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Regional Economic Sector and Skills Gap Analysis: CCWC Region

Prepared for:

Workforce Development Board of Madera County

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SUMMARY

Prepared under the auspices of the Central California Workforce Collaborative (CCWC), this report provides trend information and projections for jobs in CCWC region by industry sector, industry clusters, and occupational openings.¹ The analysis also provides a description of key labor force characteristics in the region 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 regional unemployment rate has declined to 9.9 percent in 2015, down from the peak of 16.5 percent in 2010, but still well above the low point before the recession of 7.9 percent in 2006.
- Before the recession, total jobs in the region peaked at 1,361,550 in 2007 and did not reach that level again until late 2014. Jobs have grown to 1,405,122 (annual average) in 2015.
- Health Care is projected to see the highest growth in jobs between 2015 and 2025 (49,000 new jobs), followed by Retail (27,400 new jobs) and Food Service (18,000 new jobs).
- The CCWC region is also expected to see relatively strong growth in Education (16,400 new jobs), and Professional, Scientific and Technical services (8,700 new jobs).
- The Logistics sector, including Wholesale, Warehousing and Transportation, are projected to grow by a combined 22,700 new jobs.
- Manufacturing is projected to increase by 7,000 jobs, but this trend masks considerable turbulence within the sector, with some industries growing while others decline. Wineries (NAICS 312230) are projected to grow by 1,400 new jobs and a number of other food processing industries are projected to grow by at least 500 new jobs each, such as roasted nuts and peanut butter (NAICS 311911), poultry processing (NAICS 311615), animal slaughtering (NAICS 311611), and cheese manufacturing (NAICS 311513). At the same time, dried and dehydrated food manufacturing (NAICS 311423) and fruit and vegetable canning (NAICS 311423) are expected to each decline by more than 600 jobs. Breakfast cereal manufacturing (NAICS 311230) and commercial bakeries (NAICS 311812) are expected to decline by approximately 300 jobs each.
- Construction recovered more than 12,800 jobs over the past five years but is projected to continue at less than half that rate of job growth, with 11,200 new jobs created between 2015 and 2025.

¹ For purposes of this report, the CCWC region includes the following counties: San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, Kern, Inyo, and Mono.

- Consistent with the above trends, the Health and Wellness industry cluster is projected to have the highest job growth over the next ten years. The Health and Wellness cluster is projected to add 51,000 jobs by 2025. About 26,700 (52 percent) of the new jobs will occur in the Health Care Delivery sub-cluster. Within this sub-cluster, the number of jobs in hospitals and HMO Centers is projected to increase by 8,500 new jobs. In contrast, services to elderly and disabled persons are projected to increase by 20,800 new jobs.
- The projections of job openings show a concentration in transportation and materials handling (4,900 annual openings), food services and retail (12,600 combined annual openings), office and admin support (5,900 annual openings) and farm occupations (6,300 annual openings).
- For each of the occupational categories, the report also indicates the number of unemployed and part time workers in the region that meet the minimum educational requirements for the projected job openings. These workers may need more specialized training in order to transition into these jobs.

LABOR FORCE CHARACTERISTICS

- The labor force in CCWC region is fairly evenly concentrated among the age groups. Workers in the 16-24 age group are about 16.6 percent of the total while nearly 25 percent are in the 25-34 age group. The prime working age group of 35-54 has 41 percent of the workforce. Workers over 55 constitute about 16.9 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 18.9 percent of the workforce in CCWC region, though the rate varies with age. At 23.7 percent of the prime working age (35 to 54) labor force, non-citizens are more concentrated in this age cohort relative to their overall concentration level.
- Educational attainment in the CCWC region is slightly lower than the statewide averages, with 22 percent of workers 25 years and older not holding a high school diploma or equivalent, compared to 18.5 percent for the state as a whole. Statewide, 38.8 percent have a college degree, compared to 28.5 percent for the CCWC region.
- However, in the San Joaquin Valley there is a stark contrast in the educational attainment levels of the labor force when citizenship status is taken into account. Among US citizens in the CCWC workforce, only 12 percent do not have a high school diploma or GED and 33.7 percent have a college degree. Non-citizens 25 and over exhibit high rates of less than high school attainment level: 62.8 percent of the non-citizens in the labor force have not obtained a high school diploma or a GED.
- 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 87.1 percent Latino. Overall, Latinos have earned high school diplomas and GEDs at rates slightly surpassing Whites and Others, at 25.9 percent versus 24.5 percent (Whites) and 21.7 percent (Others). However, Whites and Others are over two and a half times more likely than Latinos to have earned a

college degree: 14.9 percent of the Latinos in the labor force have earned a college degree versus 39.6 percent for Whites and 40.8 percent for Others.

- Veterans in CCWC region tend to have high levels of overall educational attainment, with 3.5 percent not achieving a high school diploma. Among disabled workers, however, 24.5 percent do not have a high school diploma, compared to 22 percent for the workforce as a whole.

CONCLUSION

At 1.4 percent a year, jobs in CCWC region is expected to grow modestly from now to 2025, although analysts project a number of sectors (Construction, Health, Logistics, Professional, Scientific and Technical Services, Administrative Support, Education, Health Care and Food Services) to exceed this overall annual growth rate. 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

ECONOMIC TRENDS

POPULATION AND EMPLOYMENT TRENDS

The region unemployment rate has declined to 9.9 percent in 2015, down from the peak of 16.5 percent in 2010, but still well above the low point before the recession of 7.9 percent in 2006 (Table 1). While job levels have been increasing since 2010, the size of the labor force peaked in 2012 at 1,843,740, then declined to 1,840,270 by 2014 and finally increased slightly to 1,840,828 in 2015.

Table 1 — Annual Labor Force Trends, 2000-2015: CCWC Region

Period	Labor Force Trends	Employed Labor Force	Unemployment Rate
08-15 Annual Growth Rate	0.7%	0.8%	13.3%
00-08 Annual Growth Rate	1.7%	1.5%	9.4%
2015	1,840,828	1,658,656	9.9%
2014	1,840,270	1,631,640	11.3%
2013	1,841,530	1,604,680	12.9%
2012	1,843,740	1,573,100	14.7%
2011	1,836,380	1,539,960	16.1%
2010	1,820,700	1,519,850	16.5%
2009	1,782,730	1,520,320	14.7%
2008	1,755,800	1,570,990	10.5%
2007	1,708,420	1,563,190	8.5%
2006	1,674,650	1,542,670	7.9%
2005	1,659,420	1,516,370	8.6%
2004	1,633,040	1,471,030	9.9%
2003	1,622,970	1,450,440	10.6%
2002	1,600,080	1,434,690	10.3%
2001	1,554,940	1,409,570	9.3%
2000	1,532,760	1,396,410	8.9%

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.

Household population growth in the San Joaquin Valley exceeded statewide growth rates between 2011 and 2013, but has slowed in the past two years (Table 2). As shown in Figure 1, CCWC region is projected to grow significantly faster than the state as a whole over the next five years (2015-2020), which will have implications for some employment sectors, as discussed below.

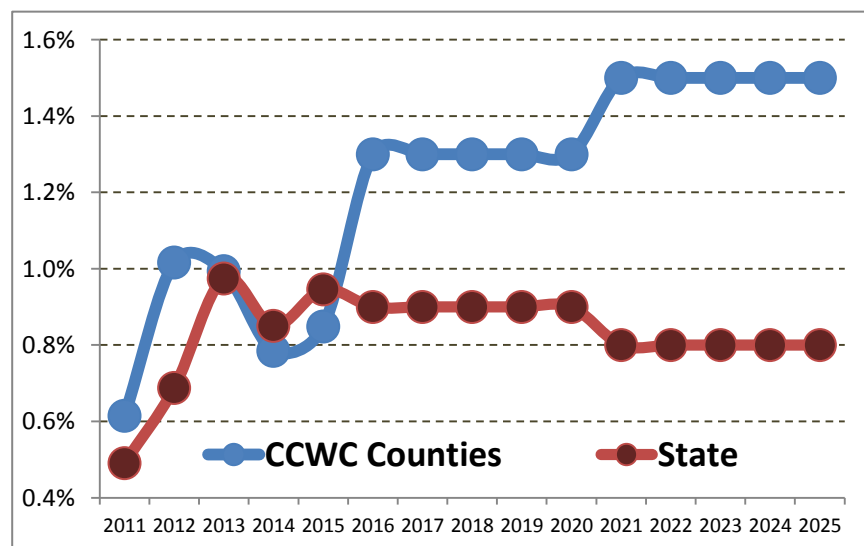
**Table 2 – Total and Household Population Trends:
CCWC Region, CCWC Region,
and California**

Year	Household Population			
	CCWC Counties	Growth Rate	State ('000)	Growth Rate
2010	3,888,941		36,412	
2011	3,912,829	0.6%	36,591	0.5%
2012	3,952,595	1.0%	36,843	0.7%
2013	3,991,868	1.0%	37,202	1.0%
2014	4,023,198	0.8%	37,518	0.9%
2015	4,057,322	0.8%	37,873	0.9%
10-15	168,381	0.9%	1,461	0.8%

Year	Total Population			
	CCWC Counties	Growth Rate	State ('000)	Growth Rate
2010	4,004,407		37,254	
2011	4,025,282	0.5%	37,428	0.5%
2012	4,058,833	0.8%	37,681	0.7%
2013	4,094,785	0.9%	38,031	0.9%
2014	4,129,749	0.9%	38,357	0.9%
2015	4,165,560	0.9%	38,715	0.9%
10-15	161,153	0.8%	1,461	0.8%

Source: CA Dept. of Finance

Figure 1 - Annual Past and Projected Household Population Growth Rates



Source: CA Dept. of Finance

Before the recession, total jobs in the region peaked at 1,361,550 in 2007 and did not reach that level again until 2014. The annual average number of jobs in 2015 is estimated at 1,405,122 (Table 3). Through 2008, total jobs in the County were growing at a 1.4 annual percentage rate, while since 2008, the number of jobs have grown at a much lower 0.5 percent per year.

**Table 3 — Trends in Total Number of Jobs:
2000-2015: CCWC Region**

Period	Total Employment
08-15 Annual Growth Rate	0.5%
00-08 Annual Growth Rate	1.4%
2015	1,405,122
2014	1,385,599
2013	1,356,973
2012	1,316,991
2011	1,284,842
2010	1,271,214
2009	1,287,708
2008	1,357,592
2007	1,361,550
2006	1,341,399
2005	1,306,916
2004	1,268,476
2003	1,249,284
2002	1,235,969
2001	1,218,992
2000	1,214,461

Source: Applied Development Economics, based on CA EDD LMID

Farm employment grew at a 2.2 percent annual rate between 2010 and 2015 but is projected to increase at a slower rate of 0.5 percent over the next ten years (Table 4). Much of the agricultural job growth is projected in farm support (NAICS 115), especially from farm labor contractors (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.

Manufacturing industries in CCWC region are mainly in food processing. Manufacturing jobs increased by more than 5,100 jobs between 2010 and 2015, from 101,451 in 2010 to 105,607 in 2015. This sector is expected to slow its growth over the next ten years, adding about 7,000 jobs. Within manufacturing, food processing (NAICS 311-312) is expected to increase annually by 0.8 percent

Table 4 — Employment Trends and Projections By Sectors: CCWC Region

NAICS CODE	INDUSTRY SECTOR	2010 JOBS	2015 JOBS	2025 PROJECTED	15-25 CHANGE	10-15 ANNUAL GROWTH RATE	15-25 ANNUAL GROWTH RATE
	Total	1,316,427	1,457,520	1,666,961	209,444	2.1%	1.4%
11	Agriculture	186,738	208,225	219,800	11,575	2.2%	0.5%
21	Mining	9,991	10,518	11,234	717	1.0%	0.7%
22	Utilities	6,214	6,746	7,084	338	1.7%	0.5%
23	Construction	48,579	61,365	72,607	11,242	4.8%	1.7%
31-33	Manufacturing	101,451	105,607	112,637	7,030	0.8%	0.6%
42	Wholesale	42,299	48,849	60,685	11,836	2.9%	2.2%
44-45	Retail	131,984	151,397	178,823	27,426	2.8%	1.7%
48	Warehousing	27,552	34,702	43,197	8,494	4.7%	2.2%
49	Transportation	19,150	20,677	23,042	2,366	1.5%	1.1%
51	Information	12,587	11,358	12,284	927	-2.0%	0.8%
52	Finance and Insurance	29,252	28,637	30,847	2,210	-0.4%	0.7%
53	Real Estate and Leasing	14,946	15,877	17,983	2,106	1.2%	1.3%
54	Prof., Scientific, Technical	35,543	37,908	46,560	8,652	1.3%	2.1%
55	Mgt. of Companies	10,568	10,953	9,469	-1,484	0.7%	-1.4%
561	Admin Support	47,214	56,111	70,618	14,506	3.5%	2.3%
562	Waste Mgt.	3,829	4,279	5,903	1,624	2.2%	3.3%
61	Education	143,868	154,138	170,580	16,441	1.4%	1.0%
62	Health	167,766	192,884	241,950	49,066	2.8%	2.3%
71	Arts, Rec. and Enter.	10,595	12,290	14,021	1,731	3.0%	1.3%
721	Accommodations	9,580	9,245	10,668	1,423	-0.7%	1.4%
722	Food and Drinking Services	81,536	98,907	116,854	17,947	3.9%	1.7%
81	Other Services	40,191	44,135	50,937	6,802	1.9%	1.4%
92	Public Admin.	118,226	114,402	121,561	7,159	-0.7%	0.6%
98	Nat'l Security/Military	14,950	14,535	13,442	-1,093	-0.6%	-0.8%
99	Misc.	1,817	3,775	4,174	400	15.7%	1.0%

Source: Applied Development Economics, based on EMSI 2015 Q4 QCEW and Non-QCEW Industry Employment Data. (Internal file: P:\CCWC Labor Force 2015\03_NEXT-TASKS\TABLES\06_draft_Fresno-update.xlsx T3r)

between 2015 and 2025. Overall, food processing is projected to grow by more than 5,700 jobs in the coming years, led by food manufacturing industries such as animal slaughtering (NAICS 311611), meat processed from carcasses (NAICS 311612), perishable prepared foods (NAICS 311991) and wineries (NAICS 312130) (Table 5).

A number of non-food processing manufacturing industries are also projected to produce new jobs. Paint and coatings (NAICS 325510), plastics pipe and pipe fittings (NAICS 326122), urethane ad other foam products (NAICS 326150), glass products (NAICS 327215), fabricated structural metal (NAICS 332312) and search and detection instruments (NAICS 334511) are projected to have a combined growth of 1,825 jobs between 2015 and 2025.

The construction industry continued to grow coming out of the recession over the past five years, and is projected to grow over the next ten years as well (Table 4). Residential construction (NAICS 236116), residential remodelers (NAICS 236118), electrical and plumbing specialties (NAICS 238210 and 238220) and water and sewer line construction (NAICS 237110) are expected to grow during this period, which is consistent with expected population growth for the region over the next ten years (Table 5). In addition, the High Speed Rail (HSR) project and a variety of highway improvement projects are projected to add significant heavy construction jobs in the region. The HSR project is estimate to support an average of nearly 3,000 jobs over the ten year period to 2025, with peaks of 6,000 jobs during the height of construction.

The Health Services sector is projected to see strong employment growth over the next ten years. This is a consistent finding throughout the state 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 241,950 in 2025 from 192,884 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 CCWC Region, 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 CCWC region.

Table 5 — Employment Projections For Industries Expected to Grow By 50 or More Jobs Between 2015 and 2025: CCWC Region

NAICS	INDUSTRY	2015	2025 PROJ.	15-25 CHANGE	15-25 CAGR
115112	Soil Preparation, Planting, and Cultivating	4,825	5,265	441	0.9%
115114	Postharvest Crop Activities (except Cotton Ginning)	19,667	21,250	1,583	0.8%
115115	Farm Labor Contractors and Crew Leaders	92,059	104,398	12,340	1.3%
115116	Farm Management Services	5,091	6,276	1,185	2.1%
115310	Support Activities for Forestry	142	199	58	3.5%
11 Agric.		121,783	137,389	15,606	1.2%
212321	Construction Sand and Gravel Mining	223	285	62	2.5%
21 Mining		223	285	62	2.5%
221112	Fossil Fuel Electric Power Generation	1,977	2,518	541	2.4%
221310	Water Supply and Irrigation Systems	1,053	1,385	332	2.8%
22 Utilities		3,030	3,903	872	2.6%
236116	New Multifamily Housing Construction (except For-Sale Builders)	274	468	194	5.5%
236118	Residential Remodelers	1,880	2,922	1,042	4.5%
236220	Commercial and Institutional Building Construction	4,169	5,261	1,092	2.4%
237110	Water and Sewer Line and Related Structures Construction	2,582	3,179	597	2.1%
237990	Other Heavy and Civil Engineering Construction	772	4,044	3,271	18.0%

NAICS	INDUSTRY	2015	2025 PROJ.	15-25 CHANGE	15-25 CAGR
238120	Structural Steel and Precast Concrete Contractors	782	1,008	225	2.6%
238140	Masonry Contractors	1,023	1,335	313	2.7%
238150	Glass and Glazing Contractors	358	529	171	4.0%
238170	Siding Contractors	111	166	55	4.1%
238190	Other Foundation, Structure, and Building Exterior Contractors	396	518	122	2.7%
238210	Electrical Contractors and Other Wiring Installation Contractors	7,300	8,765	1,465	1.8%
238220	Plumbing, Heating, and Air-Conditioning Contractors	7,413	9,240	1,826	2.2%
238290	Other Building Equipment Contractors	894	1,298	404	3.8%
238320	Painting and Wall Covering Contractors	2,002	2,101	99	0.5%
238330	Flooring Contractors	676	873	197	2.6%
238390	Other Building Finishing Contractors	458	771	314	5.4%
238910	Site Preparation Contractors	2,020	2,605	586	2.6%
238990	All Other Specialty Trade Contractors	4,022	6,129	2,107	4.3%
23 Const.		41,788	55,868	14,080	3.3%
311119	Other Animal Food Manufacturing	1,413	1,675	262	1.7%
311221	Wet Corn Milling	425	675	250	4.7%
311340	Nonchocolate Confectionery Manufacturing	100	215	115	7.9%
311412	Frozen Specialty Food Manufacturing	1,934	2,042	108	0.5%
311511	Fluid Milk Manufacturing	2,493	2,955	461	1.7%
311513	Cheese Manufacturing	4,334	4,887	553	1.2%
311520	Ice Cream and Frozen Dessert Manufacturing	1,447	1,808	361	2.3%
311611	Animal (except Poultry) Slaughtering	2,563	3,150	587	2.1%
311612	Meat Processed from Carcasses	1,815	2,340	525	2.6%
311615	Poultry Processing	7,895	8,568	673	0.8%
311830	Tortilla Manufacturing	854	946	92	1.0%
311911	Roasted Nuts and Peanut Butter Manufacturing	4,399	5,104	704	1.5%
311919	Other Snack Food Manufacturing	1,346	1,433	87	0.6%
311991	Perishable Prepared Food Manufacturing	2,119	2,544	425	1.8%
311999	All Other Miscellaneous Food Manufacturing	892	1,216	324	3.1%
312111	Soft Drink Manufacturing	996	1,186	191	1.8%
312120	Breweries	102	157	54	4.3%
312130	Wineries	6,334	7,745	1,411	2.0%
313110	Fiber, Yarn, and Thread Mills	92	196	105	7.9%
321920	Wood Container and Pallet Manufacturing	822	1,029	207	2.3%
322211	Corrugated and Solid Fiber Box Manufacturing	2,307	3,090	784	3.0%
322219	Other Paperboard Container Manufacturing	749	894	145	1.8%
322299	All Other Converted Paper Product Manufacturing	367	416	49	1.3%
323113	Commercial Screen Printing	190	267	77	3.5%
324110	Petroleum Refineries	877	1,013	136	1.5%
325193	Ethyl Alcohol Manufacturing	76	155	79	7.4%
325211	Plastics Material and Resin Manufacturing	87	164	77	6.5%
325314	Fertilizer (Mixing Only) Manufacturing	337	407	70	1.9%
325411	Medicinal and Botanical Manufacturing	114	199	85	5.7%

NAICS	INDUSTRY	2015	2025 PROJ.	15-25 CHANGE	15-25 CAGR
325510	Paint and Coating Manufacturing	199	328	129	5.1%
326111	Plastics Bag and Pouch Manufacturing	120	201	81	5.3%
326112	Plastics Packaging Film and Sheet (including Laminated) Manufacturing	491	814	323	5.2%
326130	Laminated Plastics Plate, Sheet (except Packaging), and Shape Manufacturing	91	142	51	4.5%
326150	Urethane and Other Foam Product (except Polystyrene) Manufacturing	455	733	279	4.9%
326199	All Other Plastics Product Manufacturing	1,085	1,324	239	2.0%
326299	All Other Rubber Product Manufacturing	284	393	109	3.3%
327213	Glass Container Manufacturing	1,586	1,711	125	0.8%
327215	Glass Product Manufacturing Made of Purchased Glass	340	441	101	2.6%
327310	Cement Manufacturing	380	503	123	2.8%
327331	Concrete Block and Brick Manufacturing	148	227	79	4.4%
327390	Other Concrete Product Manufacturing	567	970	403	5.5%
332119	Metal Crown, Closure, and Other Metal Stamping (except Automotive)	240	306	66	2.5%
332312	Fabricated Structural Metal Manufacturing	1,664	1,974	310	1.7%
332322	Sheet Metal Work Manufacturing	651	821	170	2.3%
332323	Ornamental and Architectural Metal Work Manufacturing	240	320	80	2.9%
332613	Spring Manufacturing	128	245	117	6.7%
332710	Machine Shops	1,326	1,390	64	0.5%
332722	Bolt, Nut, Screw, Rivet, and Washer Manufacturing	124	183	58	3.9%
332812	Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers	622	856	234	3.2%
332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	490	653	163	2.9%
333111	Farm Machinery and Equipment Manufacturing	1,527	1,599	72	0.5%
333132	Oil and Gas Field Machinery and Equipment Manufacturing	545	644	99	1.7%
333249	Other Industrial Machinery Manufacturing	146	239	93	5.0%
333318	Other Commercial and Service Industry Machinery Manufacturing	153	206	53	3.0%
333993	Packaging Machinery Manufacturing	723	790	67	0.9%
334413	Semiconductor and Related Device Manufacturing	256	320	65	2.3%
334511	Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing	679	1,044	365	4.4%
334519	Other Measuring and Controlling Device Manufacturing	78	131	53	5.3%
335129	Other Lighting Equipment Manufacturing	108	179	71	5.2%
336211	Motor Vehicle Body Manufacturing	543	707	164	2.7%
336212	Truck Trailer Manufacturing	508	617	109	2.0%
336370	Motor Vehicle Metal Stamping	73	152	79	7.6%
336413	Other Aircraft Parts and Auxiliary Equipment Manufacturing	770	1,110	340	3.7%
337910	Mattress Manufacturing	122	235	113	6.8%
339112	Surgical and Medical Instrument Manufacturing	184	248	64	3.0%
31-33 Man.		65,125	79,231	14,107	2.0%
423120	Motor Vehicle Supplies and New Parts Merchant Wholesalers	1,492	1,710	217	1.4%

NAICS	INDUSTRY	2015	2025 PROJ.	15-25 CHANGE	15-25 CAGR
423130	Tire and Tube Merchant Wholesalers	276	438	161	4.7%
423210	Furniture Merchant Wholesalers	588	943	355	4.8%
423220	Home Furnishing Merchant Wholesalers	315	555	239	5.8%
423430	Computer and Computer Peripheral Equipment and Software Merchant Wholesalers	281	418	137	4.0%
423440	Other Commercial Equipment Merchant Wholesalers	171	233	62	3.2%
423510	Metal Service Centers and Other Metal Merchant Wholesalers	1,384	1,872	488	3.1%
423610	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	989	1,156	167	1.6%
423710	Hardware Merchant Wholesalers	409	517	108	2.4%
423720	Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers	851	1,050	199	2.1%
423740	Refrigeration Equipment and Supplies Merchant Wholesalers	79	157	78	7.1%
423820	Farm and Garden Machinery and Equipment Merchant Wholesalers	2,374	2,436	62	0.3%
423830	Industrial Machinery and Equipment Merchant Wholesalers	3,287	3,788	501	1.4%
423850	Service Establishment Equipment and Supplies Merchant Wholesalers	299	367	68	2.1%
423860	Transportation Equipment and Supplies (except Motor Vehicle) Merchant Wholesalers	239	413	174	5.6%
423910	Sporting and Recreational Goods and Supplies Merchant Wholesalers	213	289	76	3.1%
423930	Recyclable Material Merchant Wholesalers	1,122	1,372	250	2.0%
423990	Other Miscellaneous Durable Goods Merchant Wholesalers	253	328	75	2.6%
424130	Industrial and Personal Service Paper Merchant Wholesalers	504	690	186	3.2%
424210	Drugs and Druggists' Sundries Merchant Wholesalers	664	979	315	4.0%
424320	Men's and Boys' Clothing and Furnishings Merchant Wholesalers	218	325	107	4.1%
424330	Women's, Children's, and Infants' Clothing and Accessories Merchant Wholesalers	217	267	50	2.1%
424410	General Line Grocery Merchant Wholesalers	2,825	3,385	560	1.8%
424420	Packaged Frozen Food Merchant Wholesalers	231	289	58	2.3%
424430	Dairy Product (except Dried or Canned) Merchant Wholesalers	717	889	171	2.2%
424450	Confectionery Merchant Wholesalers	744	808	65	0.8%
424460	Fish and Seafood Merchant Wholesalers	99	168	70	5.5%
424470	Meat and Meat Product Merchant Wholesalers	500	599	99	1.8%
424480	Fresh Fruit and Vegetable Merchant Wholesalers	3,586	4,329	743	1.9%
424490	Other Grocery and Related Products Merchant Wholesalers	3,797	5,097	1,300	3.0%
424510	Grain and Field Bean Merchant Wholesalers	287	408	121	3.6%
424590	Other Farm Product Raw Material Merchant Wholesalers	286	345	59	1.9%
424690	Other Chemical and Allied Products Merchant Wholesalers	734	926	192	2.3%
424710	Petroleum Bulk Stations and Terminals	651	851	200	2.7%
424810	Beer and Ale Merchant Wholesalers	1,024	1,105	81	0.8%
424820	Wine and Distilled Alcoholic Beverage Merchant	1,123	2,013	889	6.0%

NAICS	INDUSTRY	2015	2025 PROJ.	15-25 CHANGE	15-25 CAGR
	Wholesalers				
424910	Farm Supplies Merchant Wholesalers	3,611	4,520	909	2.3%
424990	Other Miscellaneous Nondurable Goods Merchant Wholesalers	472	530	58	1.2%
425120	Wholesale Trade Agents and Brokers	4,747	7,335	2,588	4.4%
42 Wholesale		41,661	53,901	12,240	2.6%
441110	New Car Dealers	9,727	10,022	295	0.3%
441120	Used Car Dealers	1,670	2,673	1,002	4.8%
441228	Motorcycle, ATV, and All Other Motor Vehicle Dealers	616	666	50	0.8%
441310	Automotive Parts and Accessories Stores	4,979	5,716	737	1.4%
441320	Tire Dealers	2,154	2,341	187	0.8%
442110	Furniture Stores	1,596	1,661	65	0.4%
442299	All Other Home Furnishings Stores	1,048	1,415	366	3.0%
443142	Electronics Stores	4,283	6,290	2,007	3.9%
444110	Home Centers	7,741	10,014	2,273	2.6%
444130	Hardware Stores	2,063	2,448	385	1.7%
445110	Supermarkets and Other Grocery (except Convenience) Stores	24,530	27,540	3,010	1.2%
445120	Convenience Stores	1,797	2,201	404	2.0%
445210	Meat Markets	701	822	121	1.6%
445230	Fruit and Vegetable Markets	290	368	78	2.4%
445291	Baked Goods Stores	200	321	121	4.8%
445292	Confectionery and Nut Stores	260	387	127	4.1%
446110	Pharmacies and Drug Stores	7,650	9,022	1,372	1.7%
446120	Cosmetics, Beauty Supplies, and Perfume Stores	1,086	1,702	616	4.6%
446130	Optical Goods Stores	471	681	210	3.7%
446191	Food (Health) Supplement Stores	350	434	84	2.2%
448110	Men's Clothing Stores	441	517	76	1.6%
448120	Women's Clothing Stores	2,661	4,132	1,471	4.5%
448130	Children's and Infants' Clothing Stores	614	1,049	435	5.5%
448140	Family Clothing Stores	4,194	5,433	1,239	2.6%
448150	Clothing Accessories Stores	361	545	184	4.2%
448190	Other Clothing Stores	908	1,125	217	2.2%
448210	Shoe Stores	1,975	2,315	341	1.6%
451110	Sporting Goods Stores	2,686	3,280	593	2.0%
451120	Hobby, Toy, and Game Stores	2,652	3,923	1,271	4.0%
451130	Sewing, Needlework, and Piece Goods Stores	713	889	176	2.2%
452112	Discount Department Stores	15,669	20,045	4,376	2.5%
452910	Warehouse Clubs and Supercenters	10,328	15,807	5,479	4.3%
452990	All Other General Merchandise Stores	5,075	6,890	1,814	3.1%
453310	Used Merchandise Stores	1,537	1,715	177	1.1%
453910	Pet and Pet Supplies Stores	1,183	1,457	274	2.1%
454111	Electronic Shopping	181	245	64	3.1%
454113	Mail-Order Houses	169	242	73	3.7%
454210	Vending Machine Operators	241	309	68	2.5%

NAICS	INDUSTRY	2015	2025 PROJ.	15-25 CHANGE	15-25 CAGR
454310	Fuel Dealers	546	610	64	1.1%
44-45 Retail		125,345	157,252	31,907	2.3%
482110	Rail transportation	1,757	2,007	250	1.3%
484110	General Freight Trucking, Local	5,455	6,215	760	1.3%
484121	General Freight Trucking, Long-Distance, Truckload	6,170	8,314	2,144	3.0%
484122	General Freight Trucking, Long-Distance, Less Than Truckload	2,349	2,656	307	1.2%
484220	Specialized Freight (except Used Goods) Trucking, Local	7,260	9,134	1,874	2.3%
484230	Specialized Freight (except Used Goods) Trucking, Long-Distance	1,265	1,962	698	4.5%
485113	Bus and Other Motor Vehicle Transit Systems	488	873	386	6.0%
485991	Special Needs Transportation	1,241	1,911	671	4.4%
486110	Pipeline Transportation of Crude Oil	419	474	55	1.2%
488210	Support Activities for Rail Transportation	578	789	211	3.2%
488410	Motor Vehicle Towing	1,000	1,394	394	3.4%
488490	Other Support Activities for Road Transportation	258	350	92	3.1%
488510	Freight Transportation Arrangement	872	1,270	398	3.8%
488991	Packing and Crating	593	923	330	4.5%
488999	All Other Support Activities for Transportation	356	501	145	3.5%
48 Trans.		30,059	38,772	8,714	2.6%
492110	Couriers and Express Delivery Services	2,926	3,045	120	0.4%
492210	Local Messengers and Local Delivery	574	771	197	3.0%
493110	General Warehousing and Storage	11,234	13,773	2,539	2.1%
493120	Refrigerated Warehousing and Storage	1,414	1,644	230	1.5%
493190	Other Warehousing and Storage	151	226	75	4.1%
49 Warehousing		16,298	19,459	3,161	1.8%
511120	Periodical Publishers	192	367	175	6.7%
511130	Book Publishers	137	271	134	7.1%
511210	Software Publishers	296	378	82	2.5%
515120	Television Broadcasting	1,114	1,470	356	2.8%
517110	Wired Telecommunications Carriers	3,651	5,682	2,031	4.5%
517919	All Other Telecommunications	35	138	103	14.6%
518210	Data Processing, Hosting, and Related Services	527	628	101	1.8%
51 Information		5,952	8,935	2,983	4.1%
522110	Commercial Banking	5,621	5,705	84	0.1%
522130	Credit Unions	2,461	2,996	536	2.0%
522298	All Other Nondepository Credit Intermediation	362	453	91	2.3%
522390	Other Activities Related to Credit Intermediation	485	622	137	2.5%
523120	Securities Brokerage	387	462	75	1.8%
523140	Commodity Contracts Brokerage	52	102	51	7.1%
523910	Miscellaneous Intermediation	83	161	78	6.8%
523991	Trust, Fiduciary, and Custody Activities	80	140	61	5.8%
524114	Direct Health and Medical Insurance Carriers	2,781	3,596	815	2.6%
524126	Direct Property and Casualty Insurance Carriers	2,547	2,889	342	1.3%

NAICS	INDUSTRY	2015	2025 PROJ.	15-25 CHANGE	15-25 CAGR
524210	Insurance Agencies and Brokerages	6,209	7,005	796	1.2%
524292	Third Party Administration of Insurance and Pension Funds	1,339	1,680	341	2.3%
52 Fin. And Insr.		22,406	25,812	3,405	1.4%
531130	Lessors of Miniwarehouses and Self-Storage Units	891	1,059	168	1.7%
531190	Lessors of Other Real Estate Property	821	879	58	0.7%
531210	Offices of Real Estate Agents and Brokers	2,466	2,561	95	0.4%
531311	Residential Property Managers	3,200	3,835	635	1.8%
531390	Other Activities Related to Real Estate	216	286	71	2.9%
532111	Passenger Car Rental	638	926	288	3.8%
532120	Truck, Utility Trailer, and RV (Recreational Vehicle) Rental and Leasing	562	642	80	1.3%
532299	All Other Consumer Goods Rental	701	908	207	2.6%
532310	General Rental Centers	405	608	203	4.1%
532412	Construction, Mining, and Forestry Machinery and Equipment Rental and Leasing	1,085	1,417	332	2.7%
532490	Other Commercial and Industrial Machinery and Equipment Rental and Leasing	603	930	328	4.4%
533110	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	188	241	52	2.5%
53 R.E. and Leasing		11,776	14,293	2,517	2.0%
541110	Offices of Lawyers	4,834	5,412	577	1.1%
541199	All Other Legal Services	156	229	73	3.9%
541213	Tax Preparation Services	1,337	1,506	168	1.2%
541219	Other Accounting Services	2,660	3,315	656	2.2%
541310	Architectural Services	711	822	111	1.5%
541320	Landscape Architectural Services	297	446	150	4.2%
541330	Engineering Services	4,376	4,883	506	1.1%
541350	Building Inspection Services	194	323	129	5.2%
541370	Surveying and Mapping (except Geophysical) Services	291	482	191	5.2%
541380	Testing Laboratories	1,687	2,495	808	4.0%
541410	Interior Design Services	110	181	72	5.1%
541490	Other Specialized Design Services	95	161	66	5.4%
541511	Custom Computer Programming Services	1,524	1,889	365	2.2%
541512	Computer Systems Design Services	1,319	1,748	428	2.9%
541519	Other Computer Related Services	401	514	114	2.5%
541611	Administrative Management and General Management Consulting Services	913	1,174	261	2.5%
541612	Human Resources Consulting Services	215	266	51	2.1%
541613	Marketing Consulting Services	242	357	115	4.0%
541614	Process, Physical Distribution, and Logistics Consulting Services	607	1,150	543	6.6%
541618	Other Management Consulting Services	863	978	115	1.3%
541620	Environmental Consulting Services	486	771	285	4.7%
541690	Other Scientific and Technical Consulting Services	3,185	4,857	1,672	4.3%
541712	Research and Development in the Physical, Engineering, and Life Sciences (except Biotechnology)	986	1,405	419	3.6%
541720	Research and Development in the Social Sciences and	500	819	319	5.1%

NAICS	INDUSTRY	2015	2025 PROJ.	15-25 CHANGE	15-25 CAGR
	Humanities				
541890	Other Services Related to Advertising	861	1,075	214	2.2%
541910	Marketing Research and Public Opinion Polling	280	383	103	3.2%
541940	Veterinary Services	2,621	3,119	498	1.8%
54 Prof.,Sci., Tech.		31,748	40,759	9,010	2.5%
55 Mgt of Cos.					
561110	Office Administrative Services	2,448	2,680	232	0.9%
561210	Facilities Support Services	1,717	2,333	616	3.1%
561311	Employment Placement Agencies	1,937	3,202	1,265	5.2%
561320	Temporary Help Services	21,618	29,190	7,572	3.0%
561422	Telemarketing Bureaus and Other Contact Centers	2,295	3,780	1,485	5.1%
561439	Other Business Service Centers (including Copy Shops)	387	459	72	1.7%
561520	Tour Operators	93	257	164	10.7%
561612	Security Guards and Patrol Services	5,170	6,169	999	1.8%
561621	Security Systems Services (except Locksmiths)	759	824	65	0.8%
561710	Exterminating and Pest Control Services	1,381	1,497	116	0.8%
561720	Janitorial Services	5,710	7,682	1,972	3.0%
561790	Other Services to Buildings and Dwellings	753	1,000	247	2.9%
561920	Convention and Trade Show Organizers	885	1,332	447	4.2%
561990	All Other Support Services	1,047	1,360	313	2.7%
562111	Solid Waste Collection	1,614	2,413	799	4.1%
562112	Hazardous Waste Collection	165	249	84	4.2%
562119	Other Waste Collection	240	349	109	3.8%
562219	Other Nonhazardous Waste Treatment and Disposal	242	336	94	3.3%
562910	Remediation Services	401	477	76	1.8%
562920	Materials Recovery Facilities	300	387	86	2.6%
562991	Septic Tank and Related Services	602	1,150	548	6.7%
562998	All Other Miscellaneous Waste Management Services	187	282	95	4.2%
56 Admin,Support,Waste		49,952	67,410	17,458	3.0%
611110	Elementary and Secondary Schools	116,022	126,102	10,080	0.8%
611310	Colleges, Universities, and Professional Schools	31,519	35,958	4,438	1.3%
611430	Professional and Management Development Training	367	625	258	5.5%
611511	Cosmetology and Barber Schools	367	630	262	5.5%
611513	Apprenticeship Training	208	266	58	2.5%
611519	Other Technical and Trade Schools	450	605	155	3.0%
611610	Fine Arts Schools	561	630	69	1.2%
611620	Sports and Recreation Instruction	925	1,310	385	3.5%
611691	Exam Preparation and Tutoring	1,205	1,844	639	4.3%
611710	Educational Support Services	1,056	1,308	252	2.2%
61 Education		152,680	169,277	16,598	1.0%
621111	Offices of Physicians (except Mental Health Specialists)	24,492	28,302	3,810	1.5%
621210	Offices of Dentists	9,175	10,157	982	1.0%
621320	Offices of Optometrists	1,489	1,858	369	2.2%
621330	Offices of Mental Health Practitioners (except	908	1,293	385	3.6%

NAICS	INDUSTRY	2015	2025 PROJ.	15-25 CHANGE	15-25 CAGR
	Physicians)				
621340	Offices of Physical, Occupational and Speech Therapists, and Audiologists	2,010	2,629	619	2.7%
621399	Offices of All Other Miscellaneous Health Practitioners	309	448	139	3.8%
621410	Family Planning Centers	541	660	119	2.0%
621420	Outpatient Mental Health and Substance Abuse Centers	1,433	1,880	447	2.8%
621491	HMO Medical Centers	5,260	8,443	3,183	4.8%
621492	Kidney Dialysis Centers	1,495	2,138	643	3.6%
621493	Freestanding Ambulatory Surgical and Emergency Centers	732	855	123	1.6%
621498	All Other Outpatient Care Centers	1,502	2,394	892	4.8%
621511	Medical Laboratories	896	970	74	0.8%
621512	Diagnostic Imaging Centers	1,019	1,589	570	4.5%
621610	Home Health Care Services	6,422	9,917	3,495	4.4%
621910	Ambulance Services	2,345	3,062	718	2.7%
621999	All Other Miscellaneous Ambulatory Health Care Services	191	328	137	5.5%
622110	General Medical and Surgical Hospitals	50,893	56,248	5,355	1.0%
622210	Psychiatric and Substance Abuse Hospitals	283	426	143	4.2%
623110	Nursing Care Facilities (Skilled Nursing Facilities)	14,236	17,015	2,779	1.8%
623220	Residential Mental Health and Substance Abuse Facilities	2,062	2,457	396	1.8%
623311	Continuing Care Retirement Communities	2,515	3,451	935	3.2%
623312	Assisted Living Facilities for the Elderly	4,596	5,402	807	1.6%
624110	Child and Youth Services	2,818	3,424	606	2.0%
624120	Services for the Elderly and Persons with Disabilities	36,547	57,396	20,849	4.6%
624190	Other Individual and Family Services	2,563	2,625	62	0.2%
624210	Community Food Services	305	391	86	2.5%
624221	Temporary Shelters	498	560	62	1.2%
624229	Other Community Housing Services	275	332	57	1.9%
624310	Vocational Rehabilitation Services	4,200	4,493	293	0.7%
624410	Child Day Care Services	4,863	5,218	355	0.7%
62 Health		186,876	236,363	49,487	2.4%
711211	Sports Teams and Clubs	515	655	140	2.4%
712110	Museums	176	234	59	2.9%
712130	Zoos and Botanical Gardens	167	250	83	4.1%
713210	Casinos (except Casino Hotels)	999	1,253	254	2.3%
713290	Other Gambling Industries	592	886	294	4.1%
713910	Golf Courses and Country Clubs	2,231	2,412	181	0.8%
713940	Fitness and Recreational Sports Centers	4,525	5,149	624	1.3%
713950	Bowling Centers	532	596	64	1.1%
713990	All Other Amusement and Recreation Industries	1,162	1,218	56	0.5%
71 Arts, Enter., Rec.		10,900	12,654	1,754	1.5%
721110	Hotels (except Casino Hotels) and Motels	8,433	9,663	1,230	1.4%
721191	Bed-and-Breakfast Inns	139	236	98	5.5%

NAICS	INDUSTRY	2015	2025 PROJ.	15-25 CHANGE	15-25 CAGR
721214	Recreational and Vacation Camps (except Campgrounds)	298	397	98	2.9%
722320	Caterers	1,166	1,404	238	1.9%
722330	Mobile Food Services	127	208	80	5.0%
722511	Full-Service Restaurants	37,457	43,496	6,038	1.5%
722513	Limited-Service Restaurants	49,000	58,939	9,939	1.9%
722514	Cafeterias, Grill Buffets, and Buffets	1,600	1,763	163	1.0%
722515	Snack and Nonalcoholic Beverage Bars	6,599	8,146	1,548	2.1%
72 Accommodations and Food		104,820	124,252	19,431	1.7%
811111	General Automotive Repair	3,568	4,455	887	2.2%
811121	Automotive Body, Paint, and Interior Repair and Maintenance	2,390	2,913	522	2.0%
811192	Car Washes	2,474	3,519	1,045	3.6%
811198	All Other Automotive Repair and Maintenance	483	764	281	4.7%
811212	Computer and Office Machine Repair and Maintenance	155	242	87	4.6%
811219	Other Electronic and Precision Equipment Repair and Maintenance	164	249	85	4.3%
811310	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	3,230	4,172	942	2.6%
812113	Nail Salons	810	1,373	563	5.4%
812199	Other Personal Care Services	449	607	158	3.1%
812220	Cemeteries and Crematories	351	446	95	2.4%
812310	Coin-Operated Laundries and Drycleaners	227	298	71	2.8%
812331	Linen Supply	818	1,055	237	2.6%
812332	Industrial Launderers	1,002	1,259	257	2.3%
812910	Pet Care (except Veterinary) Services	540	773	232	3.6%
813110	Religious Organizations	12,941	14,186	1,245	0.9%
813211	Grantmaking Foundations	846	1,075	229	2.4%
813212	Voluntary Health Organizations	251	376	125	4.1%
813312	Environment, Conservation and Wildlife Organizations	400	540	140	3.0%
813410	Civic and Social Organizations	1,789	2,013	224	1.2%
813930	Labor Unions and Similar Labor Organizations	791	856	65	0.8%
81 Other Svcs.		33,682	41,172	7,490	2.0%
902999	State Government, Excluding Education and Hospitals	24,623	27,500	2,877	1.1%
903999	Local Government, Excluding Education and Hospitals	67,483	73,674	6,190	0.9%
90 Public		92,106	101,173	9,067	0.9%
999999	Unclassified Industry	3,775	4,174	400	1.0%
99 Unclass.		3,775	4,174	400	1.0%

Source: ADE Inc., based on data provided by EMSI

Note: 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.² 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 CCWC region, 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 in the beginning of the Appendix). This cluster cuts across several of the major industry groups shown in Table 4 above. Within the broader Agricultural cluster, there continues to be a shift away from jobs employed directly at farms and increased reliance on farm labor contractors. In addition, a number of food processing industries are projected to increase employment, including poultry processing (NAICS 311615), animal slaughtering (NAICS 311611), meat processed from carcasses (NAICS 311612), wineries (NAICS 312130), corrugated and solid fiber box (NAICS 322211), perishable prepared foods (NAICS 311991), and wood containers and pallets (NAICS 321920)(see Table A-2 in the Appendix). In addition, the agriculture related distribution (logistics) sector is projected to add about 3,900 jobs over the next ten years.

The Health and Wellness cluster is projected to add 51,000 jobs by 2025 (Table 6). Of the 51,000 new jobs, almost 26,700 (52 percent) will occur in the Health Care – Delivery sub-cluster. Within this sub-cluster, the number of jobs in hospitals is projected to increase by 5,400 new jobs, with another 4,200 new jobs projected for services to elderly and disabled persons. In addition to the 4,200 new service-related jobs in the Health Care – Delivery sub-cluster, there is another 20,800 new jobs in the Health Care – Other Services sub-cluster pertaining to services for the elderly and disabled (NAICS 624120). 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 Tables-6 and -7 for detail on industries in this cluster).

In addition to tracking growing industries, our analysis also identifies industries that are expected to decline. Table 7 lists industries within various clusters expected to decline by 50 or more workers between 2015 and 2025. While food processing generally exhibits strong growth over the next ten years, there are several food processing industries within the Ag Cluster that expected to decline, such as breakfast cereal manufacturing (NAICS 311230), fruit and vegetable canning (NAICS 311421), and dried and dehydrated food manufacturing (NAICS 311423).

² ADE Inc., *San Joaquin Valley Regional Industry Cluster Analysis and Action Plan*, prepared for the Office of Community and Economic Development, CSU Fresno, on behalf of the California Partnership for the San Joaquin Valley. September 2012.

Table 6 — Employment Projections By Industry Clusters: CCWC Region: 2015 - 2025

NAICS	2015 JOBS	2025 PROJECTED	15-25 CHANGE	15-25 ANNUAL GROWTH RATE
Total	1,031,426	1,203,144	171,718	1.6%
Energy	47,762	53,517	5,755	1.1%
Diversified Manufacturing	30,277	30,777	500	0.2%
Health and Wellness	203,489	254,499	51,010	2.3%
Agriculture	418,394	469,406	51,012	1.2%
Water Flow Technology	9,934	11,480	1,546	1.5%
Logistics	51,436	63,324	11,888	2.1%
Retail	151,397	178,823	27,426	1.7%
Accommodations and Food Services	106,314	125,619	19,305	1.7%
Heavy Construction	12,423	15,699	3,276	2.4%

Source: Applied Development Economics, based on EMSI Q4 2015 QCEW and Non-QCEW Industry Employment. 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

Table 7 — Industries Within Various Clusters That Are Expected to Decline Significantly Between 2015 and 2025 (50 or more): CCWC Region

Cluster	NAICS	Industries	2015	2025	Change	CAGR
Ag Cluster - Distribution	445299	All Other Specialty Food Stores	561	201	-360	-9.8%
Ag Cluster - Distribution	481111	Scheduled Passenger Air Transportation	379	168	-211	-7.8%
Ag Cluster - Processing	311111	Dog and Cat Food Manufacturing	287	187	-100	-4.2%
Ag Cluster - Processing	311211	Flour Milling	356	229	-127	-4.3%
Ag Cluster - Processing	311230	Breakfast Cereal Manufacturing	359	57	-302	-16.8%
Ag Cluster - Processing	311411	Frozen Fruit, Juice, and Vegetable Manufacturing	2,598	2,462	-136	-0.5%
Ag Cluster - Processing	311421	Fruit and Vegetable Canning	7,588	6,985	-603	-0.8%
Ag Cluster - Processing	311422	Specialty Canning	55	0	-55	-
Ag Cluster - Processing	311423	Dried and Dehydrated Food Manufacturing	2,261	1,632	-629	100.0%
Ag Cluster - Processing	311613	Rendering and Meat Byproduct Processing	178	83	-95	-3.2%
Ag Cluster - Processing	311812	Commercial Bakeries	1,093	834	-259	-7.3%
Ag Cluster - Processing	316110	Leather and Hide Tanning and Finishing	56	6	-50	-2.7%
Ag Cluster - Processing	326160	Plastics Bottle Manufacturing	229	145	-84	-20.0%
Ag Cluster - Processing	332431	Metal Can Manufacturing	664	394	-270	-4.5%
Ag Cluster - Production	111000	Crop Production	46,809	45,545	-1,264	-5.1%
Ag Cluster - Production	112000	Animal Production and Aquaculture	18,521	17,793	-728	-0.3%
Ag Cluster - Support	115111	Cotton Ginning	188	9	-179	-0.4%
Ag Cluster - Support	325311	Nitrogenous Fertilizer Manufacturing	67	6	-61	-26.2%
Ag Cluster - Support	332311	Prefabricated Metal Building and Component Manufacturing	714	585	-129	-21.4%
Ag Cluster - Support	444210	Outdoor Power Equipment Stores	209	76	-133	-2.0%
Ag Cluster - Support	522292	Real Estate Credit	898	569	-329	-9.6%
						-4.5%

Cluster	NAICS	Industries	2015	2025	Change	CAGR
Ag Cluster - Support	551112	Offices of Other Holding Companies	112	15	-97	-18.2%
Ag Cluster - Support	551114	Corporate, Subsidiary, and Regional Managing Offices	10838	9454	-1384	-1.4%
Energy Core--Alt Energy Production	238160	Roofing Contractors	1378	1100	-278	-2.2%
Energy Core--Energy Efficiency	238310	Drywall and Insulation Contractors	4015	3937	-78	-0.2%
Energy Core--Petroleum	212399	All Other Nonmetallic Mineral Mining	57	3	-54	-25.5%
Energy Core--Power Generation	221111	Hydroelectric Power Generation	150	0	-150	-
Energy Core--Power Generation	221210	Natural Gas Distribution	2864	2503	-361	100.0%
Energy related--Manufacturing	311613	Rendering and Meat Byproduct Processing	178	83	-95	-1.3%
Health Care--Delivery	621310	Offices of Chiropractors	997	937	-60	-7.3%
Health Care--Delivery	622310	Specialty (except Psychiatric and Substance Abuse) Hospitals	265	152	-113	-0.6%
Health Care--Delivery	623210	Residential Intellectual and Developmental Disability Facilities	2507	2453	-54	-5.4%
Health Care--Delivery	623990	Other Residential Care Facilities	1423	1152	-271	-0.2%
Health Care--Medical devices manufacturing	339113	Surgical Appliance and Supplies Manufacturing	556	457	-99	-2.1%
Health Care--Medical devices manufacturing	339116	Dental Laboratories	246	158	-88	-1.9%
Health Care--Wellness and Fitness	532291	Home Health Equipment Rental	167	83	-84	-4.3%
Health Care--Wellness and Fitness	812191	Diet and Weight Reducing Centers	134	82	-52	-6.8%
Heavy Construction	237130	Power and Communication Line and Related Structures Construction	1060	862	-198	-4.8%
Heavy Construction	237210	Land Subdivision	444	125	-319	-2.0%
Heavy Construction	237310	Highway, Street, and Bridge Construction	1880	1779	-101	-11.9%
Logistics	336612	Boat Building	202	6	-196	-0.6%
Logistics	481111	Scheduled Passenger Air Transportation	379	168	-211	-29.6%
Logistics	484210	Used Household and Office Goods Moving	477	423	-54	-7.8%
Logistics	485410	School and Employee Bus Transportation	861	776	-85	-1.2%
Logistics	485510	Charter Bus Industry	297	222	-75	-1.0%
Logistics	493130	Farm Product Warehousing and Storage	132	79	-53	-2.9%
Manufacturing - Other	321214	Truss Manufacturing	344	142	-202	-5.0%
Manufacturing - Other	321918	Other Millwork (including Flooring)	219	73	-146	-8.5%
Manufacturing - Other	321991	Manufactured Home (Mobile Home) Manufacturing	281	0	-281	-10.4%
Manufacturing - Other	323111	Commercial Printing (except Screen and Books)	1594	910	-684	-
Manufacturing - Other	323117	Books Printing	227	52	-175	100.0%
Manufacturing - Other	325311	Nitrogenous Fertilizer Manufacturing	67	6	-61	-5.5%
Manufacturing - Other	326140	Polystyrene Foam Product Manufacturing	385	223	-162	-13.7%
						-21.4%
						-5.3%

Cluster	NAICS	Industries	2015	2025	Change	CAGR
Manufacturing - Other	327211	Flat Glass Manufacturing	227	3	-224	-35.1%
Manufacturing - Other	327320	Ready-Mix Concrete Manufacturing	990	875	-115	-1.2%
Manufacturing - Other	327332	Concrete Pipe Manufacturing	364	184	-180	-6.6%
Manufacturing - Other	332311	Prefabricated Metal Building and Component Manufacturing	714	585	-129	-2.0%
Manufacturing - Other	332321	Metal Window and Door Manufacturing	243	183	-60	-2.8%
Manufacturing - Other	332618	Other Fabricated Wire Product Manufacturing	184	94	-90	-6.5%
Manufacturing - Other	332813	Electroplating, Plating, Polishing, Anodizing, and Coloring	197	128	-69	-4.2%
Manufacturing - Other	332919	Other Metal Valve and Pipe Fitting Manufacturing	118	61	-57	-6.4%
Manufacturing - Other	334220	Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing	1018	665	-353	-4.2%
Manufacturing - Other	334412	Bare Printed Circuit Board Manufacturing	200	81	-119	-8.6%
Manufacturing - Other	336214	Travel Trailer and Camper Manufacturing	122	12	-110	-20.7%
Manufacturing - Other	336411	Aircraft Manufacturing	73	9	-64	-18.9%
Manufacturing - Other	336612	Boat Building	202	6	-196	-29.6%
Manufacturing - Other	337110	Wood Kitchen Cabinet and Countertop Manufacturing	1059	978	-81	-0.8%
Manufacturing - Other	337122	Nonupholstered Wood Household Furniture Manufacturing	324	79	-245	-13.2%

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, more than 51,200 average annual openings are projected between 2015 and 2025 (512,600 total openings), of which approximately 21,000 annual openings would be due to new job growth.

**Table 8 — Annual Opening To Number of Unemployed Who Satisfy
Minimum Educational Requirements By Occupation: CCWC Region**

Occupational Group	Annual Openings	Unemployed Whose Educational Attainment Matches Occupational Requirements	Part-Time Labor Whose Educational Attainment Matches Occupational Requirements
Total	51,263	80,373	232,966
53 Transportation and Material Moving	4,952	15,468	27,840
51 Production	1,726	3,447	5,983
49 Installation, Maintenance, and Repair	1,650	1,683	4,182
47 Construction and Extraction	1,713	7,322	12,481
45 Farming, Fishing, and Forestry	6,333	9,087	18,102
43 Office and Administrative Support	5,934	12,889	31,743
41 Sales and Related	6,337	7,814	25,382
39 Personal Care and Service	1,737	3,600	14,881
37 Building and Maintenance	1,308	3,342	10,387
35 Food Preparation and Serving Related	6,281	6,416	27,993
33 Protective Service	1,335	1,391	3,875
31 Healthcare Support	1,767	2,113	5,324
29 Healthcare Practitioners and Technical	2,298	521	7,731
27 Arts, Enter. and Media	195	101	1,096
25 Education, Training, and Library	3,087	2,351	25,120
23 Legal	129	143	645
21 Community and Social Services	824	218	1,467
19 Life, Physical, and Social Science	256	43	466
17 Architecture and Engineering	321	129	443
15 Computer and Mathematical	323	542	733
13 Business and Financial Operations	1,132	770	2,597
11 Management	1,626	982	4,497

Source: Applied Development Economics, based on EMSI Annual Openings Q4 2015 QCEW and non-QCEW and US Census ACS 3-Year Sample 2012-2014 (from iPUMS) (internal file: P:\CCWC Labor Force 2015\03_NEXT-TASKS\TABLES\06_draft_Fresno-update.xlsx T7r)

LABOR FORCE CHARACTERISTICS

The analysis of labor force characteristics includes details about the following groups:

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

The characteristics include:

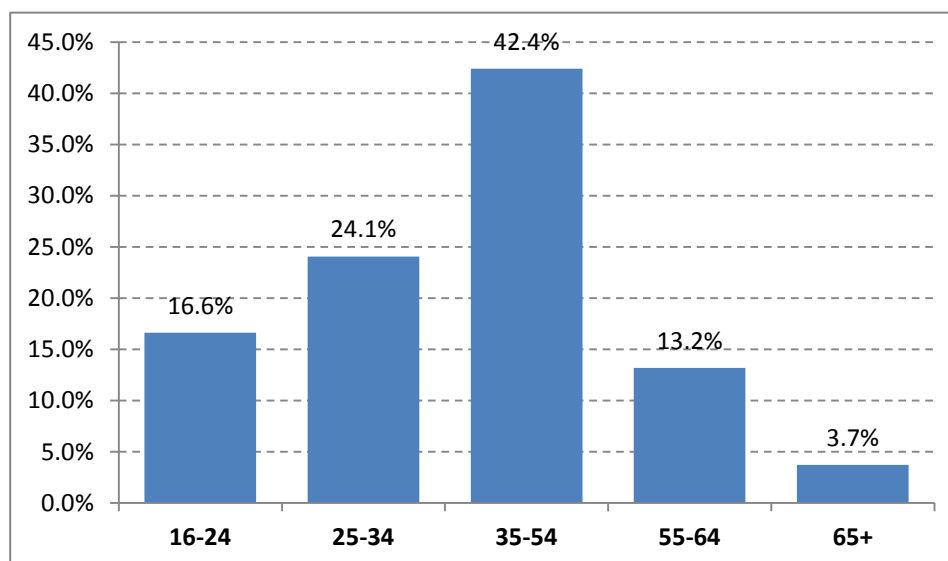
- Age
- Educational Attainment
- Employment status: full time, part time, unemployed
- Occupation

The discussion is organized around a number of graphical charts that summarize the information; however, Tables 9-25 at the end of the chapter provide more detail for these groups and demographic characteristics.

AGE DEMOGRAPHICS

The labor force in CCWC region is fairly evenly concentrated among the age groups. Workers in the 16-24 age group are about 16.6 percent of the total while nearly 25 percent are in the 25-34 age group. The prime working age group of 35-54 has 42 percent of the workforce. Workers over 55 constitute about 16.9 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.

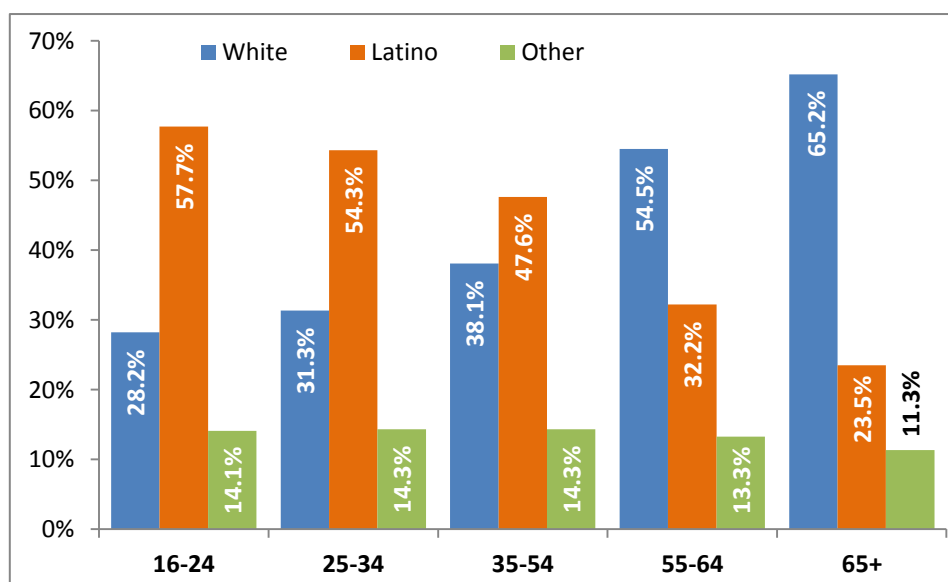
Figure 2 – Labor Force Age Distribution (Persons 16 and Over)



Source: Applied Development Economics, based on US Census ACS Public Use Microdata 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, 57.6 percent are Latino, while 28.2 percent are White. Similarly for the 25-34 age cohort, 54.3 percent are Latino and 31.3 percent are White. At 47.6 percent of the 35 to 54 workforce, Latinos comprise the largest segment of prime working-age adults in the labor force, with Whites numbering 38.1 percent. However, Whites constitute 56.8 percent of workers 55+ years old.

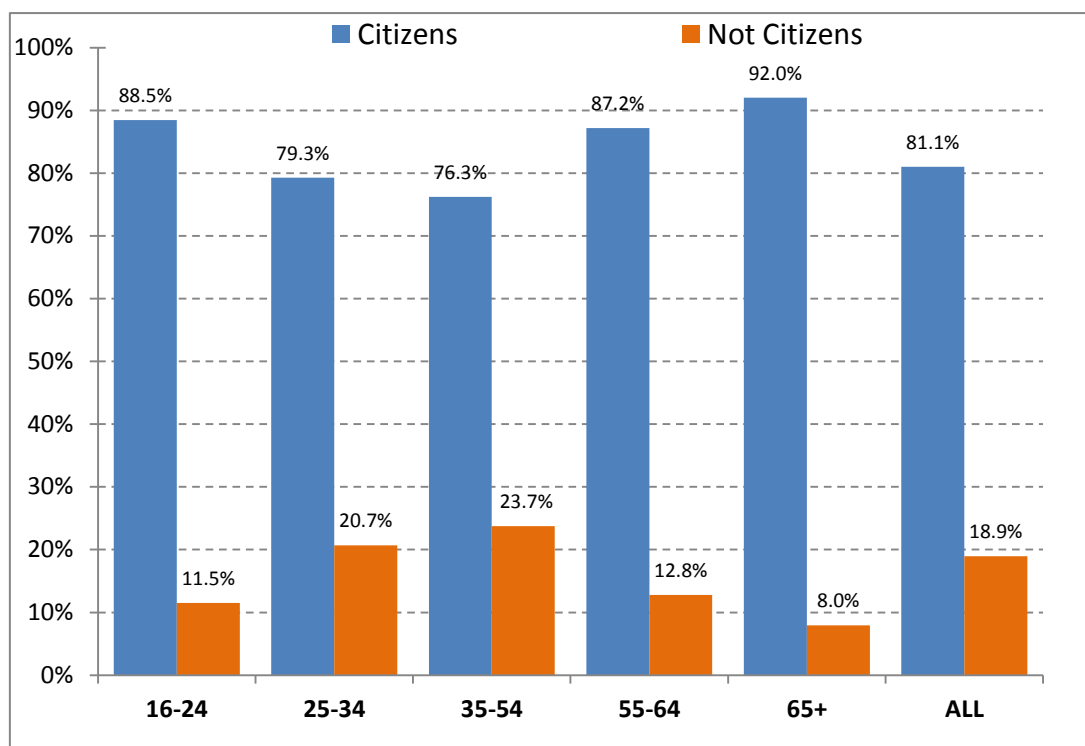
Figure 3 – Age Distribution by Race/Ethnicity (Persons 16 and Over)



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

Non-citizen workers constitute 18.9 percent of the workforce in CCWC region, though the rate varies with age (Figure 4). At 20.7 percent of the 25-34 age cohort and 23.7 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. In contrast, non-citizens comprise only 11.5 percent of the labor force between 16 and 24.

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



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

UNEMPLOYMENT

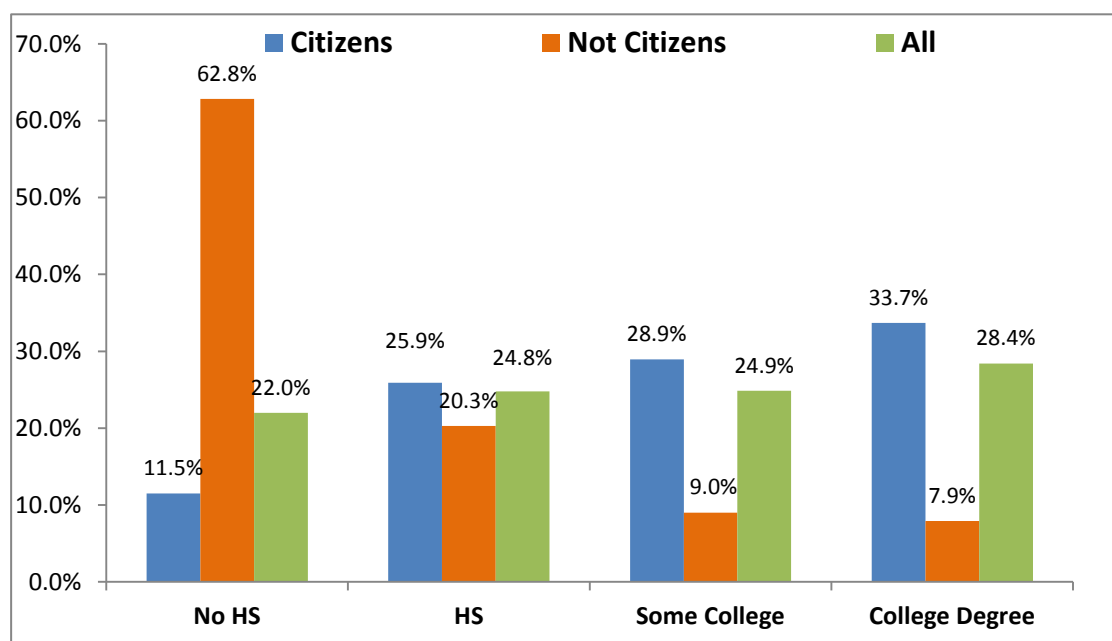
In CCWC region, about 48 percent of the labor force is Latino, at 870,562 persons out of a labor force of 1,814,685 (see Table 11 at the end of the Chapter). Thirty-eight percent is White. Unemployment for Latino workers 25 and older is 12.4 percent compared to 8.6 percent for Whites (Table 14). Unemployment is 14.2 percent for workers in other racial and ethnic groups. Unemployment affects workers 25 and older with no college degree much more, at 13.2 percent, than those with a college degree (6.1 percent). Veterans' unemployment level is at 8.8 percent. Disabled workers have relatively high unemployment, at slightly over 22.0 percent (Table 9).

EDUCATIONAL ATTAINMENT

Educational attainment in the CCWC region is slightly lower than the statewide averages, with 22 percent of workers 25 years and older not holding a high school diploma or equivalent, compared to 18.5 percent for the state as a whole. Statewide, 38.8 percent have a college degree, compared to 28.5 percent for the CCWC region. However, in the San Joaquin Valley there is a stark contrast in the educational attainment levels of the labor force when citizenship status is taken into account. Among

US citizens in the CCWC workforce, only 12 percent do not have a high school diploma or GED and 33.7 percent have a college degree. 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, 63 percent of the non-citizens 25 and over in the labor force have not obtained a high school diploma or a GED. Twenty percent of non-citizens in the labor force have earned a high school diploma or equivalent, which is five percentage points lower than the rate for citizens (i.e. 25.9 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 87.1 percent Latino; slightly over 39 percent of all Latinos in the workforce have no high school diploma or GED. It is also important to note that Latinos have earned high school diplomas and GEDs at rates slightly surpassing Whites and Others, at 25.9 percent versus 24.5 percent (Whites) and 21.7 percent (Others). However, Whites and Others are over two times more likely than Latinos to have earned a college degree: 14.9 percent of the Latinos in the labor force have earned a college degree versus 40 percent for Whites and 41 percent for Others (Figure 6).

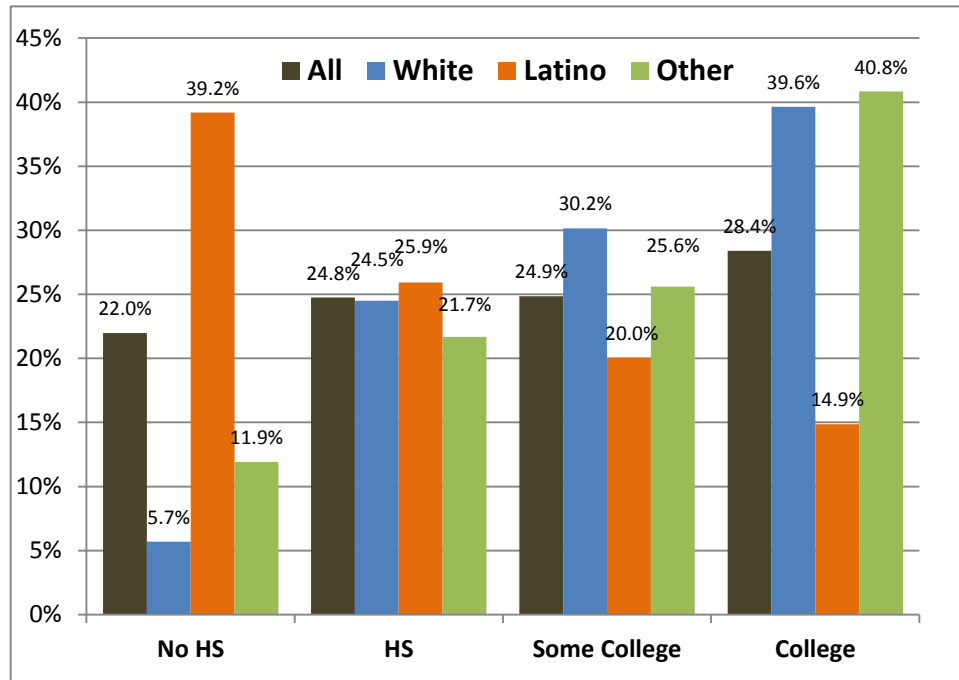
Figure 5 – Labor Force Educational Attainment by Citizenship Status (25 and over)



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

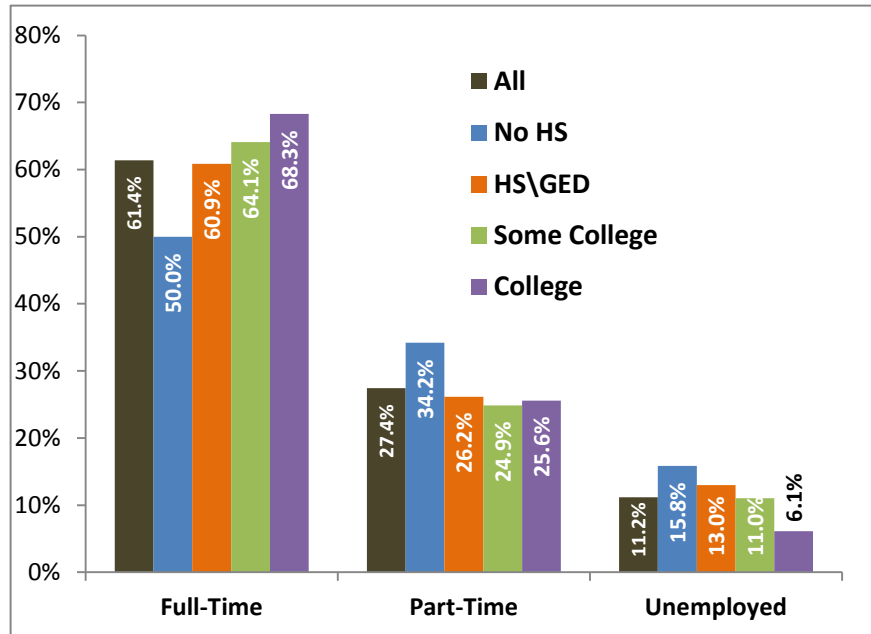
Educational attainment also affects employment status. Persons with no high school diploma exhibit rates of unemployment that more than double unemployment levels for persons with a college degree, or 15.8 percent versus 6.1 percent. Of the persons with a college degree, almost 68 percent work full-time, resulting in a full-time employment rate that is 18 percentage points greater than the rate for persons without a high school diploma (i.e. 68.3 percent versus 50.0 percent).

Figure 6 – Educational Attainment by Race/Ethnicity



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

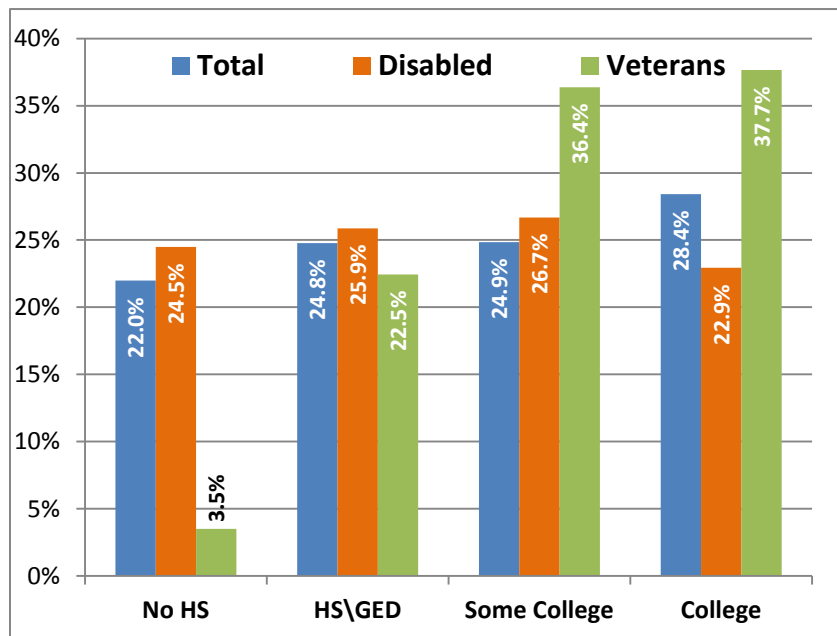
Figure 7 – Employment Status By Educational Attainment



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

Veterans in CCWC region tend to have high levels of overall educational attainment, with 3.5 percent not achieving a high school diploma (Figure 8). For the workforce as a whole, 22.0 percent do not have a high school diploma or equivalent degree. Among disabled workers, however, nearly 26.5 percent do not have a high school diploma.

Figure 8 – Educational Attainment for Disabled Workers and Veterans

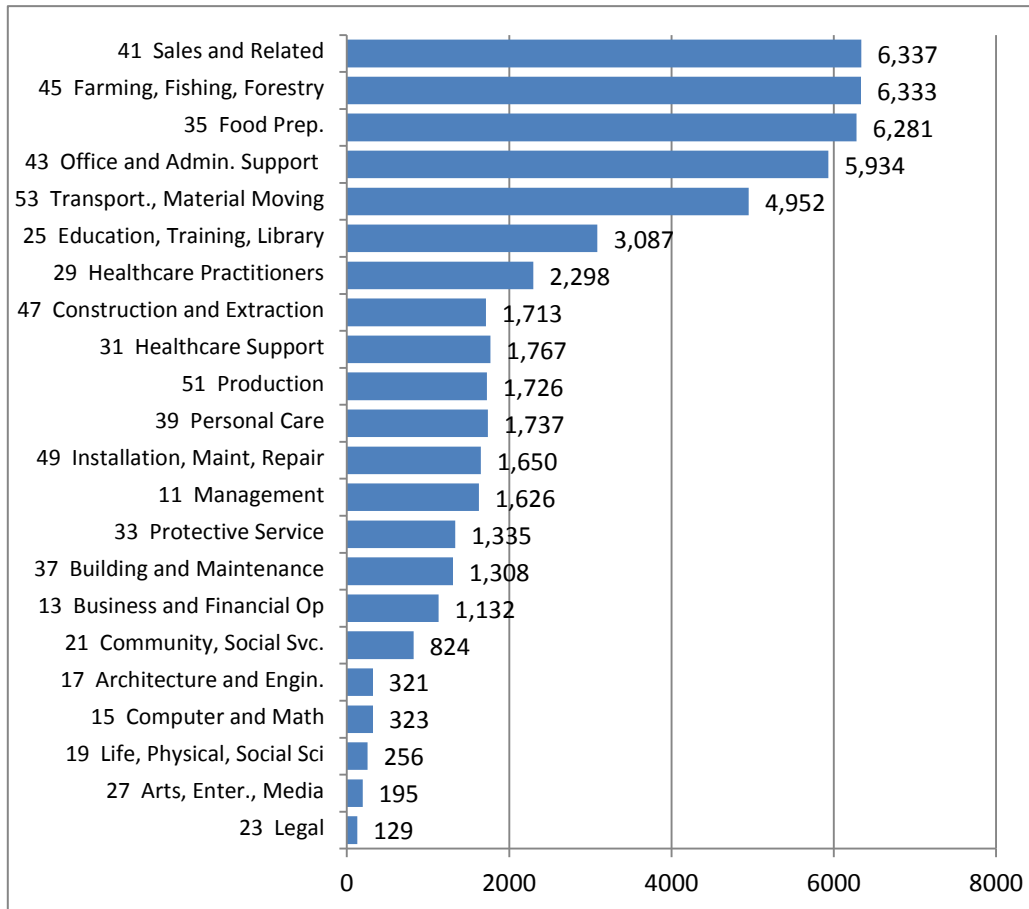


Source: Applied Development Economics, based on US Census ACS Public Use Microdata 2012-2014 from IPUMS

UNDERUTILIZED WORKFORCE

This part of report provides a focus on part time and unemployed labor force in terms of how their educational attainment and prior occupational background matches projected annual job openings. 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, healthcare practitioners and personal care services, which are 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 skill sets or they may need other services to help them be available for full time employment.

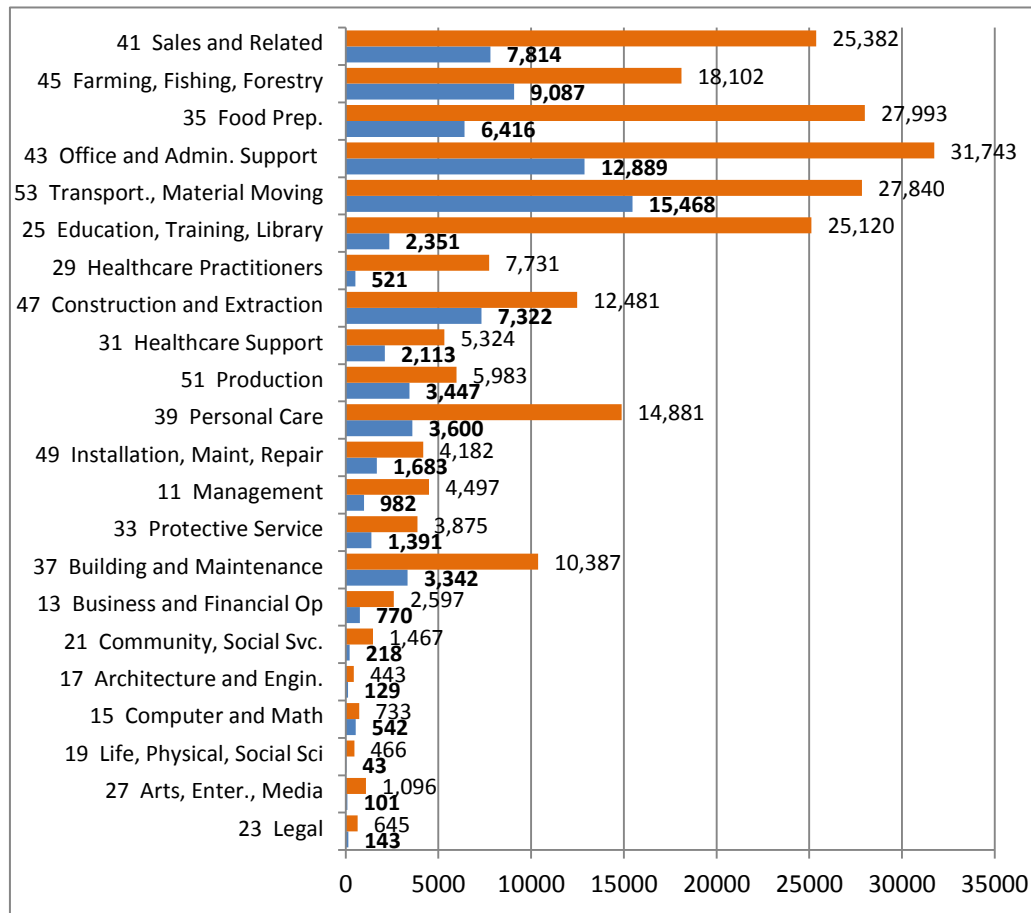
Figure 9 – Annual Openings By Major Occupational Groups



Source: ADE, Inc., based on data provided by EMSI.

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. At this level, the unemployed and part time workforce combined exceeds the available openings (shown in blue) for each category, reinforcing the notion that retraining and skills transfer may help improve the availability of workers for positions in demand by employers.

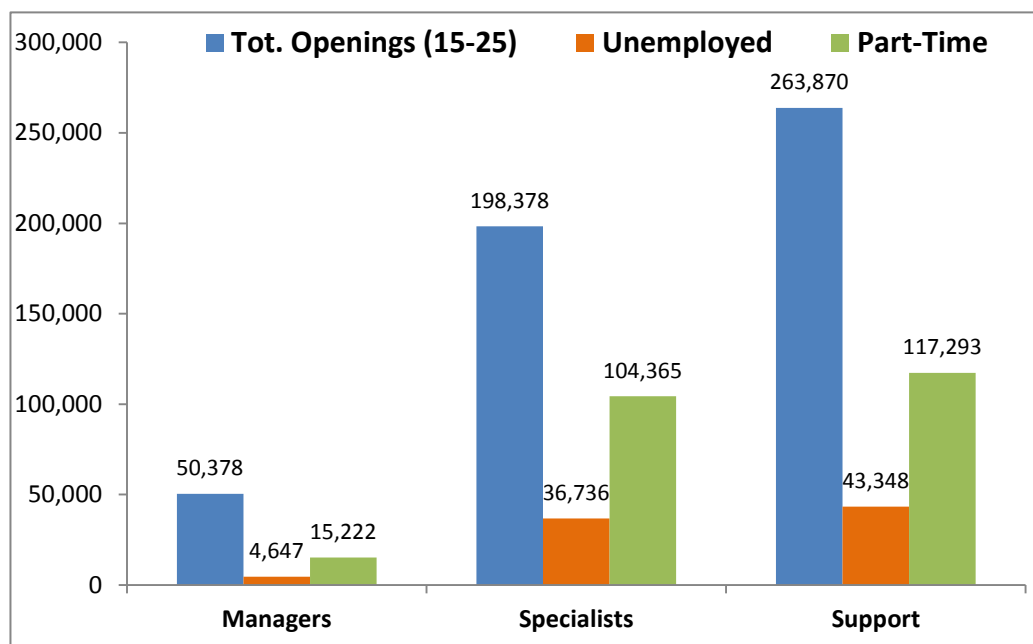
Figure 10 - Number of Unemployed and Part-Time Labor Force by Major Occupational Group



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

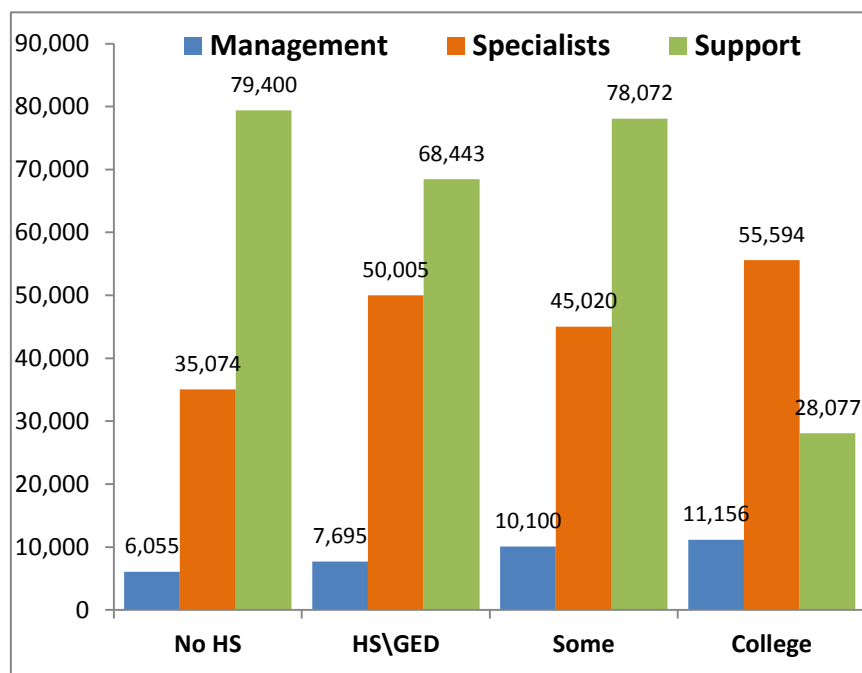
Figure 12 shows the educational level for the unemployed and part time workforce, categorized by occupational background. This figure tracks all unemployed and part-time workers, not just those who minimally qualify for the annually open positions. There are relatively few managers who have not achieved a high school diploma and the greatest number do have a high school diploma; of the 120,528 persons with no high school diploma, 6,055 (5 percent) are managers. Interestingly, the 6,055 managers with no high school diploma represent 17 percent of all managers (6,055 out of 35,006), although more than likely these persons hold lower-level managerial positions. Among mid-level workers with some special skills, most have either a college degree (55,594), or have had some college courses (45,020). Almost 28,077 workers who most recently worked in support positions also have a college degree.

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: CCWC Region



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

Figure 12 – Part Time and Unemployed Workers By Educational Attainment and Occupational Class: CCWC Region



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

Table 9 — Summary of Overall Labor Force Trends for Select Demographic Categories (Persons 16 and Over): CCWC Region

	LABOR FORCE TRENDS BY RACE AND ETHNICITY	LABOR FORCE TRENDS BY GENDER	LABOR FORCE TRENDS BY CITIZENSHIP STATUS	LABOR FORCE TRENDS BY EDUCATIONAL ATTAINMENT (25 AND OVER)	LABOR FORCE TRENDS BY VETERAN STATUS	LABOR FORCE TRENDS BY DISABILITY STATUS
	White	Women	Citizen	College Degree	Veterans	At least One Disability
Labor Force	689,327	810,184	1,470,856	429,785	85,680	117,130
Unemployed	71,290	113,984	191,809	26,248	7,511	25,927
Unemployment Rate	10.3%	14.1%	13.0%	6.1%	8.8%	22.1%
	Latino	Men	Not Citizens	Persons with No College Degree	Not Veterans	Persons with No Reported Disability
Labor Force	870,562	1,004,502	343,829	1,083,078	1,729,005	1,697,555
Unemployed	128,560	127,175	49,350	142,738	233,648	215,232
Unemployment Rate	14.8%	12.7%	14.4%	13.2%	13.5%	12.7%
	Other					
Labor Force	254,797					
Unemployed	41,310					
Unemployment Rate	16.2%					
	Total	Total	Total	Total	Total	Total
Labor Force	1,814,685	1,814,685	1,814,685	1,512,863	1,814,685	1,814,685
Unemployed	241,159	241,159	241,159	168,986	241,159	241,159
Unemployment Rate	13.3%	13.3%	13.3%	11.2%	13.3%	13.3%

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

Table 10 — Population by Age, Race\Ethnicity, and Educational Attainment: CCWC Region

	0-15	16-19	20-24	25-29	30-34	35-54	55-64	65+	TOTAL
Total	1,065,791	252,987	328,701	298,217	284,180	1,023,563	416,184	441,796	4,111,420
White	240,526	63,017	89,363	90,155	86,883	382,109	220,119	274,009	1,446,183
Did not earn HSD\GED	197,887	37,974	7,384	7,008	7,329	32,976	17,141	38,599	346,299
HSD\GED	14	11,838	28,252	23,961	22,556	104,145	56,658	82,917	330,340
Some college -- not attending	0	1,027	16,902	23,272	24,109	107,305	63,506	72,622	308,743
Some college -- attending	44	12,058	23,080	7,670	3,736	7,135	958	550	55,231
AA	0	45	6,468	8,196	9,269	38,237	25,186	21,140	108,541
BA+	0	76	7,277	20,049	19,884	92,311	56,670	58,181	254,448
NA	42,581	0	0	0	0	0	0	0	42,581
Latino	670,501	148,156	186,934	162,231	155,040	482,866	134,849	108,796	2,049,372
Did not earn HSD\GED	547,701	94,123	35,695	45,041	56,993	224,683	69,478	70,126	1,143,838
HSD\GED	0	28,109	60,802	50,699	44,551	118,309	26,449	18,037	346,954
Some college -- not attending	0	2,691	30,614	32,174	25,942	75,922	22,333	12,661	202,338
Some college -- attending	231	22,900	43,474	10,514	6,147	6,177	556	130	90,129
AA	0	311	10,049	12,061	9,870	23,749	7,696	3,987	67,723
BA+	0	22	6,301	11,742	11,537	34,027	8,337	3,855	75,820
NA	122,570	0	0	0	0	0	0	0	122,570
Other	154,764	41,814	52,404	45,830	42,257	158,589	61,217	58,992	615,865
Did not earn HSD\GED	128,320	24,720	6,970	5,587	6,023	26,601	16,472	21,144	235,836
HSD\GED	0	8,697	13,368	11,989	11,101	37,361	12,636	11,435	106,587
Some college -- not attending	0	1,001	8,954	10,399	8,996	35,522	12,294	9,211	86,377
Some college -- attending	0	6,891	14,684	3,128	1,853	4,366	512	192	31,627
AA	0	505	3,901	4,628	4,974	13,878	5,123	4,992	38,001
BA+	0	0	4,527	10,098	9,309	40,861	14,179	12,018	90,993
NA	26,444	0	0	0	0	0	0	0	26,444

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

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

	16-19	20-24	25-29	30-34	35-54	55-64	65+	TOTAL 25+ ONLY	TOTAL
Total	73,189	228,633	224,535	212,155	769,337	239,252	67,586	1,512,863	1,814,685
White	19,098	66,041	69,470	67,359	292,851	130,444	44,063	604,187	689,327
Did not earn HSD\GED	NA	NA	3,401	4,382	16,709	7,093	2,759	34,344	NA
HSD\GED	NA	NA	17,224	16,229	75,421	29,873	9,339	148,086	NA
Some college -- not attending	NA	NA	18,621	19,013	82,720	36,231	11,443	168,028	NA
Some college -- attending	NA	NA	5,641	2,600	5,306	496	128	14,171	NA
AA	NA	NA	7,086	7,795	30,930	15,127	5,504	66,442	NA
BA+	NA	NA	17,497	17,340	81,765	41,624	14,891	173,117	NA
Latino	43,509	130,678	122,484	114,752	366,197	77,078	15,865	696,376	870,562
Did not earn HSD\GED	NA	NA	28,309	39,039	160,686	36,187	8,638	272,859	NA
HSD\GED	NA	NA	39,548	32,460	89,997	15,744	2,791	180,540	NA
Some college -- not attending	NA	NA	26,882	20,417	60,795	13,520	2,370	123,984	NA
Some college -- attending	NA	NA	7,024	4,024	3,983	340	84	15,455	NA
AA	NA	NA	10,481	8,323	20,614	4,773	717	44,908	NA
BA+	NA	NA	10,241	10,488	30,121	6,515	1,265	58,630	NA
Other	10,583	31,914	32,581	30,043	110,289	31,730	7,658	212,300	254,797
Did not earn HSD\GED	NA	NA	2,411	2,829	12,718	5,976	1,334	25,267	NA
HSD\GED	NA	NA	7,753	7,372	23,413	6,361	1,100	45,999	NA
Some college -- not attending	NA	NA	8,179	6,561	25,563	6,360	1,418	48,082	NA
Some college -- attending	NA	NA	1,981	1,192	2,872	178	41	6,263	NA
AA	NA	NA	4,031	4,108	10,689	2,854	1,102	22,784	NA
BA+	NA	NA	8,226	7,980	35,034	10,001	2,663	63,905	NA

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

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

	16-19	20-24	25-29	30-34	35-54	55-64	65+	TOTAL 25+ ONLY	TOTAL
Total	42,442	110,237	71,128	56,915	194,119	61,854	31,082	415,098	567,777
White	12,501	34,079	21,889	16,676	65,208	31,777	20,568	156,119	202,699
Did not earn HSD\GED	NA	NA	890	1,086	4,744	1,891	1,163	9,775	NA
HSD\GED	NA	NA	4,674	3,863	17,095	7,790	4,737	38,159	NA
Some college -- not attending	NA	NA	5,359	4,618	17,195	8,517	5,232	40,920	NA
Some college -- attending	NA	NA	2,599	1,059	1,355	139	70	5,222	NA
AA	NA	NA	2,892	2,205	7,066	4,128	2,445	18,736	NA
BA+	NA	NA	5,475	3,845	17,754	9,312	6,921	43,308	NA
Latino	24,196	60,244	39,194	32,507	103,830	21,841	7,280	204,652	289,092
Did not earn HSD\GED	NA	NA	10,309	14,622	54,634	12,463	3,990	96,019	NA
HSD\GED	NA	NA	12,247	7,744	22,550	4,081	1,144	47,765	NA
Some college -- not attending	NA	NA	6,946	4,252	13,840	2,763	1,023	28,825	NA
Some college -- attending	NA	NA	3,587	1,182	993	130	67	5,959	NA
AA	NA	NA	2,783	2,200	5,395	1,262	511	12,153	NA
BA+	NA	NA	3,322	2,506	6,417	1,141	545	13,932	NA
Other	5,745	15,914	10,045	7,732	25,081	8,236	3,233	54,327	75,985
Did not earn HSD\GED	NA	NA	624	932	3,362	2,072	876	7,867	NA
HSD\GED	NA	NA	2,396	1,739	5,834	1,640	456	12,065	NA
Some college -- not attending	NA	NA	2,430	1,514	5,210	1,367	416	10,937	NA
Some college -- attending	NA	NA	439	449	699	42	0	1,629	NA
AA	NA	NA	1,283	1,127	2,093	642	548	5,694	NA
BA+	NA	NA	2,872	1,971	7,883	2,473	937	16,136	NA

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

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

	16-19	20-24	25-29	30-34	35-54	55-64	65+	TOTAL 25+ ONLY	TOTAL
Total	25,774	46,400	31,363	26,936	82,204	22,600	5,882	168,986	241,159
White	5,622	13,497	7,855	7,764	24,775	8,943	2,834	52,171	71,290
Did not earn HSD\GED	NA	NA	920	1,192	3,032	978	243	6,366	NA
HSD\GED	NA	NA	2,833	2,251	8,259	2,134	524	16,001	NA
Some college -- not attending	NA	NA	2,120	2,270	6,883	3,369	953	15,595	NA
Some college -- attending	NA	NA	710	450	1,005	101	51	2,317	NA
AA	NA	NA	439	851	2,597	764	411	5,062	NA
BA+	NA	NA	833	752	2,998	1,596	652	6,831	NA
Latino	15,920	26,040	17,089	13,944	43,326	9,814	2,425	86,599	128,560
Did not earn HSD\GED	NA	NA	4,679	5,357	23,733	6,222	1,546	41,537	NA
HSD\GED	NA	NA	6,221	4,619	10,247	1,751	538	23,376	NA
Some college -- not attending	NA	NA	3,004	2,049	5,445	1,022	235	11,754	NA
Some college -- attending	NA	NA	1,239	616	723	45	0	2,623	NA
AA	NA	NA	1,311	814	1,550	418	82	4,174	NA
BA+	NA	NA	635	490	1,629	357	24	3,136	NA
Other	4,231	6,863	6,420	5,227	14,102	3,843	624	30,216	41,310
Did not earn HSD\GED	NA	NA	677	805	2,420	817	50	4,768	NA
HSD\GED	NA	NA	2,183	1,889	4,167	830	150	9,219	NA
Some college -- not attending	NA	NA	1,525	1,344	3,417	821	106	7,212	NA
Some college -- attending	NA	NA	856	476	539	91	10	1,972	NA
AA	NA	NA	393	151	1,294	286	16	2,141	NA
BA+	NA	NA	786	563	2,266	998	292	4,905	NA

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

Table 14 — Unemployment Rates by Age, Race\Ethnicity, and Educational Attainment: CCWC Region

	16-19	20-24	25-29	30-34	35-54	55-64	65+	TOTAL 25+ ONLY	TOTAL
Total	35.2%	20.3%	14.0%	12.7%	10.7%	9.4%	8.7%	11.2%	13.3%
White	29.4%	20.4%	11.3%	11.5%	8.5%	6.9%	6.4%	8.6%	10.3%
Did not earn HSD\GED	NA	NA	27.1%	27.2%	18.1%	13.8%	8.8%	18.5%	NA
HSD\GED	NA	NA	16.4%	13.9%	11.0%	7.1%	5.6%	10.8%	NA
Some college -- not attending	NA	NA	11.4%	11.9%	8.3%	9.3%	8.3%	9.3%	NA
Some college -- attending	NA	NA	12.6%	17.3%	18.9%	20.4%	40.2%	16.4%	NA
AA	NA	NA	6.2%	10.9%	8.4%	5.1%	7.5%	7.6%	NA
BA+	NA	NA	4.8%	4.3%	3.7%	3.8%	4.4%	3.9%	NA
Latino	36.6%	19.9%	14.0%	12.2%	11.8%	12.7%	15.3%	12.4%	14.8%
Did not earn HSD\GED	NA	NA	16.5%	13.7%	14.8%	17.2%	17.9%	15.2%	NA
HSD\GED	NA	NA	15.7%	14.2%	11.4%	11.1%	19.3%	12.9%	NA
Some college -- not attending	NA	NA	11.2%	10.0%	9.0%	7.6%	9.9%	9.5%	NA
Some college -- attending	NA	NA	17.6%	15.3%	18.1%	13.2%	0.0%	17.0%	NA
AA	NA	NA	12.5%	9.8%	7.5%	8.8%	11.4%	9.3%	NA
BA+	NA	NA	6.2%	4.7%	5.4%	5.5%	1.9%	5.3%	NA
Other	40.0%	21.5%	19.7%	17.4%	12.8%	12.1%	8.1%	14.2%	16.2%
Did not earn HSD\GED	NA	NA	28.1%	28.4%	19.0%	13.7%	3.7%	18.9%	NA
HSD\GED	NA	NA	28.2%	25.6%	17.8%	13.0%	13.7%	20.0%	NA
Some college -- not attending	NA	NA	18.6%	20.5%	13.4%	12.9%	7.4%	15.0%	NA
Some college -- attending	NA	NA	43.2%	39.9%	18.8%	51.4%	25.2%	31.5%	NA
AA	NA	NA	9.8%	3.7%	12.1%	10.0%	1.5%	9.4%	NA
BA+	NA	NA	9.6%	7.1%	6.5%	10.0%	11.0%	7.7%	NA

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

Table 15 — Unemployment Rates By Age, Gender, and Educational Attainment: CCWC Region

	16-19	20-24	25-29	30-34	35-54	55-64	65+	TOTAL 25+ ONLY	TOTAL
Total	35.2%	20.3%	14.0%	12.7%	10.7%	9.4%	8.7%	11.2%	13.3%
Men	37.5%	21.2%	13.1%	12.0%	9.6%	8.4%	9.3%	10.3%	12.7%
Did not earn HSD\GED	NA	NA	16.0%	13.9%	12.3%	14.0%	13.0%	13.2%	NA
HSD\GED	NA	NA	16.2%	14.3%	10.6%	7.8%	10.3%	11.9%	NA
Some college -- not attending	NA	NA	9.3%	11.3%	8.3%	8.7%	8.2%	8.9%	NA
Some college -- attending	NA	NA	19.5%	21.7%	17.0%	18.2%	20.1%	19.1%	NA
AA	NA	NA	8.8%	7.7%	7.8%	6.2%	9.5%	7.8%	NA
BA+	NA	NA	6.5%	4.8%	5.1%	3.7%	6.8%	5.0%	NA
Women	32.7%	19.2%	15.2%	13.6%	12.0%	10.7%	8.0%	12.3%	14.1%
Did not earn HSD\GED	NA	NA	24.7%	20.6%	20.6%	20.1%	16.6%	20.7%	NA
HSD\GED	NA	NA	19.6%	18.0%	14.1%	10.4%	7.9%	14.6%	NA
Some college -- not attending	NA	NA	16.0%	13.4%	10.4%	10.0%	8.8%	11.6%	NA
Some college -- attending	NA	NA	18.7%	18.3%	20.0%	27.0%	30.8%	19.4%	NA
AA	NA	NA	10.8%	9.9%	9.4%	6.7%	4.4%	9.0%	NA
BA+	NA	NA	6.1%	5.3%	4.4%	6.6%	2.2%	5.0%	NA

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

Table 16 — Labor Force By Age, Citizen Status, and Educational Attainment (Persons 16 and over): CCWC Region

	16-19	20-24	25-29	30-34	35-54	55-64	65+	TOTAL 25+ ONLY	TOTAL
Total	73,189	228,633	224,535	212,155	769,337	239,252	67,586	1,512,863	1,814,685
Citizen	66,562	200,460	183,504	162,778	586,680	208,664	62,207	1,203,834	1,470,856
Did not earn HSD\GED	NA	NA	15,126	16,875	70,924	26,655	8,788	138,368	NA
HSD\GED	NA	NA	52,414	44,688	154,609	47,711	12,519	311,941	NA
Some college -- not attending	NA	NA	48,183	42,119	155,214	54,321	14,878	314,713	NA
Some college - attending	NA	NA	13,796	7,159	11,261	1,014	253	33,483	NA
AA	NA	NA	20,090	19,032	58,694	22,193	7,255	127,264	NA
BA+	NA	NA	33,896	32,905	135,978	56,771	18,516	278,065	NA
Not Citizen	6,628	28,173	41,030	49,376	182,657	30,587	5,378	309,029	343,829
Did not earn HSD\GED	NA	NA	18,995	29,375	119,189	22,600	3,943	194,102	NA
HSD\GED	NA	NA	12,111	11,373	34,222	4,267	710	62,684	NA
Some college -- not attending	NA	NA	5,500	3,873	13,864	1,790	353	25,380	NA
Some college - attending	NA	NA	849	657	900	0	0	2,407	NA
AA	NA	NA	1,507	1,195	3,539	560	67	6,869	NA
BA+	NA	NA	2,068	2,903	10,942	1,369	304	17,587	NA

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

Table 17 — Unemployed Labor Force By Age, Citizen Status, and Educational Attainment (Persons 16 and over): CCWC Region

	16-19	20-24	25-29	30-34	35-54	55-64	65+	TOTAL 25+ ONLY	TOTAL
Total	25,774	46,400	31,363	26,936	82,204	22,600	5,882	168,986	241,159
Citizen	23,919	41,471	26,370	20,707	57,849	17,041	4,453	126,419	191,809
Did not earn HSD\GED	NA	NA	4,534	3,867	11,183	3,499	922	24,005	NA
HSD\GED	NA	NA	9,452	6,832	18,625	4,232	817	39,959	NA
Some college -- not attending	NA	NA	5,946	5,135	14,630	4,976	1,224	31,911	NA
Some college -- attending	NA	NA	2,608	1,458	2,121	238	62	6,487	NA
AA	NA	NA	1,995	1,770	5,098	1,388	460	10,711	NA
BA+	NA	NA	1,835	1,643	6,193	2,708	968	13,346	NA
Not Citizen	1,855	4,929	4,993	6,229	24,355	5,559	1,430	42,567	49,350
Did not earn HSD\GED	NA	NA	1,741	3,486	18,003	4,518	918	28,666	NA
HSD\GED	NA	NA	1,785	1,926	4,047	484	394	8,636	NA
Some college -- not attending	NA	NA	703	527	1,115	236	69	2,650	NA
Some college -- attending	NA	NA	196	83	146	0	0	425	NA
AA	NA	NA	148	45	343	80	48	665	NA
BA+	NA	NA	420	162	700	242	0	1,525	NA

Table 18 — Labor Force By Citizen Status, Age, and Educational Attainment: Unemployment Rates: CCWC Region

	16-19	20-24	25-29	30-34	35-54	55-64	65+	TOTAL 25+ ONLY	TOTAL
Total	35.2%	20.3%	14.0%	12.7%	10.7%	9.4%	8.7%	11.2%	13.3%
Citizen	35.9%	20.7%	14.4%	12.7%	9.9%	8.2%	7.2%	10.5%	13.0%
Did not earn HSD\GED	NA	NA	30.0%	22.9%	15.8%	13.1%	10.5%	17.3%	NA
HSD\GED	NA	NA	18.0%	15.3%	12.0%	8.9%	6.5%	12.8%	NA
Some college -- not attending	NA	NA	12.3%	12.2%	9.4%	9.2%	8.2%	10.1%	NA
Some college -- attending	NA	NA	18.9%	20.4%	18.8%	23.4%	24.4%	19.4%	NA
AA	NA	NA	9.9%	9.3%	8.7%	6.3%	6.3%	8.4%	NA
BA+	NA	NA	5.4%	5.0%	4.6%	4.8%	5.2%	4.8%	NA
Not Citizen	28.0%	17.5%	12.2%	12.6%	13.3%	18.2%	26.6%	13.8%	14.4%
Did not earn HSD\GED	NA	NA	9.2%	11.9%	15.1%	20.0%	23.3%	14.8%	NA
HSD\GED	NA	NA	14.7%	16.9%	11.8%	11.3%	55.5%	13.8%	NA
Some college -- not attending	NA	NA	12.8%	13.6%	8.0%	13.2%	19.5%	10.4%	NA
Some college -- attending	NA	NA	23.1%	12.6%	16.2%	NA	NA	17.6%	NA
AA	NA	NA	9.8%	3.8%	9.7%	14.3%	71.8%	9.7%	NA
BA+	NA	NA	20.3%	5.6%	6.4%	17.7%	0.1%	8.7%	NA

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

Table 19 — Labor Force By Age, Disability Status, and Educational Attainment (Persons 16 and over): CCWC Region

	16-19	20-24	25-29	30-34	35-54	55-64	65+	TOTAL 25+ ONLY	TOTAL
Total	73,189	228,633	224,535	212,155	769,337	239,252	67,586	1,512,863	1,814,685
No Reported Disability	70,040	220,060	215,711	202,038	721,989	214,139	53,579	1,407,455	1,697,555
Did not earn HSD\GED	NA	NA	32,877	43,713	176,709	43,514	9,839	306,653	NA
HSD\GED	NA	NA	61,393	53,421	176,639	45,723	10,171	347,347	NA
Some college -- not attending	NA	NA	51,645	42,938	158,472	49,817	11,529	314,401	NA
Some college -- attending	NA	NA	13,909	7,303	11,249	833	161	33,455	NA
AA	NA	NA	20,978	19,574	58,374	20,168	5,880	124,974	NA
BA+	NA	NA	34,909	35,088	140,546	54,084	15,999	280,625	NA
At Least One Disability	3,150	8,572	8,823	10,117	47,348	25,113	14,006	105,408	117,130
Did not earn HSD\GED	NA	NA	1,243	2,537	13,404	5,741	2,891	25,817	NA
HSD\GED	NA	NA	3,132	2,641	12,192	6,255	3,058	27,278	NA
Some college -- not attending	NA	NA	2,037	3,054	10,606	6,294	3,702	25,693	NA
Some college -- attending	NA	NA	736	513	912	181	92	2,434	NA
AA	NA	NA	620	652	3,860	2,585	1,442	9,159	NA
BA+	NA	NA	1,055	720	6,374	4,056	2,821	15,027	NA

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

Table 20 — Unemployed Labor Force By Age, Disability Status, and Educational Attainment (Persons 16 and over): CCWC Region

	16-19	20-24	25-29	30-34	35-54	55-64	65+	TOTAL 25+ ONLY	TOTAL
Total	25,774	46,400	31,363	26,936	82,204	22,600	5,882	168,986	241,159
No Reported Disability	23,908	43,238	28,963	24,137	72,341	18,561	4,085	148,086	215,232
Did not earn HSD\GED	NA	NA	6,013	6,382	25,611	6,647	1,309	45,963	NA
HSD\GED	NA	NA	10,046	7,933	19,752	3,926	804	42,460	NA
Some college -- not attending	NA	NA	6,059	5,107	13,628	4,368	877	30,039	NA
Some college -- attending	NA	NA	2,561	1,370	2,079	215	31	6,256	NA
AA	NA	NA	2,081	1,669	5,016	1,045	327	10,139	NA
BA+	NA	NA	2,202	1,676	6,254	2,360	737	13,229	NA
At Least One Disability	1,865	3,162	2,400	2,799	9,863	4,039	1,797	20,900	25,927
Did not earn HSD\GED	NA	NA	262	971	3,575	1,370	530	6,708	NA
HSD\GED	NA	NA	1,191	825	2,921	789	408	6,134	NA
Some college -- not attending	NA	NA	590	556	2,117	843	416	4,521	NA
Some college -- attending	NA	NA	243	171	187	23	31	656	NA
AA	NA	NA	62	147	425	423	181	1,238	NA
BA+	NA	NA	52	130	639	591	231	1,642	NA

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

Table 21 — Labor Force By Disability Status, Age, and Educational Attainment: Unemployment Rates: CCWC Region

	16-19	20-24	25-29	30-34	35-54	55-64	65+	TOTAL 25+ ONLY	TOTAL
Total	35.2%	20.3%	14.0%	12.7%	10.7%	9.4%	8.7%	11.2%	13.3%
No Reported Disability	34.1%	19.6%	13.4%	11.9%	10.0%	8.7%	7.6%	10.5%	12.7%
Did not earn HSD\GED	NA	NA	18.3%	14.6%	14.5%	15.3%	13.3%	15.0%	NA
HSD\GED	NA	NA	16.4%	14.8%	11.2%	8.6%	7.9%	12.2%	NA
Some college -- not attending	NA	NA	11.7%	11.9%	8.6%	8.8%	7.6%	9.6%	NA
Some college -- attending	NA	NA	18.4%	18.8%	18.5%	25.8%	19.0%	18.7%	NA
AA	NA	NA	9.9%	8.5%	8.6%	5.2%	5.6%	8.1%	NA
BA+	NA	NA	6.3%	4.8%	4.4%	4.4%	4.6%	4.7%	NA
At Least One Disability	59.2%	36.9%	27.2%	27.7%	20.8%	16.1%	12.8%	19.8%	22.1%
Did not earn HSD\GED	NA	NA	21.1%	38.3%	26.7%	23.9%	18.3%	26.0%	NA
HSD\GED	NA	NA	38.0%	31.2%	24.0%	12.6%	13.3%	22.5%	NA
Some college -- not attending	NA	NA	28.9%	18.2%	20.0%	13.4%	11.2%	17.6%	NA
Some college -- attending	NA	NA	33.0%	33.4%	20.5%	12.7%	33.8%	26.9%	NA
AA	NA	NA	10.0%	22.5%	11.0%	16.4%	12.6%	13.5%	NA
BA+	NA	NA	4.9%	18.0%	10.0%	14.6%	8.2%	10.9%	NA

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

Table 22 — Labor Force By Age, Veteran Status, and Educational Attainment (Persons 16 and over): CCWC Region

	16-19	20-24	25-29	30-34	35-54	55-64	65+	TOTAL 25+ ONLY	TOTAL
Total	73,189	228,633	224,535	212,155	769,337	239,252	67,586	1,512,863	1,814,685
Not Veterans	73,146	225,677	219,302	204,679	734,820	218,142	53,239	1,430,182	1,729,005
Did not earn HSD\GED	NA	NA	34,078	46,145	189,361	48,195	11,785	329,565	NA
HSD\GED	NA	NA	63,162	54,446	179,990	47,612	10,852	356,062	NA
Some college -- not attending	NA	NA	51,719	43,126	157,633	49,223	10,988	312,690	NA
Some college -- attending	NA	NA	13,916	7,387	10,899	854	162	33,218	NA
AA	NA	NA	21,018	19,092	57,302	19,240	5,284	121,936	NA
BA+	NA	NA	35,408	34,483	139,635	53,018	14,168	276,712	NA
Veterans	44	2,955	5,233	7,476	34,516	21,110	14,347	82,681	85,680
Did not earn HSD\GED	NA	NA	43	105	751	1,060	945	2,905	NA
HSD\GED	NA	NA	1,363	1,616	8,841	4,366	2,378	18,563	NA
Some college -- not attending	NA	NA	1,963	2,866	11,445	6,887	4,242	27,404	NA
Some college -- attending	NA	NA	729	429	1,262	160	91	2,671	NA
AA	NA	NA	579	1,134	4,932	3,513	2,038	12,197	NA
BA+	NA	NA	555	1,325	7,285	5,122	4,652	18,941	NA

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

Table 23 — Unemployed Labor Force By Age, Veteran Status, and Educational Attainment (Persons 16 and over): CCWC Region

	16-19	20-24	25-29	30-34	35-54	55-64	65+	TOTAL 25+ ONLY	TOTAL
Total	25,774	46,400	31,363	26,936	82,204	22,600	5,882	168,986	241,159
Not Veterans	25,774	45,630	30,673	26,270	79,623	20,949	4,729	162,244	233,648
Did not earn HSD\GED	NA	NA	6,275	7,353	29,062	7,878	1,739	52,308	NA
HSD\GED	NA	NA	11,022	8,574	21,870	4,319	1,089	46,874	NA
Some college -- not attending	NA	NA	6,354	5,406	15,090	4,650	914	32,414	NA
Some college -- attending	NA	NA	2,743	1,444	2,030	212	31	6,460	NA
AA	NA	NA	2,113	1,816	5,112	1,282	241	10,563	NA
BA+	NA	NA	2,166	1,677	6,457	2,608	716	13,625	NA
Veterans	0	770	690	666	2,581	1,651	1,153	6,742	7,511
Did not earn HSD\GED	NA	NA	0	0	124	139	100	363	NA
HSD\GED	NA	NA	215	184	802	396	123	1,720	NA
Some college -- not attending	NA	NA	294	256	655	561	379	2,146	NA
Some college -- attending	NA	NA	62	98	236	26	30	451	NA
AA	NA	NA	30	0	329	186	268	813	NA
BA+	NA	NA	88	128	436	342	253	1,247	NA

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

Table 24 — Labor Force By Veteran Status, Age, and Educational Attainment: Unemployment Rates: CCWC Region

	16-19	20-24	25-29	30-34	35-54	55-64	65+	TOTAL 25+ ONLY	TOTAL
Total	35.2%	20.3%	14.0%	12.7%	10.7%	9.4%	8.7%	11.2%	13.3%
Not Veterans	35.2%	20.2%	14.0%	12.8%	10.8%	9.6%	8.9%	11.3%	13.5%
Did not earn HSD\GED	NA	NA	18.4%	15.9%	15.3%	16.3%	14.8%	15.9%	NA
HSD\GED	NA	NA	17.4%	15.7%	12.2%	9.1%	10.0%	13.2%	NA
Some college -- not attending	NA	NA	12.3%	12.5%	9.6%	9.4%	8.3%	10.4%	NA
Some college -- attending	NA	NA	19.7%	19.5%	18.6%	24.8%	19.3%	19.4%	NA
AA	NA	NA	10.1%	9.5%	8.9%	6.7%	4.6%	8.7%	NA
BA+	NA	NA	6.1%	4.9%	4.6%	4.9%	5.1%	4.9%	NA
Veterans	0.0%	26.0%	13.2%	8.9%	7.5%	7.8%	8.0%	8.2%	8.8%
Did not earn HSD\GED	NA	NA	0.0%	0.0%	16.5%	13.1%	10.6%	12.5%	NA
HSD\GED	NA	NA	15.8%	11.4%	9.1%	9.1%	5.2%	9.3%	NA
Some college -- not attending	NA	NA	15.0%	8.9%	5.7%	8.2%	8.9%	7.8%	NA
Some college -- attending	NA	NA	8.5%	22.8%	18.7%	16.0%	33.3%	16.9%	NA
AA	NA	NA	5.2%	0.0%	6.7%	5.3%	13.1%	6.7%	NA
BA+	NA	NA	15.9%	9.7%	6.0%	6.7%	5.4%	6.6%	NA

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

**Table 25 — Employed and Unemployed Labor Force By College Degree Status and Economic Sector
(Persons 25 and Over): CCWC Region**

	COLLEGE DEGREE				NO COLLEGE DEGREE			
	Full-Time	Part-Time	Unem- ployed	UER	Full- Time	Part- Time	Unem- ployed	UER
Total	293,637	109,958	26,248	6.1%	635,199	305,140	142,738	13.2%
11 Agriculture	7,469	1,965	715	7.0%	75,080	64,851	25,230	15.3%
21 Mining	3,330	434	48	1.3%	11,441	1,454	693	5.1%
22 Utilities	4,090	334	128	2.8%	7,901	709	144	1.6%
23 Construction	9,538	3,425	1,128	8.0%	51,068	22,676	12,829	14.8%
31 Manufacturing	20,027	3,217	2,077	8.2%	79,291	17,082	13,097	12.0%
42 Wholesale	8,081	1,742	482	4.7%	30,457	9,275	4,928	11.0%
43 Retail	17,593	8,704	2,438	8.5%	70,213	33,153	11,626	10.1%
48 Transportation	4,436	1,791	532	7.9%	29,218	9,036	3,543	8.5%
49 Warehousing	1,705	818	293	10.4%	9,968	4,163	1,401	9.0%
51 Information	4,921	930	586	9.1%	8,488	1,675	1,625	13.8%
52 Finance	12,279	2,723	892	5.6%	17,213	3,645	2,174	9.4%
53 Real Estate	4,689	2,454	460	6.0%	11,249	4,425	1,362	8.0%
54 Professional Technical	21,598	7,540	1,591	5.2%	15,275	6,190	2,559	10.7%
55 MCE	369	32	0	0.0%	338	253	0	0.0%
56 Admin Support	5,312	3,668	1,621	15.3%	26,093	19,817	9,069	16.5%
56 Waste Mgt	400	91	0	0.0%	4,076	1,375	653	10.7%
61 Education	50,913	31,732	3,189	3.7%	19,282	18,914	2,837	6.9%
62 Health	64,023	23,654	3,394	3.7%	62,477	30,425	10,116	9.8%
71 Arts, Entrmnt, etc.	2,809	2,033	521	9.7%	6,840	4,086	1,771	13.9%
72 Accommodations	1,177	416	177	10.0%	4,772	2,636	903	10.9%
72 Food Services	4,055	3,244	787	9.7%	23,985	23,098	6,209	11.7%
81 Other Services	8,485	5,278	1,104	7.4%	28,530	18,931	4,627	8.9%
92 Public Sector	30,163	3,365	1,357	3.9%	34,486	6,846	3,187	7.2%

	COLLEGE DEGREE				NO COLLEGE DEGREE			
	Full-Time	Part-Time	Unem- ployed	UER	Full-Time	Part-Time	Unem- ployed	UER
98 Military	6,175	367	187	2.8%	7,458	423	370	4.5%
99 Long-Term Unemployed			2,541				21,787	

Source: Applied Development Economics, based on US Census ACS Public Use Microdata 2012-2014 from iPUMS (Internal: file = H:\zTEMPORARY\2016_projects\CCWC--2016\01_DATA\PUMS\06_EZ-TAG--OUTPUTS\05_Fresno\EZ-TAGS--zSector-05_Fresno--25+.xlsx)

CONCLUSION

At 1.4 percent a year, jobs in CCWC region is expected to grow modestly from now to 2025, although analysts project a number of sectors (Construction, Health, Logistics, Professional, Scientific and Technical Services, Administrative Support, Education, Health Care and Food Services) to exceed this overall annual growth rate. 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

The following tables provide more detailed information on the topics discussed in the report.

Appendix Table 1 - Employment Projections By Industry Clusters: Agriculture: Distribution: CCWC Region

NAICS	Description	2015	2025	Chg	CAGR	Rank Chg
Total		89,574	107,789	18,215	2%	
424410	General Line Grocery Merchant Wholesalers	2,825	3,385	560	2%	11
424420	Packaged Frozen Food Merchant Wholesalers	231	289	58	2%	30
424430	Dairy Product (except Dried or Canned) Merchant Wholesalers	717	889	172	2%	19
424440	Poultry and Poultry Product Merchant Wholesalers	96	77	-19	-2%	45
424450	Confectionery Merchant Wholesalers	744	808	64	1%	28
424460	Fish and Seafood Merchant Wholesalers	99	168	69	5%	27
424470	Meat and Meat Product Merchant Wholesalers	500	599	99	2%	24
424480	Fresh Fruit and Vegetable Merchant Wholesalers	3,586	4,329	743	2%	9
424490	Other Grocery and Related Products Merchant Wholesalers	3,797	5,097	1,300	3%	5
424510	Grain and Field Bean Merchant Wholesalers	287	408	121	4%	21
424520	Livestock Merchant Wholesalers	259	218	-41	-2%	47
424590	Other Farm Product Raw Material Merchant Wholesalers	286	345	59	2%	29
424810	Beer and Ale Merchant Wholesalers	1,024	1,105	81	1%	25
424820	Wine and Distilled Alcoholic Beverage Merchant Wholesalers	1,123	2,013	890	6%	7
424910	Farm Supplies Merchant Wholesalers	3,611	4,520	909	2%	6
424930	Flower, Nursery Stock, and Florists' Supplies Merchant Wholesalers	196	182	-14	-1%	44
445110	Supermarkets and Other Grocery (except Convenience) Stores	24,530	27,540	3,010	1%	1
445120	Convenience Stores	1,797	2,201	404	2%	12
445210	Meat Markets	701	822	121	2%	21
445220	Fish and Seafood Markets	6	6	0	0%	41
445291	Baked Goods Stores	200	321	121	5%	21
445292	Confectionery and Nut Stores	260	387	127	4%	20
445299	All Other Specialty Food Stores	561	201	-360	-10%	49
445310	Beer, Wine, and Liquor Stores	992	1,028	36	0%	32
481111	Scheduled Passenger Air Transportation	379	168	-211	-8%	48
481112	Scheduled Freight Air Transportation	107	130	23	2%	34

NAICS	Description	2015	2025	Chg	CAGR	Rank Chg
481211	Nonscheduled Chartered Passenger Air Transportation	171	216	45	2%	31
481212	Nonscheduled Chartered Freight Air Transportation	20	21	1	0%	39
482110	Rail transportation	1,757	2,007	250	1%	16
483111	Deep Sea Freight Transportation	16	26	10	5%	37
483113	Coastal and Great Lakes Freight Transportation	9	27	18	12%	36
483212	Inland Water Passenger Transportation	21	22	1	0%	39
484110	General Freight Trucking, Local	5,455	6,215	760	1%	8
484121	General Freight Trucking, Long-Distance, Truckload	6,170	8,314	2,144	3%	3
484122	General Freight Trucking, Long-Distance, Less Than Truckload	2,349	2,656	307	1%	15
484220	Specialized Freight (except Used Goods) Trucking, Local	7,260	9,134	1,874	2%	4
484230	Specialized Freight (except Used Goods) Trucking, Long-Distance	1,265	1,962	697	4%	10
488111	Air Traffic Control	12	0	-12	-100%	43
488119	Other Airport Operations	128	148	20	1%	35
488190	Other Support Activities for Air Transportation	904	910	6	0%	38
488210	Support Activities for Rail Transportation	578	789	211	3%	18
488310	Port and Harbor Operations	224	186	-38	-2%	46
488320	Marine Cargo Handling	54	81	27	4%	33
488390	Other Support Activities for Water Transportation	3	3	0	0%	41
488510	Freight Transportation Arrangement	872	1,270	398	4%	13
488991	Packing and Crating	593	923	330	5%	14
493110	General Warehousing and Storage	11,234	13,773	2,539	2%	2
493120	Refrigerated Warehousing and Storage	1,414	1,644	230	2%	17
493190	Other Warehousing and Storage	151	226	75	4%	26

Source: Applied Development Economics, based on EMSI 2015 Q4 QCEW and Non-QCEW Industry Employment Data

Appendix Table 2 — Employment Projections by Industry Clusters: Agriculture: Processing: CCWC Region

NAICS	Description	2015	2025	Chg	CAGR	Rank Chg
Total		64,091	69,887	5,796	1%	
311111	Dog and Cat Food Manufacturing	287	187	-100	-4%	52
311119	Other Animal Food Manufacturing	1,413	1,675	262	2%	12
311211	Flour Milling	356	229	-127	-4%	53
311212	Rice Milling	9	9	0	0%	32
311221	Wet Corn Milling	425	675	250	5%	13
311225	Fats and Oils Refining and Blending	6	6	0	0%	32
311230	Breakfast Cereal Manufacturing	359	57	-302	-17%	57
311313	Beet Sugar Manufacturing	27	0	-27	-100%	46
311340	Nonchocolate Confectionery Manufacturing	100	215	115	8%	17
311352	Confectionery Manufacturing from Purchased Chocolate	13	3	-10	-14%	42
311411	Frozen Fruit, Juice, and Vegetable Manufacturing	2,598	2,462	-136	-1%	54
311412	Frozen Specialty Food Manufacturing	1,934	2,042	108	1%	18
311421	Fruit and Vegetable Canning	7,588	6,985	-603	-1%	58
311422	Specialty Canning	55	0	-55	-100%	49
311423	Dried and Dehydrated Food Manufacturing	2,261	1,632	-629	-3%	59
311511	Fluid Milk Manufacturing	2,493	2,955	462	2%	8
311512	Creamery Butter Manufacturing	101	141	40	3%	26
311513	Cheese Manufacturing	4,334	4,887	553	1%	6
311514	Dry, Condensed, and Evaporated Dairy Product Manufacturing	420	437	17	0%	27
311520	Ice Cream and Frozen Dessert Manufacturing	1,447	1,808	361	2%	10
311611	Animal (except Poultry) Slaughtering	2,563	3,150	587	2%	5
311612	Meat Processed from Carcasses	1,815	2,340	525	3%	7
311613	Rendering and Meat Byproduct Processing	178	83	-95	-7%	51
311615	Poultry Processing	7,895	8,568	673	1%	4
311811	Retail Bakeries	424	408	-16	0%	43
311812	Commercial Bakeries	1,093	834	-259	-3%	55
311813	Frozen Cakes, Pies, and Other Pastries Manufacturing	14	6	-8	-8%	41
311821	Cookie and Cracker Manufacturing	53	6	-47	-20%	47

NAICS	Description	2015	2025	Chg	CAGR	Rank Chg
311824	Dry Pasta, Dough, and Flour Mixes Mfg from Purchased Flour	28	43	15	4%	28
311830	Tortilla Manufacturing	854	946	92	1%	19
311911	Roasted Nuts and Peanut Butter Manufacturing	4,399	5,104	705	1%	3
311919	Other Snack Food Manufacturing	1,346	1,433	87	1%	20
311920	Coffee and Tea Manufacturing	6	14	8	9%	31
311930	Flavoring Syrup and Concentrate Manufacturing	3	3	0	0%	32
311941	Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing	30	29	-1	0%	38
311942	Spice and Extract Manufacturing	12	12	0	0%	32
311991	Perishable Prepared Food Manufacturing	2,119	2,544	425	2%	9
311999	All Other Miscellaneous Food Manufacturing	892	1,216	324	3%	11
312111	Soft Drink Manufacturing	996	1,186	190	2%	15
312112	Bottled Water Manufacturing	124	167	43	3%	25
312113	Ice Manufacturing	100	99	-1	0%	38
312120	Breweries	102	157	55	4%	23
312130	Wineries	6,334	7,745	1,411	2%	1
312140	Distilleries	92	76	-16	-2%	43
313210	Broadwoven Fabric Mills	31	43	12	3%	29
313230	Nonwoven Fabric Mills	3	3	0	0%	32
316110	Leather and Hide Tanning and Finishing	56	6	-50	-20%	48
321113	Sawmills	165	210	45	2%	24
321920	Wood Container and Pallet Manufacturing	822	1,029	207	2%	14
322211	Corrugated and Solid Fiber Box Manufacturing	2,307	3,090	783	3%	2
322212	Folding Paperboard Box Manufacturing	159	158	-1	0%	38
322291	Sanitary Paper Product Manufacturing	13	23	10	6%	30
325411	Medicinal and Botanical Manufacturing	114	199	85	6%	21
325414	Biological Product (except Diagnostic) Manufacturing	3	3	0	0%	32
326111	Plastics Bag and Pouch Manufacturing	120	201	81	5%	22
326160	Plastics Bottle Manufacturing	229	145	-84	-4%	50
327213	Glass Container Manufacturing	1,586	1,711	125	1%	16
332431	Metal Can Manufacturing	664	394	-270	-5%	56

NAICS	Description	2015	2025	Chg	CAGR	Rank Chg
332439	Other Metal Container Manufacturing	121	98	-23	-2%	45

Source: Applied Development Economics, based on EMSI 2015 Q4 QCEW and Non-QCEW Industry Employment Data (CAGR = compound annual growth rate)

Appendix Table 3 — Employment Projections by Industry Clusters: Agriculture: Production: CCWC Region

Industry	NAICS	2015	2025p	Change	CAGR
Total		65,522	63,514	-2,008	-0.3%
111000	Crop Production	46,809	45,545	-1,264	-0.3%
112000	Animal Production and Aquaculture	18,521	17,793	-728	-0.4%
113210	Forest Nurseries and Gathering of Forest Products	177	164	-13	-0.8%
114111	Finfish Fishing	3	3	0	0.0%
114112	Shellfish Fishing	3	3	0	0.0%
114210	Hunting and Trapping	9	6	-3	-4.0%

Source: Applied Development Economics, based on EMSI 2015 Q4 QCEW and Non-QCEW Industry Employment Data

Appendix Table 4 — Employment Projections by Industry Clusters: Agriculture: Support: CCWC Region

NAICS	Description	2015	2025p	Chg	CAGR
Total		199,207	228,216	29,009	1.4%
115111	Cotton Ginning	188	9	-179	-26.2%
115112	Soil Preparation, Planting, and Cultivating	4,825	5,265	440	0.9%
115113	Crop Harvesting, Primarily by Machine	2,474	2,442	-32	-0.1%
115114	Postharvest Crop Activities (except Cotton Ginning)	19,667	21,250	1,583	0.8%
115115	Farm Labor Contractors and Crew Leaders	92,059	104,398	12,339	1.3%
115116	Farm Management Services	5,091	6,276	1,185	2.1%
115210	Support Activities for Animal Production	512	495	-17	-0.3%
115310	Support Activities for Forestry	142	199	57	3.4%
221310	Water Supply and Irrigation Systems	1,053	1,385	332	2.8%
237110	Water and Sewer Line and Related Structures Construction	2,582	3,179	597	2.1%
325311	Nitrogenous Fertilizer Manufacturing	67	6	-61	-21.4%

NAICS	Description	2015	2025p	Chg	CAGR
325312	Phosphatic Fertilizer Manufacturing	202	172	-30	-1.6%
325314	Fertilizer (Mixing Only) Manufacturing	337	407	70	1.9%
325320	Pesticide and Other Agricultural Chemical Manufacturing	104	79	-25	-2.7%
326291	Rubber Product Manufacturing for Mechanical Use	116	85	-31	-3.1%
326299	All Other Rubber Product Manufacturing	284	393	109	3.3%
332311	Prefabricated Metal Building and Component Manufacturing	714	585	-129	-2.0%
332420	Metal Tank (Heavy Gauge) Manufacturing	180	221	41	2.1%
333111	Farm Machinery and Equipment Manufacturing	1,527	1,599	72	0.5%
333911	Pump and Pumping Equipment Manufacturing	653	687	34	0.5%
333924	Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing	92	92	0	0.0%
333992	Welding and Soldering Equipment Manufacturing	33	54	21	5.0%
333993	Packaging Machinery Manufacturing	723	790	67	0.9%
423820	Farm and Garden Machinery and Equipment Merchant Wholesalers	2,374	2,436	62	0.3%
423830	Industrial Machinery and Equipment Merchant Wholesalers	3,287	3,788	501	1.4%
423840	Industrial Supplies Merchant Wholesalers	757	799	42	0.5%
423850	Service Establishment Equipment and Supplies Merchant Wholesalers	302	367	65	2.0%
423860	Transportation Equipment and Supplies (except Motor Vehicle) Merchant Wholesalers	239	413	174	5.6%
444210	Outdoor Power Equipment Stores	209	76	-133	-9.6%
444220	Nursery, Garden Center, and Farm Supply Stores	1,457	1,499	42	0.3%
522292	Real Estate Credit	898	569	-329	-4.5%
532490	Other Commercial and Industrial Machinery and Equipment Rental and Leasing	603	930	327	4.4%
541360	Geophysical Surveying and Mapping Services	47	83	36	5.9%
541370	Surveying and Mapping (except Geophysical) Services	291	482	191	5.2%
541380	Testing Laboratories	1,687	2,495	808	4.0%
541613	Marketing Consulting Services	242	357	115	4.0%
541614	Process, Physical Distribution, and Logistics Consulting Services	607	1,147	540	6.6%
541620	Environmental Consulting Services	486	771	285	4.7%
541690	Other Scientific and Technical Consulting Services	3,185	4,857	1,672	4.3%
541810	Advertising Agencies	358	394	36	1.0%
541820	Public Relations Agencies	67	74	7	1.0%

NAICS	Description	2015	2025p	Chg	CAGR
541830	Media Buying Agencies	9	9	0	0.0%
541840	Media Representatives	129	124	-5	-0.4%
541850	Outdoor Advertising	60	19	-41	-10.9%
541870	Advertising Material Distribution Services	65	18	-47	-12.0%
541890	Other Services Related to Advertising	858	1,072	214	2.3%
541940	Veterinary Services	2,621	3,119	498	1.8%
551111	Offices of Bank Holding Companies	3	0	-3	-100.0%
551112	Offices of Other Holding Companies	112	15	-97	-18.2%
551114	Corporate, Subsidiary, and Regional Managing Offices	10,838	9,454	-1,384	-1.4%
561110	Office Administrative Services	2,448	2,680	232	0.9%
561320	Temporary Help Services	21,618	29,190	7,572	3.0%
561710	Exterminating and Pest Control Services	1,381	1,497	116	0.8%
561730	Landscaping Services	4,526	4,510	-16	0.0%
562213	Solid Waste Combustors and Incinerators	46	9	-37	-15.1%
562219	Other Nonhazardous Waste Treatment and Disposal	242	336	94	3.3%
562920	Materials Recovery Facilities	300	387	87	2.6%
811310	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	3,230	4,172	942	2.6%

Source: Applied Development Economics, based on EMSI 2015 Q4 QCEW and Non-QCEW Industry Employment Data

Appendix Table 5 — Employment Projections by Industry Clusters: Energy: CCWC Region

NAICS	Description	Sub-Cluster	2015	2025p	Chg	CAGR
Total			85,670	100,077	14,407	1.6%
211111	Crude Petroleum and Natural Gas Extraction	01 Energy Core--01Petroleum	2,778	2,778	0	0.0%
211112	Natural Gas Liquid Extraction	01 Energy Core--01Petroleum	32	32	0	0.0%
212399	All Other Nonmetallic Mineral Mining	01 Energy Core--01Petroleum	57	3	-54	-25.5%
213111	Drilling Oil and Gas Wells	01 Energy Core--01Petroleum	1,453	1,453	0	0.0%
213112	Support Activities for Oil and Gas Operations	01 Energy Core--01Petroleum	5,132	5,132	0	0.0%
324110	Petroleum Refineries	01 Energy Core--01Petroleum	877	1,013	136	1.5%
424710	Petroleum Bulk Stations and Terminals	01 Energy Core--02 Petroelum Distribution	651	851	200	2.7%
424720	Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)	01 Energy Core--02 Petroelum Distribution	874	875	1	0.0%
486110	Pipeline Transportation of Crude Oil	01 Energy Core--02 Petroelum Distribution	419	474	55	1.2%
486210	Pipeline Transportation of Natural Gas	01 Energy Core--02 Petroelum Distribution	50	31	-19	-4.7%
486910	Pipeline Transportation of Refined Petroleum Products	01 Energy Core--02 Petroelum Distribution	104	106	2	0.2%
221111	Hydroelectric Power Generation	01 Energy Core--03 Power Generation	150	0	-150	-100.0%
221112	Fossil Fuel Electric Power Generation	01 Energy Core--03 Power Generation	1,977	2,518	541	2.4%
221121	Electric Bulk Power Transmission and Control	01 Energy Core--03 Power Generation	38	59	21	4.5%
221122	Electric Power Distribution	01 Energy Core--03 Power Generation	3	3	0	0.0%
221210	Natural Gas Distribution	01 Energy Core--03 Power Generation	2,864	2,503	-361	-1.3%
221113	Nuclear Electric Power Generation	01 Energy Core--04 Alt Energy Production	44	58	14	2.8%
237110	Water and Sewer Line and Related Structures Construction	01 Energy Core--04 Alt Energy Production	2,582	3,179	597	2.1%
238160	Roofing Contractors	01 Energy Core--04 Alt Energy Production	1,378	1,100	-278	-2.2%
325193	Ethyl Alcohol Manufacturing	01 Energy Core--04 Alt Energy Production	76	155	79	7.4%
423610	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	01 Energy Core--05 Alt Energy Distribution	989	1,156	167	1.6%
423690	Other Electronic Parts and Equipment Merchant Wholesalers	01 Energy Core--05 Alt Energy Distribution	165	180	15	0.9%
423720	Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers	01 Energy Core--05 Alt Energy Distribution	851	1,050	199	2.1%

NAICS	Description	Sub-Cluster	2015	2025p	Chg	CAGR
238210	Electrical Contractors and Other Wiring Installation Contractors	01 Energy Core--06 Energy Efficiency	7,300	8,765	1,465	1.8%
238220	Plumbing, Heating, and Air-Conditioning Contractors	01 Energy Core--06 Energy Efficiency	7,413	9,240	1,827	2.2%
238310	Drywall and Insulation Contractors	01 Energy Core--06 Energy Efficiency	4,015	3,937	-78	-0.2%
333132	Oil and Gas Field Machinery and Equipment Manufacturing	01 Energy Core--07 Energy Equipment Mfg	545	644	99	1.7%
333414	Heating Equipment (except Warm Air Furnaces) Manufacturing	01 Energy Core--07 Energy Equipment Mfg	3	3	0	0.0%
333611	Turbine and Turbine Generator Set Units Manufacturing	01 Energy Core--07 Energy Equipment Mfg	48	9	-39	-15.4%
334512	Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use	01 Energy Core--07 Energy Equipment Mfg	85	74	-11	-1.4%
334515	Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals	01 Energy Core--07 Energy Equipment Mfg	6	9	3	4.1%
335110	Electric Lamp Bulb and Part Manufacturing	01 Energy Core--07 Energy Equipment Mfg	17	21	4	2.1%
335121	Residential Electric Lighting Fixture Manufacturing	01 Energy Core--07 Energy Equipment Mfg	3	3	0	0.0%
335122	Commercial, Industrial, and Institutional Electric Lighting Fixture Manufacturing	01 Energy Core--07 Energy Equipment Mfg	74	52	-22	-3.5%
335129	Other Lighting Equipment Manufacturing	01 Energy Core--07 Energy Equipment Mfg	108	179	71	5.2%
335311	Power, Distribution, and Specialty Transformer Manufacturing	01 Energy Core--07 Energy Equipment Mfg	3	3	0	0.0%
311225	Fats and Oils Refining and Blending	02 Energy related--01 Manufacturing	6	6	0	0.0%
311613	Professional, Scientific and Technical All Other Converted Paper Product Manufacturing	02 Energy related--01 Manufacturing	178	83	-95	-7.3%
322299	Semiconductor and Related Device Manufacturing	02 Energy related--01 Manufacturing	367	416	49	1.3%
334413	Other Measuring and Controlling Device Manufacturing	02 Energy related--01 Manufacturing	256	320	64	2.3%
334519	Motor and Generator Manufacturing	02 Energy related--01 Manufacturing	78	131	53	5.3%
335312	Relay and Industrial Control Manufacturing	02 Energy related--01 Manufacturing	9	17	8	6.6%
335314	All Other Miscellaneous Electrical Equipment and Component Manufacturing	02 Energy related--01 Manufacturing	14	28	14	7.2%
335999	Miscellaneous Intermediation	02 Energy related--02 Services	3	3	0	0.0%
523910	Miscellaneous Financial Investment	02 Energy related--02 Services	83	161	78	6.9%
523999			22	42	20	6.7%

NAICS	Description	Sub-Cluster	2015	2025p	Chg	CAGR
533110	Activities Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	02 Energy related--02 Services	188	241	53	2.5%
811219	Other Electronic and Precision Equipment Repair and Maintenance	02 Energy related--02 Services	164	249	85	4.3%
811310	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	02 Energy related--02 Services	3,230	4,172	942	2.6%
541	Prof., Tech., Scien.	02 Energy related--03 Research	37,908	46,560	8,652	2.1%

Source: Applied Development Economics, based on EMSI Industry Employment Trends Data Q4 2015 QCEW and non-QCEW

Appendix Table 6 — Employment Projections by Industry Clusters: Health and Wellness: Other: CCWC Region

NAICS	Description	Sub-Cluster	2015	2025p	Chg	CAGR
Total			59,065	83,369	24,304	3.5%
325411	Medicinal and Botanical Manufacturing	Health Care--02 Pharmaceuticals	114	199	85	5.7%
325412	Pharmaceutical Preparation Manufacturing	Health Care--02 Pharmaceuticals	53	37	-16	-3.5%
325413	In-Vitro Diagnostic Substance Manufacturing	Health Care--02 Pharmaceuticals	19	37	18	6.9%
325414	Biological Product (except Diagnostic) Manufacturing	Health Care--02 Pharmaceuticals	3	3	0	0.0%
446110	Pharmacies and Drug Stores	Health Care--03 Wellness and Fitness	7,650	9,022	1,372	1.7%
446130	Optical Goods Stores	Health Care--03 Wellness and Fitness	471	681	210	3.8%
446191	Food (Health) Supplement Stores	Health Care--03 Wellness and Fitness	350	434	84	2.2%
446199	All Other Health and Personal Care Stores	Health Care--03 Wellness and Fitness	420	447	27	0.6%
532291	Home Health Equipment Rental	Health Care--03 Wellness and Fitness	167	83	-84	-6.8%
621399	Offices of All Other Miscellaneous Health Practitioners	Health Care--03 Wellness and Fitness	309	448	139	3.8%
621999	All Other Miscellaneous Ambulatory Health Care Services	Health Care--03 Wellness and Fitness	191	328	137	5.6%
812191	Diet and Weight Reducing Centers	Health Care--03 Wellness and Fitness	134	82	-52	-4.8%
339112	Surgical and Medical Instrument Manufacturing	Health Care--04 Medical devices manufacturing	184	248	64	3.0%
339113	Surgical Appliance and Supplies	Health Care--04 Medical devices	556	457	-99	-1.9%

339114	Manufacturing	manufacturing				
	Dental Equipment and Supplies Manufacturing	Health Care--04 Medical devices manufacturing	29	20	-9	-3.6%
339115		Health Care--04 Medical devices manufacturing	104	86	-18	-1.9%
	Ophthalmic Goods Manufacturing	manufacturing				
339116		Health Care--04 Medical devices manufacturing	246	158	-88	-4.3%
	Dental Laboratories	manufacturing				
423450	Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers	Health Care--05 Supplies and Services	373	385	12	0.3%
423460	Ophthalmic Goods Merchant Wholesalers	Health Care--05 Supplies and Services	6	6	0	0.0%
423490	Other Professional Equipment and Supplies Merchant Wholesalers	Health Care--05 Supplies and Services	144	150	6	0.4%
424210	Drugs and Druggists' Sundries Merchant Wholesalers	Health Care--05 Supplies and Services	664	979	315	4.0%
813212	Voluntary Health Organizations	Health Care--05 Supplies and Services	251	376	125	4.1%
624110	Child and Youth Services	Health Care--06 Other Services	2,818	3,424	606	2.0%
624120	Services for the Elderly and Persons with Disabilities	Health Care--06 Other Services	36,547	57,396	20,849	4.6%
624190	Other Individual and Family Services	Health Care--06 Other Services	2,563	2,625	62	0.2%
624210	Community Food Services	Health Care--06 Other Services	305	391	86	2.5%
624221	Temporary Shelters	Health Care--06 Other Services	498	560	62	1.2%
624229	Other Community Housing Services	Health Care--06 Other Services	272	329	57	1.9%
624230	Emergency and Other Relief Services	Health Care--06 Other Services	87	95	8	0.9%
624410	Child Day Care Services	Health Care--06 Other Services	3,537	3,883	346	0.9%

Source: Applied Development Economics, based on EMSI Industry Employment Trends Data Q4 2015 QCEW and non-QCEW

Appendix Table 7 — Employment Projections by Industry Clusters: Health and Wellness: Delivery: CCWC Region

NAICS	Description	2015	2025	Chg	CAGR
Total		144,424	171,130	26,706	1.7%
621111	Offices of Physicians (except Mental Health Specialists)	24,492	28,302	3,810	1.5%
621112	Offices of Physicians, Mental Health Specialists	204	224	20	0.9%
621210	Offices of Dentists	9,175	10,157	982	1.0%

NAICS	Description	2015	2025	Chg	CAGR
621310	Offices of Chiropractors	997	937	-60	-0.6%
621320	Offices of Optometrists	1,489	1,858	369	2.2%
621330	Offices of Mental Health Practitioners (except Physicians)	908	1,293	385	3.6%
621340	Offices of Physical, Occupational and Speech Therapists, and Audiologists	2,010	2,629	619	2.7%
621391	Offices of Podiatrists	217	235	18	0.8%
621410	Family Planning Centers	541	660	119	2.0%
621420	Outpatient Mental Health and Substance Abuse Centers	1,433	1,880	447	2.8%
621491	HMO Medical Centers	5,260	8,443	3,183	4.8%
621492	Kidney Dialysis Centers	1,495	2,138	643	3.6%
621493	Freestanding Ambulatory Surgical and Emergency Centers	732	855	123	1.6%
621498	All Other Outpatient Care Centers	1,502	2,394	892	4.8%
621511	Medical Laboratories	896	970	74	0.8%
621512	Diagnostic Imaging Centers	1,019	1,589	570	4.5%
621610	Home Health Care Services	6,422	9,917	3,495	4.4%
621910	Ambulance Services	2,345	3,062	717	2.7%
621991	Blood and Organ Banks	307	338	31	1.0%
622110	General Medical and Surgical Hospitals	50,893	56,248	5,355	1.0%
622210	Psychiatric and Substance Abuse Hospitals	283	426	143	4.2%
622310	Specialty (except Psychiatric and Substance Abuse) Hospitals	265	152	-113	-5.4%
623110	Nursing Care Facilities (Skilled Nursing Facilities)	14,236	17,015	2,779	1.8%
623210	Residential Intellectual and Developmental Disability Facilities	2,507	2,453	-54	-0.2%
623220	Residential Mental Health and Substance Abuse Facilities	2,062	2,457	395	1.8%
623311	Continuing Care Retirement Communities	2,515	3,451	936	3.2%
623312	Assisted Living Facilities for the Elderly	4,596	5,402	806	1.6%
623990	Other Residential Care Facilities	1,423	1,152	-271	-2.1%
624310	Vocational Rehabilitation Services	4,200	4,493	293	0.7%

Source: Applied Development Economics, based on EMSI Industry Employment Trends Data Q4 2015 QCEW and non-QCEW

Appendix Table 8 — Employment Projections by Industry Clusters: Logistics: CCWC Region

NAICS	Description	2015	2025	Chg	CAGR
Total		51,436	63,324	11,888	2.1%
336120	Heavy Duty Truck Manufacturing	60	93	33	4.5%
336612	Boat Building	202	6	-196	-29.6%
481111	Scheduled Passenger Air Transportation	379	168	-211	-7.8%
481112	Scheduled Freight Air Transportation	107	130	23	2.0%
481211	Nonscheduled Chartered Passenger Air Transportation	171	216	45	2.4%
481212	Nonscheduled Chartered Freight Air Transportation	20	21	1	0.5%
482110	Rail transportation	1,757	2,007	250	1.3%
483111	Deep Sea Freight Transportation	16	26	10	5.0%
483113	Coastal and Great Lakes Freight Transportation	9	27	18	11.6%
483212	Inland Water Passenger Transportation	21	22	1	0.5%
484110	General Freight Trucking, Local	5,455	6,215	760	1.3%
484121	General Freight Trucking, Long-Distance, Truckload	6,170	8,314	2,144	3.0%
484122	General Freight Trucking, Long-Distance, Less Than Truckload	2,349	2,656	307	1.2%
484210	Used Household and Office Goods Moving	477	423	-54	-1.2%
484220	Specialized Freight (except Used Goods) Trucking, Local	7,260	9,134	1,874	2.3%
484230	Specialized Freight (except Used Goods) Trucking, Long-Distance	1,265	1,962	697	4.5%
485111	Mixed Mode Transit Systems	165	173	8	0.5%
485112	Commuter Rail Systems	92	100	8	0.8%
485113	Bus and Other Motor Vehicle Transit Systems	488	873	385	6.0%
485119	Other Urban Transit Systems	25	36	11	3.7%
485210	Interurban and Rural Bus Transportation	147	135	-12	-0.8%
485310	Taxi Service	15	26	11	5.7%
485410	School and Employee Bus Transportation	861	776	-85	-1.0%
485510	Charter Bus Industry	297	222	-75	-2.9%
485991	Special Needs Transportation	1,241	1,911	670	4.4%
485999	All Other Transit and Ground Passenger Transportation	96	132	36	3.2%
488111	Air Traffic Control	12	0	-12	-100.0%

NAICS	Description	2015	2025	Chg	CAGR
488119	Other Airport Operations	128	148	20	1.5%
488190	Other Support Activities for Air Transportation	904	910	6	0.1%
488210	Support Activities for Rail Transportation	578	789	211	3.2%
488310	Port and Harbor Operations	224	186	-38	-1.8%
488320	Marine Cargo Handling	54	81	27	4.1%
488330	Navigational Services to Shipping	3	3	0	0.0%
488390	Other Support Activities for Water Transportation	3	3	0	0.0%
488410	Motor Vehicle Towing	1,000	1,394	394	3.4%
488490	Other Support Activities for Road Transportation	258	350	92	3.1%
488510	Freight Transportation Arrangement	872	1,270	398	3.8%
488991	Packing and Crating	593	923	330	4.5%
488999	All Other Support Activities for Transportation	356	501	145	3.5%
492110	Couriers and Express Delivery Services	2,926	3,045	119	0.4%
492210	Local Messengers and Local Delivery	574	771	197	3.0%
493110	General Warehousing and Storage	11,234	13,773	2,539	2.1%
493120	Refrigerated Warehousing and Storage	1,414	1,644	230	1.5%
493130	Farm Product Warehousing and Storage	132	79	-53	-5.0%
493190	Other Warehousing and Storage	151	226	75	4.1%
541614	Process, Physical Distribution, and Logistics Consulting Services	607	1,150	543	6.6%
561910	Packaging and Labeling Services	268	274	6	0.2%

Source: Applied Development Economics, based on EMSI Industry Employment Trends Data Q4 2015 QCEW and non-QCEW

Appendix Table 9 — Employment Projections by Industry Clusters: Diversified Manufacturing: CCWC Region

NAICS	Description	2015	2025	Chg	CAGR
Total		30,277	30,777	500	0.2%
314110	Carpet and Rug Mills	13	3	-10	-13.6%
314999	All Other Miscellaneous Textile Product Mills	76	121	45	4.8%
321114	Wood Preservation	98	146	48	4.1%
321213	Engineered Wood Member (except Truss) Mfg	17	0	-17	-100.0%
321214	Truss Manufacturing	344	142	-202	-8.5%

NAICS	Description	2015	2025	Chg	CAGR
321219	Reconstituted Wood Product Manufacturing	3	0	-3	-100.0%
321911	Wood Window and Door Manufacturing	495	473	-22	-0.5%
321912	Cut Stock, Resawing Lumber, and Planing	222	174	-48	-2.4%
321918	Other Millwork (including Flooring)	219	73	-146	-10.4%
321991	Manufactured Home (Mobile Home) Manufacturing	281	0	-281	-100.0%
321992	Prefabricated Wood Building Manufacturing	39	6	-33	-17.1%
321999	All Other Miscellaneous Wood Product Manufacturing	38	6	-32	-16.9%
322121	Paper (except Newsprint) Mills	6	6	0	0.0%
323111	Commercial Printing (except Screen and Books)	1,594	910	-684	-5.5%
323113	Commercial Screen Printing	190	267	77	3.5%
323117	Books Printing	227	52	-175	-13.7%
324121	Asphalt Paving Mixture and Block Manufacturing	33	9	-24	-12.2%
324122	Asphalt Shingle and Coating Materials Manufacturing	84	49	-35	-5.2%
324191	Petroleum Lubricating Oil and Grease Manufacturing	6	14	8	8.8%
325120	Industrial Gas Manufacturing	18	6	-12	-10.4%
325199	All Other Basic Organic Chemical Manufacturing	104	124	20	1.8%
325211	Plastics Material and Resin Manufacturing	87	164	77	6.5%
325311	Nitrogenous Fertilizer Manufacturing	67	6	-61	-21.4%
325312	Phosphatic Fertilizer Manufacturing	202	172	-30	-1.6%
325314	Fertilizer (Mixing Only) Manufacturing	337	407	70	1.9%
325320	Pesticide and Other Agricultural Chemical Manufacturing	104	79	-25	-2.7%
325510	Paint and Coating Manufacturing	199	328	129	5.1%
325520	Adhesive Manufacturing	144	163	19	1.2%
325611	Soap and Other Detergent Manufacturing	96	117	21	2.0%
325612	Polish and Other Sanitation Good Manufacturing	65	64	-1	-0.2%
325613	Surface Active Agent Manufacturing	3	0	-3	-100.0%
325910	Printing Ink Manufacturing	13	3	-10	-13.6%
325992	Photographic Film, Paper, Plate, and Chemical Manufacturing	16	3	-13	-15.4%
325998	All Other Miscellaneous Chemical Product and Preparation Mfg	140	174	34	2.2%
326112	Plastics Packaging Film and Sheet (including Laminated) Mfg	491	814	323	5.2%
326113	Unlaminated Plastics Film and Sheet (except Packaging) Mfg	3	3	0	0.0%

NAICS	Description	2015	2025	Chg	CAGR
326121	Unlaminated Plastics Profile Shape Manufacturing	23	27	4	1.6%
326130	Laminated Plastics Plate, Sheet (except Packaging), and Shape Mfg	91	142	51	4.6%
326140	Polystyrene Foam Product Manufacturing	385	223	-162	-5.3%
326150	Urethane and Other Foam Product (except Polystyrene) Mfg	455	733	278	4.9%
326191	Plastics Plumbing Fixture Manufacturing	27	25	-2	-0.8%
326199	All Other Plastics Product Manufacturing	1,085	1,324	239	2.0%
326211	Tire Manufacturing (except Retreading)	3	0	-3	-100.0%
326212	Tire Retreading	67	63	-4	-0.6%
326220	Rubber and Plastics Hoses and Belting Manufacturing	57	103	46	6.1%
326291	Rubber Product Manufacturing for Mechanical Use	116	85	-31	-3.1%
326299	All Other Rubber Product Manufacturing	284	393	109	3.3%
327211	Flat Glass Manufacturing	227	3	-224	-35.1%
327212	Other Pressed and Blown Glass and Glassware Manufacturing	3	3	0	0.0%
327215	Glass Product Manufacturing Made of Purchased Glass	340	441	101	2.6%
327310	Cement Manufacturing	380	503	123	2.8%
327320	Ready-Mix Concrete Manufacturing	990	875	-115	-1.2%
327331	Concrete Block and Brick Manufacturing	148	227	79	4.4%
327332	Concrete Pipe Manufacturing	364	184	-180	-6.6%
327390	Other Concrete Product Manufacturing	567	970	403	5.5%
327420	Gypsum Product Manufacturing	6	23	17	14.4%
327991	Cut Stone and Stone Product Manufacturing	53	33	-20	-4.6%
327992	Ground or Treated Mineral and Earth Manufacturing	3	0	-3	-100.0%
327993	Mineral Wool Manufacturing	275	279	4	0.1%
327999	All Other Miscellaneous Nonmetallic Mineral Product Mfg	15	3	-12	-14.9%
331210	Iron and Steel Pipe and Tube Manufacturing from Purchased Steel	35	76	41	8.1%
331221	Rolled Steel Shape Manufacturing	12	0	-12	-100.0%
331222	Steel Wire Drawing	29	50	21	5.6%
331314	Secondary Smelting and Alloying of Aluminum	65	30	-35	-7.4%
331315	Aluminum Sheet, Plate, and Foil Manufacturing	19	0	-19	-100.0%
331491	Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing, and Extruding	0	3	3	#NUM!

NAICS	Description	2015	2025	Chg	CAGR
331492	Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum)	28	41	13	3.9%
331511	Iron Foundries	63	41	-22	-4.2%
331513	Steel Foundries (except Investment)	64	83	19	2.6%
331524	Aluminum Foundries (except Die-Casting)	56	43	-13	-2.6%
332111	Iron and Steel Forging	32	3	-29	-21.1%
332114	Custom Roll Forming	307	289	-18	-0.6%
332311	Prefabricated Metal Building and Component Manufacturing	714	585	-129	-2.0%
332312	Fabricated Structural Metal Manufacturing	1,664	1,974	310	1.7%
332313	Plate Work Manufacturing	201	178	-23	-1.2%
332321	Metal Window and Door Manufacturing	243	183	-60	-2.8%
332322	Sheet Metal Work Manufacturing	651	821	170	2.3%
332323	Ornamental and Architectural Metal Work Manufacturing	240	320	80	2.9%
332410	Power Boiler and Heat Exchanger Manufacturing	11	11	0	0.0%
332420	Metal Tank (Heavy Gauge) Manufacturing	180	221	41	2.1%
332510	Hardware Manufacturing	17	3	-14	-15.9%
332618	Other Fabricated Wire Product Manufacturing	184	94	-90	-6.5%
332710	Machine Shops	1,326	1,390	64	0.5%
332721	Precision Turned Product Manufacturing	61	41	-20	-3.9%
332722	Bolt, Nut, Screw, Rivet, and Washer Manufacturing	124	183	59	4.0%
332812	Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers	622	856	234	3.2%
332813	Electroplating, Plating, Polishing, Anodizing, and Coloring	197	128	-69	-4.2%
332911	Industrial Valve Manufacturing	135	114	-21	-1.7%
332912	Fluid Power Valve and Hose Fitting Manufacturing	3	3	0	0.0%
332913	Plumbing Fixture Fitting and Trim Manufacturing	74	51	-23	-3.7%
332919	Other Metal Valve and Pipe Fitting Manufacturing	118	61	-57	-6.4%
332991	Ball and Roller Bearing Manufacturing	27	33	6	2.0%
332993	Ammunition (except Small Arms) Manufacturing	3	0	-3	-100.0%
332994	Small Arms, Ordnance, and Ordnance Accessories Manufacturing	32	68	36	7.8%
332996	Fabricated Pipe and Pipe Fitting Manufacturing	77	39	-38	-6.6%
332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	490	653	163	2.9%

NAICS	Description	2015	2025	Chg	CAGR
333120	Construction Machinery Manufacturing	231	217	-14	-0.6%
333415	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing	453	492	39	0.8%
333511	Industrial Mold Manufacturing	18	25	7	3.3%
333514	Special Die and Tool, Die Set, Jig, and Fixture Manufacturing	103	120	17	1.5%
333515	Cutting Tool and Machine Tool Accessory Manufacturing	38	50	12	2.8%
333517	Machine Tool Manufacturing	23	22	-1	-0.4%
333611	Turbine and Turbine Generator Set Units Manufacturing	3	3	0	0.0%
333612	Speed Changer, Industrial High-Speed Drive, and Gear Manufacturing	6	6	0	0.0%
333613	Mechanical Power Transmission Equipment Manufacturing	3	3	0	0.0%
333911	Pump and Pumping Equipment Manufacturing	3	3	0	0.0%
333921	Elevator and Moving Stairway Manufacturing	3	3	0	0.0%
333922	Conveyor and Conveying Equipment Manufacturing	159	199	40	2.3%
333923	Overhead Traveling Crane, Hoist, and Monorail System Manufacturing	40	36	-4	-1.0%
333924	Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing	92	92	0	0.0%
333991	Power-Driven Handtool Manufacturing	19	22	3	1.5%
333992	Welding and Soldering Equipment Manufacturing	33	54	21	5.0%
333993	Packaging Machinery Manufacturing	723	790	67	0.9%
333995	Fluid Power Cylinder and Actuator Manufacturing	67	24	-43	-9.8%
333997	Scale and Balance Manufacturing	0	3	3	#NUM!
333999	All Other Miscellaneous General Purpose Machinery Manufacturing	265	222	-43	-1.8%
334111	Electronic Computer Manufacturing	64	102	38	4.8%
334118	Computer Terminal and Other Computer Peripheral Equipment Manufacturing	3	3	0	0.0%
334210	Telephone Apparatus Manufacturing	6	3	-3	-6.7%
334220	Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing	1,018	665	-353	-4.2%
334290	Other Communications Equipment Manufacturing	9	6	-3	-4.0%
334310	Audio and Video Equipment Manufacturing	44	47	3	0.7%
334412	Bare Printed Circuit Board Manufacturing	200	81	-119	-8.6%
334416	Capacitor, Resistor, Coil, Transformer, and Other Inductor Manufacturing	45	54	9	1.8%
334418	Printed Circuit Assembly (Electronic Assembly) Manufacturing	34	43	9	2.4%

NAICS	Description	2015	2025	Chg	CAGR
334419	Other Electronic Component Manufacturing	43	53	10	2.1%
334510	Electromedical and Electrotherapeutic Apparatus Manufacturing	3	3	0	0.0%
334511	Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing	679	1,044	365	4.4%
334513	Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables	158	164	6	0.4%
334516	Analytical Laboratory Instrument Manufacturing	14	25	11	6.0%
335221	Household Cooking Appliance Manufacturing	3	3	0	0.0%
335313	Switchgear and Switchboard Apparatus Manufacturing	143	152	9	0.6%
335911	Storage Battery Manufacturing	3	3	0	0.0%
335912	Primary Battery Manufacturing	3	3	0	0.0%
335929	Other Communication and Energy Wire Manufacturing	35	47	12	3.0%
336111	Automobile Manufacturing	39	53	14	3.1%
336211	Motor Vehicle Body Manufacturing	543	707	164	2.7%
336212	Truck Trailer Manufacturing	508	617	109	2.0%
336214	Travel Trailer and Camper Manufacturing	122	12	-110	-20.7%
336330	Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing	19	9	-10	-7.2%
336340	Motor Vehicle Brake System Manufacturing	316	283	-33	-1.1%
336350	Motor Vehicle Transmission and Power Train Parts Manufacturing	43	62	19	3.7%
336360	Motor Vehicle Seating and Interior Trim Manufacturing	62	14	-48	-13.8%
336370	Motor Vehicle Metal Stamping	73	152	79	7.6%
336411	Aircraft Manufacturing	73	9	-64	-18.9%
336412	Aircraft Engine and Engine Parts Manufacturing	53	28	-25	-6.2%
336413	Other Aircraft Parts and Auxiliary Equipment Manufacturing	770	1,110	340	3.7%
336414	Guided Missile and Space Vehicle Manufacturing	18	3	-15	-16.4%
336415	Guided Missile and Space Vehicle Propulsion Unit and Propulsion Unit Parts Manufacturing	3	3	0	0.0%
336419	Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturing	6	15	9	9.6%
336612	Boat Building	202	6	-196	-29.6%
336991	Motorcycle, Bicycle, and Parts Manufacturing	6	6	0	0.0%
336992	Military Armored Vehicle, Tank, and Tank Component Manufacturing	35	44	9	2.3%

NAICS	Description	2015	2025	Chg	CAGR
336999	All Other Transportation Equipment Manufacturing	9	9	0	0.0%
337110	Wood Kitchen Cabinet and Countertop Manufacturing	1,059	978	-81	-0.8%
337121	Upholstered Household Furniture Manufacturing	13	3	-10	-13.6%
337122	Nonupholstered Wood Household Furniture Manufacturing	324	79	-245	-13.2%
337124	Metal Household Furniture Manufacturing	3	3	0	0.0%
337127	Institutional Furniture Manufacturing	43	51	8	1.7%
337211	Wood Office Furniture Manufacturing	6	6	0	0.0%
337212	Custom Architectural Woodwork and Millwork Manufacturing	13	23	10	5.9%
337214	Office Furniture (except Wood) Manufacturing	27	17	-10	-4.5%
337215	Showcase, Partition, Shelving, and Locker Manufacturing	74	77	3	0.4%
337910	Mattress Manufacturing	122	235	113	6.8%
337920	Blind and Shade Manufacturing	19	6	-13	-10.9%
339920	Sporting and Athletic Goods Manufacturing	117	153	36	2.7%
339950	Sign Manufacturing	406	431	25	0.6%
339991	Gasket, Packing, and Sealing Device Manufacturing	36	51	15	3.5%
339992	Musical Instrument Manufacturing	3	3	0	0.0%
339994	Broom, Brush, and Mop Manufacturing	9	20	11	8.3%
339999	All Other Miscellaneous Manufacturing	172	203	31	1.7%

Source: Applied Development Economics, based on EMSI Industry Employment Trends Data Q4 2015 QCEW and non-QCEW

Appendix Table 10 — Employment Projections By Industry Clusters: Water Flow Technologies: CCWC Region

NAICS	Description	2015	2025p	Chg	CAGR
Total		9,934	11,480	1,546	1.5%
326122	Plastics Pipe and Pipe Fitting Manufacturing	856	886	30	0.3%
333111	Farm Machinery and Equipment Manufacturing	1,527	1,599	72	0.5%
333911	Pump and Pumping Equipment Manufacturing	653	687	34	0.5%
423830	Industrial Machinery and Equipment Merchant Wholesalers	3,287	3,788	501	1.4%
424910	Farm Supplies Merchant Wholesalers	3,611	4,520	909	2.3%

Source: Applied Development Economics, based on EMSI Industry Employment Trends Data Q4 2015 QCEW and non-QCEW (Internal file: P:\CCWC Labor Force 2015\03_NEXT-TASKS\TABLES\06_draft_Fresno-update.xlsx T19r)

Appendix Table 11 — Employment Projections by Industry Clusters: Heavy Construction: CCWC Region

NAICS	Description	2015	2025	Chg	CAGR
Total		12,423	18,930	6,507	4.3%
237000	Local govt hvy cons.	1,029	1,054	25	0.2%
237110	Water and Sewer Line and Related Structures Construction	2,582	3,179	597	2.1%
237120	Oil and Gas Pipeline and Related Structures Construction	4,656	4,656	0	0.0%
237130	Power and Communication Line and Related Structures Construction	1,060	862	-198	-2.0%
237210	Land Subdivision	444	125	-319	-11.9%
237310	Highway, Street, and Bridge Construction	1,880	1,779	-101	-0.6%
237990	Other Heavy and Civil Engineering Construction	772	4,044	3,272	18.0%

Source: Applied Development Economics, based on EMSI Industry Employment Trends Data Q4 2015 QCEW and non-QCEW (Note: high speed rail employment projections included in NAICS 237990)

Appendix Table 12 — Employment Projections by Industry Clusters: Accommodations and Food Services, and Retail: CCWC Region

NAICS	Description	2015	2025p	Chg	CAGR
44-45	Retail	151,397	178,823	27,426	1.7%
721	Accommodations	9,245	10,668	1,423	1.4%
722	Food services	97,069	114,951	17,882	1.7%

Source: Applied Development Economics, based on EMSI Industry Employment Trends Data Q4 2015 QCEW and non-QCEW

Appendix Table 13 — Employed Labor Force by Age, Race\Ethnicity, and Educational Attainment (Persons 16 and Over): CCWC Region

	16-19	20-24	25-29	30-34	35-54	55-64	65+	Labor Force (25+)	Total Labor Force
Total	47,441	182,278	193,169	185,219	687,143	216,664	61,739	1,343,934	1,573,652
White	13,507	52,588	61,612	59,595	268,079	121,506	41,265	552,058	618,152
Did not earn HSD\GED	NA	NA	2,481	3,190	13,671	6,111	2,516	27,969	NA
HSD\GED	NA	NA	14,387	13,977	67,142	27,746	8,820	132,073	NA
Some college -- not attending	NA	NA	16,503	16,746	75,832	32,867	10,497	152,444	NA
Some college -- attending	NA	NA	4,929	2,149	4,301	396	77	11,852	NA
AA	NA	NA	6,647	6,943	28,338	14,361	5,098	61,386	NA
BA+	NA	NA	16,666	16,590	78,794	40,026	14,258	166,334	NA
Latino	27,583	104,650	105,395	100,808	322,878	67,268	13,441	609,791	742,024
Did not earn HSD\GED	NA	NA	23,631	33,683	136,958	29,968	7,092	231,330	NA
HSD\GED	NA	NA	33,327	27,841	79,751	13,993	2,253	157,165	NA
Some college -- not attending	NA	NA	23,879	18,369	55,355	12,500	2,135	112,238	NA
Some college -- attending	NA	NA	5,783	3,408	3,260	295	84	12,831	NA
AA	NA	NA	9,170	7,510	19,062	4,354	635	40,730	NA
BA+	NA	NA	9,606	9,997	28,492	6,160	1,242	55,497	NA
Other	6,351	25,040	26,161	24,816	96,186	27,889	7,033	182,085	213,476
Did not earn HSD\GED	NA	NA	1,734	2,024	10,299	5,159	1,284	20,500	NA
HSD\GED	NA	NA	5,570	5,484	19,244	5,531	951	36,780	NA
Some college -- not attending	NA	NA	6,655	5,218	22,144	5,540	1,309	40,865	NA
Some college -- attending	NA	NA	1,125	716	2,333	86	30	4,291	NA
AA	NA	NA	3,637	3,957	9,397	2,569	1,086	20,646	NA
BA+	NA	NA	7,440	7,417	32,769	9,004	2,373	59,003	NA

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

**Appendix Table 14 — Full-Time Employed Labor Force by Age, Race\Ethnicity, and Educational Attainment (Persons 16 and Over):
CCWC Region**

	16-19	20-24	25-29	30-34	35-54	55-64	65+	Labor Force (25+)	Total Labor Force
Total	4,999	72,041	122,041	128,304	493,024	154,810	30,657	928,836	1,005,876
White	1,006	18,508	39,723	42,919	202,871	89,729	20,696	395,938	415,453
Did not earn HSD\GED	NA	NA	1,590	2,105	8,927	4,219	1,353	18,194	NA
HSD\GED	NA	NA	9,713	10,114	50,047	19,957	4,083	93,913	NA
Some college -- not attending	NA	NA	11,145	12,127	58,638	24,349	5,265	111,524	NA
Some college -- attending	NA	NA	2,330	1,090	2,947	257	7	6,631	NA
AA	NA	NA	3,755	4,738	21,272	10,232	2,653	42,650	NA
BA+	NA	NA	11,191	12,745	61,040	30,715	7,336	123,026	NA
Latino	3,386	44,407	66,201	68,301	219,048	45,428	6,161	405,139	452,932
Did not earn HSD\GED	NA	NA	13,321	19,060	82,323	17,504	3,102	135,311	NA
HSD\GED	NA	NA	21,081	20,097	57,201	9,912	1,109	109,400	NA
Some college -- not attending	NA	NA	16,933	14,117	41,515	9,737	1,112	83,414	NA
Some college -- attending	NA	NA	2,196	2,226	2,268	165	18	6,872	NA
AA	NA	NA	6,387	5,309	13,666	3,092	124	28,577	NA
BA+	NA	NA	6,284	7,491	22,075	5,018	697	41,565	NA
Other	606	9,126	16,117	17,084	71,105	19,653	3,800	127,759	137,491
Did not earn HSD\GED	NA	NA	1,110	1,093	6,937	3,087	408	12,634	NA
HSD\GED	NA	NA	3,174	3,744	13,411	3,891	496	24,716	NA
Some college -- not attending	NA	NA	4,224	3,703	16,934	4,174	893	29,928	NA
Some college -- attending	NA	NA	686	267	1,635	45	30	2,662	NA
AA	NA	NA	2,354	2,830	7,304	1,927	537	14,952	NA
BA+	NA	NA	4,568	5,446	24,886	6,531	1,436	42,867	NA
Source: Applied Development Economics, based on US Census ACS Public Use Microdata 2012-2014 from IPUMS									

Appendix Table 15 – Population by Age, gender, and Educational Attainment

	0-15	16-19	20-24	25-29	30-34	35-54	55-64	65+	TOTAL
Total	1,065,791	252,987	328,701	298,217	284,180	1,023,5	416,184	441,796	4,111,42
Men	544,868	130,873	170,798	156,174	146,725	517,403	204,469	197,119	2,068,430
Did not earn HSD\GED	447,119	82,819	31,084	34,537	41,843	153,619	52,333	56,550	899,904
HSD\GED	14	25,277	57,952	50,302	45,445	141,769	46,263	43,276	410,297
Some college -- not attending	-	2,555	27,260	32,235	28,381	107,160	48,752	42,341	288,684
Some college -- attending	86	19,629	38,886	11,163	4,335	7,806	832	368	83,105
AA	-	496	8,290	10,353	9,019	31,106	17,309	15,309	91,882
BA+	-	97	7,327	17,583	17,702	75,942	38,980	39,276	196,909
NA	97,649	-	-	-	-	-	-	-	97,649
Women	520,923	122,114	157,902	142,043	137,455	506,160	211,716	244,677	2,042,990
Did not earn HSD\GED	426,788	73,997	18,965	23,099	28,502	130,641	50,757	73,318	826,069
HSD\GED	-	23,367	44,469	36,348	32,763	118,044	49,480	69,113	373,584
Some college -- not attending	-	2,164	29,209	33,609	30,667	111,589	49,381	52,154	308,774
Some college -- attending	189	22,220	42,352	10,150	7,401	9,872	1,194	504	93,881
AA	-	366	12,129	14,532	15,094	44,757	20,697	14,810	122,384
BA+	-	-	10,778	24,306	23,028	91,257	40,206	34,778	224,352
NA	93,946	-	-	-	-	-	-	-	93,946
Source: Applied Development Economics, based on US Census ACS Public Use Microdata 2012-2014 from IPUMS									

Appendix Table 16 — Labor Force by Age, Gender, and Educational Attainment (Persons 16 and Over): CCWC Region

	16-19	20-24	25-29	30-34	35-54	55-64	65+	Labor Force (25+)	Total Labor Force
Total	73,189	228,633	224,535	212,155	769,337	239,252	67,586	1,512,863	1,814,685
Men	38,327	124,680	128,548	120,884	424,195	129,654	38,214	841,495	1,004,502
Did not earn HSD\GED	NA	NA	24,580	32,456	119,917	30,688	7,533	215,173	NA
HSD\GED	NA	NA	41,409	36,035	113,003	26,856	6,838	224,141	NA
Some college -- not attending	NA	NA	29,180	23,967	88,535	30,330	8,004	180,016	NA
Some college -- attending	NA	NA	8,209	3,309	5,532	411	151	17,612	NA
AA	NA	NA	9,492	8,475	26,514	11,071	3,695	59,246	NA
BA+	NA	NA	15,678	16,643	70,694	30,297	11,993	145,306	NA
Women	34,862	103,953	95,987	91,270	345,142	109,598	29,372	671,368	810,184
Did not earn HSD\GED	NA	NA	9,541	13,795	70,196	18,567	5,198	117,297	NA
HSD\GED	NA	NA	23,116	20,026	75,828	25,122	6,392	150,484	NA
Some college -- not attending	NA	NA	24,502	22,025	80,543	25,780	7,226	160,078	NA
Some college -- attending	NA	NA	6,436	4,507	6,629	603	102	18,277	NA
AA	NA	NA	12,106	11,751	35,719	11,682	3,628	74,886	NA
BA+	NA	NA	20,285	19,166	76,226	27,843	6,827	150,347	NA
<i>Source: Applied Development Economics, based on US Census ACS Public Use Microdata 2012-2014 from iPUMS</i>									

Appendix Table 17 — Employed Labor Force by Age, Gender, and Educational Attainment (Persons 16 and Over): CCWC Region

	16-19	20-24	25-29	30-34	35-54	55-64	65+	Labor Force (25+)	Total Labor Force
Total	47,416	182,233	193,172	185,219	687,133	216,651	61,703	1,343,878	1,573,526
Men	23,957	98,279	111,746	106,347	383,554	118,771	34,673	755,090	877,327
Did not earn HSD\GED	NA	NA	20,659	27,949	105,215	26,405	6,557	186,785	NA
HSD\GED	NA	NA	34,699	30,872	101,009	24,762	6,131	197,473	NA
Some college -- not attending	NA	NA	26,463	21,264	81,178	27,698	7,345	163,948	NA
Some college -- attending	NA	NA	6,609	2,591	4,591	337	121	14,248	NA
AA	NA	NA	8,656	7,819	24,441	10,382	3,345	54,643	NA
BA+	NA	NA	14,661	15,852	67,120	29,187	11,175	137,994	NA
Women	23,459	83,953	81,426	78,872	303,579	97,880	27,030	588,787	696,200
Did not earn HSD\GED	NA	NA	7,187	10,948	55,712	14,834	4,334	93,014	NA
HSD\GED	NA	NA	18,589	16,431	65,150	22,500	5,887	128,557	NA
Some college -- not attending	NA	NA	20,571	19,066	72,155	23,201	6,593	141,586	NA
Some college -- attending	NA	NA	5,232	3,684	5,304	440	70	14,730	NA
AA	NA	NA	10,799	10,592	32,351	10,903	3,469	68,114	NA
BA+	NA	NA	19,049	18,151	72,908	26,002	6,677	142,787	NA
<i>Source: Applied Development Economics, based on US Census ACS Public Use Microdata 2012-2014 from iPUMS</i>									

Appendix Table 18 — Full-Time Employed Labor Force by Age, Gender, and Educational Attainment (Persons 16 and Over) CCWC Region

	16-19	20-24	25-29	30-34	35-54	55-64	65+	Labor Force (25+)	Total Labor Force
Total	4,974	71,996	122,044	128,304	493,014	154,797	30,621	928,780	1,005,750
Men	3,334	43,422	75,966	78,950	298,088	92,183	19,123	564,310	611,066
Did not earn HSD\GED	NA	NA	12,439	17,649	70,324	17,478	3,460	121,350	NA
HSD\GED	NA	NA	24,124	23,451	78,741	19,629	3,259	149,204	NA
Some college -- not attending	NA	NA	19,904	17,277	67,531	23,158	4,359	132,228	NA
Some college -- attending	NA	NA	3,063	1,791	3,333	231	30	8,447	NA
AA	NA	NA	6,200	6,133	21,178	7,839	1,702	43,052	NA
BA+	NA	NA	10,235	12,650	56,982	23,848	6,314	110,028	NA
Women	1,640	28,574	46,077	49,354	194,926	62,615	11,498	364,470	394,684
Did not earn HSD\GED	NA	NA	3,582	4,609	27,862	7,333	1,402	44,789	NA
HSD\GED	NA	NA	9,847	10,507	41,939	14,123	2,422	78,837	NA
Some college -- not attending	NA	NA	12,395	12,668	49,558	15,094	2,908	92,623	NA
Some college -- attending	NA	NA	2,152	1,794	3,515	235	25	7,722	NA
AA	NA	NA	6,295	6,746	21,060	7,414	1,607	43,122	NA
BA+	NA	NA	11,805	13,031	50,991	18,415	3,135	97,377	NA
Source: Applied Development Economics, based on US Census ACS Public Use Microdata 2012-2014 from iPUMS									

Appendix Table 19 — Part-Time Employed Labor Force By Age, Gender, and Educational Attainment (Persons 16 and Over): CCWC Region

	16-19	20-24	25-29	30-34	35-54	55-64	65+	Labor Force (25+)	Total Labor Force
Total	42,442	110,237	71,128	56,915	194,119	61,854	31,082	415,098	567,777
Men	20,623	54,857	35,779	27,397	85,466	26,589	15,550	190,781	266,261
Did not earn HSD\GED	NA	NA	8,219	10,301	34,891	8,926	3,097	65,435	NA
HSD\GED	NA	NA	10,575	7,422	22,268	5,133	2,872	48,269	NA
Some college -- not attending	NA	NA	6,559	3,987	13,648	4,541	2,985	31,720	NA
Some college -- attending	NA	NA	3,546	800	1,258	106	91	5,801	NA
AA	NA	NA	2,455	1,686	3,263	2,544	1,643	11,591	NA
BA+	NA	NA	4,426	3,202	10,138	5,339	4,862	27,966	NA
Women	21,819	55,380	35,349	29,518	108,653	35,265	15,532	224,317	301,516
Did not earn HSD\GED	NA	NA	3,604	6,339	27,849	7,501	2,932	48,225	NA
HSD\GED	NA	NA	8,742	5,924	23,210	8,378	3,466	49,720	NA
Some college -- not attending	NA	NA	8,176	6,398	22,597	8,106	3,685	48,962	NA
Some college -- attending	NA	NA	3,080	1,890	1,788	204	46	7,008	NA
AA	NA	NA	4,503	3,847	11,291	3,489	1,862	24,992	NA
BA+	NA	NA	7,244	5,121	21,917	7,587	3,542	45,409	NA

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

Appendix Table 20 — Unemployed Labor Force By Age, Gender, and Educational Attainment (Persons 16 and Over): CCWC Region

	16-19	20-24	25-29	30-34	35-54	55-64	65+	Labor Force (25+)	Total Labor Force
Total	25,774	46,400	31,363	26,936	82,204	22,600	5,882	168,986	241,159
Men	14,371	26,400	16,802	14,538	40,641	10,883	3,541	86,404	127,175
Did not earn HSD\GED	NA	NA	3,921	4,506	14,701	4,284	976	28,389	NA
HSD\GED	NA	NA	6,710	5,163	11,994	2,094	707	26,668	NA
Some college -- not attending	NA	NA	2,717	2,703	7,357	2,632	660	16,068	NA
Some college -- attending	NA	NA	1,600	718	941	75	30	3,364	NA
AA	NA	NA	836	656	2,073	689	349	4,604	NA
BA+	NA	NA	1,018	791	3,575	1,110	818	7,312	NA
Women	11,403	20,000	14,561	12,398	41,563	11,718	2,342	82,581	113,984
Did not earn HSD\GED	NA	NA	2,354	2,847	14,484	3,733	864	24,282	NA
HSD\GED	NA	NA	4,527	3,595	10,679	2,622	504	21,927	NA
Some college -- not attending	NA	NA	3,931	2,959	8,388	2,580	633	18,492	NA
Some college -- attending	NA	NA	1,205	823	1,325	163	31	3,547	NA
AA	NA	NA	1,307	1,159	3,368	779	159	6,773	NA
BA+	NA	NA	1,237	1,014	3,318	1,841	150	7,560	NA
<i>Source: Applied Development Economics, based on US Census ACS Public Use Microdata 2012-2014 from iPUMS</i>									

Appendix Table 21 — Population By Age, Citizen Status, and Educational Attainment: CCWC Region

	0-15	16-19	20-24	25-29	30-34	35-54	55-64	65+	Total
Total	1,065,79	252,987	328,701	298,217	284,180	1,023,56	416,184	441,796	4,111,42
Citizen	1,033,06	230,737	288,833	240,350	216,498	776,636	362,627	401,883	3,550,62
Did not earn HSD\GED	842,342	143,277	34,031	29,254	29,712	121,018	62,422	98,076	1,360,13
HSD\GED	14	43,352	89,767	69,996	62,503	214,924	89,578	108,324	678,458
Some college -- not attending	0	4,347	53,146	59,294	54,226	201,028	94,833	92,470	559,344
Some college -- attending	275	38,848	75,814	19,936	10,671	15,859	2,002	817	164,222
AA	0	815	19,125	22,853	22,623	71,010	36,948	29,710	203,084
BA+	0	97	16,951	39,015	36,763	152,797	76,844	72,487	394,956
NA	190,430	0	0	0	0	0	0	0	190,430
Not Citizen	32,730	22,250	39,867	57,867	67,682	246,928	53,557	39,913	560,795
Did not earn HSD\GED	31,566	13,539	16,018	28,382	40,633	163,242	40,668	31,793	365,840
HSD\GED	0	5,292	12,655	16,653	15,705	44,890	6,165	4,065	105,424
Some college -- not attending	0	371	3,324	6,550	4,821	17,722	3,301	2,025	38,114
Some college -- attending	0	3,001	5,424	1,376	1,066	1,819	24	55	12,765
AA	0	47	1,294	2,032	1,490	4,853	1,058	408	11,182
BA+	0	0	1,153	2,874	3,967	14,402	2,342	1,567	26,305
NA	1,165	0	0	0	0	0	0	0	1,165
<i>Source: Applied Development Economics, based on US Census ACS Public Use Microdata 2012-2014 from iPUMS</i>									

Appendix Table 22 — Population By Age, Disability Status, and Educational Attainment: CCWC Region

	0-15	16-19	20-24	25-29	30-34	35-54	55-64	65+	Total
Total	1,065,791	252,987	328,701	298,217	284,180	1,023,563	416,184	441,796	4,111,420
No Reported Disability	1,053,031	238,230	307,046	277,534	259,979	898,164	321,117	247,836	3,602,936
Did not earn HSD\GED	861,195	146,785	43,699	51,561	62,693	241,413	72,928	59,851	1,540,123
HSD\GED	0	45,607	95,526	79,437	70,681	226,893	71,747	60,382	650,273
Some college -- not attending	0	4,334	53,583	62,164	53,835	189,881	74,193	55,280	493,270
Some college -- attending	241	40,545	76,948	20,139	10,669	15,394	1,414	547	165,898
AA	0	861	19,606	23,932	22,651	67,988	30,196	19,919	185,153
BA+	0	97	17,684	40,301	39,452	156,595	70,639	51,856	376,624
NA	191,595	0	0	0	0	0	0	0	191,595
At Least One Disability	12,761	14,757	21,655	20,683	24,201	125,400	95,068	193,961	508,485
Did not earn HSD\GED	12,713	10,032	6,349	6,076	7,652	42,847	30,162	70,018	185,850
HSD\GED	14	3,037	6,895	7,212	7,527	32,920	23,996	52,006	133,609
Some college -- not attending	0	384	2,887	3,680	5,213	28,869	23,940	39,215	104,188
Some college -- attending	33	1,304	4,290	1,173	1,068	2,284	613	324	11,089
AA	0	0	812	953	1,463	7,875	7,809	10,200	29,112
BA+	0	0	421	1,588	1,279	10,604	8,547	22,198	44,637
NA	0	0	0	0	0	0	0	0	0
<i>Source: Applied Development Economics, based on US Census ACS Public Use Microdata 2012-2014 from iPUMS</i>									

Appendix Table 23 — Population By Age, Veteran Status, and Educational Attainment: CCWC Region

	0-15	16-19	20-24	25-29	30-34	35-54	55-64	65+	Total
Total	1,065,791	252,987	328,701	298,217	284,180	1,023,563	416,184	441,796	4,111,420
Not Veterans	0	186,654	325,186	291,295	275,054	980,556	377,201	357,851	2,793,797
Did not earn HSD\GED	0	91,189	49,971	57,509	70,104	282,947	100,403	118,971	771,096
HSD\GED	0	48,280	100,934	84,811	76,257	248,886	86,934	91,755	737,858
Some college -- not attending	0	4,683	55,241	63,344	55,325	204,697	84,779	69,847	537,915
Some college -- attending	0	41,543	80,723	20,080	11,151	15,822	1,630	679	171,628
AA	0	861	20,325	24,308	22,887	69,363	31,834	20,982	190,560
BA+	0	97	17,992	41,244	39,329	158,840	71,620	55,617	384,740
NA	0	0	0	0	0	0	0	0	0
Veterans	0	159	3,515	6,922	9,126	43,007	38,984	83,945	185,658
Did not earn HSD\GED	0	0	77	127	241	1,313	2,687	10,897	15,342
HSD\GED	0	98	1,487	1,838	1,951	10,928	8,809	20,633	45,743
Some college -- not attending	0	0	1,229	2,501	3,723	14,052	13,355	24,648	59,508
Some college -- attending	0	61	515	1,233	585	1,856	396	193	4,839
AA	0	0	93	577	1,226	6,500	6,172	9,137	23,705
BA+	0	0	113	645	1,401	8,359	7,565	18,437	36,521
NA	0	0	0	0	0	0	0	0	0
Ineligible (i.e. youth < 17)	1,065,791	66,174	0	0	0	0	0	0	1,131,966
Did not earn HSD\GED	873,908	65,627	0	0	0	0	0	0	939,535
HSD\GED	14	266	0	0	0	0	0	0	281
Some college -- not attending	0	35	0	0	0	0	0	0	35
Some college -- attending	275	245	0	0	0	0	0	0	520
AA	0	0	0	0	0	0	0	0	0
BA+	0	0	0	0	0	0	0	0	0
NA	191,595	0	0	0	0	0	0	0	191,595
Source: Applied Development Economics, based on US Census ACS Public Use Microdata 2012-2014 from iPUMS									

Appendix Table 24 — Part-Time Employed Labor Force By Broad Occupation Categories, Educational Attainment and Management Status CCWC Region

Part-Time Management	Total	01 < HS\GED	02 HS\GED	03 Some College- OUT	04 Some College- ATTENDING	05 AA	06 BA or up
Total	42,576	6,731	8,451	9,539	2,525	3,451	11,879
11 Management Occupations	21,783	4,334	3,841	4,131	1,318	1,851	6,309
13 Business Operations Specialists	0	0	0	0	0	0	0
13 Financial Specialists	0	0	0	0	0	0	0
15 Computer and Mathematical Occupations	0	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	131	39	0	0	0	0	92
21 Community and Social Science Occupations	0	0	0	0	0	0	0
23 Legal	894	0	0	0	0	18	875
25 Education	0	0	0	0	0	0	0
27 Arts, Design, Entertainment, Sports, and Media	0	0	0	0	0	0	0
29 Healthcare Practitioners and Technical Occupations	2,071	0	14	0	0	0	2,058
31 Healthcare Support Occupations	0	0	0	0	0	0	0
33 Protective Service Occupations	224	0	96	28	2	0	98
35 Food Preparation and Serving Occupations	3,160	286	747	1,096	602	230	199
37 Building and Ground Cleaning and Maintenance	817	152	216	271	23	134	22
39 Personal Care and Service Occupations	611	27	408	60	98	0	18
41 Sales Occupations	7,195	744	1,625	2,372	280	870	1,305
43 Office and Administrative Support Occupations	1,787	111	385	592	159	211	330
45 Farming, Fishing, and Forestry Occupations	944	554	285	63	31	0	10
47 Construction Trades	1,441	233	384	444	12	110	257
47 Extraction Workers	0	0	0	0	0	0	0
49 Installation, Maintenance, and Repair Workers	58	50	0	0	0	8	0
51 Production Occupations	1,224	201	288	412	0	19	304
53 Transportation and Material Moving Occupations	233	0	163	70	0	0	0

55 Military Specific Occupations	0	0	0	0	0	0	0
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Part-Time Specialists	Total	01 < HS\GED	02 HS\GED	03 Some College- OUT	04 Some College- ATTENDING	05 AA	06 BA or up
Total	220,901	39,291	53,939	38,465	17,252	20,579	51,374
11 Management Occupations	0	0	0	0	0	0	0
13 Business Operations Specialists	4,654	282	634	1,206	636	514	1,382
13 Financial Specialists	4,225	103	289	766	323	740	2,004
15 Computer and Mathematical Occupations	3,077	141	473	578	481	366	1,039
17 Architecture and Engineering Occupations	2,752	96	214	399	139	322	1,583
19 Life, Physical, and Social Science Occupations	2,174	105	66	187	243	241	1,332
21 Community and Social Science Occupations	6,287	355	460	999	246	882	3,345
23 Legal	0	0	0	0	0	0	0
25 Education	32,639	387	884	2,457	2,379	3,070	23,462
27 Arts, Design, Entertainment, Sports, and Media	8,842	743	1,601	1,792	960	1,024	2,722
29 Healthcare Practitioners and Technical Occupations	17,341	51	1,261	2,441	634	5,817	7,137
31 Healthcare Support Occupations	0	0	0	0	0	0	0
33 Protective Service Occupations	3,051	202	587	971	660	348	283
35 Food Preparation and Serving Occupations	23,068	5,755	7,639	3,849	3,986	844	995
37 Building and Ground Cleaning and Maintenance	67	12	34	21	0	0	0
39 Personal Care and Service Occupations	8,953	674	2,964	2,595	858	949	912
41 Sales Occupations	5,397	153	1,206	1,637	297	694	1,410
43 Office and Administrative Support Occupations	210	0	22	27	98	0	63
45 Farming, Fishing, and Forestry Occupations	43	0	23	17	0	0	3
47 Construction Trades	22,770	8,364	7,523	3,950	882	939	1,111
47 Extraction Workers	820	298	201	286	35	0	0
49 Installation, Maintenance, and Repair Workers	9,708	2,326	3,757	2,204	613	561	248
51 Production Occupations	20,050	6,456	7,668	3,342	988	1,053	543

53 Transportation and Material Moving Occupations	44,742	12,788	16,403	8,741	2,795	2,215	1,800
55 Military Specific Occupations	31	0	31	0	0	0	0

Part-Time Support	Total	01 < HS\GED	02 HS\GED	03 Some College- OUT	04 Some College- ATTENDING	05 AA	06 BA or up
Total	304,300	91,753	80,432	54,563	39,762	19,707	18,083
11 Management Occupations	0	0	0	0	0	0	0
13 Business Operations Specialists	0	0	0	0	0	0	0
13 Financial Specialists	0	0	0	0	0	0	0
15 Computer and Mathematical Occupations	0	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	0	0	0	0	0	0	0
21 Community and Social Science Occupations	0	0	0	0	0	0	0
23 Legal	1,064	0	88	371	205	44	356
25 Education	10,157	545	2,073	3,184	1,136	2,054	1,165
27 Arts, Design, Entertainment, Sports, and Media	0	0	0	0	0	0	0
29 Healthcare Practitioners and Technical Occupations	0	0	0	0	0	0	0
31 Healthcare Support Occupations	15,446	1,362	3,964	5,095	847	2,619	1,559
33 Protective Service Occupations	5,247	611	1,377	1,489	854	295	621
35 Food Preparation and Serving Occupations	27,419	4,970	8,600	4,258	7,304	1,223	1,064
37 Building and Ground Cleaning and Maintenance	29,801	13,210	9,198	3,538	1,752	1,190	913
39 Personal Care and Service Occupations	28,951	7,167	8,724	5,482	3,670	2,237	1,670
41 Sales Occupations	52,752	7,716	15,274	10,303	12,362	3,481	3,616
43 Office and Administrative Support Occupations	62,916	4,661	17,748	17,875	10,101	6,033	6,498
45 Farming, Fishing, and Forestry Occupations	68,984	51,214	12,822	2,809	1,405	323	410
47 Construction Trades	0	0	0	0	0	0	0
47 Extraction Workers	0	0	0	0	0	0	0
49 Installation, Maintenance, and Repair Workers	1,318	298	466	75	126	207	145

51 Production Occupations	0	0	0	0	0	0	0
53 Transportation and Material Moving Occupations	23	0	0	23	0	0	0
55 Military Specific Occupations	222	0	95	61	0	0	65

Appendix Table 25 — Unemployed Labor Force By Broad Occupation Categories, Educational Attainment and Management Status (Excluding Long-Term Unemployed)

Unemployed Management	Total	01 < HS\GED	02 HS\GED	03 Some College- OUT	04 Some College- ATTENDING	05 AA	06 BA or up
Total	12,740	1,468	3,267	4,198	655	1,329	1,823
11 Management Occupations	5,176	413	1,270	1,825	228	532	909
13 Business Operations Specialists	0	0	0	0	0	0	0
13 Financial Specialists	0	0	0	0	0	0	0
15 Computer and Mathematical Occupations	0	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	0	0	0	0	0	0	0
21 Community and Social Science Occupations	0	0	0	0	0	0	0
23 Legal	58	0	0	0	0	0	58
25 Education	0	0	0	0	0	0	0
27 Arts, Design, Entertainment, Sports, and Media	0	0	0	0	0	0	0
29 Healthcare Practitioners and Technical Occupations	74	0	0	0	0	0	74
31 Healthcare Support Occupations	0	0	0	0	0	0	0
33 Protective Service Occupations	121	0	0	53	67	0	0
35 Food Preparation and Serving Occupations	1,135	171	250	387	84	220	23
37 Building and Ground Cleaning and Maintenance	166	72	77	0	16	0	2
39 Personal Care and Service Occupations	145	0	43	27	21	55	0
41 Sales Occupations	2,683	179	1,143	803	43	160	356
43 Office and Administrative Support Occupations	1,040	0	183	402	77	239	139

45 Farming, Fishing, and Forestry Occupations	355	247	12	51	0	45	0
47 Construction Trades	772	179	130	250	119	52	42
47 Extraction Workers	0	0	0	0	0	0	0
49 Installation, Maintenance, and Repair Workers	216	18	65	106	0	27	0
51 Production Occupations	563	104	30	294	0	0	135
53 Transportation and Material Moving Occupations	227	85	57	0	0	0	85
55 Military Specific Occupations	7	0	7	0	0	0	0

Unemployed Specialists	Total	01 < HS\GED	02 HS\GED	03 Some College- OUT	04 Some College- ATTENDING	05 AA	06 BA or up
Total	78,526	20,991	24,382	14,282	5,783	4,843	8,245
11 Management Occupations	0	0	0	0	0	0	0
13 Business Operations Specialists	2,008	106	741	358	113	240	450
13 Financial Specialists	1,443	25	121	564	0	169	565
15 Computer and Mathematical Occupations	1,433	0	146	478	215	229	366
17 Architecture and Engineering Occupations	566	105	63	92	0	62	244
19 Life, Physical, and Social Science Occupations	674	40	96	204	134	43	157
21 Community and Social Science Occupations	934	16	100	148	70	160	440
23 Legal	0	0	0	0	0	0	0
25 Education	4,279	171	150	396	594	643	2,325
27 Arts, Design, Entertainment, Sports, and Media	2,521	222	334	391	378	605	590
29 Healthcare Practitioners and Technical Occupations	1,959	148	184	408	237	468	514
31 Healthcare Support Occupations	0	0	0	0	0	0	0
33 Protective Service Occupations	1,475	47	285	261	634	126	122
35 Food Preparation and Serving Occupations	4,925	1,057	2,013	981	432	184	257
37 Building and Ground Cleaning and Maintenance	145	0	62	83	0	0	0
39 Personal Care and Service Occupations	1,084	230	536	134	143	25	16
41 Sales Occupations	1,280	162	226	186	365	60	282

43 Office and Administrative Support Occupations	210	33	31	40	0	105	0
45 Farming, Fishing, and Forestry Occupations	63	0	37	0	0	0	26
47 Construction Trades	13,043	5,209	3,903	2,679	465	421	366
47 Extraction Workers	947	389	247	277	0	33	0
49 Installation, Maintenance, and Repair Workers	4,637	1,394	1,913	746	126	301	157
51 Production Occupations	12,503	4,090	4,759	1,971	522	419	742
53 Transportation and Material Moving Occupations	22,362	7,546	8,435	3,850	1,357	549	626
55 Military Specific Occupations	35	0	0	35	0	0	0

Unemployed Support	Total	01 < HS\GED	02 HS\GED	03 Some College- OUT	04 Some College- ATTENDING	05 AA	06 BA or up
Total	99,066	31,612	28,862	19,409	8,229	6,284	4,670
11 Management Occupations	0	0	0	0	0	0	0
13 Business Operations Specialists	0	0	0	0	0	0	0
13 Financial Specialists	0	0	0	0	0	0	0
15 Computer and Mathematical Occupations	0	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	0	0	0	0	0	0	0
21 Community and Social Science Occupations	0	0	0	0	0	0	0
23 Legal	424	43	35	148	0	106	92
25 Education	1,298	179	451	120	182	256	111
27 Arts, Design, Entertainment, Sports, and Media	0	0	0	0	0	0	0
29 Healthcare Practitioners and Technical Occupations	0	0	0	0	0	0	0
31 Healthcare Support Occupations	4,551	599	1,371	1,380	448	509	244
33 Protective Service Occupations	1,695	193	656	340	201	179	125
35 Food Preparation and Serving Occupations	5,502	772	1,990	1,397	1,047	210	85
37 Building and Ground Cleaning and Maintenance	8,996	3,494	3,393	1,257	496	257	98
39 Personal Care and Service Occupations	6,455	1,061	2,520	1,617	354	461	443

41 Sales Occupations	15,992	2,309	4,434	3,947	2,456	1,491	1,354
43 Office and Administrative Support Occupations	23,877	2,224	7,630	7,648	2,254	2,246	1,876
45 Farming, Fishing, and Forestry Occupations	29,048	20,653	5,925	1,148	712	441	170
47 Construction Trades	0	0	0	0	0	0	0
47 Extraction Workers	0	0	0	0	0	0	0
49 Installation, Maintenance, and Repair Workers	838	84	179	408	39	128	0
51 Production Occupations	0	0	0	0	0	0	0
53 Transportation and Material Moving Occupations	0	0	0	0	0	0	0
55 Military Specific Occupations	390	0	278	0	40	0	72

Appendix Table 26 — Long-Term Unemployed Labor Force By Educational Attainment

	Total	<HS	HS	Some Coll OUT	Some Coll IN	AA	BA or up
Long-Term Unemployed persons	50,827	16,697	17,794	5,580	7,054	1,771	1,931
Source: Applied Development Economics, based on US Census ACS Public Use Microdata 2012-2014 from iPUMS							

Appendix Table 27 — Unemployed Labor Force-to-Job Openings Skills Match

OCCSOC	Occupation	Required Education	Annual Openings	Ten-Year Openings	Unemployed in Target Occupations	Unemployed in Target Occupations With Required background
Total			51,619	516,190	151,907	80,374
53-70XX	Conveyor operators and tenders, and hoist and winch operators	Less than high school	7	70	0	0
53-7081	Refuse and Recyclable Material Collectors	Less than high school	41	410	197	163
53-7070	Pumping Station Operators	Less than high school	6	60	0	0
53-7064	Packers and Packagers, Hand	Less than high school	596	5960	4,820	4,159
53-7063	Machine Feeders and Offbearers	Less than high school	19	190	64	64

OCCSOC	Occupation	Required Education	Annual Openings	Ten-Year Openings	Unemployed in Target Occupations	Unemployed in Target Occupations With Required background
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	Less than high school	1,471	14710	6,631	4,528
53-7061	Cleaners of Vehicles and Equipment	Less than high school	298	2980	1,067	919
53-7051	Industrial Truck and Tractor Operators	Less than high school	287	2870	2,247	1,417
53-7030	Dredge, Excavating, and Loading Machine Operators	Less than high school	5	50	12	12
53-7021	Crane and Tower Operators	High school diploma or equivalent	33	330	0	0
53-6031	Service Station Attendants	Less than high school	44	440	193	167
53-6021	Parking Lot Attendants	Less than high school	14	140	32	32
53-3099	Motor Vehicle Operators, All Other	High school diploma or equivalent	19	190	0	0
53-3041	Taxi Drivers and Chauffeurs	Less than high school	39	390	63	0
53-3030	Driver/Sales Workers and Truck Drivers	High school diploma or equivalent	1,711	17110	5,783	3,702
53-3020	Bus Drivers	High school diploma or equivalent	160	1600	274	248
53-2020	Air Traffic Controllers and Airfield Operations Specialists	Associate's degree	12	120	0	0
53-2010	Aircraft Pilots and Flight Engineers	Bachelor's degree	7	70	0	0
53-1000	Supervisors of Transportation and Material Moving Workers	High school diploma or equivalent	166	1660	227	57
51-91XX	Other production workers including semiconductor processors and cooling and freezing equipment operators	Associate's degree	76	760	1,143	22
51-9198	Helpers--Production Workers	Less than high school	130	1300	96	96
51-9196	Paper Goods Machine Setters, Operators, and Tenders	High school diploma or equivalent	14	140	0	0
51-9111	Packaging and Filling Machine Operators and Tenders	High school diploma or equivalent	321	3210	1,409	720
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	High school diploma or equivalent	129	1290	1,319	849
51-9020	Crushing, Grinding, Polishing, Mixing, and Blending Workers	High school diploma or equivalent	32	320	28	28
51-9010	Chemical Processing Machine Setters, Operators, and Tenders	High school diploma or equivalent	44	440	26	26
51-8090	Miscellaneous Plant and System Operators	High school diploma or equivalent	18	180	0	0
51-8031	Water and Wastewater Treatment Plant and System Operators	High school diploma or equivalent	53	530	39	0
51-8010	Power Plant Operators, Distributors, and Dispatchers	High school diploma or equivalent	13	130	0	0
51-6011	Laundry and Dry-Cleaning Workers	Less than high school	56	560	44	21

OCCSOC	Occupation	Required Education	Annual Openings	Ten-Year Openings	Unemployed in Target Occupations	Unemployed in Target Occupations With Required background
51-4XXX	Misc. metal workers\plastic workers incl. milling and planing mach. setters, and multiple mach. tool setters, and lay-out workers	High school diploma or equivalent	6	60	92	68
51-4120	Welding, Soldering, and Brazing Workers	High school diploma or equivalent	132	1320	655	537
51-4041	Machinists	High school diploma or equivalent	68	680	7	7
51-4010	Computer Control Programmers and Operators	High school diploma or equivalent	6	60	0	0
51-3099	Food Processing Workers, All Other	Less than high school	9	90	16	16
51-3093	Food Cooking Machine Operators and Tenders	High school diploma or equivalent	14	140	0	0
51-3092	Food Batchmakers	High school diploma or equivalent	81	810	263	114
51-3091	Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders	Less than high school	6	60	0	0
51-3020	Butchers and Other Meat, Poultry, and Fish Processing Workers	Less than high school	219	2190	210	199
51-3011	Bakers	Less than high school	45	450	152	96
51-2090	Miscellaneous Assemblers and Fabricators	High school diploma or equivalent	156	1560	814	566
51-2041	Structural Metal Fabricators and Fitters	High school diploma or equivalent	12	120	0	0
51-1011	First-Line Supervisors of Production and Operating Workers	Postsecondary non-degree award	106	1060	352	83
49-90XX	Miscellaneous Installation, Maintenance, and Repair Workers, Including Wind Turbine Service Technicians	Some college, no degree	24	240	267	53
49-9098	Helpers--Installation, Maintenance, and Repair Workers	High school diploma or equivalent	51	510	0	0
49-9071	Maintenance and Repair Workers, General	High school diploma or equivalent	419	4190	745	333
49-9060	Precision Instrument and Equipment Repairers	Associate's degree	12	120	0	0
49-9052	Telecommunications Line Installers and Repairers	High school diploma or equivalent	36	360	0	0
49-9051	Electrical Power-Line Installers and Repairers	High school diploma or equivalent	47	470	0	0
49-904X	Industrial and Refractory Machinery Mechanic	High school diploma or equivalent	192	1920	393	295
49-9043	Maintenance Workers, Machinery	High school diploma or equivalent	21	210	0	0
49-9031	Home Appliance Repairers	High school diploma or equivalent	12	120	0	0
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	Postsecondary non-degree award	96	960	234	31
49-3090	Miscellaneous Vehicle and Mobile Equipment Mechanics, Installers, and Repairers	High school diploma or equivalent	60	600	23	19
49-3040	Heavy Vehicle and Mobile Equipment Service Technicians and Mechanics	High school diploma or equivalent	111	1110	121	39

OCCSOC	Occupation	Required Education	Annual Openings	Ten-Year Openings	Unemployed in Target Occupations	Unemployed in Target Occupations With Required background
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	High school diploma or equivalent	82	820	223	148
49-3023	Automotive Service Technicians and Mechanics	High school diploma or equivalent	219	2190	1,020	512
49-3021	Automotive Body and Related Repairers	High school diploma or equivalent	38	380	0	0
49-3011	Aircraft Mechanics and Service Technicians	Postsecondary non-degree award	31	310	22	0
49-209X	Electrical and electronics repairers, transportation equipment, and industrial and utility	Postsecondary non-degree award	6	60	0	0
49-2092	Electric Motor, Power Tool, and Related Repairers	Postsecondary non-degree award	6	60	0	0
49-2020	Radio and Telecommunications Equipment Installers and Repairers	Associate's degree	72	720	287	0
49-2011	Computer, Automated Teller, and Office Machine Repairers	Some college, no degree	15	150	137	108
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	High school diploma or equivalent	148	1480	191	146
47-XXXX	Miscellaneous Construction Workers Including Solar Photovoltaic Installers, and Septic Tank Servicers and Sewer Pipe Cleaners	High school diploma or equivalent	281	2810	140	76
47-5021	Earth Drillers, Except Oil and Gas	High school diploma or equivalent	19	190	0	0
47-4051	Highway Maintenance Workers	High school diploma or equivalent	12	120	85	57
47-4041	Hazardous Materials Removal Workers	High school diploma or equivalent	17	170	0	0
47-4031	Fence Erectors	High school diploma or equivalent	9	90	12	12
47-4011	Construction and Building Inspectors	High school diploma or equivalent	18	180	0	0
47-3010	Helpers, Construction Trades	Less than high school	24	240	96	96
47-2221	Structural Iron and Steel Workers	High school diploma or equivalent	13	130	126	126
47-2211	Sheet Metal Workers	High school diploma or equivalent	24	240	105	105
47-2181	Roofers	Less than high school	17	170	98	98
47-2150	Pipelayers, Plumbers, Pipefitters, and Steamfitters	Less than high school	96	960	503	402
47-2140	Painters and Paperhangers	Less than high school	57	570	838	617
47-2111	Electricians	High school diploma or equivalent	155	1550	414	250
47-2080	Drywall Installers, Ceiling Tile Installers, and Tapers	Less than high school	28	280	155	155
47-207X	Construction equipment operators except paving, surfacing, and tamping equipment operators	High school diploma or equivalent	210	2100	236	160
47-2071	Paving, Surfacing, and Tamping Equipment Operators	High school diploma or equivalent	7	70	0	0

OCCSOC	Occupation	Required Education	Annual Openings	Ten-Year Openings	Unemployed in Target Occupations	Unemployed in Target Occupations With Required background
47-2061	Construction Laborers	Less than high school	558	5580	4,835	3,671
47-2050	Cement Masons, Concrete Finishers, and Terrazzo Workers	Less than high school	51	510	182	155
47-2040	Carpet, Floor, and Tile Installers and Finishers	Less than high school	8	80	264	236
47-2031	Carpenters	High school diploma or equivalent	135	1350	1,707	898
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	High school diploma or equivalent	168	1680	477	209
45-4011	Forest and Conservation Workers	High school diploma or equivalent	6	60	0	0
45-20XX	Miscellaneous agricultural workers including animal breeders	High school diploma or equivalent	6,033	60330	23,134	4,939
45-2041	Graders and Sorters, Agricultural Products	Less than high school	158	1580	4,376	4,085
45-2011	Agricultural Inspectors	Bachelor's degree	9	90	37	0
45-1011	First-Line Supervisors of Farming, Fishing, and Forestry Workers	High school diploma or equivalent	128	1280	333	63
43-9XXX	Miscellaneous office and administrative support workers including desktop publishers	High school diploma or equivalent	119	1190	326	145
43-9061	Office Clerks, General	High school diploma or equivalent	816	8160	2,075	1,341
43-9051	Mail Clerks and Mail Machine Operators, Except Postal Service	High school diploma or equivalent	14	140	27	27
43-9041	Insurance Claims and Policy Processing Clerks	High school diploma or equivalent	96	960	185	158
43-9022	Word Processors and Typists	High school diploma or equivalent	5	50	0	0
43-9021	Data Entry Keyers	High school diploma or equivalent	9	90	387	184
43-6010	Secretaries and Administrative Assistants	High school diploma or equivalent	732	7320	2,490	1,747
43-5111	Weighers, Measurers, Checkers, and Samplers, Recordkeeping	High school diploma or equivalent	46	460	273	209
43-5081	Stock Clerks and Order Fillers	Less than high school	903	9030	4,177	2,491
43-5071	Shipping, Receiving, and Traffic Clerks	High school diploma or equivalent	241	2410	600	397
43-5061	Production, Planning, and Expediting Clerks	High school diploma or equivalent	57	570	197	21
43-5052	Postal Service Mail Carriers	High school diploma or equivalent	56	560	28	28
43-5030	Dispatchers	High school diploma or equivalent	113	1130	204	67
43-5011	Cargo and Freight Agents	High school diploma or equivalent	8	80	0	0
43-4XXX	Correspondent clerks and order clerks	High school diploma or equivalent	33	330	119	113
43-4199	Information and Record Clerks, All Other	High school diploma or equivalent	30	300	82	20

OCCSOC	Occupation	Required Education	Annual Openings	Ten-Year Openings	Unemployed in Target Occupations	Unemployed in Target Occupations With Required background
43-4171	Receptionists and Information Clerks	High school diploma or equivalent	325	3250	1,628	1,206
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	High school diploma or equivalent	22	220	37	37
43-4121	Library Assistants, Clerical	High school diploma or equivalent	30	300	37	0
43-4111	Interviewers, Except Eligibility and Loan	High school diploma or equivalent	36	360	469	283
43-4081	Hotel, Motel, and Resort Desk Clerks	High school diploma or equivalent	99	990	169	26
43-4071	File Clerks	High school diploma or equivalent	41	410	357	261
43-4061	Eligibility Interviewers, Government Programs	High school diploma or equivalent	59	590	39	20
43-4051	Customer Service Representatives	High school diploma or equivalent	727	7270	3,660	2,180
43-4031	Court, Municipal, and License Clerks	High school diploma or equivalent	24	240	0	0
43-3071	Tellers	High school diploma or equivalent	150	1500	249	124
43-3061	Procurement Clerks	High school diploma or equivalent	14	140	0	0
43-3051	Payroll and Timekeeping Clerks	High school diploma or equivalent	70	700	23	0
43-3031	Bookkeeping, Accounting, and Auditing Clerks	High school diploma or equivalent	356	3560	920	671
43-3021	Billing and Posting Clerks	High school diploma or equivalent	135	1350	459	336
43-3011	Bill and Account Collectors	High school diploma or equivalent	84	840	182	182
43-2011	Switchboard Operators, Including Answering Service	High school diploma or equivalent	6	60	29	29
43-1011	First-Line Supervisors of Office and Administrative Support Workers	High school diploma or equivalent	508	5080	1,040	585
41-9099	Sales and Related Workers, All Other	High school diploma or equivalent	21	210	32	18
41-9041	Telemarketers	Less than high school	46	460	348	116
41-9020	Real Estate Brokers and Sales Agents	High school diploma or equivalent	6	60	121	0
41-9010	Models, Demonstrators, and Product Promoters	High school diploma or equivalent	54	540	217	55
41-4010	Sales Representatives, Wholesale and Manufacturing	Bachelor's degree	515	5150	931	154
41-3099	Sales Representatives, Services, All Other	High school diploma or equivalent	299	2990	446	146
41-3031	Securities, Commodities, and Financial Services Sales Agents	Bachelor's degree	29	290	59	40
41-3021	Insurance Sales Agents	High school diploma or equivalent	95	950	189	102
41-3011	Advertising Sales Agents	High school diploma or equivalent	19	190	260	95
41-2031	Retail Salespersons	Less than high school	2,207	22070	4,485	1,557
41-2022	Parts Salespersons	Less than high school	86	860	148	148

OCCSOC	Occupation	Required Education	Annual Openings	Ten-Year Openings	Unemployed in Target Occupations	Unemployed in Target Occupations With Required background
41-2021	Counter and Rental Clerks	Less than high school	203	2030	73	29
41-2010	Cashiers	Less than high school	2,206	22060	8,089	3,684
41-1012	First-Line Supervisors of Non-Retail Sales	High school diploma or equivalent	38	380	62	3
41-1011	First-Line Supervisors of Retail Sales Workers	High school diploma or equivalent	516	5160	2,267	1,668
39-9041	Residential Advisors	High school diploma or equivalent	13	130	0	0
39-9030	Recreation and Fitness Workers	High school diploma or equivalent	87	870	156	123
39-9021	Personal Care Aides	Less than high school	1,089	10890	3,625	2,251
39-9011	Childcare Workers	High school diploma or equivalent	281	2810	1,826	917
39-7010	Tour and Travel Guides	High school diploma or equivalent	5	50	0	0
39-5090	Miscellaneous Personal Appearance Workers	Postsecondary non-degree award	7	70	27	0
39-5012	Hairdressers, Hairstylists, and Cosmetologists	Postsecondary non-degree award	45	450	289	62
39-3090	Miscellaneous Entertainment Attendants and Related Workers	Less than high school	101	1010	166	22
39-3031	Ushers, Lobby Attendants, and Ticket Takers	Less than high school	23	230	0	0
39-3010	Gaming Services Workers	High school diploma or equivalent	34	340	0	0
39-2021	Nonfarm Animal Caretakers	Less than high school	21	210	224	224
39-1021	First-Line Supervisors of Personal Service Workers	High school diploma or equivalent	31	310	75	0
37-3010	Grounds Maintenance Workers	Less than high school	235	2350	2,297	1,993
37-2021	Pest Control Workers	High school diploma or equivalent	32	320	145	145
37-2012	Maids and Housekeeping Cleaners	Less than high school	242	2420	1,446	1,166
37-1012	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	Less than high school	760	7600	53	37
37-1011	First-Line Supervisors of Housekeeping and Janitorial Workers	High school diploma or equivalent	40	400	73	0
35-90XX	Miscellaneous food preparation and serving related workers incl. dining room\cafeteria attendants, bartender helpers	Less than high school	239	2390	485	305
35-9031	Host and Hostesses, Restaurant, Lounge, and Coffee Shop	Less than high school	200	2000	429	328
35-9021	Dishwashers	Less than high school	253	2530	652	297
35-3041	Food Servers, Nonrestaurant	Less than high school	73	730	154	64
35-3031	Waiters and Waitresses	Less than high school	966	9660	2,124	1,115

OCCSOC	Occupation	Required Education	Annual Openings	Ten-Year Openings	Unemployed in Target Occupations	Unemployed in Target Occupations With Required background
35-3022	Counter Attendant, Cafeteria, Food Concession, and Coffee Shop	Less than high school	253	2530	684	339
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	Less than high school	2,339	23390	505	142
35-3011	Bartenders	Less than high school	165	1650	409	179
35-2021	Food Preparation Workers	Less than high school	365	3650	1,740	826
35-2010	Cooks	Less than high school	985	9850	3,043	2,285
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	High school diploma or equivalent	431	4310	714	461
35-1011	Chefs and Head Cooks	High school diploma or equivalent	14	140	155	74
33-909X	Lifeguards and Other Protective Service Workers	High school diploma or equivalent	132	1320	380	50
33-9091	Crossing Guards	High school diploma or equivalent	51	510	1	0
33-9030	Security Guards and Gaming Surveillance Officers	High school diploma or equivalent	301	3010	1,515	950
33-3050	Police Officers	High school diploma or equivalent	236	2360	266	177
33-3021	Detectives and Criminal Investigators	High school diploma or equivalent	22	220	0	0
33-3010	Bailiffs, Correctional Officers, and Jailers	High school diploma or equivalent	444	4440	519	159
33-2011	Firefighters	Postsecondary non-degree award	91	910	144	56
33-1012	First-Line Supervisors of Police and Detectives	High school diploma or equivalent	5	50	0	0
33-1011	First-Line Supervisors of Correctional Officers	High school diploma or equivalent	53	530	67	0
31-909X	Medical Assistants and Other Healthcare Support Occupations, except dental assistants	High school diploma or equivalent	25	250	18	18
31-9097	Phlebotomists	Postsecondary non-degree award	36	360	0	0
31-9096	Veterinary Assistants and Laboratory Animal Caretakers	High school diploma or equivalent	13	130	22	0
31-9095	Pharmacy Aides	High school diploma or equivalent	10	100	44	1
31-9092	Medical Assistants	Postsecondary non-degree award	347	3470	1,073	288
31-9091	Dental Assistants	Postsecondary non-degree award	96	960	101	75
31-2020	Physical Therapist Assistants and Aides	Associate's degree	12	120	30	0
31-1010	Nursing, Psychiatric, and Home Health Aides	Less than high school	1,228	12280	3,368	1,731
29-9000	Other Healthcare Practitioners and Technical Occupations	Bachelor's degree	25	250	23	23
29-2090	Miscellaneous Health Technologists and Technicians	Master's degree	33	330	79	79
29-2081	Opticians, Dispensing	High school diploma or equivalent	32	320	46	46

OCCSOC	Occupation	Required Education	Annual Openings	Ten-Year Openings	Unemployed in Target Occupations	Unemployed in Target Occupations With Required background
29-2071	Medical Records and Health Information Technicians	Postsecondary non-degree award	58	580	0	0
29-2061	Licensed Practical and Licensed Vocational Nurses	Postsecondary non-degree award	307	3070	453	197
29-2050	Health Diagnosing and Treating Practitioner Support Technicians	Associate's degree	144	1440	145	0
29-2041	Emergency Medical Technicians and Paramedics	Postsecondary non-degree award	86	860	45	38
29-2030	Diagnostic Related Technologists and Technicians	Associate's degree	60	600	93	93
29-2021	Dental Hygienists	Associate's degree	40	400	0	0
29-2010	Clinical Laboratory Technologists and Technicians	Associate's degree	51	510	40	0
29-11XX	Nurse Practitioners, and Nurse Midwives	Master's degree	71	710	0	0
29-1141	Nurse Practitioners, and Nurse Midwives	Associate's degree	989	9890	404	46
29-1131	Veterinarians	Doctoral or professional degree	16	160	0	0
29-1127	SpeechLanguage Pathologists	Master's degree	26	260	0	0
29-1126	Respiratory Therapists	Associate's degree	18	180	0	0
29-1123	Physical Therapists	Doctoral or professional degree	42	420	0	0
29-1122	Occupational Therapists	Master's degree	16	160	0	0
29-1071	Physician Assistants	Master's degree	30	300	0	0
29-1060	Physicians and Surgeons	Doctoral or professional degree	107	1070	0	0
29-1051	Pharmacists	Doctoral or professional degree	95	950	0	0
29-1041	Optometrists	Doctoral or professional degree	8	80	0	0
29-1031	Dieticians and Nutritionists	Bachelor's degree	8	80	0	0
29-1020	Dentists	Doctoral or professional degree	35	350	0	0
27-40XX	Broadcast and Sound Engineering Techs and Radio Operators, and media and commequipment workers, all other	Postsecondary non-degree award	18	180	0	0
27-3090	Miscellaneous Media and Communication Workers	Bachelor's degree	18	180	133	0
27-3031	Public Relations Specialists	Bachelor's degree	16	160	157	59
27-2040	Musicians, Singers, and Related Workers	Bachelor's degree	16	160	19	0
27-2020	Athletes, Coaches, Umpires, and Related Workers	High school diploma or equivalent	68	680	144	40
27-2012	Producers and Directors	Bachelor's degree	10	100	0	0
27-1020	Designers	Bachelor's degree	50	500	182	3
25-90XX	Other Education, Training, and Library Workers	Bachelor's degree	50	500	0	0

OCCSOC	Occupation	Required Education	Annual Openings	Ten-Year Openings	Unemployed in Target Occupations	Unemployed in Target Occupations With Required background
25-9041	Teacher Assistants	Some college, no degree	572	5720	1,298	301
25-4031	Library Technicians	Postsecondary non-degree award	57	570	0	0
25-4021	Librarians	Master's degree	13	130	44	0
25-3000	Other Teachers and Instructors	Bachelor's degree	502	5020	965	448
25-2050	Elementary and Middle School Teachers	Bachelor's degree	69	690	29	29
25-2030	Secondary School Teachers	Bachelor's degree	391	3910	208	147
25-2020	Elementary and Middle School Teachers	Bachelor's degree	918	9180	1,313	1,005
25-2010	Preschool and Kindergarten Teachers	Associate's degree	225	2250	349	79
25-1000	Postsecondary Teachers	Doctoral or professional degree	291	2910	535	341
23-2011	Paralegals and Legal Assistants	Associate's degree	53	530	279	106
23-10XX	Lawyers, and judges, magistrates, and other judicial workers	Doctoral or professional degree	75	750	36	36
21-2099	Religious Workers, All Other	Bachelor's degree	6	60	0	0
21-2021	Directors, Religious Activities and Education	Bachelor's degree	18	180	0	0
21-2011	Clergy	Bachelor's degree	23	230	0	0
21-109X	Miscellaneous Community and Social Service Specialists	Bachelor's degree	65	650	54	54
21-1093	Social and Human Service Assistants	High school diploma or equivalent	219	2190	57	49
21-1092	Probation Officers and Correctional Treatment Specialists	Bachelor's degree	44	440	0	0
21-1020	Social Workers	Bachelor's degree	245	2450	218	53
21-1010	Counselors	High school diploma or equivalent	204	2040	406	63
19-40YY	Miscellaneous Life, Physical, and Social Science Technicians, Including Social Science Research Assistants	Associate's degree	58	580	127	19
19-40XX	Misc. life, physical, social science technicians, incl social science RAs & nuclear techs	Associate's degree	18	180	0	0
19-4031	Chemical Technicians	Associate's degree	19	190	19	0
19-4021	Biological Technicians	Bachelor's degree	6	60	40	0
19-4011	Agricultural and Food Science Technicians	Associate's degree	19	190	142	0
19-3051	Urban and Regional Planners	Master's degree	17	170	0	0
19-3030	Market and Survey Researchers	Doctoral or professional degree	56	560	0	0

OCCSOC	Occupation	Required Education	Annual Openings	Ten-Year Openings	Unemployed in Target Occupations	Unemployed in Target Occupations With Required background
19-2040	Environmental Scientists and Geoscientists	Bachelor's degree	37	370	24	24
19-2030	Chemists and Materials Scientists	Bachelor's degree	16	160	0	0
19-10XX	General and Operations Managers	Master's degree	14	140	0	0
17-3020	Engineering Technicians, Except Drafters	Associate's degree	36	360	0	0
17-3010	Drafters	Associate's degree	6	60	0	0
17-21YY	Miscellaneous engineers including nuclear engineers	Bachelor's degree	35	350	0	0
17-2141	Mechanical Engineers	Bachelor's degree	39	390	55	55
17-2110	Industrial Engineers, including Health and Safety	Bachelor's degree	45	450	21	0
17-20XX	Biomedical and agricultural engineers	Bachelor's degree	30	300	0	0
17-2081	Environmental Engineers	Bachelor's degree	7	70	0	0
17-2070	Electrical and Electronics Engineers	Bachelor's degree	22	220	0	0
17-2051	Civil Engineers	Bachelor's degree	76	760	37	30
17-2011	Aerospace Engineers	Bachelor's degree	25	250	33	33
17-1010	Architects, Except Naval	Bachelor's degree	21	210	15	11
15-20XX	Misc. mathematical science occupations, including mathematicians and statisticians	Master's degree	6	60	0	0
15-2031	Operations Research Analysts	Bachelor's degree	6	60	0	0
15-1199	Computer Occupations, All Other	Bachelor's degree	16	160	20	0
15-1150	Computer Support Specialists	Some college, no degree	90	900	471	378
15-1143	Computer Network Architects	Bachelor's degree	6	60	0	0
15-1142	Network and Computer Systems Administrators	Bachelor's degree	43	430	0	0
15-1141	Database Administrators	Bachelor's degree	5	50	0	0
15-113X	Software Developers, Applications and Systems Software	Bachelor's degree	66	660	119	119
15-1131	Computer Programmers	Bachelor's degree	25	250	55	0
15-1121	Computer Programmers	Bachelor's degree	61	610	85	46
13-2099	Financial Specialists, All Other	Bachelor's degree	5	50	44	44
13-2082	Tax Preparers	High school diploma or equivalent	7	70	47	0
13-2081	Tax Examiners and Collectors, and Revenue Agents	Bachelor's degree	60	600	432	0
13-2070	Credit Counselors and Loan Officers	Bachelor's degree	18	180	87	0

OCCSOC	Occupation	Required Education	Annual Openings	Ten-Year Openings	Unemployed in Target Occupations	Unemployed in Target Occupations With Required background
13-2053	Insurance Underwriters	Bachelor's degree	6	60	0	0
13-2051	Financial Analysts	Bachelor's degree	19	190	0	0
13-2031	Budget Analysts	Bachelor's degree	14	140	0	0
13-2011	Accountants and Auditors	Bachelor's degree	340	3400	325	282
13-1199	Business Operations Specialists, All Other	High school diploma or equivalent	144	1440	161	68
13-1161	Market Research Analysts and Marketing Specialists	Bachelor's degree	71	710	59	42
13-1151	Training and Development Specialists	Bachelor's degree	34	340	95	0
13-1141	Compensation, Benefits, and Job Analysis Specialists	Bachelor's degree	7	70	0	0
13-1131	Fundraisers	Bachelor's degree	7	70	22	0
13-1121	Meeting and Convention Planners	Bachelor's degree	7	70	47	19
13-1111	Management Analysts	Bachelor's degree	84	840	192	64
13-1081	Logisticians	Bachelor's degree	15	150	29	0
13-1070	Human Resources, Training, and Labor Relations Specialists	Bachelor's degree	78	780	244	75
13-1051	Cost Estimators	Bachelor's degree	102	1020	0	0
13-1041	Compliance Officers, Except Ag., Construction, Health and Safety, and Transport.	Bachelor's degree	25	250	34	34
13-1030	Claims Adjusters, Appraisers, Examiners, and Investigators	High school diploma or equivalent	47	470	0	0
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	High school diploma or equivalent	33	330	109	109
13-1022	Wholesale and Retail Buyers, Except Farm Products	High school diploma or equivalent	28	280	107	32
11-9XXX	Miscellaneous managers including postmansters and mail superintendents	Associate's degree	43	430	740	22
11-9151	Social and Community Service Managers	Bachelor's degree	51	510	36	13
11-9141	Property, Real Estate, and Community Association Managers	High school diploma or equivalent	27	270	262	212
11-9111	Medical and Health Services Managers	Bachelor's degree	109	1090	0	0
11-9081	Lodging Managers	High school diploma or equivalent	6	60	0	0
11-9051	Food Service Managers	High school diploma or equivalent	55	550	313	199
11-9041	Architectural and Engineering Managers	Bachelor's degree	25	250	0	0
11-9030	Education Administrators	Bachelor's degree	114	1140	304	139
11-9021	Constructions Managers	Bachelor's degree	59	590	148	23

OCCSOC	Occupation	Required Education	Annual Openings	Ten-Year Openings	Unemployed in Target Occupations	Unemployed in Target Occupations With Required background
11-9013	Farmers, Ranchers, and Other Agricultural Managers	High school diploma or equivalent	118	1180	323	29
11-3121	Human Resources Managers	Bachelor's degree	19	190	20	20
11-3071	Transportation, Storage, and Distribution Managers	High school diploma or equivalent	34	340	47	47
11-3051	Industrial Production Managers	Bachelor's degree	29	290	31	0
11-3031	Financial Managers	Bachelor's degree	83	830	361	102
11-3021	Computer and Information Systems Managers	Bachelor's degree	25	250	104	47
11-3011	Administrative Services Managers	Bachelor's degree	54	540	13	0
11-2031	Public Relations Managers	Bachelor's degree	6	60	0	0
11-2020	Marketing and Sales Managers	Bachelor's degree	102	1020	188	40
11-10XX	Chief executives and legislators	Bachelor's degree	47	470	294	60
11-1021	General and Operations Managers	Bachelor's degree	648	6480	342	29

Appendix Table 28 — Part-Time Labor Force-to-Job Openings Skills Match CCWC Region

OCCSOC	Occupation	Required Education	Annual Openings	Ten-Year Openings	Part-Time in Target Occupations	Part-Time in Target Occupations With Required background
Total			51,619	516,190	464,933	232,968
53-70XX	Conveyor operators and tenders, and hoist and winch operators	Less than high school	7	70	0	0
53-7081	Refuse and Recyclable Material Collectors	Less than high school	41	410	485	246
53-7070	Pumping Station Operators	Less than high school	6	60	39	39
53-7064	Packers and Packagers, Hand	Less than high school	596	5,960	6,753	5,398
53-7063	Machine Feeders and Offbearers	Less than high school	19	190	21	21
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	Less than high school	1,471	14,710	11,757	8,365
53-7061	Cleaners of Vehicles and Equipment	Less than high school	298	2,980	2,906	1,643
53-7051	Industrial Truck and Tractor Operators	Less than high school	287	2,870	3,234	2,397

OCCSOC	Occupation	Required Education	Annual Openings	Ten-Year Openings	Part-Time in Target Occupations	Part-Time in Target Occupations With Required background
53-7030	Dredge, Excavating, and Loading Machine Operators	Less than high school	5	50	0	0
53-7021	Crane and Tower Operators	High school diploma or equivalent	33	330	20	20
53-6031	Service Station Attendants	Less than high school	44	440	437	149
53-6021	Parking Lot Attendants	Less than high school	14	140	104	60
53-3099	Motor Vehicle Operators, All Other	High school diploma or equivalent	19	190	22	22
53-3041	Taxi Drivers and Chauffeurs	Less than high school	39	390	880	410
53-3030	Driver/Sales Workers and Truck Drivers	High school diploma or equivalent	1,711	17,110	14,230	7,762
53-3020	Bus Drivers	High school diploma or equivalent	160	1,600	1,364	1,034
53-2020	Air Traffic Controllers and Airfield Operations Specialists	Associate's degree	12	120	0	0
53-2010	Aircraft Pilots and Flight Engineers	Bachelor's degree	7	70	97	41
53-1000	Supervisors of Transportation and Material Moving Workers	High school diploma or equivalent	166	1,660	233	233
51-91XX	Other production workers including semiconductor processors and cooling and freezing equipment operators	Associate's degree	76	760	1,869	115
51-9198	Helpers--Production Workers	Less than high school	130	1,300	256	217
51-9196	Paper Goods Machine Setters, Operators, and Tenders	High school diploma or equivalent	14	140	112	112
51-9111	Packaging and Filling Machine Operators and Tenders	High school diploma or equivalent	321	3,210	2,089	746
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	High school diploma or equivalent	129	1,290	1,816	1,049
51-9020	Crushing, Grinding, Polishing, Mixing, and Blending Workers	High school diploma or equivalent	32	320	54	0
51-9010	Chemical Processing Machine Setters, Operators, and Tenders	High school diploma or equivalent	44	440	25	0
51-8090	Miscellaneous Plant and System Operators	High school diploma or equivalent	18	180	0	0
51-8031	Water and Wastewater Treatment Plant and System Operators	High school diploma or equivalent	53	530	0	0
51-8010	Power Plant Operators, Distributors, and Dispatchers	High school diploma or equivalent	13	130	45	45

OCCSOC	Occupation	Required Education	Annual Openings	Ten-Year Openings	Part-Time in Target Occupations	Part-Time in Target Occupations With Required background
51-6011	Laundry and Dry-Cleaning Workers	Less than high school	56	560	630	323
51-4XXX	Misc. metal workers\plastic workers incl. milling and planing mach. setters, and multiple mach. tool setters, and lay-out workers	High school diploma or equivalent	6	60	0	0
51-4120	Welding, Soldering, and Brazing Workers	High school diploma or equivalent	132	1,320	1,224	945
51-4041	Machinists	High school diploma or equivalent	68	680	245	154
51-4010	Computer Control Programmers and Operators	High school diploma or equivalent	6	60	0	0
51-3099	Food Processing Workers, All Other	Less than high school	9	90	133	67
51-3093	Food Cooking Machine Operators and Tenders	High school diploma or equivalent	14	140	0	0
51-3092	Food Batchmakers	High school diploma or equivalent	81	810	290	153
51-3091	Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders	Less than high school	6	60	21	21
51-3020	Butchers and Other Meat, Poultry, and Fish Processing Workers	Less than high school	219	2,190	818	571
51-3011	Bakers	Less than high school	45	450	1,064	726
51-2090	Miscellaneous Assemblers and Fabricators	High school diploma or equivalent	156	1,560	958	411
51-2041	Structural Metal Fabricators and Fitters	High school diploma or equivalent	12	120	65	36
51-1011	First-Line Supervisors of Production and Operating Workers	Postsecondary non-degree award	106	1,060	986	292
49-90XX	Miscellaneous Installation, Maintenance, and Repair Workers, Including Wind Turbine Service Technicians	Some college, no degree	24	240	807	172
49-9098	Helpers--Installation, Maintenance, and Repair Workers	High school diploma or equivalent	51	510	22	0
49-9071	Maintenance and Repair Workers, General	High school diploma or equivalent	419	4,190	1,152	586
49-9060	Precision Instrument and Equipment Repairers	Associate's degree	12	120	0	0
49-9052	Telecommunications Line Installers and Repairers	High school diploma or equivalent	36	360	0	0
49-9051	Electrical Power-Line Installers and Repairers	High school diploma or equivalent	47	470	0	0

OCCSOC	Occupation	Required Education	Annual Openings	Ten-Year Openings	Part-Time in Target Occupations	Part-Time in Target Occupations With Required background
49-904X	Industrial and Refractory Machinery Mechanic	High school diploma or equivalent	192	1,920	845	594
49-9043	Maintenance Workers, Machinery	High school diploma or equivalent	21	210	97	97
49-9031	Home Appliance Repairers	High school diploma or equivalent	12	120	0	0
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	Postsecondary non-degree award	96	960	425	43
49-3090	Miscellaneous Vehicle and Mobile Equipment Mechanics, Installers, and Repairers	High school diploma or equivalent	60	600	464	247
49-3040	Heavy Vehicle and Mobile Equipment Service Technicians and Mechanics	High school diploma or equivalent	111	1,110	674	525
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	High school diploma or equivalent	82	820	321	166
49-3023	Automotive Service Technicians and Mechanics	High school diploma or equivalent	219	2,190	2,070	1,597
49-3021	Automotive Body and Related Repairers	High school diploma or equivalent	38	380	174	109
49-3011	Aircraft Mechanics and Service Technicians	Postsecondary non-degree award	31	310	7	0
49-209X	Electrical and electronics repairers, transportation equipment, and industrial and utility	Postsecondary non-degree award	6	60	0	0
49-2092	Electric Motor, Power Tool, and Related Repairers	Postsecondary non-degree award	6	60	0	0
49-2020	Radio and Telecommunications Equipment Installers and Repairers	Associate's degree	72	720	124	0
49-2011	Computer, Automated Teller, and Office Machine Repairers	Some college, no degree	15	150	254	46
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	High school diploma or equivalent	148	1,480	8	0
47-XXXX	Miscellaneous Construction Workers Including Solar Photovoltaic Installers, and Septic Tank Servicers and Sewer Pipe Cleaners	High school diploma or equivalent	281	2,810	126	126
47-5021	Earth Drillers, Except Oil and Gas	High school diploma or equivalent	19	190	0	0
47-4051	Highway Maintenance Workers	High school diploma or equivalent	12	120	35	35
47-4041	Hazardous Materials Removal Workers	High school diploma or equivalent	17	170	41	0

OCCSOC	Occupation	Required Education	Annual Openings	Ten-Year Openings	Part-Time in Target Occupations	Part-Time in Target Occupations With Required background
47-4031	Fence Erectors	High school diploma or equivalent	9	90	22	22
47-4011	Construction and Building Inspectors	High school diploma or equivalent	18	180	161	161
47-3010	Helpers, Construction Trades	Less than high school	24	240	57	52
47-2221	Structural Iron and Steel Workers	High school diploma or equivalent	13	130	277	90
47-2211	Sheet Metal Workers	High school diploma or equivalent	24	240	0	0
47-2181	Roofers	Less than high school	17	170	405	389
47-2150	Pipelayers, Plumbers, Pipefitters, and Steamfitters	Less than high school	96	960	1,282	917
47-2140	Painters and Paperhangers	Less than high school	57	570	1,418	1,004
47-2111	Electricians	High school diploma or equivalent	155	1,550	1,027	643
47-2080	Drywall Installers, Ceiling Tile Installers, and Tapers	Less than high school	28	280	129	50
47-207X	Construction equipment operators except paving, surfacing, and tamping equipment operators	High school diploma or equivalent	210	2,100	818	599
47-2071	Paving, Surfacing, and Tamping Equipment Operators	High school diploma or equivalent	7	70	0	0
47-2061	Construction Laborers	Less than high school	558	5,580	9,053	6,435
47-2050	Cement Masons, Concrete Finishers, and Terrazzo Workers	Less than high school	51	510	20	0
47-2040	Carpet, Floor, and Tile Installers and Finishers	Less than high school	8	80	144	144
47-2031	Carpenters	High school diploma or equivalent	135	1,350	2,056	1,096
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	High school diploma or equivalent	168	1,680	1,070	718
45-4011	Forest and Conservation Workers	High school diploma or equivalent	6	60	0	0
45-20XX	Miscellaneous agricultural workers including animal breeders	High school diploma or equivalent	6,033	60,330	62,768	13,808
45-2041	Graders and Sorters, Agricultural Products	Less than high school	158	1,580	4,401	3,946
45-2011	Agricultural Inspectors	Bachelor's degree	9	90	0	0
45-1011	First-Line Supervisors of Farming, Fishing, and Forestry Workers	High school diploma or equivalent	128	1,280	870	349

OCCSOC	Occupation	Required Education	Annual Openings	Ten-Year Openings	Part-Time in Target Occupations	Part-Time in Target Occupations With Required background
43-9XXX	Miscellaneous office and administrative support workers including desktop publishers	High school diploma or equivalent	119	1,190	944	523
43-9061	Office Clerks, General	High school diploma or equivalent	816	8,160	6,864	2,956
43-9051	Mail Clerks and Mail Machine Operators, Except Postal Service	High school diploma or equivalent	14	140	75	18
43-9041	Insurance Claims and Policy Processing Clerks	High school diploma or equivalent	96	960	279	159
43-9022	Word Processors and Typists	High school diploma or equivalent	5	50	0	0
43-9021	Data Entry Keyers	High school diploma or equivalent	9	90	387	220
43-6010	Secretaries and Administrative Assistants	High school diploma or equivalent	732	7,320	8,336	4,653
43-5111	Weighers, Measurers, Checkers, and Samplers, Recordkeeping	High school diploma or equivalent	46	460	20	0
43-5081	Stock Clerks and Order Fillers	Less than high school	903	9,030	8,679	5,410
43-5071	Shipping, Receiving, and Traffic Clerks	High school diploma or equivalent	241	2,410	1,854	1,343
43-5061	Production, Planning, and Expediting Clerks	High school diploma or equivalent	57	570	319	113
43-5052	Postal Service Mail Carriers	High school diploma or equivalent	56	560	229	209
43-5030	Dispatchers	High school diploma or equivalent	113	1,130	297	138
43-5011	Cargo and Freight Agents	High school diploma or equivalent	8	80	12	0
43-4XXX	Correspondent clerks and order clerks	High school diploma or equivalent	33	330	278	134
43-4199	Information and Record Clerks, All Other	High school diploma or equivalent	30	300	36	36
43-4171	Receptionists and Information Clerks	High school diploma or equivalent	325	3,250	4,649	2,780
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	High school diploma or equivalent	22	220	145	145
43-4121	Library Assistants, Clerical	High school diploma or equivalent	30	300	321	89
43-4111	Interviewers, Except Eligibility and Loan	High school diploma or equivalent	36	360	595	359

OCCSOC	Occupation	Required Education	Annual Openings	Ten-Year Openings	Part-Time in Target Occupations	Part-Time in Target Occupations With Required background
43-4081	Hotel, Motel, and Resort Desk Clerks	High school diploma or equivalent	99	990	665	314
43-4071	File Clerks	High school diploma or equivalent	41	410	1,019	369
43-4061	Eligibility Interviewers, Government Programs	High school diploma or equivalent	59	590	11	11
43-4051	Customer Service Representatives	High school diploma or equivalent	727	7,270	10,395	5,544
43-4031	Court, Municipal, and License Clerks	High school diploma or equivalent	24	240	52	22
43-3071	Tellers	High school diploma or equivalent	150	1,500	1,643	1,152
43-3061	Procurement Clerks	High school diploma or equivalent	14	140	0	0
43-3051	Payroll and Timekeeping Clerks	High school diploma or equivalent	70	700	401	318
43-3031	Bookkeeping, Accounting, and Auditing Clerks	High school diploma or equivalent	356	3,560	4,654	3,371
43-3021	Billing and Posting Clerks	High school diploma or equivalent	135	1,350	439	191
43-3011	Bill and Account Collectors	High school diploma or equivalent	84	840	188	171
43-2011	Switchboard Operators, Including Answering Service	High school diploma or equivalent	6	60	20	20
43-1011	First-Line Supervisors of Office and Administrative Support Workers	High school diploma or equivalent	508	5,080	1,787	977
41-9099	Sales and Related Workers, All Other	High school diploma or equivalent	21	210	231	78
41-9041	Telemarketers	Less than high school	46	460	209	115
41-9020	Real Estate Brokers and Sales Agents	High school diploma or equivalent	6	60	845	479
41-9010	Models, Demonstrators, and Product Promoters	High school diploma or equivalent	54	540	521	449
41-4010	Sales Representatives, Wholesale and Manufacturing	Bachelor's degree	515	5,150	2,582	653
41-3099	Sales Representatives, Services, All Other	High school diploma or equivalent	299	2,990	886	489
41-3031	Securities, Commodities, and Financial Services Sales Agents	Bachelor's degree	29	290	0	0

OCCSOC	Occupation	Required Education	Annual Openings	Ten-Year Openings	Part-Time in Target Occupations	Part-Time in Target Occupations With Required background
41-3021	Insurance Sales Agents	High school diploma or equivalent	95	950	645	278
41-3011	Advertising Sales Agents	High school diploma or equivalent	19	190	158	110
41-2031	Retail Salespersons	Less than high school	2,207	22,070	16,559	5,358
41-2022	Parts Salespersons	Less than high school	86	860	699	78
41-2021	Counter and Rental Clerks	Less than high school	203	2,030	288	134
41-2010	Cashiers	Less than high school	2,206	22,060	26,922	13,639
41-1012	First-Line Supervisors of Non-Retail Sales	High school diploma or equivalent	38	380	1,084	682
41-1011	First-Line Supervisors of Retail Sales Workers	High school diploma or equivalent	516	5,160	5,411	2,840
39-9041	Residential Advisors	High school diploma or equivalent	13	130	51	0
39-9030	Recreation and Fitness Workers	High school diploma or equivalent	87	870	1,168	400
39-9021	Personal Care Aides	Less than high school	1,089	10,890	14,427	9,048
39-9011	Childcare Workers	High school diploma or equivalent	281	2,810	8,846	3,811
39-7010	Tour and Travel Guides	High school diploma or equivalent	5	50	70	20
39-5090	Miscellaneous Personal Appearance Workers	Postsecondary non-degree award	7	70	227	0
39-5012	Hairdressers, Hairstylists, and Cosmetologists	Postsecondary non-degree award	45	450	2,898	595
39-3090	Miscellaneous Entertainment Attendants and Related Workers	Less than high school	101	1,010	588	161
39-3031	Ushers, Lobby Attendants, and Ticket Takers	Less than high school	23	230	192	71
39-3010	Gaming Services Workers	High school diploma or equivalent	34	340	162	162
39-2021	Nonfarm Animal Caretakers	Less than high school	21	210	649	287
39-1021	First-Line Supervisors of Personal Service Workers	High school diploma or equivalent	31	310	422	326
37-3010	Grounds Maintenance Workers	Less than high school	235	2,350	6,377	5,149
37-2021	Pest Control Workers	High school diploma or equivalent	32	320	55	55

OCCSOC	Occupation	Required Education	Annual Openings	Ten-Year Openings	Part-Time in Target Occupations	Part-Time in Target Occupations With Required background
37-2012	Maids and Housekeeping Cleaners	Less than high school	242	2,420	6,575	4,820
37-1012	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	Less than high school	760	7,600	376	235
37-1011	First-Line Supervisors of Housekeeping and Janitorial Workers	High school diploma or equivalent	40	400	262	128
35-90XX	Miscellaneous food preparation and serving related workers incl. dining room\cafeteria attendants, bartender helpers	Less than high school	239	2,390	2,183	1,228
35-9031	Host and Hostesses, Restaurant, Lounge, and Coffee Shop	Less than high school	200	2,000	1,589	759
35-9021	Dishwashers	Less than high school	253	2,530	2,182	1,365
35-3041	Food Servers, Nonrestaurant	Less than high school	73	730	863	527
35-3031	Waiters and Waitresses	Less than high school	966	9,660	11,773	4,581
35-3022	Counter Attendant, Cafeteria, Food Concession, and Coffee Shop	Less than high school	253	2,530	1,825	907
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	Less than high school	2,339	23,390	3,209	2,079
35-3011	Bartenders	Less than high school	165	1,650	987	409
35-2021	Food Preparation Workers	Less than high school	365	3,650	7,706	4,320
35-2010	Cooks	Less than high school	985	9,850	16,858	10,427
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	High school diploma or equivalent	431	4,310	2,063	1,142
35-1011	Chefs and Head Cooks	High school diploma or equivalent	14	140	619	248
33-909X	Lifeguards and Other Protective Service Workers	High school diploma or equivalent	132	1,320	468	19
33-9091	Crossing Guards	High school diploma or equivalent	51	510	281	81
33-9030	Security Guards and Gaming Surveillance Officers	High school diploma or equivalent	301	3,010	4,592	2,697
33-3050	Police Officers	High school diploma or equivalent	236	2,360	486	143
33-3021	Detectives and Criminal Investigators	High school diploma or equivalent	22	220	83	18
33-3010	Bailiffs, Correctional Officers, and Jailers	High school diploma or equivalent	444	4,440	881	745

OCCSOC	Occupation	Required Education	Annual Openings	Ten-Year Openings	Part-Time in Target Occupations	Part-Time in Target Occupations With Required background
33-2011	Firefighters	Postsecondary non-degree award	91	910	527	143
33-1012	First-Line Supervisors of Police and Detectives	High school diploma or equivalent	5	50	28	28
33-1011	First-Line Supervisors of Correctional Officers	High school diploma or equivalent	53	530	65	0
31-909X	Medical Assistants and Other Healthcare Support Occupations, except dental assistants	High school diploma or equivalent	25	250	216	98
31-9097	Phlebotomists	Postsecondary non-degree award	36	360	381	196
31-9096	Veterinary Assistants and Laboratory Animal Caretakers	High school diploma or equivalent	13	130	188	70
31-9095	Pharmacy Aides	High school diploma or equivalent	10	100	35	0
31-9092	Medical Assistants	Postsecondary non-degree award	347	3,470	2,516	640
31-9091	Dental Assistants	Postsecondary non-degree award	96	960	1,868	878
31-2020	Physical Therapist Assistants and Aides	Associate's degree	12	120	136	0
31-1010	Nursing, Psychiatric, and Home Health Aides	Less than high school	1,228	12,280	9,570	3,441
29-9000	Other Healthcare Practitioners and Technical Occupations	Bachelor's degree	25	250	60	17
29-2090	Miscellaneous Health Technologists and Technicians	Master's degree	33	330	264	35
29-2081	Opticians, Dispensing	High school diploma or equivalent	32	320	14	14
29-2071	Medical Records and Health Information Technicians	Postsecondary non-degree award	58	580	350	48
29-2061	Licensed Practical and Licensed Vocational Nurses	Postsecondary non-degree award	307	3,070	1,929	793
29-2050	Health Diagnosing and Treating Practitioner Support Technicians	Associate's degree	144	1,440	1,028	212
29-2041	Emergency Medical Technicians and Paramedics	Postsecondary non-degree award	86	860	293	136
29-2030	Diagnostic Related Technologists and Technicians	Associate's degree	60	600	563	279
29-2021	Dental Hygienists	Associate's degree	40	400	681	479
29-2010	Clinical Laboratory Technologists and Technicians	Associate's degree	51	510	231	37
29-11XX	Nurse Practitioners, and Nurse Midwives	Master's degree	71	710	38	38

OCCSOC	Occupation	Required Education	Annual Openings	Ten-Year Openings	Part-Time in Target Occupations	Part-Time in Target Occupations With Required background
29-1141	Nurse Practitioners, and Nurse Midwives	Associate's degree	989	9,890	7,589	3,232
29-1131	Veterinarians	Doctoral or professional degree	16	160	35	35
29-1127	SpeechLanguage Pathologists	Master's degree	26	260	125	125
29-1126	Respiratory Therapists	Associate's degree	18	180	79	79
29-1123	Physical Therapists	Doctoral or professional degree	42	420	421	288
29-1122	Occupational Therapists	Master's degree	16	160	104	104
29-1071	Physician Assistants	Master's degree	30	300	144	144
29-1060	Physicians and Surgeons	Doctoral or professional degree	107	1,070	648	648
29-1051	Pharmacists	Doctoral or professional degree	95	950	368	368
29-1041	Optometrists	Doctoral or professional degree	8	80	31	31
29-1031	Dieticians and Nutritionists	Bachelor's degree	8	80	75	75
29-1020	Dentists	Doctoral or professional degree	35	350	513	513
27-40XX	Broadcast and Sound Engineering Techs and Radio Operators, and media and commequipment workers, all other	Postsecondary non-degree award	18	180	41	0
27-3090	Miscellaneous Media and Communication Workers	Bachelor's degree	18	180	557	207
27-3031	Public Relations Specialists	Bachelor's degree	16	160	12	3
27-2040	Musicians, Singers, and Related Workers	Bachelor's degree	16	160	326	80
27-2020	Athletes, Coaches, Umpires, and Related Workers	High school diploma or equivalent	68	680	1,230	373
27-2012	Producers and Directors	Bachelor's degree	10	100	186	78
27-1020	Designers	Bachelor's degree	50	500	1,333	355
25-90XX	Other Education, Training, and Library Workers	Bachelor's degree	50	500	142	85
25-9041	Teacher Assistants	Some college, no degree	572	5,720	10,157	4,320
25-4031	Library Technicians	Postsecondary non-degree award	57	570	150	46
25-4021	Librarians	Master's degree	13	130	155	29

OCCSOC	Occupation	Required Education	Annual Openings	Ten-Year Openings	Part-Time in Target Occupations	Part-Time in Target Occupations With Required background
25-3000	Other Teachers and Instructors	Bachelor's degree	502	5,020	4,554	1,414
25-2050	Elementary and Middle School Teachers	Bachelor's degree	69	690	495	324
25-2030	Secondary School Teachers	Bachelor's degree	391	3,910	3,494	2,901
25-2020	Elementary and Middle School Teachers	Bachelor's degree	918	9,180	14,935	13,258
25-2010	Preschool and Kindergarten Teachers	Associate's degree	225	2,250	1,391	333
25-1000	Postsecondary Teachers	Doctoral or professional degree	291	2,910	2,868	2,410
23-2011	Paralegals and Legal Assistants	Associate's degree	53	530	275	18
23-10XX	Lawyers, and judges, magistrates, and other judicial workers	Doctoral or professional degree	75	750	627	627
21-2099	Religious Workers, All Other	Bachelor's degree	6	60	99	16
21-2021	Directors, Religious Activities and Education	Bachelor's degree	18	180	112	67
21-2011	Clergy	Bachelor's degree	23	230	370	142
21-109X	Miscellaneous Community and Social Service Specialists	Bachelor's degree	65	650	470	132
21-1093	Social and Human Service Assistants	High school diploma or equivalent	219	2,190	510	112
21-1092	Probation Officers and Correctional Treatment Specialists	Bachelor's degree	44	440	43	43
21-1020	Social Workers	Bachelor's degree	245	2,450	1,125	662
21-1010	Counselors	High school diploma or equivalent	204	2,040	1,223	292
19-40YY	Miscellaneous Life, Physical, and Social Science Technicians, Including Social Science Research Assistants	Associate's degree	58	580	243	5
19-40XX	Misc. life, physical, social science technicians, incl social science RAs & nuclear techs	Associate's degree	18	180	14	0
19-4031	Chemical Technicians	Associate's degree	19	190	0	0
19-4021	Biological Technicians	Bachelor's degree	6	60	0	0
19-4011	Agricultural and Food Science Technicians	Associate's degree	19	190	150	113
19-3051	Urban and Regional Planners	Master's degree	17	170	0	0
19-3030	Market and Survey Researchers	Doctoral or professional degree	56	560	264	264

OCCSOC	Occupation	Required Education	Annual Openings	Ten-Year Openings	Part-Time in Target Occupations	Part-Time in Target Occupations With Required background
19-2040	Environmental Scientists and Geoscientists	Bachelor's degree	37	370	23	23
19-2030	Chemists and Materials Scientists	Bachelor's degree	16	160	22	22
19-10XX	General and Operations Managers	Master's degree	14	140	78	39
17-3020	Engineering Technicians, Except Drafters	Associate's degree	36	360	206	0
17-3010	Drafters	Associate's degree	6	60	14	0
17-21YY	Miscellaneous engineers including nuclear engineers	Bachelor's degree	35	350	63	63
17-2141	Mechanical Engineers	Bachelor's degree	39	390	0	0
17-2110	Industrial Engineers, including Health and Safety	Bachelor's degree	45	450	66	66
17-20XX	Biomedical and agricultural engineers	Bachelor's degree	30	300	0	0
17-2081	Environmental Engineers	Bachelor's degree	7	70	2	0
17-2070	Electrical and Electronics Engineers	Bachelor's degree	22	220	77	77
17-2051	Civil Engineers	Bachelor's degree	76	760	231	182
17-2011	Aerospace Engineers	Bachelor's degree	25	250	0	0
17-1010	Architects, Except Naval	Bachelor's degree	21	210	94	56
15-20XX	Misc. mathematical science occupations, including mathematicians and statisticians	Master's degree	6	60	0	0
15-2031	Operations Research Analysts	Bachelor's degree	6	60	0	0
15-1199	Computer Occupations, All Other	Bachelor's degree	16	160	462	57
15-1150	Computer Support Specialists	Some college, no degree	90	900	419	228
15-1143	Computer Network Architects	Bachelor's degree	6	60	0	0
15-1142	Network and Computer Systems Administrators	Bachelor's degree	43	430	113	39
15-1141	Database Administrators	Bachelor's degree	5	50	0	0
15-113X	Software Developers, Applications and Systems Software	Bachelor's degree	66	660	390	251
15-1131	Computer Programmers	Bachelor's degree	25	250	133	49
15-1121	Computer Programmers	Bachelor's degree	61	610	350	108
13-2099	Financial Specialists, All Other	Bachelor's degree	5	50	0	0
13-2082	Tax Preparers	High school diploma or	7	70	95	22

OCCSOC	Occupation	Required Education	Annual Openings	Ten-Year Openings	Part-Time in Target Occupations	Part-Time in Target Occupations With Required background
		equivalent				
13-2081	Tax Examiners and Collectors, and Revenue Agents	Bachelor's degree	60	600	226	61
13-2070	Credit Counselors and Loan Officers	Bachelor's degree	18	180	238	72
13-2053	Insurance Underwriters	Bachelor's degree	6	60	5	0
13-2051	Financial Analysts	Bachelor's degree	19	190	0	0
13-2031	Budget Analysts	Bachelor's degree	14	140	0	0
13-2011	Accountants and Auditors	Bachelor's degree	340	3,400	1,718	1,105
13-1199	Business Operations Specialists, All Other	High school diploma or equivalent	144	1,440	70	57
13-1161	Market Research Analysts and Marketing Specialists	Bachelor's degree	71	710	167	55
13-1151	Training and Development Specialists	Bachelor's degree	34	340	164	68
13-1141	Compensation, Benefits, and Job Analysis Specialists	Bachelor's degree	7	70	47	24
13-1131	Fundraisers	Bachelor's degree	7	70	20	20
13-1121	Meeting and Convention Planners	Bachelor's degree	7	70	44	0
13-1111	Management Analysts	Bachelor's degree	84	840	569	293
13-1081	Logisticians	Bachelor's degree	15	150	34	34
13-1070	Human Resources, Training, and Labor Relations Specialists	Bachelor's degree	78	780	656	174
13-1051	Cost Estimators	Bachelor's degree	102	1,020	61	0
13-1041	Compliance Officers, Except Ag., Construction, Health and SAfety, and Transport.	Bachelor's degree	25	250	316	259
13-1030	Claims Adjusters, Appraisers, Examiners, and Investigators	High school diploma or equivalent	47	470	78	24
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	High school diploma or equivalent	33	330	112	76
13-1022	Wholesale and Retail Buyers, Except Farm Products	High school diploma or equivalent	28	280	451	254
11-9XXX	Miscellaneous managers including postmansters and mail superintendents	Associate's degree	43	430	2,820	115
11-9151	Social and Community Service Managers	Bachelor's degree	51	510	487	223
11-9141	Property, Real Estate, and Community Association Managers	High school diploma or equivalent	27	270	977	373

OCCSOC	Occupation	Required Education	Annual Openings	Ten-Year Openings	Part-Time in Target Occupations	Part-Time in Target Occupations With Required background
11-9111	Medical and Health Services Managers	Bachelor's degree	109	1,090	624	483
11-9081	Lodging Managers	High school diploma or equivalent	6	60	8	4
11-9051	Food Service Managers	High school diploma or equivalent	55	550	1,683	516
11-9041	Architectural and Engineering Managers	Bachelor's degree	25	250	10	10
11-9030	Education Administrators	Bachelor's degree	114	1,140	1,417	664
11-9021	Constructions Managers	Bachelor's degree	59	590	258	21
11-9013	Farmers, Ranchers, and Other Agricultural Managers	High school diploma or equivalent	118	1,180	3,520	738
11-3121	Human Resources Managers	Bachelor's degree	19	190	224	61
11-3071	Transportation, Storage, and Distribution Managers	High school diploma or equivalent	34	340	48	7
11-3051	Industrial Production Managers	Bachelor's degree	29	290	106	0
11-3031	Financial Managers	Bachelor's degree	83	830	556	414
11-3021	Computer and Information Systems Managers	Bachelor's degree	25	250	73	51
11-3011	Administrative Services Managers	Bachelor's degree	54	540	23	0
11-2031	Public Relations Managers	Bachelor's degree	6	60	21	21
11-2020	Marketing and Sales Managers	Bachelor's degree	102	1,020	641	374
11-10XX	Chief executives and legislators	Bachelor's degree	47	470	367	172
11-1021	General and Operations Managers	Bachelor's degree	648	6,480	1,060	251