equipment	7	Less than high school	289	244	86	158	0	0	0	0
53-7051	Industrial Truck and Tractor Operators	18	Less than high school	376	324	171	153	0	0	0	0
53-3030	Driver/Sales Workers and Truck Drivers	80	High school diploma or equivalent	875	505	0	335	171	0	0	0
53-3020	Bus Drivers	21	High school diploma or equivalent	176	119	0	0	119	0	0	0
53-1000	Supervisors of Transportation and Material Moving Workers	7	High school diploma or equivalent	103	103	0	103	0	0	0	0
51-9198	HelpersProduction Workers	6	Less than high school	0	0	0	0	0	0	0	0
51-9111	Packaging and Filling Machine		High school diploma	0.57			100				
	Operators and Tenders	36	or equivalent	357	126	0	126	0	0	0	0
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	16	High school diploma or equivalent	71	0	0	0	0	0	0	0
51-9010	Chemical Processing Machine Setters, Operators, and Tenders	7	High school diploma or equivalent	0	0	0	0	0	0	0	0
51-8031	Water and Wastewater Treatment Plant and System Operators	5	High school diploma or equivalent	0	0	0	0	0	0	0	0
51-4120	Welding, Soldering, and Brazing Workers	7	High school diploma or equivalent	64	48	0	48	0	0	0	0
51-3092	Food Batchmakers	12	High school diploma or equivalent	0	0	0	0	0	0	0	0
51-3020	Butchers and Other Meat, Poultry, and Fish Processing Workers	49	Less than high school	87	87	87	0	0	0	0	0
51-2090	Miscellaneous Assemblers and Fabricators	9	High school diploma or equivalent	65	17	0	0	17	0	0	0
51-1011	First-Line Supervisors of Production and Operating Workers	10	Postsecondary non- degree award	31	0	0	0	0	0	0	0
49-9071	Maintenance and Repair Workers, General	25	High school diploma or equivalent	31	0	0	0	0	0	0	0

		Annual	Required Education for	Unemployed in Target	Unemployed Whose Credentials Match Occupational	01 <	02	03 Some College-	04 Some College-		06 BA or
OCCSOC	Occupation	Openings	Openings	Occupations	Requirement	HS\GED	HS\GED	OUT	Attending	05 AA	up
49-904X	Industrial and Refractory Machinery Mechanic	23	High school diploma or equivalent	41	25	0	25	0	0	0	0
	Miscellaneous Vehicle and Mobile	25		41	25	0	23	0	0	0	0
49-3090	Equipment Mechanics, Installers,		High school diploma								
49-3090	and Repairers	5	or equivalent	0	0	0	0	0	0	0	0
	Bus and Truck Mechanics and		High school diploma	0	U U	0	0	0	0	0	0
49-3031	Diesel Engine Specialists	6	or equivalent	19	19	0	19	0	0	0	0
-	Automotive Service Technicians	0	High school diploma	15	15	0	17	0	0	0	0
49-3023	and Mechanics	8	or equivalent	115	104	0	78	27	0	0	0
	First-Line Supervisors of			115	101	Ŭ	70	27			<u> </u>
49-1011	Mechanics, Installers, and		High school diploma								
	Repairers	8	or equivalent	0	0	0	0	0	0	0	0
47 04 50	Pipelayers, Plumbers, Pipefitters,		•								
47-2150	and Steamfitters	5	Less than high school	201	135	18	117	0	0	0	0
	Construction equipment operators										
47-207X	except paving, surfacing, and		High school diploma								
	tamping equipment operators	6	or equivalent	50	11	0	11	0	0	0	0
47-2061	Construction Laborers	12	Less than high school	612	525	203	322	0	0	0	0
47-2031			High school diploma								
47-2031	Carpenters	5	or equivalent	318	84	0	14	70	0	0	0
45-20XX	Miscellaneous agricultural workers		High school diploma								
43-2077	including animal breeders	416	or equivalent	3,836	513	0	216	297	0	0	0
45-2041	Graders and Sorters, Agricultural										
43-2041	Products	25	Less than high school	299	238	189	49	0	0	0	0
45-1011	First-Line Supervisors of Farming,		High school diploma								
45 1011	Fishing, and Forestry Workers	12	or equivalent	9	0	0	0	0	0	0	0
	Miscellaneous office and										
43-9XXX	administrative support workers		High school diploma								
	including desktop publishers	11	or equivalent	90	69	0	42	27	0	0	0
43-9061			High school diploma				~ ~ ~				
	Office Clerks, General	36	or equivalent	440	137	0	64	73	0	0	0
43-6010	Secretaries and Administrative		High school diploma	<i>c</i> 1 <b>-</b>							
	Assistants	34	or equivalent	617	345	0	107	238	0	0	0
43-5111	Weighers, Measurers, Checkers,	6	High school diploma			0	•	0		0	
	and Samplers, Recordkeeping	6	or equivalent	0	0	0	0	0	0	0	0
43-5081	Stock Clerks and Order Fillers	57	Less than high school	531	329	94	235	0	0	0	0
43-5071	Shipping, Receiving, and Traffic		High school diploma								
	Clerks	16	or equivalent	0	0	0	0	0	0	0	0

		Annual	Required Education for	Unemployed in Target	Unemployed Whose Credentials Match Occupational	01 <	02	03 Some College-	04 Some College-		06 BA or
OCCSOC	Occupation	Openings	Openings	Occupations	Requirement	HS\GED	HS\GED	OUT	Attending	05 AA	up
43-5052	Destal Causian Mail Causian	-	High school diploma	62	62	0	0	62		0	0
	Postal Service Mail Carriers	5	or equivalent	63	63	0	0	63	0	0	0
43-4171	Receptionists and Information Clerks	16	High school diploma or equivalent	192	146	0	69	77	0	0	0
	Interviewers, Except Eligibility and	10	High school diploma	192	140	0	09	//	0	0	0
43-4111	Loan	8	or equivalent	34	34	0	34	0	0	0	0
	Loan	0	High school diploma	54	54	0	54	0	0	0	0
43-4051	Customer Service Representatives	51	or equivalent	1,080	873	0	506	367	0	0	0
		51	High school diploma	1,000	075	0	500	507	0	0	0
43-3071	Tellers	17	or equivalent	111	99	0	53	46	0	0	0
		17	High school diploma			Ŭ		10	0	Ū	Ŭ
43-3051	Payroll and Timekeeping Clerks	5	or equivalent	4	4	0	0	4	0	0	0
10.0001	Bookkeeping, Accounting, and		High school diploma						-		
43-3031	Auditing Clerks	16	or equivalent	45	28	0	22	6	0	0	0
42 2021	5		High school diploma								
43-3021	Billing and Posting Clerks	8	or equivalent	38	0	0	0	0	0	0	0
43-1011	First-Line Supervisors of Office and Administrative Support Workers	27	High school diploma or equivalent	37	19	0	0	19	0	0	0
41-9041	Telemarketers	5	Less than high school	50	50	50	0	0	0	0	0
	Sales Representatives, Wholesale	5	Less than high school	50	50	50	0	0	0	0	0
41-4010	and Manufacturing	13	Bachelor's degree	0	0	0	0	0	0	0	0
	Sales Representatives, Services,	15	High school diploma	0	- · ·	0	0	0	0	0	0
41-3099	All Other	10	or equivalent	22	0	0	0	0	0	0	0
41-2031	Retail Salespersons	121	Less than high school	1,174	197	25	172	0	0	0	0
41-2021	Counter and Rental Clerks	8	Less than high school	0	0	0	0	0	0	0	0
41-2010	Cashiers	162	Less than high school	1,557	331	84	247	0	0	0	0
	First-Line Supervisors of Retail	102	High school diploma	1,337		04	247	0	0	U	U
41-1011	Sales Workers	28	or equivalent	359	297	0	84	213	0	0	0
39-9021									0	0	-
59-9021	Personal Care Aides	59	Less than high school	735	362	197	165	0	0	U	0
39-9011	Childcare Workers	19	High school diploma or equivalent	428	136	0	88	48	0	0	0
	Hairdressers, Hairstylists, and	19	Postsecondary non-	420	130	0	00	40	0	0	0
39-5012	Cosmetologists	5	degree award	13	0	0	0	0	0	0	0
20, 2000	Miscellaneous Entertainment									<b>y</b>	Ť
39-3090	Attendants and Related Workers	8	Less than high school	101	0	0	0	0	0	0	0

occsoc	Occupation	Annual Openings	Required Education for Openings	Unemployed in Target Occupations	Unemployed Whose Credentials Match Occupational Requirement	01 < HS\GED	02 HS\GED	03 Some College- OUT	04 Some College- Attending	05 AA	06 BA or up
37-3010	Grounds Maintenance Workers	14	Less than high school	412	323	323	0	0	0	0	0
37-2012	Maids and Housekeeping Cleaners	12	Less than high school	477	410	290	121	0	0	0	0
37-1012	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	24	Less than high school	0	0	0	0	0	0	0	0
35-9031	Host and Hostesses, Restaurant, Lounge, and Coffee Shop	10	Less than high school	83	55	22	33	0	0	0	0
35-9021	Dishwashers	11	Less than high school	292	161	42	119	0	0	0	0
35-3031	Waiters and Waitresses	33	Less than high school	861	349	18	331	0	0	0	0
35-3022	Counter Attendant, Cafeteria, Food Concession, and Coffee Shop	9	Less than high school	0	0	0	0	0	0	0	0
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	157	Less than high school	131	33	0	33	0	0	0	0
35-3011	Bartenders	7	Less than high school	68	0	0	0	0	0	0	0
35-2021	Food Preparation Workers	15	Less than high school	373	163	62	101	0	0	0	0
35-2010	Cooks	55	Less than high school	1,310	918	412	506	0	0	0	0
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	30	High school diploma or equivalent	48	38	0	38	0	0	0	0
33-909X	Lifeguards and Other Protective Service Workers	10	High school diploma or equivalent	136	0	0	0	0	0	0	0
33-3050	Police Officers	18	High school diploma or equivalent	59	0	0	0	0	0	0	0
33-3010	Bailiffs, Correctional Officers, and Jailers	10	High school diploma or equivalent	0	0	0	0	0	0	0	0
33-2011	Firefighters	8	Postsecondary non- degree award	0	0	0	0	0	0	0	0
31-9092	Medical Assistants	17	Postsecondary non- degree award	164	56	0	0	56	0	0	0
31-9091	Dental Assistants	5	Postsecondary non- degree award	117	94	0	0	94	0	0	0
31-1010	Nursing, Psychiatric, and Home Health Aides	46	Less than high school	342	90	65	24	0	0	0	0
29-2061	Licensed Practical and Licensed Vocational Nurses	15	Postsecondary non- degree award	96	33	0	0	33	0	0	0

				Unemployed	Unemployed Whose Credentials Match			03 Some	04 Some		
000000		Annual	Required Education for	in Target	Occupational	01 <	02	College-	College-	05.44	06 BA or
OCCSOC	Occupation Health Diagnosing and Treating	Openings	Openings	Occupations	Requirement	HS\GED	HS\GED	OUT	Attending	05 AA	up
29-2050	Practitioner Support Technicians	6	Associate's degree	0	0	0	0	0	0	0	0
29-2041	Emergency Medical Technicians		Postsecondary non-								
29-2041	and Paramedics	6	degree award	0	0	0	0	0	0	0	0
29-1141	Nurse Practitioners, and Nurse Midwives	29	Associate's degree	405	0	0	0	0	0	0	0
	Midwives	29	Doctoral or	405	0	0	0	0	0	0	0
29-1051	Pharmacists	5	professional degree	0	0	0	0	0	0	0	0
25-9041			Some college, no								
	Teacher Assistants	46	degree	969	0	0	0	0	0	0	0
25-3000	Other Teachers and Instructors	24	Bachelor's degree	407	178	0	0	0	0	0	178
25-2030	Secondary School Teachers	30	Bachelor's degree	191	169	0	0	0	0	0	169
25-2020	Elementary and Middle School Teachers	74	Bachelor's degree	1,016	860	0	0	0	0	0	860
25-2010	Preschool and Kindergarten Teachers	18	Associate's degree	126	0	0	0	0	0	0	0
25-1000	Postsecondary Teachers	47	Doctoral or professional degree	352	340	0	0	0	0	0	340
21-1093	Social and Human Service Assistants	14	High school diploma or equivalent	91	91	0	30	62	0	0	0
21-1020	Social Workers	7	Bachelor's degree	28	0	0	0	0	0	0	0
21-1010	Counselors	8	High school diploma or equivalent	53	0	0	0	0	0	0	0
19-40YY	Miscellaneous Life, Physical, and Social Science Technicians, Including Social Science Research Assistants	13	Associate's degree	0	0	0	0	0	0	0	0
13-2011	Accountants and Auditors	14	Bachelor's degree	114	74	0	0	0	0	0	74
	Business Operations Specialists,		High school diploma		<u> </u>		0	0		0	,,
13-1199	All Other	6	or equivalent	0	0	0	0	0	0	0	0
13-1111	Management Analysts	6	Bachelor's degree	33	0	0	0	0	0	0	0
11-9111	Medical and Health Services Managers	5	Bachelor's degree	0	0	0	0	0	0	0	0
11-9051	Food Service Managers	5	High school diploma or equivalent	146	37	0	37	0	0	0	0
11-9030	Education Administrators	7	Bachelor's degree	289	20	0	0	0	0	0	20

				Unemployed	Unemployed Whose Credentials Match			03 Some	04 Some		
occsoc	Occupation	Annual Openings	Required Education for Openings	in Target Occupations	Occupational Requirement	01 < HS\GED	02 HS\GED	College- OUT	College- Attending	05 AA	06 BA or up
11-9013	Farmers, Ranchers, and Other Agricultural Managers	15	High school diploma or equivalent	243	140	0	92	48	0	0	0
11-3031	Financial Managers	5	Bachelor's degree	39	0	0	0	0	0	0	0
11-2020	Marketing and Sales Managers	5	Bachelor's degree	0	0	0	0	0	0	0	0
11-1021	General and Operations Managers	28	Bachelor's degree	13	0	0	0	0	0	0	0
17-2051	Operating engineers/civil engineers	4	Bachelor's degree	0	0	0	0	0	0	0	0
47-1011	First-line supervisors/managers of construction trades and extraction workers	10	High school diploma or equivalent	16	16	0	0	16	0	0	0
47-2061	Construction laborers	31	Less than high school	612	525	203	322	0	0	0	0
47-207X	Other construction equipment operators	13	High school diploma or equivalent	50	11	0	11	0	0	0	0
47-2031	Carpenters	4	High school diploma or equivalent	318	84	0	14	70	0	0	0
53-7051	Truck drivers, heavy and tractor- trailer	6	Less than high school	376	324	171	153	0	0	0	0

Source: ADE, Inc., based on EMSI 2015 Q4 QCEW and Non QCEW, and US Census ACS 2012-2014 PUMS (from iPUMS)

## DETAILED MERCED COUNTY LABOR FORCE CHARACTERISTICS

	0-15	16-19	20-24	25-29	30-34	35-54	55-64	65+	Total
Total	71,334	18,773	21,597	18,483	17,871	63,944	24,992	27,169	264,162
White	13,232	3,956	4,816	4,693	4,678	20,407	11,961	15,300	79,043
Did not earn HSD\GED	10,899	2,160	438	277	487	2,145	1,597	2,636	20,640
HSD\GED		861	1,418	1,440	669	6,051	3,356	4,857	18,651
Some college not attending		8	890	979	1,338	5,821	3,220	3,797	16,053
Some college attending		926	1,747	383	376	353	31	45	3,862
AA			104	208	739	1,790	1,444	1,004	5,288
BA+			220	1,406	1,068	4,247	2,314	2,962	12,217
NA	2,332								2,332
Latino	49,390	11,468	13,583	11,517	10,657	35,280	9,759	8,226	149,879
Did not earn HSD\GED	40,631	6,858	1,380	3,293	4,754	18,277	5,715	5,234	86,143
HSD\GED		1,392	4,073	4,145	2,333	7,451	1,557	1,221	22,172
Some college not attending		353	2,653	2,343	1,691	6,082	1,475	1,200	15,798
Some college attending		2,865	4,311	529	827	185	38		8,755
AA			696	549	357	1,577	505	394	4,078
BA+			469	658	694	1,708	468	178	4,176
NA	8,759								8,759
Other	8,713	3,349	3,198	2,273	2,536	8,257	3,272	3,643	35,240
Did not earn HSD\GED	7,567	1,358	326	147	244	1,352	680	1,415	13,089
HSD\GED		568	760	627	869	2,048	925	664	6,460
Some college not attending		176	366	248	444	2,172	571	631	4,608
Some college attending		1,128	1,462	103	98	201	17	14	3,023
AA		119	134	176	349	718	522	264	2,281
BA+			151	971	532	1,766	557	656	4,632
NA	1,146								1,146

Appendix Table 17 Population by Age, Race\Ethnicity, and Educational Attainment Merced County (All Ages)

	16-19	20-24	25-29	30-34	35-54	55-64	65+	Total
Total	5,293	15,366	14,183	14,046	48,530	13,077	4,154	114,650
White	1,244	3,191	3,993	4,017	15,427	6,332	2,427	36,631
Did not earn HSD\GED	163	170	121	426	1,145	685	124	2,834
HSD\GED	705	902	1,053	545	4,341	1,603	521	9,670
Some college not attending	8	890	884	1,046	4,267	1,588	538	9,222
Some college attending	367	1,018	365	329	181	31	0	2,291
AA	0	70	174	645	1,481	811	332	3,513
BA+	0	142	1,397	1,025	4,012	1,613	912	9,101
Latino	3,035	10,367	8,329	8,291	27,418	5,234	1,295	63,970
Did not earn HSD\GED	723	843	2,030	3,493	12,871	2,790	779	23,529
HSD\GED	694	3,323	2,851	1,938	6,169	896	232	16,103
Some college not attending	335	2,317	2,043	1,290	5,292	807	146	12,230
Some college attending	1,283	3,159	478	608	153	0	0	5,682
AA	0	435	269	268	1,353	322	109	2,756
BA+	0	290	658	694	1,581	418	29	3,670
Other	1,014	1,808	1,860	1,738	5,685	1,512	432	14,049
Did not earn HSD\GED	187	215	83	45	706	204	227	1,666
HSD\GED	236	435	515	383	1,343	537	32	3,481
Some college not attending	119	315	135	368	1,459	279	46	2,721
Some college attending	472	569	103	98	201	0	0	1,444
АА	0	123	150	349	504	163	32	1,320
BA+	0	151	874	494	1,472	329	95	3,416

Appendix Table 18 Labor Force by Age, Race\Ethnicity, and Educational Attainment (Persons 16 and Over)

	16-19	20-24	25-29	30-34	35-54	55-64	65+	Total
Total	2,776	10,748	11,589	11,642	42,874	11,943	3,564	95,137
White	630	2,399	3,344	3,454	14,258	6,083	2,292	32,461
Did not earn HSD\GED	145	72	121	346	1,003	685	96	2,468
HSD\GED	283	786	741	496	3,800	1,603	521	8,230
Some college not attending	8	553	832	817	3,984	1,493	528	8,215
Some college attending	193	790	241	242	148	31	0	1,645
AA	0	57	165	619	1,366	776	278	3,261
BA+	0	142	1,244	934	3,958	1,495	870	8,642
NA	0	0	0	0	0	0	0	0
Latino	1,648	7,212	6,782	6,802	23,752	4,607	885	51,687
Did not earn HSD\GED	405	445	1,629	2,836	10,835	2,446	399	18,995
HSD\GED	325	2,553	1,985	1,654	5,245	649	232	12,643
Some college not attending	335	1,862	1,905	1,154	4,864	771	124	11,015
Some college attending	583	1,848	458	380	98	0	0	3,367
AA	0	214	171	189	1,312	322	101	2,308
BA+	0	290	634	590	1,398	418	29	3,359
NA	0	0	0	0	0	0	0	0
Other	498	1,136	1,463	1,386	4,865	1,253	387	10,989
Did not earn HSD\GED	71	125	0	45	606	173	227	1,247
HSD\GED	156	422	458	224	1,076	449	32	2,817
Some college not attending	119	273	64	250	1,372	171	19	2,268
Some college attending	153	131	0	67	124	0	0	476
AA	0	91	150	323	477	147	32	1,221
BA+	0	93	791	476	1,210	313	78	2,961
NA	0	0	0	0	0	0	0	0

Appendix Table 19 Employed Labor Force by Age, Race\Ethnicity, and Educational Attainment (Persons 16 and Over)

Source: ADE Inc., based on US Census ACS PUMS 2012-2014 from iPUMS

Appendix Table 20 Full-Time Employed Labor Force by Age, Race\Ethnicity, and Educational Attainment (Persons 16 and	
Over) Merced County	

	16-19	20-24	25-29	30-34	35-54	55-64	65+	Total
Total	371	3,881	7,815	8,646	30,411	8,686	1,880	61,691
White	64	634	2,468	2,447	11,016	4,666	1,219	22,514
Did not earn HSD\GED	0	72	121	346	761	528	25	1,853
HSD\GED	64	325	624	415	3,094	1,148	229	5,900
Some college not attending	0	116	575	496	3,096	1,272	314	5,868
Some college attending	0	84	143	22	11	31	0	291
AA	0	0	45	572	1,057	636	150	2,460
BA+	0	36	960	596	2,998	1,052	500	6,142
Latino	188	2,868	4,402	5,124	15,981	3,263	471	32,297
Did not earn HSD\GED	38	286	1,120	1,967	6,108	1,545	260	11,325
HSD\GED	47	1,269	1,335	1,352	3,944	388	125	8,459
Some college not attending	73	808	1,271	892	3,703	684	58	7,489
Some college attending	30	214	248	280	0	0	0	773
AA	0	160	104	146	1,102	284	0	1,797
BA+	0	130	323	486	1,124	362	29	2,454
Other	119	380	945	1,075	3,414	757	190	6,880
Did not earn HSD\GED	0	125	0	45	390	76	100	737
HSD\GED	0	152	222	129	936	252	0	1,692
Some college not attending	119	78	38	250	905	30	10	1,429
Some college attending	0	0	0	17	124	0	0	141
АА	0	0	86	323	217	143	32	801
BA+	0	24	599	310	841	257	48	2,079

	16-19	20-24	25-29	30-34	35-54	55-64	65+	Total
Total	2,776	10,748	11,589	11,642	42,874	11,943	3,564	95,137
Men	1,662	5,950	6,722	7,021	24,628	6,499	1,795	54,278
Did not earn HSD\GED	473	582	1,376	2,756	8,391	2,175	483	16,237
HSD\GED	554	2,693	2,428	1,487	6,400	1,754	435	15,751
Some college not attending	267	1,039	1,604	1,123	5,017	1,148	336	10,533
Some college attending	368	1,302	205	97	98	0	0	2,070
AA	0	214	158	819	1,489	678	98	3,457
BA+	0	120	950	739	3,233	744	444	6,230
NA	0	0	0	0	0	0	0	0
Women	1,114	4,797	4,868	4,621	18,246	5,444	1,769	40,859
Did not earn HSD\GED	148	61	374	471	4,053	1,128	239	6,474
HSD\GED	210	1,068	756	887	3,720	947	349	7,938
Some college not attending	195	1,649	1,198	1,097	5,202	1,287	335	10,964
Some college attending	561	1,468	494	592	272	31	0	3,417
AA	0	147	327	313	1,666	568	313	3,333
BA+	0	405	1,719	1,261	3,333	1,482	533	8,733
NA	0	0	0	0	0	0	0	0

Appendix Table 21 Employed Labor Force by Age, Gender, and Educational Attainment (Persons 16 and Over) Merced County

Source: ADE, Inc. based on US Census ACS 2012-2014 PUMS from iPUMS

	16-19	20-24	25-29	30-34	35-54	55-64	65+	Total
Total	371	3,881	7,815	8,646	30,411	8,686	1,880	61,691
Men	303	2,985	4,753	5,624	18,496	5,015	1,126	38,301
Did not earn HSD\GED	0	484	1,014	2,083	5,337	1,462	303	10,682
HSD\GED	111	1,435	1,537	1,197	5,306	1,384	291	11,261
Some college not attending	192	568	1,282	934	4,047	1,007	186	8,215
Some college attending	0	292	18	17	25	0	0	352
	16-19	20-24	25-29	30-34	35-54	55-64	65+	Total
AA	0	160	108	779	1,275	588	76	2,987
BA+	0	47	793	614	2,505	575	270	4,804
NA	0	0	0	0	0	0	0	0
Women	68	896	3,063	3,022	11,916	3,671	754	23,390
Did not earn HSD\GED	38	0	227	275	1,922	687	83	3,233
HSD\GED	0	312	644	700	2,669	403	64	4,791
Some college not attending	0	435	602	704	3,656	979	196	6,571
Some college attending	30	7	373	301	110	31	0	852
АА	0	0	127	263	1,101	474	106	2,071
BA+	0	143	1,089	779	2,458	1,096	306	5,872
NA	0	0	0	0	0	0	0	0

Appendix Table 22 Full-Time Employed Labor Force by Age, Gender, and Educational Attainment (Persons 16 and Over) Merced County

Source: ADE, Inc. based on US Census ACS 2012-2014 PUMS from iPUMS

	16-19	20-24	25-29	30-34	35-54	55-64	65+	Total
Total	2,405	6,866	3,774	2,996	12,463	3,257	1,685	33,446
Men	1,359	2,965	1,969	1,397	6,133	1,484	670	15,977
Did not earn HSD\GED	473	98	362	673	3,054	714	180	5,554
HSD\GED	443	1,259	891	290	1,094	370	145	4,491
Some college not attending	75	471	322	189	970	141	150	2,318
Some college attending	368	1,010	187	80	72	0	0	1,718
AA	0	54	50	39	214	90	22	470
BA+	0	74	157	125	728	169	173	1,426
NA	0	0	0	0	0	0	0	0
Women	1,046	3,901	1,805	1,599	6,330	1,773	1,015	17,469
Did not earn HSD\GED	110	61	147	196	2,130	441	156	3,241
HSD\GED	210	756	112	188	1,051	544	286	3,147
Some college not attending	195	1,214	596	393	1,546	308	139	4,393
Some college attending	531	1,461	120	291	162	0	0	2,565
AA	0	147	200	50	565	93	207	1,262
BA+	0	261	630	482	875	386	227	2,861
NA	0	0	0	0	0	0	0	0

Appendix Table 23 Part-Time Employed Labor Force by Age, Gender, and Educational Attainment (Persons 16 and Over) Merced County

Source: ADE, Inc. based on US Census ACS 2012-2014 PUMS from iPUMS

	16-19	20-24	25-29	30-34	35-54	55-64	65+	Total
Total	2,517	4,619	2,594	2,404	5,656	1,134	590	19,513
Men	1,441	2,623	1,776	1,356	2,707	561	423	10,887
Did not earn HSD\GED	224	267	296	504	1,078	270	291	2,929
HSD\GED	326	489	1,007	253	792	164	0	3,032
Some college not attending	0	569	114	227	356	95	49	1,409
Some college attending	891	1,068	178	218	55	0	0	2,409
AA	0	230	98	45	110	4	23	510
BA+	0	0	83	110	316	29	59	597
Women	1,076	1,996	818	1,048	2,949	573	167	8,627
Did not earn HSD\GED	227	318	189	234	1,200	105	117	2,390
HSD\GED	545	410	228	239	940	172	0	2,534
Some college not attending	0	266	147	257	442	144	10	1,266
Some college attending	303	908	69	129	110	0	0	1,519
AA	0	37	9	85	73	46	39	290
BA+	0	57	177	104	184	106	0	628

Appendix Table 24 Unemployed Labor Force by Age, Gender, and Educational Attainment (Persons 16 and Over): Merced County

	0-15	16-19	20-24	25-29	30-34	35-54	55-64	65+	Total
Total	71,334	18,773	21,597	18,483	17,871	63,944	24,992	27,169	264,162
No Reported Disability	69,655	16,603	19,097	16,658	15,611	51,830	17,990	14,295	221,739
Did not earn HSD\GED	57,418	9,236	1,629	3,139	4,574	17,042	5,340	4,050	102,428
HSD\GED		2,338	5,539	5,468	3,375	12,634	4,624	3,230	37,209
Some college not attending		480	3,529	3,386	3,017	11,002	3,439	3,270	28,122
Some college attending		4,430	6,686	937	1,166	720	47	45	14,032
AA		119	934	831	1,309	3,412	1,769	1,115	9,489
BA+			781	2,897	2,170	7,019	2,771	2,585	18,223
NA	12,237								12,237
At Least One Disability	1,679	2,170	2,500	1,825	2,260	12,114	7,001	12,874	42,423
Did not earn HSD\GED	1,679	1,141	515	579	911	4,733	2,651	5,235	17,444
HSD\GED		482	712	744	496	2,916	1,213	3,512	10,074
Some college not attending		57	380	184	456	3,073	1,828	2,357	8,336
Some college attending		489	834	78	135	19	38	14	1,608
АА				102	137	672	702	546	2,159
BA+			59	138	125	702	568	1,210	2,802
NA									0

Appendix Table 25 Population by Age, Disability Status, and Educational Attainment Merced County

Appendix Table 26	Population by Age	, Veteran Status,	and Educational	Attainment Merced County
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	0-15	16-19	20-24	25-29	30-34	35-54	55-64	65+	Total
	71,334	18,773	21,597	18,483	17,871	63,944	24,992	27,169	264,162
Not Veterans	0	14,242	21,516	18,266	17,405	61,507	22,127	21,801	176,865
Did not earn HSD\GED		5,920	2,144	3,718	5,486	21,716	7,913	8,417	55,313
HSD\GED		2,763	6,201	6,152	3,819	15,211	5,233	5,544	44,923
Some college not attending		537	3,909	3,481	3,357	12,884	4,327	4,241	32,736
Some college attending		4,903	7,489	1,001	1,259	703	55	59	15,470
АА		119	934	879	1,264	3,767	1,746	1,066	9,775
BA+			840	3,035	2,220	7,227	2,853	2,474	18,647
NA									0
Veterans	0	19	81	217	466	2,437	2,864	5,368	11,452
Did not earn HSD\GED						58	78	867	1,004
HSD\GED		19	50	60	52	339	605	1,197	2,321
Some college not attending				88	116	1,191	940	1,387	3,722
Some college attending			31	15	42	36	31		154
	0-15	16-19	20-24	25-29	30-34	35-54	55-64	65+	Total
АА				54	182	318	725	595	1,873
BA+					75	495	486	1,322	2,378
NA									0
Ineligible (i.e. youth < 17)	71,334	4,512	0	0	0	0	0	0	75,846
Did not earn HSD\GED	59,097	4,457							63,554
HSD\GED		39							39
Some college not attending									0
Some college attending		16							16
AA									0
BA+									0
NA	12,237								12,237

## UNEMPLOYED AND PART-TIME LABOR FORCE BY BROAD OCCUPATIONAL CATEGORIES (MANAGER, SPECIALISTS, AND SUPPORT) (PERSONS 16 AND OVER)

## Appendix Table 27 Part-Time Employed Labor Force by Broad Occupation Categories, Educational Attainment and Management Status

				Man	agers		
Broad Occupational Categories	Total	Sub- Total	<hs< th=""><th>HS</th><th>Some Coll OUT</th><th>Some Coll IN</th><th>AA</th></hs<>	HS	Some Coll OUT	Some Coll IN	AA
	33,446	2,102	415	556	559	114	133
11 Management Occupations	1,341	1,341	407	245	251	94	108
13 Business Operations Specialists	286	0	0	0	0	0	0
13 Financial Specialists	299	0	0	0	0	0	0
15 Computer and Mathematical Occupations	176	0	0	0	0	0	0
17 Architecture and Engineering Occupations	0	0	0	0	0	0	0
19 Life, Physical, and Social Science Occupations	139	0	0	0	0	0	0
21 Community and Social Science Occupations	3,418	0	0	0	0	0	0
27 Arts, Design, Entertainment, Sports, and Media Occupations	296	0	0	0	0	0	0
29 Healthcare Practitioners and Technical Occupations	831	22	0	0	0	0	0
31 Healthcare Support Occupations	772	0	0	0	0	0	0
33 Protective Service Occupations	332	18	0	18	0	0	0
35 Food Preparation and Serving Occupations	3,723	64	0	38	16	0	0
37 Building and Ground Cleaning and Maintenance Occupations	1,251	25	0	25	0	0	0
39 Personal Care and Service Occupations	1,669	20	0	0	0	20	0
41 Sales Occupations	3,695	417	0	97	258	0	7
43 Office and Administrative Support Occupations	3,940	37	0	0	19	0	18
45 Farming, Fishing, and Forestry Occupations	4,161	9	9	0	0	0	0
47 Construction Trades	1,725	16	0	0	16	0	0
47 Extraction Workers	40	0	0	0	0	0	0
49 Installation, Maintenance, and Repair Workers	260	0	0	0	0	0	0
51 Production Occupations	1,403	31	0	31	0	0	0
53 Transportation and Material Moving Occupations	3,689	103	0	103	0	0	0

			Speci	alists		
Broad Occupational Categories	Sub- Total	<hs< th=""><th>HS</th><th>Some Coll OUT</th><th>Some Coll IN</th><th>AA</th></hs<>	HS	Some Coll OUT	Some Coll IN	AA
	13,920	3,110	3,531	2,244	1,157	889
11 Management Occupations	0	0	0	0	0	0
13 Business Operations Specialists	286	0	27	150	52	22
13 Financial Specialists	299	0	0	133	45	0
15 Computer and Mathematical Occupations	176	0	0	35	14	0
17 Architecture and Engineering Occupations	0	0	0	0	0	0
19 Life, Physical, and Social Science Occupations	139	22	0	53	0	0
21 Community and Social Science Occupations	2,449	0	87	176	185	235
27 Arts, Design, Entertainment, Sports, and Media Occupations	296	37	0	45	30	80
29 Healthcare Practitioners and Technical Occupations	809	19	0	84	0	367
31 Healthcare Support Occupations	0	0	0	0	0	0
33 Protective Service Occupations	195	0	0	0	180	16
35 Food Preparation and Serving Occupations	1,751	474	607	364	234	0
37 Building and Ground Cleaning and Maintenance Occupations	0	0	0	0	0	0
39 Personal Care and Service Occupations	196	13	82	0	68	0
41 Sales Occupations	366	0	141	38	21	0
43 Office and Administrative Support Occupations	12	0	0	12	0	0
45 Farming, Fishing, and Forestry Occupations	17	0	0	17	0	0
47 Construction Trades	1,709	701	678	260	0	17
47 Extraction Workers	40	0	10	30	0	0
49 Installation, Maintenance, and Repair Workers	221	0	137	27	47	11
51 Production Occupations	1,372	629	471	65	78	92
53 Transportation and Material Moving Occupations	3,586	1,216	1,291	755	203	49

Source: ADE, based on US Census ACS (Note: "BA and higher" column not included, though sub-total includes this labor force).

	Support							
Broad Occupational Categories	Sub-Total	<hs< th=""><th>HS</th><th>Some Coll OUT</th><th>Some Coll IN</th><th>AA</th></hs<>	HS	Some Coll OUT	Some Coll IN	AA		
	17,424	5,269	3,550	3,908	3,013	710		
11 Management Occupations	0	0	0	0	0	0		
13 Business Operations Specialists	0	0	0	0	0	0		
13 Financial Specialists	0	0	0	0	0	0		
15 Computer and Mathematical Occupations	0	0	0	0	0	0		
17 Architecture and Engineering Occupations	0	0	0	0	0	0		
19 Life, Physical, and Social Science Occupations	0	0	0	0	0	0		
21 Community and Social Science Occupations	969	0	272	299	208	101		
27 Arts, Design, Entertainment, Sports, and Media Occupations	0	0	0	0	0	0		
29 Healthcare Practitioners and Technical Occupations	0	0	0	0	0	0		
31 Healthcare Support Occupations	772	65	123	336	156	0		
33 Protective Service Occupations	119	48	65	6	0	0		
35 Food Preparation and Serving Occupations	1,908	151	653	404	616	57		
37 Building and Ground Cleaning and Maintenance Occupations	1,225	741	245	167	22	50		
39 Personal Care and Service Occupations	1,453	337	362	240	340	104		
41 Sales Occupations	2,911	230	419	680	1,081	184		
43 Office and Administrative Support Occupations	3,891	242	1,148	1,417	567	139		
45 Farming, Fishing, and Forestry Occupations	4,135	3,455	264	359	22	36		
47 Construction Trades	0	0	0	0	0	0		
47 Extraction Workers	0	0	0	0	0	0		
49 Installation, Maintenance, and Repair Workers	39	0	0	0	0	39		
51 Production Occupations	0	0	0	0	0	0		
53 Transportation and Material Moving Occupations	0	0	0	0	0	0		

Source: Applied Development Economics, based on US Census ACS Public Use Microdata 2012-2014 from iPUMS (Note: Data colum for "BA and higher" not included, though subtotal includes this labor force). Appendix Table 28 Unemployed Labor Force by Broad Occupation Categories, Educational Attainment and Management Status (excluding Long-Term Unemployed) (Persons 16 and Over)

				Ма	anagers			
Broad Occupational Categories	Total	Sub- Total	<hs< th=""><th>HS</th><th>Some Coll OUT</th><th>Some Coll IN</th><th>AA</th></hs<>	HS	Some Coll OUT	Some Coll IN	AA	
	15,182	404	0	276	127	0	0	
11 Management Occupations	190	190	0	137	0	0	0	
13 Business Operations Specialists	59	0	0	0	0	0	0	
13 Financial Specialists	21	0	0	0	0	0	0	
15 Computer and Mathematical Occupations	71	0	0	0	0	0	0	
17 Architecture and Engineering Occupations	55	0	0	0	0	0	0	
19 Life, Physical, and Social Science Occupations	99	0	0	0	0	0	0	
21 Community and Social Science Occupations	549	0	0	0	0	0	0	
27 Arts, Design, Entertainment, Sports, and Media Occupations	172	0	0	0	0	0	0	
29 Healthcare Practitioners and Technical Occupations	330	0	0	0	0	0	0	
31 Healthcare Support Occupations	172	0	0	0	0	0	0	
33 Protective Service Occupations	67	0	0	0	0	0	0	
35 Food Preparation and Serving Occupations	1,210	43	0	17	26	0	0	
37 Building and Ground Cleaning and Maintenance Occupations	914	0	0	0	0	0	0	
39 Personal Care and Service Occupations	484	0	0	0	0	0	0	
41 Sales Occupations	1,680	147	0	34	79	0	0	
43 Office and Administrative Support Occupations	1,432	171	0	88	22	0	0	
45 Farming, Fishing, and Forestry Occupations	2,991	0	0	0	0	0	0	
47 Construction Trades	1,273	0	0	0	0	0	0	
47 Extraction Workers	45	0	0	0	0	0	0	
49 Installation, Maintenance, and Repair Workers	333	0	0	0	0	0	0	
51 Production Occupations	1,223	0	0	0	0	0	0	
53 Transportation and Material Moving Occupations	1,812	0	0	0	0	0	0	
55 Military Specific Occupations	0	0	0	0	0	0	0	

	Specialists							
Broad Occupational Categories	Sub- Total	<hs< th=""><th>HS</th><th>Some Coll OUT</th><th>Some Coll IN</th><th>AA</th></hs<>	HS	Some Coll OUT	Some Coll IN	AA		
	6,138	1,825	1,825	1,045	943	499		
11 Management Occupations	0	0	0	0	0	0		
13 Business Operations Specialists	59	0	27	22	0	9		
13 Financial Specialists	21	0	0	21	0	0		
15 Computer and Mathematical Occupations	71	0	35	0	0	36		
17 Architecture and Engineering Occupations	55	0	0	0	0	26		
19 Life, Physical, and Social Science Occupations	99	21	59	0	0	19		
21 Community and Social Science Occupations	448	16	29	105	68	25		
27 Arts, Design, Entertainment, Sports, and Media Occupations	172	18	0	0	77	22		
29 Healthcare Practitioners and Technical Occupations	330	0	12	73	144	13		
31 Healthcare Support Occupations	0	0	0	0	0	0		
33 Protective Service Occupations	0	0	0	0	0	0		
35 Food Preparation and Serving Occupations	563	31	267	26	152	19		
37 Building and Ground Cleaning and Maintenance Occupations	0	0	0	0	0	0		
39 Personal Care and Service Occupations	70	0	0	0	70	0		
41 Sales Occupations	153	0	13	45	73	0		
43 Office and Administrative Support Occupations	0	0	0	0	0	0		
45 Farming, Fishing, and Forestry Occupations	0	0	0	0	0	0		
47 Construction Trades	1,273	697	93	127	80	237		
47 Extraction Workers	45	17	28	0	0	0		
49 Installation, Maintenance, and Repair Workers	311	98	75	35	103	0		
51 Production Occupations	1,223	347	603	235	38	0		
53 Transportation and Material Moving Occupations	1,812	581	584	356	138	93		
55 Military Specific Occupations	0	0	0	0	0	0		

	Support						
Broad Occupational Categories	Sub- Total	<hs< th=""><th>HS</th><th>Some Coll OUT</th><th>Some Coll IN</th><th>AA</th></hs<>	HS	Some Coll OUT	Some Coll IN	AA	
	7,490	2,520	2,334	1,006	1,438	192	
11 Management Occupations	0	0	0	0	0	0	
13 Business Operations Specialists	0	0	0	0	0	0	
13 Financial Specialists	0	0	0	0	0	0	
15 Computer and Mathematical Occupations	0	0	0	0	0	0	
17 Architecture and Engineering Occupations	0	0	0	0	0	0	
19 Life, Physical, and Social Science Occupations	0	0	0	0	0	0	
21 Community and Social Science Occupations	101	0	19	0	41	41	
27 Arts, Design, Entertainment, Sports, and Media Occupations	0	0	0	0	0	0	
29 Healthcare Practitioners and Technical Occupations	0	0	0	0	0	0	
31 Healthcare Support Occupations	172	19	35	75	19	23	
33 Protective Service Occupations	67	67	0	0	0	0	
35 Food Preparation and Serving Occupations	605	0	120	199	286	0	
37 Building and Ground Cleaning and Maintenance Occupations	914	400	302	56	156	0	
39 Personal Care and Service Occupations	414	61	125	137	0	4	
41 Sales Occupations	1,380	45	383	193	614	20	
43 Office and Administrative Support Occupations	1,261	198	319	268	171	104	
45 Farming, Fishing, and Forestry Occupations	2,991	1,731	1,031	54	151	0	
47 Construction Trades	0	0	0	0	0	0	
47 Extraction Workers	0	0	0	0	0	0	
49 Installation, Maintenance, and Repair Workers	22	0	0	22	0	0	
51 Production Occupations	0	0	0	0	0	0	
53 Transportation and Material Moving Occupations	0	0	0	0	0	0	
55 Military Specific Occupations	0	0	0	0	0	0	

Source: ADE, based on US Census ACS (Note: "BA and higher" column not included, though sub-total includes this labor force).

## Appendix Table 29 Long-Term Unemployed Labor Force by Educational Attainment (Persons 16 and Over)

	Total	<hs< th=""><th>HS</th><th>Some Coll OUT</th><th>Some Coll IN</th><th>AA</th><th>BA or up</th></hs<>	HS	Some Coll OUT	Some Coll IN	AA	BA or up
Long-Term Unemployed persons	4,331	974	1,130	497	1,547	109	74