



WORKFORCE DEVELOPMENT BOARD OF VENTURA COUNTY

CLEAN/GREEN COMMITTEE MEETING

Friday, January 15, 2016

8:00 a.m. - 9:30 a.m.

VCCF Nonprofit Center (Board Room)
4001 Mission Oaks Blvd., Camarillo, CA

AGENDA

8:00 a.m.	1.0 Call to Order and Agenda Review	Anthony Mireles
8:03 a.m.	2.0 Public Comments	Anthony Mireles
	<u>Procedure:</u> The public is welcome to comment. All comments not related to items on the agenda may be made at the beginning of the meeting only.	
8:05 a.m.	3.0 Approval of Minutes: November 20, 2015	Anthony Mireles
	4.0 Ventura County Regional Strategic Workforce Development Plan	
8:08 a.m.	<ul style="list-style-type: none">Clean/Green Committee 2-Year Plan	Cheryl Moore
	<ul style="list-style-type: none">- Definitions	Patricia Duffy
	<ul style="list-style-type: none">- REAP Data Review	Cheryl Moore
	<ul style="list-style-type: none"><ul style="list-style-type: none">Hospitality and Tourism; Agriculture, Food, and Beverage Processing; Construction Materials and Services; Transportation and Logistics; Oil and Gas Products and Services; Energies and Utilities; Forest Products, Forestry, and Primary Wood Processing.	
	<ul style="list-style-type: none">- Inventory of Clean/Green Programs	Patricia Duffy
	<ul style="list-style-type: none"><ul style="list-style-type: none">Community Colleges, Adult Schools, Labor	
9:00 a.m.	<ul style="list-style-type: none">- Discussion and Next Steps	Cheryl Moore
9:15 a.m.	<ul style="list-style-type: none">Career Pathways: Update	Tiffany Morse Jim Rose
9:25 a.m.	5.0 Committee Member Comments	Committee Members
9:30 a.m.	6.0 Adjournment	Anthony Mireles
	<u>Next Meeting</u>	
	March 18, 2016 (8:00 a.m. - 9:30 a.m.)	
	VCCF Nonprofit Center (Community Room)	
	4001 Mission Oaks Blvd., Camarillo, CA	

Individuals who require accommodations for their disabilities (including interpreters and alternate formats) are requested to contact the Workforce Development Board of Ventura County staff at (805) 477-5306 at least five days prior to the meeting. TTY line: 1-800-735-2922.

For information about the Workforce Development Board of Ventura County, go to workforceventuracounty.org



WDB Clean/Green Committee Meeting
November 20, 2015

MINUTES

Meeting Attendees

Committee Members

Anthony Mireles* (Vice Chair)
John Brooks
Dave Fleisch
Paul Grossgold
Eric Humel
Douglas O'Brien
Mary Anne Rooney
Nancy Williams

WDB Staff

Patricia Duffy
Cheryl Moore
Theresa Salazar Vital

Guest

Melanie Peck (The Energy Coalition)
Nathan Inouye (VCOE)

**WDB Members*

1.0 Call to Order and Agenda Review

Patricia Duffy announced that Chair Kimberly Nilsson recently appointed Anthony Mireles as the new Vice Chair of the Clean/Green Committee.

Anthony Mireles called the meeting to order at 8:05 a.m. No changes were made to the agenda.

2.0 Public Comments

There were no public comments.

3.0 Approval of Minutes: September 18, 2015

Motion to approve: Dave Fleisch

Second: Mary Anne Rooney

Motion carried

4.0 Ventura County Regional Strategic Workforce Development Plan

- Clean/Green Committee Workgroup on 2-Year Plan

The Clean/Green Committee Workgroup, which had convened on October 28, 2015, reported on their recommendations for the Clean/Green Committee 2-Year Plan. The workgroup members participating were David Fleisch, Paul Grossgold, Mary Anne Rooney, Nancy Williams and WDB staff, Patricia Duffy. Committee members discussed the workgroup's draft definitions and agreed to further develop the definitions for sector certifications and stackable credentials and incorporate clean/green industry examples.

- Clean/Green Committee 2-Year Plan Update

The Committee reviewed a new format for the 2-Year Plan, designed to standardize the 2-Year Plan documents used by all of the WDB sector committees. The template organizes the information and creates a document that is easier to read and use as a planning tool. The components are (1) engage stakeholders, (2) analyze data, (3) take inventory, (4) determine priorities, (5) identify gaps, (6) take action, and (7) monitor progress. The Committee members

discussed the integration of the workgroup ideas into the format and identified next steps for continuing work on the plan.

- Clean/Green Committee Planning

The Committee members received a brief overview of the new 2015 Ventura County Regional Economic Analysis Profile (REAP) on sub-market data. The data was prepared for the Workforce Development Board of Ventura County (WDB) by the Labor Market Information Division (LMID) of the State of California Employment Development Department (EDD). The Committee was provided the Occupational Analysis: Construction Materials and Services Cluster report as an example of one section of the larger document. Members were invited to access the complete document on the WDB website: www.workforceventuracounty.org. Committee members engaged in a discussion on the methodology of data collection and were encouraged to submit their questions and comments to WDB staff and were invited to attend the Workforce Development Board meeting on December 17, 2015, for an LMID presentation and discussion on the report.

- AWET Deputy Sector Navigator Update

Committee members referred to the written report submitted by Margaret Lau, the Agriculture, Water and Environmental Technologies (AWET) Deputy Sector Navigator for eight community colleges. Information included regional events and Career Technical Education projects.

5.0 Committee Spotlight: The PEAK Program of The Energy Coalition

Melanie Peck, Program Manager for the PEAK Program, gave a presentation on the statewide environmental education program focused on energy, water and career pathway development. PEAK partners with California investor-owned and municipal electric and water utilities to empower students to be resource-wise.

6.0 Committee Member Comments

No comments

7.0 Adjournment

Anthony Mireles adjourned the meeting at 9:40 a.m.

Next Meeting

Friday, January 15, 2016 (8:00 a.m.-9:30 a.m.)
VCCF Nonprofit Center (Board Room)
4001 Mission Oaks Blvd., Camarillo, CA



CLEAN/GREEN COMMITTEE 2-YEAR PLAN **Workforce Development Board of Ventura County** **2016-2018**

Goal

The Clean/Green Committee will develop a pipeline of skilled workers in clean/green occupations to address the workforce needs of employers, working in collaboration with business, economic development, education, labor, government, and community-based organizations. Focus areas:

- Recycling/reuse
- Energy efficiency
- Natural and sustainable product manufacturing
- Renewable energy
- Water conservation
- Infrastructure
- Services

Components of Plan

- 1. Engage** Engage a core team of Ventura County employers, agencies, education, labor, and other organizations most involved in clean/green workforce development. Develop ways to identify, engage, and communicate effectively with the core team and other clean/green workforce partners
 - Waste Facilities/ Recycling Centers
 - Water/Wastewater
 - Trash Haulers
 - Utilities/Energy
 - Landscapers
 - Architects
 - Contractors
 - Agriculture
 - Automotive
 - California State University, Channel Islands
 - Ventura County Community College District
 - Ventura County Office of Education
 - Adult education
 - Others
- 2. Analyze Data** Conduct annual research to analyze clean/green workforce needs and changes.
- 3. Take Inventory** Inventory current training providers in the region.
 - Industry-recognized certification programs
 - Apprenticeships
 - Pre-apprenticeships
 - Internships
 - Externships
 - High school academies
 - Regional Occupational Program
 - Adult education
 - Community colleges
 - Universities
 - Trade associations
 - Community organizations



CLEAN/GREEN COMMITTEE 2-YEAR PLAN

Workforce Development Board of Ventura County 2016-2018

- 4. Determine Priorities** Determine focus area priorities for clean/green workforce development.
- Sector workforce readiness
 - Career pathways
 - Sector certifications
 - Stackable credentials
 - Pre-apprenticeship programs
 - Apprenticeship programs
 - Business participation:
 - Curriculum development
 - Job shadowing
 - Internships
 - Externships
 - On-the-job training
 - Career awareness/outreach
- 5. Identify Gaps** Monitor identified gaps and continue to identify new gaps between education and clean/green workforce development needs.
- 6. Take Action** Many employers, particularly small businesses, in Ventura County are not aware of the activities of the Workforce Development Board Clean/Green Committee in developing a pipeline of skilled workers for clean/green jobs. As such, we need to:
- **Create awareness** throughout all business communities and the public sector of clean green jobs and certification programs that exist to provide skilled workers.
 - **Develop understanding** by employers and managers of the importance clean green practices in their operation (regardless of size) and how hiring skilled clean green workers will improve their organization's performance. Emphasize that virtually every job, in every industry, should incorporate clean green practices.
 - **Encourage involvement** by leaders in business and the public sector, in the education of skilled clean green workers through engagement in the classroom, providing internships or job training programs for students or externships for faculty.
 - **Complete integration** of clean green practices and workers in all components of the workforce in businesses and the public sector in Ventura County.
- 7. Monitor Progress** The progress of the Clean/Green Committee is measured by the Workforce Development Board Year-End Review and a review of the Committee's 2-Year Plan.

WDB CLEAN/GREEN COMMITTEE WORKGROUP DRAFT DEFINITIONS

- Sector workforce readiness
- Career pathways
- Sector certifications
- Stackable credentials
- Pre-apprenticeship programs
- Apprenticeship programs
- Business participation:
 - Curriculum development
 - Job shadowing
 - Internships
 - On-the-job training
 - Career awareness/outreach
 - Externships

Sector workforce readiness: These are identified skills that are needed for certain industry sectors. Each of the skills categories are defined by the sectors' chief activities.

Career pathways: The pipeline of education and training that moves students from secondary education through post-secondary education to the entry-level job.

Sector certifications: Industry-recognized certifications that are particular to a given industry. Community colleges, trade schools and apprenticeship programs can prepare students for certifications. Some training programs have the additional authority to test for or approve the certifications on site, depending on the certification requirements.

Stackable credentials: These are credentials earned in different levels of programs within industry sectors. For example, a student might earn a water distribution credential of D1 level with less than a high school diploma. Through work experience and classes water, distribution professionals can move up to D2, D3, D4 D5 levels. The California Department of Public Health and A.W.W.A can issue these certifications. Requirements can vary for both agencies.

Pre-apprenticeship and apprenticeship programs: Formalized training programs, usually sponsored or organized by post-secondary agencies, in which skills development is based on number of hours of work experience and On the Job Training combined with a requisite amount of class time. At the end of a certified apprenticeship, a certification is obtained.

Curriculum development: (C.T.E.): The partnership between industry representatives and educators to collaborate in the development of career technical education curriculum that reflects the needs of industry.

Job shadowing: The opportunity for students to observe the actions of an industry employee while they are engaged in the common functions of their job. It is usually limited to a few hours in a day and is not a regularly occurring activity.

Internships: A paid/unpaid position within a business whereby a student does work of value to the organization while they are engaged in completing the educational program or training leading to an entry level job in that industry.












On-the-job training: An entry-level position in which the employee learns the essential skills of a job while he is engaged in the job usually under the tutelage of a senior employee.

Career awareness/outreach: Any variety of activities appropriate for the maturity level of a student that raises that student's awareness of an industry sector's job opportunities, or allows them to explore the variety of careers related to an industry sector.













Externships: Opportunities (paid or unpaid) for a teacher to work within a business so they can learn what that career is like from the inside out. Theoretically, the experience will help them speak with authority when they inform their students of work in that industry sector.

Ventura County Occupational Employment Data Growth Projections









WDB CLEAN/GREEN COMMITTEE

SOC Code*	U.S. D.O.L. Green Jobs in Demand	Occupations	2014 Education and Training Level**	2014 VENTURA COUNTY Median Annual Wages***	2022 CALIFORNIA Employment Growth Projection	CALIFORNIA Average Annual Job Openings****	2022 VENTURA COUNTY Employment Growth Projection	VENTURA COUNTY Average Annual Job Replacement Openings	VENTURA COUNTY Average Annual Job Openings****	2012 CALIFORNIA Average Annual Employment	2012 VENTURA COUNTY Average Annual Employment
53-7064		Packers and Packagers, Hand	Less Than H.S.	\$19,644	11.2	3,480	16.4	43	82	93,000	1,650
51-9198		Helpers--Production Workers	Less Than H.S.	\$23,592	9.2	1,150	7.3	19	22	43,600	1,090
53-7062		Laborers and Freight, Stock, and Material Movers, Hand	Less Than H.S.	\$24,095	19.1	13,560	18.1	150	174	270,500	4,860
47-3019		<i>Helpers, Construction Trades, All Other</i>	<i>Less Than H.S.</i>	<i>\$24,130</i>	<i>29.4</i>	<i>80</i>	<i>32.5</i>	<i>10</i>	<i>23</i>	<i>1,700</i>	<i>400</i>
47-3014		<i>Helpers--Painters, Paperhangers, Plasterers, and Stucco Masons</i>	<i>Less Than H.S.</i>	<i>\$25,926</i>	<i>23.1</i>	<i>110</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>2,600</i>	<i>N/A</i>
37-3011		Landscaping and Groundskeeping Workers	Less Than H.S.	\$27,660	13.8	5,360	19.8	97	146	137,600	3,840
47-3016		<i>Helpers--Roofers</i>	<i>Less Than H.S.</i>	<i>\$29,219</i>	<i>-7.7</i>	<i>30</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>1,300</i>	<i>N/A</i>
53-7051		Industrial Truck and Tractor Operators	Less Than H.S.	\$29,725	7.6	1,690	11.2	27	68	55,300	1,160
47-3011		<i>Helpers--Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters</i>	<i>Less Than H.S.</i>	<i>\$30,164</i>	<i>58.6</i>	<i>210</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>2,900</i>	<i>N/A</i>
47-3012		<i>Helpers--Carpenters</i>	<i>Less Than H.S.</i>	<i>\$30,908</i>	<i>40.0</i>	<i>110</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>2,000</i>	<i>N/A</i>
45-2091		Agricultural Equipment Operators	Less Than H.S.	\$31,744	12.8	610	32.2	27	53	14,100	900
47-2061		Construction Laborers	Less Than H.S.	\$39,496	29.2	5,510	33.0	39	69	108,800	1,820
47-2181		Roofers	Less Than H.S.	\$46,458	25.6	770	41.9	6	12	16,400	310
53-7081		Refuse and Recyclable Material Collectors	Less Than H.S.	\$48,851	16.9	580	27.3	9	N/A	15,400	440
45-2000		Agricultural Workers	Less Than H.S.	N/A	11.6	12,700	16.4	551	864	308,300	18,670
45-4011		Forest and Conservation Workers	H.S. Diploma + OJT	\$21,072	10.0	60	28.6	1	3	2,000	70
51-2022		Electrical and Electronic Equipment Assemblers	H.S. Diploma + OJT	\$23,358	0.7	370	-5.4	14	20	28,600	1,120
51-2092		Team Assemblers	H.S. Diploma + OJT	\$26,458	3.9	1,550	12.6	35	58	78,700	2,220
53-6099		Transportation Workers, All Other	H.S. Diploma + OJT	\$28,506	19.0	370	10.5	7	11	6,300	190
49-9098		Helpers--Installation, Maintenance, and Repair Workers	H.S. Diploma + OJT	\$28,783	14.7	640	11.8	10	14	14,300	340
51-2099		Assemblers and Fabricators	H.S. Diploma + OJT	\$29,081	9.2	570	36.0	20	33	22,800	1,250
43-5071		Shipping, Receiving, and Traffic Clerks	H.S. Diploma + OJT	\$29,638	8.3	3,030	12.3	53	62	87,500	2,030








Ventura County Occupational Employment Data Growth Projections WDB CLEAN/GREEN COMMITTEE

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51-2023		Electromechanical Equipment Assemblers	H.S. Diploma + OJT	\$30,534	-7.2	80	13.6	3	3	6,900	220
49-9043		Maintenance Workers, Machinery	H.S. Diploma + OJT	\$30,870	14.3	190	11.1	1	5	7,000	90
47-3015		<i>Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters</i>	<i>H.S. Diploma + OJT</i>	<i>\$31,266</i>	<i>28.6</i>	<i>120</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>2,800</i>	<i>N/A</i>
47-3013		<i>Helpers--Electricians</i>	<i>H.S. Diploma + OJT</i>	<i>\$31,452</i>	<i>35.7</i>	<i>210</i>	<i>27.8</i>	<i>5</i>	<i>10</i>	<i>4,200</i>	<i>180</i>
51-4011		Computer-Controlled Machine Tool Operators, Metal and Plastic	H.S. Diploma + OJT	\$33,960	16.3	380	14.3	8	7	8,600	280
47-4041		Hazardous Materials Removal Workers	H.S. Diploma + OJT	\$34,294	15.6	170	50.0	1	3	4,500	60
51-9061		Inspectors, Testers, Sorters, Samplers, and Weighers	H.S. Diploma + OJT	\$34,387	8.3	1,460	7.8	31	45	48,200	1,410
51-9032		Cutting and Slicing Machine Setters, Operators, and Tenders	H.S. Diploma + OJT	\$35,474	-7.3	90	-9.1	2	4	5,500	110
43-4051		Customer Service Representatives	H.S. Diploma + OJT	\$36,058	16.4	8,520	19.9	98	217	195,300	3,610
51-4121		Welders, Cutters, Solderers, and Brazers	H.S. Diploma + OJT	\$36,114	6.5	770	10.0	12	23	24,700	500
51-2031		Engine and Other Machine Assemblers	H.S. Diploma + OJT	\$36,186	0.0	20	60.0	1	2	1,300	50
49-9071		Maintenance and Repair Workers, General	H.S. Diploma + OJT	\$38,412	12.1	3,650	12.5	43	58	116,600	2,240
51-4041		Machinists	H.S. Diploma + OJT	\$39,225	15.3	1,300	17.3	22	23	34,000	980
53-3021		Bus Drivers, Transit and Intercity	H.S. Diploma + OJT	\$42,377	13.3	740	-5.6	7	11	23,300	360
51-9011		<i>Chemical Equipment Operators and Tenders</i>	<i>H.S. Diploma + OJT</i>	<i>\$44,949</i>	<i>7.4</i>	<i>110</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>2,700</i>	<i>N/A</i>
43-5061		Production, Planning, and Expediting Clerks	H.S. Diploma + OJT	\$45,485	9.5	1,350	6.0	17	21	38,900	670
47-2152		Plumbers, Pipefitters, and Steamfitters	H.S. Diploma + OJT	\$50,010	24.3	1,250	25.0	6	33	34,100	520
13-1022		Wholesale and Retail Buyers, Farm Products	H.S. Diploma + OJT	\$55,989	15.9	720	21.2	8	13	17,600	330
51-8021		Stationary Engineers and Boiler Operators	H.S. Diploma + OJT	\$56,474	7.9	150	0.0	2	1	3,800	60
47-2111		Electricians	H.S. Diploma + OJT	\$59,866	22.2	2,000	24.5	20	33	48,700	1,060








Ventura County Occupational Employment Data Growth Projections WDB CLEAN/GREEN COMMITTEE

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47-1011		First-Line Supervisors of Construction Trades and Extraction Workers	H.S. Diploma + OJT	\$70,046	28.4	1,840	25.9	9	43	46,800	810
47-2073		Operating Engineers and Other Construction Equipment Operators	H.S. Diploma + OJT	\$72,384	22.2	990	31.1	14	29	22,100	610
47-4011		Construction and Building Inspectors	H.S. Diploma + OJT	\$72,434	14.1	340	12.5	4	9	9,200	160
13-1199		Business Operations Specialists, All Other	H.S. Diploma + OJT	\$81,611	14.2	3,790	7.4	42	106	135,700	3,100
51-8013		Power Plant Operators	H.S. Diploma + OJT	\$84,797	7.0	160	0.0	2	2	4,300	50
11-3071		Transportation, Storage, and Distribution Managers	H.S. Diploma + OJT	\$94,870	12.6	460	20.0	6	9	12,700	250
11-9199		Managers, All Other	H.S. Diploma + OJT	\$109,359	14.1	3,190	5.0	39	84	88,800	1,790
49-2092		Electric Motor, Power Tool, and Related Repairers	Vocational / OJT	\$41,903	0.0	30	N/A	N/A	N/A	1,400	N/A
49-9021		Heating, Air Conditioning, and Refrigeration Mechanics and Installers	Vocational / OJT	\$51,356	23.0	970	27.5	9	23	20,000	510
49-2094		Electrical and Electronics Repairers, Commercial and Industrial Equipment	Vocational / OJT	\$59,680	9.2	190	0.0	3	3	6,500	140
49-2095		Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	Vocational / OJT	\$83,825	12.5	50	N/A	N/A	N/A	1,600	N/A
19-4011		Agricultural and Food Science Technicians	Associate's Degree	\$28,399	16.7	200	12.5	3	4	3,600	80
19-4093		Forest and Conservation Technicians	Associate's Degree	\$38,870	-1.4	290	-8.3	5	6	7,400	120
19-4031		Chemical Technicians	Associate's Degree	\$39,174	16.0	200	28.6	2	N/A	5,000	70
17-3026		Industrial Engineering Technicians	Associate's Degree	\$45,517	2.4	90	0.0	1	N/A	4,200	60
19-4091		Environmental Science and Protection Technicians, Including Health	Associate's Degree	\$48,653	26.3	250	40.0	4	6	3,800	100
17-3013		Mechanical Drafters	Associate's Degree	\$50,646	-7.3	50	0.0	1	5	4,100	90
17-3024		Electro-Mechanical Technicians	Associate's Degree	\$52,618	7.1	70	N/A	N/A	N/A	2,800	N/A
17-3012		Electrical and Electronics Drafters	Associate's Degree	\$53,085	11.1	120	0.0	1	3	4,500	80
17-3011		Architectural and Civil Drafters	Associate's Degree	\$55,857	-0.8	160	-6.7	2	3	12,200	150

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17-3025		Environmental Engineering Technicians	Associate's Degree	\$57,627	27.8	90	37.5	2	6	1,800	80
17-3027		Mechanical Engineering Technicians	Associate's Degree	\$60,349	3.8	130	-10.0	2	4	5,300	100
17-3022		Civil Engineering Technicians	Associate's Degree	\$66,328	3.2	150	0.0	2	5	6,300	90
17-3023		Electrical and Electronics Engineering Technicians	Associate's Degree	\$71,154	1.9	470	-3.8	16	16	20,700	780
17-3029		Engineering Technicians, Except Drafters, All Other	Associate's Degree	\$81,878	6.9	240	-3.6	6	7	8,700	280
11-9021		Construction Managers	Associate's Degree	\$91,505	18.4	1,780	15.0	13	22	52,300	800
45-2011		<i>Agricultural Inspectors</i>	<i>Bachelor's Degree</i>	<i>\$45,509</i>	<i>4.8</i>	<i>80</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>2,100</i>	<i>N/A</i>
13-2099		Financial Specialists, All Other	Bachelor's Degree	\$55,042	11.7	460	10.5	9	54	20,500	860
13-1151		Training and Development Specialists	Bachelor's Degree	\$57,390	23.7	890	10.8	7	20	21,100	370
41-3031		Securities, Commodities, and Financial Services Sales Agents	Bachelor's Degree	\$57,508	7.9	1,430	20.9	20	46	45,400	860
27-3031		Public Relations Specialists	Bachelor's Degree	\$62,463	13.2	610	11.8	2	14	22,800	170
19-1013		Soil and Plant Scientists	Bachelor's Degree	\$67,947	35.0	140	0.0	3	N/A	2,000	90
13-2051		Financial Analysts	Bachelor's Degree	\$70,629	23.1	1,520	3.6	14	22	32,100	560
19-2041		Environmental Scientists and Specialists, Including Health	Bachelor's Degree	\$73,542	29.5	880	34.1	12	21	14,900	410
17-1012*		<i>Landscape Architects</i>	<i>Bachelor's Degree</i>	<i>\$76,000</i>	<i>12.5</i>	<i>120</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>3,200</i>	<i>N/A</i>
19-2031		<i>Chemists</i>	<i>Bachelor's Degree</i>	<i>\$76,659</i>	<i>15.4</i>	<i>560</i>	<i>0.0</i>	<i>8</i>	<i>8</i>	<i>13,600</i>	<i>10,900</i>
29-9011		Occupational Health and Safety Specialists	Bachelor's Degree	\$76,688	23.6	360	6.7	4	6	7,200	150
13-1111		Management Analysts	Bachelor's Degree	\$83,294	31.6	4,490	21.4	26	55	95,200	1,680
13-1081		Logisticians	Bachelor's Degree	\$84,956	32.1	590	8.8	8	19	13,700	680
17-1022*		<i>Surveyors</i>	<i>Bachelor's Degree</i>	<i>\$85,245</i>	<i>7.5</i>	<i>120</i>	<i>20.0</i>	<i>2</i>	<i>2</i>	<i>4,000</i>	<i>5,100</i>
11-3131		Training and Development Managers	Bachelor's Degree	\$87,435	18.5	120	20.0	1	2	2,700	50
19-2042		Geoscientists, Except Hydrologists and Geographers	Bachelor's Degree	\$89,415	22.4	310	40.0	3	8	5,800	100
11-3051		Industrial Production Managers	Bachelor's Degree	\$90,870	0.5	360	13.8	10	23	19,200	580
27-1021		Commercial and Industrial Designers	Bachelor's Degree	\$91,601	10.4	170	11.1	5	9	4,800	180

Ventura County Occupational Employment Data Growth Projections WDB CLEAN/GREEN COMMITTEE

SOC Code*	U.S. D.O.L. Green Jobs in Demand	Occupations	2014 Education and Training Level**	2014 VENTURA COUNTY Median Annual Wages***	2022 CALIFORNIA Employment Growth Projection	CALIFORNIA Average Annual Job Openings****	2022 VENTURA COUNTY Employment Growth Projection	VENTURA COUNTY Average Annual Job Replacement Openings	VENTURA COUNTY Average Annual Job Openings****	2012 CALIFORNIA Average Annual Employment	2012 VENTURA COUNTY Average Annual Employment
17-2112		Industrial Engineers	Bachelor's Degree	\$92,926	8.2	860	4.5	13	8	23,100	440
19-2032		<i>Materials Scientists</i>	<i>Bachelor's Degree</i>	<i>\$92,999</i>	<i>15.4</i>	<i>60</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>1,300</i>	<i>N/A</i>
17-2141		Mechanical Engineers	Bachelor's Degree	\$94,960	4.7	910	14.3	26	30	23,500	770
17-2081		Environmental Engineers	Bachelor's Degree	\$97,044	24.7	360	26.1	6	8	7,300	230
17-2071		Electrical Engineers	Bachelor's Degree	\$97,459	4.6	620	-1.5	14	15	23,800	650
17-2131*		<i>Materials Engineers</i>	<i>Bachelor's Degree</i>	<i>\$98,576</i>	<i>3.7</i>	<i>100</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>2,700</i>	<i>N/A</i>
17-2051		Civil Engineers	Bachelor's Degree	\$99,219	18.3	1,670	11.9	10	22	39,300	420
17-2072		Electronics Engineers, Except Computer	Bachelor's Degree	\$106,857	8.5	1,080	-7.1	37	37	35,500	1,700
11-3031		Financial Managers	Bachelor's Degree	\$111,475	13.6	2,400	14.9	25	51	74,200	1,340
17-2011*		<i>Aerospace Engineers</i>	<i>Bachelor's Degree</i>	<i>\$112,911</i>	<i>18.5</i>	<i>660</i>	<i>0.0</i>	<i>2</i>	<i>2</i>	<i>15,700</i>	<i>20,300</i>
11-2021		Marketing Managers	Bachelor's Degree	\$128,039	21.8	1,310	10.0	6	17	30,300	300
11-9041		Architectural and Engineering Managers	Bachelor's Degree	\$139,968	11.1	1,160	8.6	14	15	32,300	580
11-9121*		<i>Natural Sciences Managers</i>	<i>Bachelor's Degree</i>	<i>\$143,098</i>	<i>18.3</i>	<i>360</i>	<i>7.0</i>	<i>26</i>	<i>29</i>	<i>9,300</i>	<i>430</i>
19-3051		Urban and Regional Planners	Master's Degree	\$83,244	18.3	450	9.1	5	6	7,100	110
25-1032		<i>Engineering Teachers, Postsecondary</i>	<i>Doctoral Degree</i>	<i>\$109,773</i>	<i>11.1</i>	<i>70</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>2,700</i>	<i>N/A</i>

*2010 Standard Occupational Classifications and Occupational Information Network provided by the Department of Labor

**Occupational training and education classifications were developed by the Bureau of Labor Statistics (BLS).

***Median Annual Wages are the estimated 50th percentile of the distribution of wages; 50 percent of workers in an occupation earn wages below, and 50 percent earn wages above the median wage. The wages are from

****Average Annual Job Openings includes new jobs and replacement needs.

Data Source: State of California Employment Development Department - Labor Market Info

Additional Information:

Living Wage in Ventura County as of December 2013 (California Budget Project)

\$34,109.00	Single Adult
\$79,549.00	Single-Parent Family*
\$64,203.00	Two-Parent Family* (one working)
\$85,713.00	Two-Working-Parent Family*

Ventura County Occupational Employment Data Growth Projections

WDB CLEAN/GREEN COMMITTEE

SOC Code*	U.S. D.O.L. Green Jobs in Demand	Occupations	2014 Education and Training Level**	2014 VENTURA COUNTY Median Annual Wages***	2022 CALIFORNIA Employment Growth Projection	CALIFORNIA Average Annual Job Openings****	2022 VENTURA COUNTY Employment Growth Projection	VENTURA COUNTY Average Annual Job Replacement Openings	VENTURA COUNTY Average Annual Job Openings****	2012 CALIFORNIA Average Annual Employment	2012 VENTURA COUNTY Average Annual Employment
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*All family types are assumed to have two children.

Current Employment Data
2020 Growth Projection Data
Priority Occupations Identified by Living Wages & Employment Growth
Infrastructure Jobs
Removed from the 2012-2022 Occupational Employment Projections for Ventura County
Removed from the 2012-2022 Occupational Employment Projections for California

VENTURA COUNTY CLEAN/GREEN PROGRAMS

VENTURA COUNTY ADULT SCHOOL PROGRAMS **					
ADULT SCHOOL	PROGRAM	TRAINING COMPLETION	INDUSTRY RECOGNIZED CREDENTIAL AWARDED	PREPARATION FOR RECOGNIZED CREDENTIAL	JOB PLACEMENT % RATE
AGRICULTURE AND NATURAL RESOURCES					
BUILDING AND CONSTRUCTION TRADES					
SIMI VALLEY ADULT SCHOOL	Welder /Master Course	Self Paced			
SIMI VALLEY ADULT SCHOOL	Welder Beginning	Self Paced			
SIMI VALLEY ADULT SCHOOL	Welder Fabricator	Self Paced		SVAS Certified Testing Facility-5 Certifications prepared for.	
SIMI VALLEY ADULT SCHOOL	Welder Advanced	Self Paced			
OXNARD ADULT SCHOOL	Welder Beginning	Jan- June			
OXNARD ADULT SCHOOL	Advanced Welding	Jan- June			
ENGINEERING AND ARCHITECTURE					
VACE	CAD Technician	28 Weeks			
VACE	CAD Technician Fast Track	16 Weeks			
VACE	Solid Works Technician	10 Weeks		Certified SolidWorks Associate Exam on site testing	
ENERGY ENVIRONMENT AND UTILITIES					
OXNARD ADULT SCHOOL	Photovoltaics- Solar Panel Technology	1 year (2 Semesters)			
HOSPITALITY					
TRANSPORTATION					
OXNARD ADULT SCHOOL	Advanced Automotive Technology				
*ADULT SCHOOLS VACE- VENTURA ADULT AND CONTINUING EDUCATION OXNARD ADULT SCHOOL SIMI VALLEY ADULT SCHOOL CONEJO VALLEY ADULT SCHOOL					

VENTURA COUNTY CLEAN/GREEN PROGRAMS

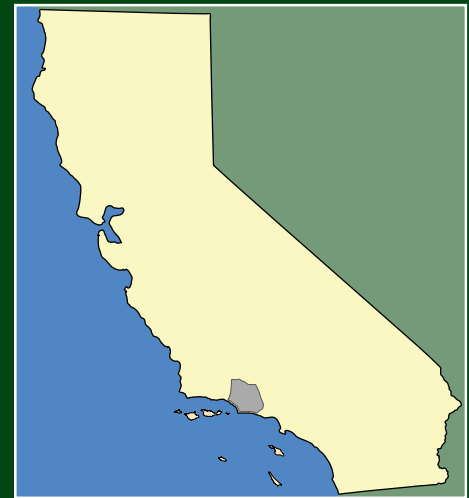
Ventura County Community Colleges' Degrees, Certificates and Awards in the Clean/Green Sector (DRAFT 1.15.2016)								
COLLEGE	PROGRAM	DEGREE AA/AS	CERTIFICATE OF ACHIEVEMENT	PROFICIENCY AWARD **	TBD	INDUSTRY RECOGNIZED CREDENTIAL AWARDED	PREPARATION FOR RECOGNIZED CREDENTIAL	Job Placement % Rate
AGRICULTURE AND NATURAL RESOURCES								
OXNARD COLLEGE	Coastal Environmental Studies	X						
VENTURA COLLEGE	Agricultural Business (TBD)				X			
VENTURA COLLEGE	Natural Resource Management			X				
VENTURA COLLEGE	Landscape Management			X				
VENTURA COLLEGE	Biological Sciences: Plant Biotechnology	X	X					
MOORPARK	Environmental Science	X						
MOORPARK	Environmental Studies	X						
BUILDING AND CONSTRUCTION TRADES								
VENTURA COLLEGE	Construction Technology: Building Inspection	X	X					
VENTURA COLLEGE	Construction Technology: Construction Management	X	X					
ENGINEERING AND ARCHITECTURE								
MOORPARK	Drafting Technology/CAD Architectural		X					
MOORPARK	Mechanical Drafting: Industrial Design & Manufacturing		X					
MOORPARK	Engineering	X						
VENTURA COLLEGE	Engineering	X	X					
VENTURA COLLEGE	Physical Science: Engineering Technology	X	X					
ENERGY ENVIRONMENT AND UTILITIES								
OXNARD COLLEGE	Environmental Control Technology	X	X					
OXNARD COLLEGE	Airside Systems			X				
OXNARD COLLEGE	Electrical Systems for HVAC/R			X				
OXNARD COLLEGE	Energy Auditing			X				
OXNARD COLLEGE	Heating and Hydronics			X				
OXNARD COLLEGE	Mechanical Systems for HVAC/R							
MOORPARK COLLEGE	Photovoltaic Technology			X				
MOORPARK COLLEGE	Environmental Technology	X						
VENTURA COLLEGE	Water Science: Wastewater	X	X					
VENTURA COLLEGE	Water Science: Water	X	X					

VENTURA COUNTY CLEAN/GREEN PROGRAMS

HOSPITALITY								
OXNARD COLLEGE	Culinary Arts	X	X					
OXNARD COLLEGE	Restaurant Management	X	X					
OXNARD COLLEGE	Lead Cook			X				
OXNARD COLLEGE	Hospitality Management		X					
TRANSPORTATION								
OXNARD COLLEGE	Automotive Technology	X	X					
** Proficiency Award	does not appear on transcript- is not for credit.							

VENTURA COUNTY CLEAN/GREEN PROGRAMS (To be developed)

LABOR UNIONS: TRAINING AND APPRENTICESHIP PROGRAMS IN VENTURA COUNTY				(DRAFT 1.15.2016)		
LABOR UNION	PROGRAM	TRAINING	REGISTERED APPRENTICESHIP	INDUSTRY RECOGNIZED CREDENTIAL AWARDED	PREPARATION FOR RECOGNIZED CREDENTIAL	JOB PLACEMENT %RATE
AGRICULTURE AND NATURAL RESOURCES						
BUILDING AND CONSTRUCTION TRADES						
ENGINEERING AND ARCHITECTURE						
ENERGY ENVIRONMENT AND UTILITIES						
HOSPITALITY						
TRANSPORTATION						



Occupational Analysis: Energy and Utilities Cluster

Ventura County Economic Sub-Market

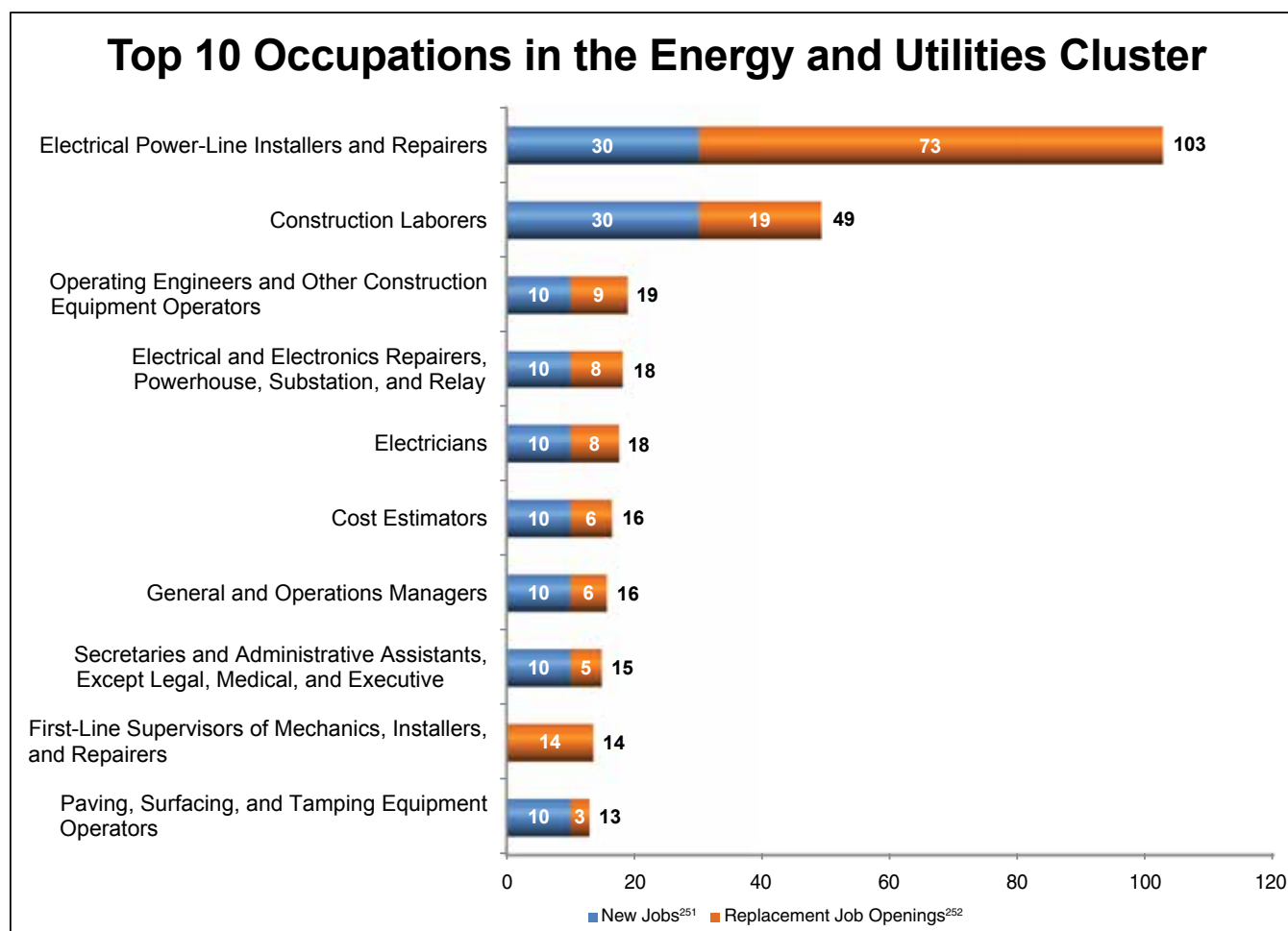
July 2015

What is the Energy and Utilities Cluster?

The Energies and Utilities industry cluster is comprised of two related industries that build the structures providing energy as well as the operation and distribution of different types of electrical power. The workers employed within this cluster span all skill levels and share skills and work activities both within the cluster and in many other industry clusters, suggesting the potential for skills transference and upward mobility with additional training.

Top 10 Occupations in the Energy and Utilities Cluster

The graph below identifies the top 10 occupations in the Energy and Utilities cluster, based on the Ventura County Economic Sub-Market's new job growth plus replacement openings. In sum, these 10 occupations represent more than one-half of the 509 total job openings projected in this cluster between 2012 and 2022. Moreover, many share the same required skills such as active listening, coordination, critical thinking, monitoring, and reading comprehension.²⁵⁰



Source: California Employment Development Department, *Projections of Employment 2012-2022*. Industry and occupational employment projections for 2012-2022 in this report may not be directly comparable to the published 2012-2022 employment projections available online at www.labormarketinfo.edd.ca.gov.

²⁵⁰ U.S. Department of Labor's [Occupational Information Network \(O*NET\)](http://www.onetonline.org) at www.onetonline.org.

²⁵¹ New jobs are only openings due to growth and do not include job declines. If an occupation's employment change is negative, there is no job growth and new jobs are set to zero.

²⁵² Replacement job openings estimate the number of job openings created when workers retire or permanently leave an occupation and need to be replaced.

Top 10 Occupations and Recent Job Demand in the Energy and Utilities Cluster

The table below further profiles the Ventura County Economic Sub-Market's top 10 occupations in the Energy and Utilities cluster by listing the total job openings for 2012-2022, median hourly and annual wages, and entry-level education requirements. Also included are online job advertisements extracted from The Conference Board Help Wanted OnLine™ (HWOL) data series over a 120-day period. HWOL compiles, analyzes, and categorizes job advertisements from numerous online job boards, including CalJOBSSM (www.caljobs.ca.gov), California's online job listing system.

Occupations	Total Job Openings ²⁵³ (2012-2022)	Median Hourly Wage (2014)	Median Annual Wage (2014)	Entry Level Education ²⁵⁴	HWOL Job Ads ²⁵⁵ (120 days)
Electrical Power-Line Installers and Repairers	103	\$49.20	\$102,319	High school diploma or equivalent	7
Construction Laborers	49	\$19.37	\$40,295	Less than high school	140
Operating Engineers and Other Construction Equipment Operators	19	\$35.50	\$73,842	High school diploma or equivalent	14
Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	18	N/A	N/A	Postsecondary non-degree award	0
Electricians	18	\$29.36	\$61,072	High school diploma or equivalent	112
Cost Estimators	16	\$28.37	\$59,006	Bachelor's degree	24
General and Operations Managers	16	\$51.15	\$106,377	Bachelor's degree	202
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	15	\$17.94	\$37,302	High school diploma or equivalent	316
First-Line Supervisors of Mechanics, Installers, and Repairers	14	\$33.16	\$68,972	High school diploma or equivalent	165
Paving, Surfacing, and Tamping Equipment Operators	13	\$24.71	\$51,385	High school diploma or equivalent	4

Source: California Employment Development Department, *Projections of Employment 2012-2022: Occupational Employment Statistics Wage Survey*, updated to 4th Q, 2014; The Conference Board Help Wanted OnLine™ (HWOL) Data Series, 120-day period ending July 24, 2015.

²⁵³ Total job openings are the sum of new jobs and replacement job openings.

²⁵⁴ U.S. Department of Labor, Bureau of Labor Statistics (BLS) 2012 education levels.

²⁵⁵ Totals represent job advertisements from employers in all industries. One job opening may be represented in more than one job advertisement.

Top Occupations for the Energy and Utilities Cluster by Education Level

The table below identifies the occupations with the most total job openings, categorized by Bureau of Labor Statistics (BLS) 2012 entry-level education requirements, within the Energy and Utilities cluster. The table includes the Ventura County Economic Sub-Market's projected total job openings and median hourly and annual wages. In addition, recent totals of online job advertisements over 120-day period are included. Grouping occupations by education levels allows individuals to better gauge the potential for skills transference and upward mobility within the cluster.

Occupations	Total Job Openings ²⁵⁶ (2012-2022)	Median Hourly Wage (2014)	Median Annual Wage (2014)	HWOL Job Ads (120 days)
Requires a Bachelor's Degree or Higher				
Cost Estimators	16	\$28.37	\$59,006	24
General and Operations Managers	16	\$51.15	\$106,377	202
Construction Managers	10	\$44.90	\$93,403	47
Accountants and Auditors	9	\$34.49	\$71,730	334
Logisticians	3	\$41.70	\$86,718	46
Requires Some College, Postsecondary Non-Degree Award, or Associate's Degree				
Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	18	N/A	N/A	0
Heavy and Tractor-Trailer Truck Drivers	10	\$22.09	\$45,961	606
Wind Turbine Service Technicians	3	N/A	N/A	0
Requires a High School Diploma or Equivalent or Less				
Electrical Power-Line Installers and Repairers	103	\$49.20	\$102,319	7
Construction Laborers	49	\$19.37	\$40,295	140
Operating Engineers and Other Construction Equipment Operators	19	\$35.50	\$73,842	14
Electricians	18	\$29.36	\$61,072	112
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	15	\$17.94	\$37,302	316

Source: California Employment Development Department, Projections of Employment 2012-2022; Occupational Employment Statistics Wage Survey, updated to 4th Q, 2014; The Conference Board Help Wanted OnLine™ (HWOL) Data Series, 120-day period ending July 24, 2015.

²⁵⁶ Total job openings are the sum of new jobs and replacement job openings.

The table below lists the 10 top skills required for top occupations in the Energy and Utilities cluster, categorized by entry-level education requirements. Critical thinking, monitoring, and reading comprehension are the most commonly shared skills, followed by active listening and coordination. The skills and work activities identified for each occupation are from the U.S. Department of Labor's Occupational Information Network (O*NET).

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

Labor Market Information Division

Work Activities in the Energy and Utilities Cluster

The table below lists the 10 top work activities required for top occupations in the Energy and Utilities cluster, categorized by entry-level education requirements. The most common include organizing, planning, and prioritizing work and communicating with supervisors, peers, or subordinates.

Occupations	Work Activities																																	
	Analyzing Data or Information	Communicating with Persons Outside Organization	Communicating with Supervisors, Peers, or Subordinates	Controlling Machines and Processes	Coordinating the Work and Activities of Others	Developing and Building Teams	Documenting/Recording Information	Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment	Establishing and Maintaining Interpersonal Relationships	Estimating the Quantifiable Characteristics of Products, Events, or Information	Evaluating Information to Determine Compliance with Standards	Getting Information	Handling and Moving Objects	Identifying Objects, Actions, and Events	Inspecting Equipment, Structures, or Material	Judging the Qualities of Things, Services, or People	Making Decisions and Solving Problems	Monitor Processes, Materials, or Surroundings	Monitoring and Controlling Resources	Operating Vehicles, Mechanized Devices, or Equipment	Organizing, Planning, and Prioritizing Work	Performing Administrative Activities	Performing for or Working Directly with the Public	Performing General Physical Activities	Processing Information	Provide Consultation and Advice to Others	Repairing and Maintaining Electronic Equipment	Repairing and Maintaining Mechanical Equipment	Resolving Conflicts and Negotiating with Others	Scheduling Work and Activities	Thinking Creatively	Training and Teaching Others	Updating and Using Relevant Knowledge	
Requires a Bachelor’s Degree or Higher																																		
Cost Estimators	●	●				●			●		●						●				●				●	●							●	
General and Operations Managers		●	●	●				●									●		●		●									●	●	●		
Construction Managers		●	●		●	●		●			●						●				●									●	●			
Accountants and Auditors ²⁵⁸	●		●					●		●	●						●				●	●			●	●								●
Logisticians			●					●		●	●		●					●			●										●	●		●
Requires Some College, Postsecondary Non-Degree Award, or Associate’s Degree																																		
Electrical and Electronics Repairers, Powerhouse, Substation, and Relay			●	●			●	●					●		●			●						●				●	●					
Heavy and Tractor-Trailer Truck Drivers				●				●			●	●	●	●	●	●				●	●		●											
Wind Turbine Service Technicians				●				●					●		●			●			●		●				●	●						●
Requires a High School Diploma or Equivalent or Less																																		
Electrical Power-Line Installers and Repairers			●	●	●								●					●			●	●			●				●					●
Construction Laborers			●	●									●		●	●	●	●		●				●					●					●
Operating Engineers and Other Construction Equipment Operators				●	●								●		●			●		●	●		●					●						●
Electricians					●							●	●	●	●	●	●			●			●		●		●							●
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive			●					●		●			●				●				●	●	●		●									●

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

²⁵⁸ Work Activities represent Accountants, a specialty occupation of Accountants and Auditors.

Related Occupations for the Energy and Utilities Cluster

The table below lists top occupations in the Energy and Utilities cluster by entry-level education requirements and provides a sample of related occupations. These related occupations match many of the skills, education, and work experience needed for the top Energy and Utilities cluster occupations.

Energy and Utilities Occupations	Related Occupations
Requires a Bachelor's Degree or Higher	
Cost Estimators	<ul style="list-style-type: none"> Budget Analysts Regulatory Affairs Specialists Risk Management Specialists
General and Operations Managers	<ul style="list-style-type: none"> First-Line Supervisors of Office and Administrative Support Workers First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators Logistics Managers
Construction Managers	<ul style="list-style-type: none"> Civil Engineers Energy Engineers Logistics Managers
Accountants and Auditors	<ul style="list-style-type: none"> Bookkeeping, Accounting, and Auditing Clerks Credit Analysts Financial Analysts
Logisticians	<ul style="list-style-type: none"> Logistics Managers Management Analysts Transportation Managers
Requires Some College, Postsecondary Non-Degree Award, or Associate's Degree	
Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	<ul style="list-style-type: none"> Electrical Power-Line Installers and Repairers Elevator Installers and Repairers Maintenance and Repair Workers, General
Heavy and Tractor-Trailer Truck Drivers	<ul style="list-style-type: none"> Excavating and Loading Machine and Dragline Operators Paving, Surfacing, and Tamping Equipment Operators Pile-Driver Operators
Wind Turbine Service Technicians	<ul style="list-style-type: none"> N/A
Requires a High School Diploma or Equivalent or Less	
Electrical Power-Line Installers and Repairers	<ul style="list-style-type: none"> Control and Valve Installers and Repairers, Except Mechanical Door Maintenance and Repair Workers, General Telecommunications Line Installers and Repairers
Construction Laborers	<ul style="list-style-type: none"> Helpers -Carpenters Pipelayers Roustabouts, Oil and Gas
Operating Engineers and Other Construction Equipment Operators	<ul style="list-style-type: none"> Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic Excavating and Loading Machine and Dragline Operators Pile-Driver Operators
Electricians	<ul style="list-style-type: none"> Heating and Air Conditioning Mechanics and Installers Pipe Fitters and Steamfitters Plumbers
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	<ul style="list-style-type: none"> Executive Secretaries and Executive Administrative Assistants Office Clerks, General Receptionists and Information Clerks

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

Employer Demand for the Energy and Utilities Cluster

The following table lists the Ventura County Economic Sub-Market employers in the Energy and Utilities cluster who posted the most job advertisements during the 120-day period ending July 24, 2015. The table also includes the number of job advertisements from the previous year's period, as well as the numerical change and year-over percent change in these postings for the same 120-day period.

Energy and Utilities Cluster Employers	Recent Job Advertisements ²⁵⁹ (120-day period)	Prior Year Job Advertisements (120-day period)	Numerical Change	Year-Over Percent Change (HWOL Job Advertisements)
Southern California Edison	15	11	4	36.4%
NRG Energy, Inc.	3	2	1	50.0%

Source: The Conference Board Help Wanted OnLine™ (HWOL) Data Series: Period ending July 24, 2015.

²⁵⁹ Totals do not include employers with anonymous job advertisements.

Instructional Programs for the Top Energy and Utilities Occupations

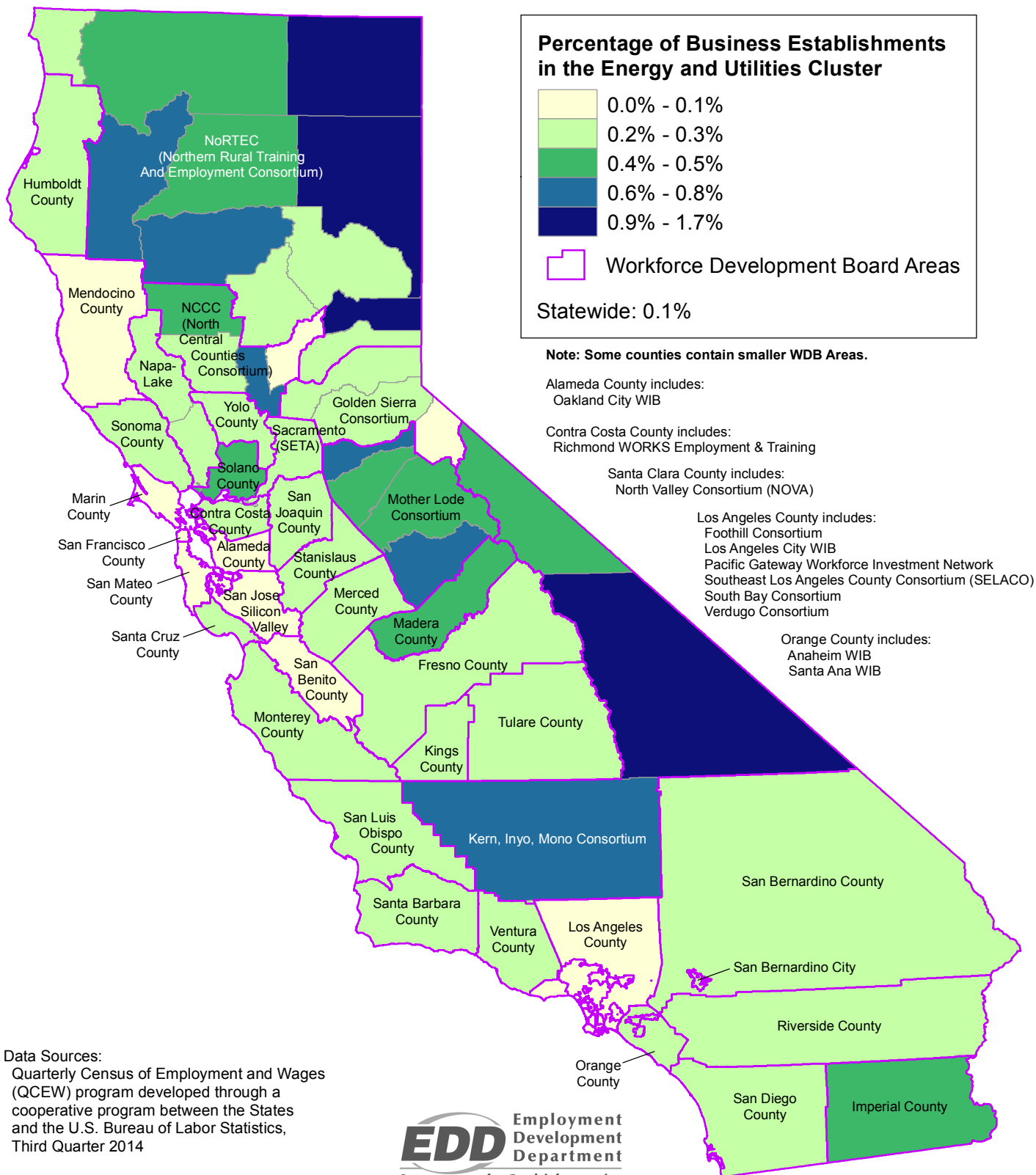
The table below provides examples of instructional programs related to some of the top occupations in the Energy and Utilities cluster, particularly those that require less than a bachelor's degree. These programs train individuals for occupations throughout many industries and are not limited to the Energy and Utilities cluster. To view a more complete list of training programs, select the source links under the table below. The Taxonomy of Programs categorizes and describes instructional programs only for California Community Colleges.

Occupations	Classification of Instructional Program (CIP)		Taxonomy of Programs (TOP)	
	CIP Code	CIP Title	TOP Code	TOP Title
Heavy and Tractor-Trailer Truck Drivers	49.0205	Truck and Bus Driver/Commercial Vehicle Operator and Instructor	094750	Truck and Bus Driving
Wind Turbine Service Technicians	47.0303	Industrial Mechanics and Maintenance Technology	N/A	N/A
Electrical Power-Line Installers and Repairers	46.0301	Electrical and Power Transmission Installation/Installer, General	093440	Electrical Systems and Power Transmission
	46.0303	Lineworker		
	46.0399	Electrical and Power Transmission Installers, Other		
Operating Engineers and Other Construction Equipment Operators	49.0202	Construction/Heavy Equipment/Earthmoving Equipment Operation	094730	Heavy Equipment Operation
	49.0206	Mobil Crane Operation/Operator		
Electricians	46.0302	Electrician	095220	Electrical
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	52.0401	Administrative Assistant and Secretarial Science, General	051400	Office Technology/Office Computer Applications
	52.0402	Executive Assistant/Executive Secretary		

Source: U.S. Department of Education [Integrated Postsecondary Education Data System \(IPEDS\)](http://www.nces.ed.gov/ipeds) at www.nces.ed.gov; [California Community Colleges TOP-to-CIP Crosswalk](http://www.cccco.edu) 7th Edition (2010), www.cccco.edu.

California Energy and Utilities Cluster

Percentage of Total County Establishments, 2014



Data Sources:
Quarterly Census of Employment and Wages (QCEW) program developed through a cooperative program between the States and the U.S. Bureau of Labor Statistics, Third Quarter 2014

Cartography by:
Labor Market Information Division
California Employment Development Department
<http://www.labormarketinfo.edd.ca.gov>
September 2015

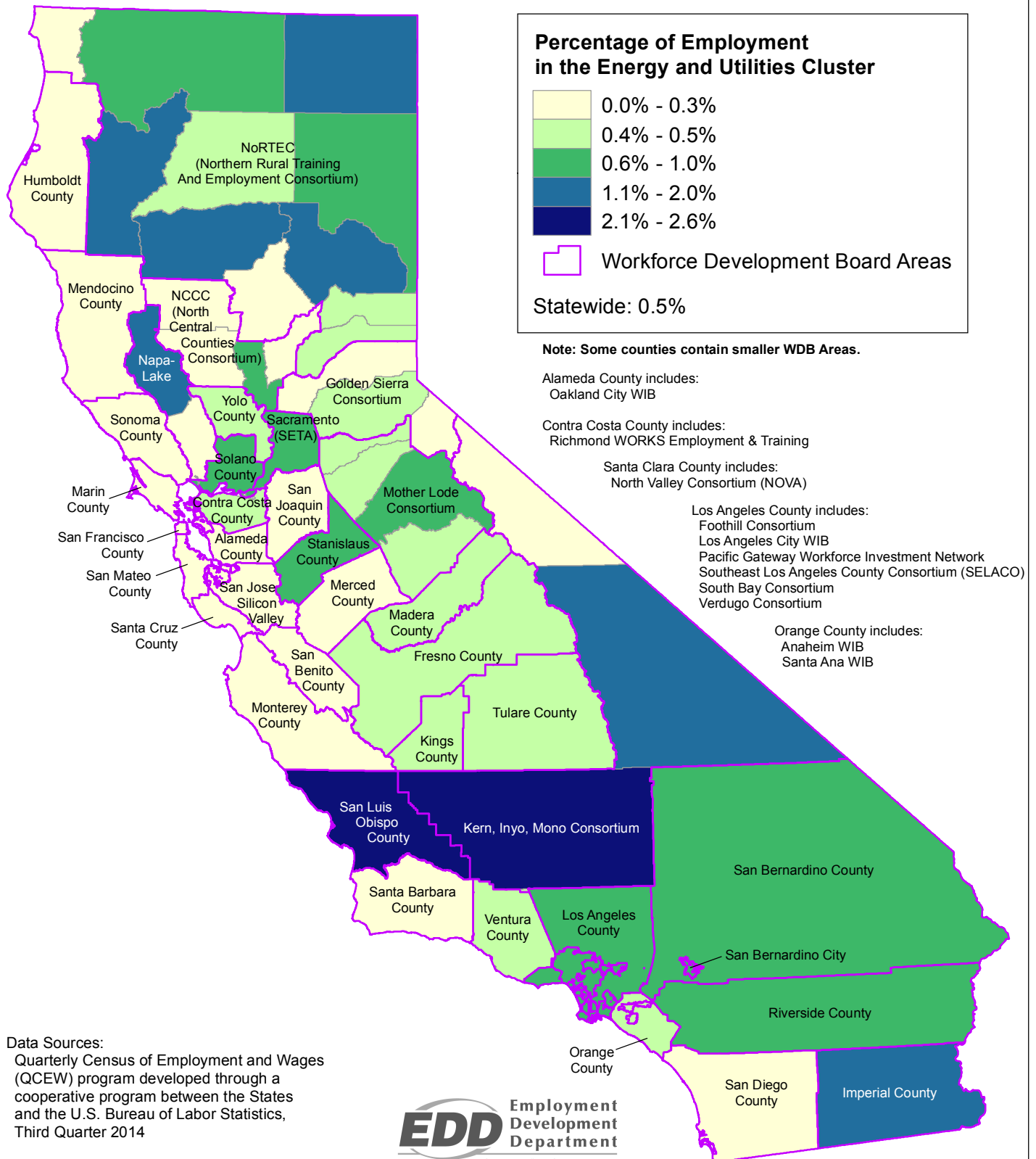
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California Energy and Utilities Cluster

Percentage of Total County Employment, 2014



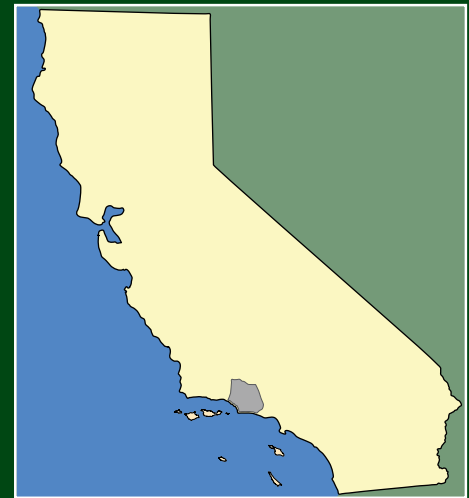
Data Sources:
Quarterly Census of Employment and Wages (QCEW) program developed through a cooperative program between the States and the U.S. Bureau of Labor Statistics, Third Quarter 2014

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Occupational Analysis: Hospitality and Tourism Cluster

Ventura County Economic Sub-Market

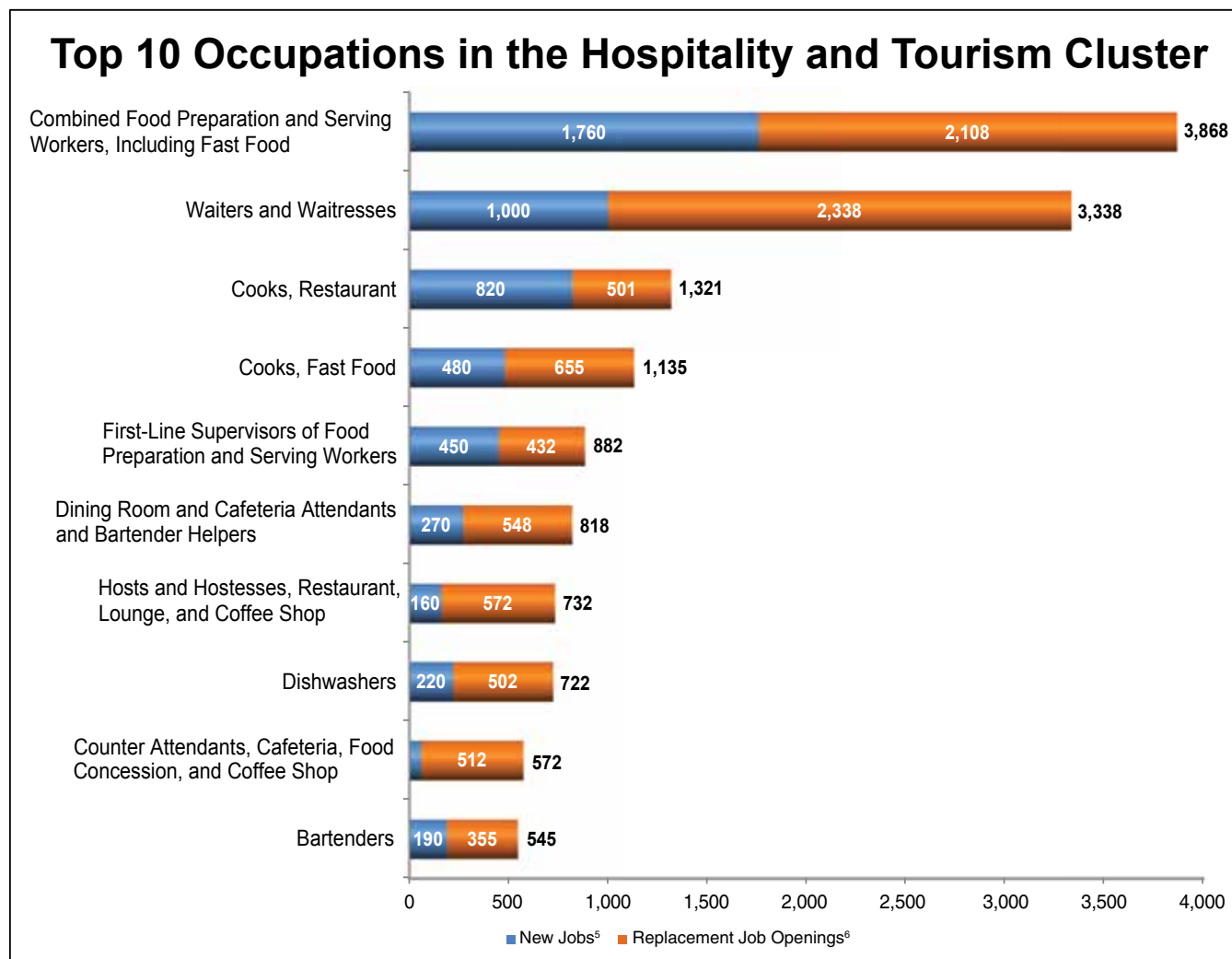
July 2015

What is the Hospitality and Tourism Cluster?

The Hospitality and Tourism cluster is comprised of 14 industries that provide goods and services related to lodging, food, recreation, travel, conventions, and transportation. The workers employed within this cluster span all skill levels and share skills and work activities both within the cluster and in many other industry clusters, suggesting the potential for skills transference and upward mobility with additional training.

Top 10 Occupations in the Hospitality and Tourism Cluster

The graph below identifies the top 10 occupations in the Hospitality and Tourism cluster, based on Ventura County Economic Sub-Market's new job growth plus replacement openings. In sum, these 10 occupations represent three-quarters of the 18,462 total job openings projected in this cluster between 2012 and 2022. Moreover, many share the same required skills such as active listening, coordination, reading comprehension, social perceptiveness, and speaking.⁴



Source: California Employment Development Department, *Projections of Employment 2012-2022*. Industry and occupational employment projections for 2012-2022 in this report may not be directly comparable to the published 2012-2022 employment projections available online at www.labormarketinfo.edd.ca.gov.

⁴ U.S. Department of Labor's [Occupational Information Network \(O*NET\)](http://www.onetonline.org) at www.onetonline.org.

⁵ New jobs are only openings due to growth and do not include job declines. If an occupation's employment change is negative, there is no job growth and new jobs are set to zero.

⁶ Replacement job openings estimate the number of job openings created when workers retire or permanently leave an occupation and need to be replaced.

Top 10 Occupations and Recent Job Demand in the Hospitality and Tourism Cluster

The table below further profiles the Ventura County Economic Sub-Market's top 10 occupations in the Hospitality and Tourism cluster by listing the total job openings for 2012-2022, median hourly and annual wages, and entry-level education requirements. Also included are online job advertisements extracted from The Conference Board Help Wanted OnLine™ (HWOL) data series over a 120-day period. HWOL compiles, analyzes, and categorizes job advertisements from numerous online job boards, including CalJOBSSM (www.caljobs.ca.gov), California's online job listing system.

Occupations	Total Job Openings ⁷ (2012-2022)	Median Hourly Wage (2014)	Median Annual Wage (2014)	Entry Level Education ⁸	HWOL Job Ads ⁹ (120 days)
Combined Food Preparation and Serving Workers, Including Fast Food	3,868	\$9.50	\$19,777	Less than high school	285
Waiters and Waitresses	3,338	\$9.20	\$19,122	Less than high school	246
Cooks, Restaurant	1,321	\$11.25	\$23,399	Less than high school	387
Cooks, Fast Food	1,135	\$9.45	\$19,666	Less than high school	36
First-Line Supervisors of Food Preparation and Serving Workers	882	\$13.10	\$27,239	High school diploma or equivalent	424
Dining Room and Cafeteria Attendants and Bartender Helpers	818	\$9.13	\$18,992	Less than high school	92
Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	732	\$9.26	\$19,261	Less than high school	62
Dishwashers	722	\$9.32	\$19,393	Less than high school	213
Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	572	\$9.52	\$19,821	Less than high school	38
Bartenders	545	\$9.45	\$19,655	Less than high school	84

Source: California Employment Development Department, *Projections of Employment 2012-2022*; *Occupational Employment Statistics Wage Survey*, updated to 4th Q, 2014; The Conference Board Help Wanted OnLine™ (HWOL) Data Series, 120-day period ending July 24, 2015.

⁷ Total job openings are the sum of new jobs and replacement job openings.

⁸ U.S. Department of Labor, Bureau of Labor Statistics (BLS) 2012 education levels.

⁹ Totals represent job advertisements from employers in all industries. One job opening may be represented in more than one job advertisement.

Top Occupations for the Hospitality and Tourism Cluster by Education Level

The table below identifies the occupations with the most total job openings, categorized by Bureau of Labor Statistics (BLS) 2012 entry-level education requirements, within the Hospitality and Tourism cluster. The table includes the Ventura County Economic Sub-Market's projected total job openings and median hourly and annual wages. In addition, recent totals of online job advertisements over 120-day period are included. Grouping occupations by education levels allows individuals to better gauge the potential for skills transference and upward mobility within the cluster.

Occupations	Total Job Openings ¹⁰ (2012-2022)	Median Hourly Wage (2014)	Median Annual Wage (2014)	HWOL Job Ads (120 days)
Requires a Bachelor's Degree or Higher				
General and Operations Managers	142	\$51.15	\$106,377	202
Coaches and Scouts	66	N/A	\$33,195	36
Accountants and Auditors	25	\$34.49	\$71,730	334
Sales Managers	16	\$49.80	\$103,581	141
Captains, Mates, and Pilots of Water Vessels	15	\$27.60	\$57,408	5
Requires Some College, Postsecondary Non-Degree Award, or Associate's Degree				
Massage Therapists	26	\$22.03	\$45,822	69
Skincare Specialists	12	N/A	N/A	44
Manicurists and Pedicurists	11	\$9.39	\$19,539	35
Computer Network Support Specialists	2	\$30.94	\$64,357	7
Requires a High School Diploma or Equivalent or Less				
Combined Food Preparation and Serving Workers, Including Fast Food	3,868	\$9.50	\$19,777	285
Waiters and Waitresses	3,338	\$9.20	\$19,122	246
Cooks, Restaurant	1,321	\$11.25	\$23,399	387
Cooks, Fast Food	1,135	\$9.45	\$19,666	36
First-Line Supervisors of Food Preparation and Serving Workers	882	\$13.10	\$27,239	424

Source: California Employment Development Department, Projections of Employment 2012-2022; Occupational Employment Statistics Wage Survey, updated to 4th Q, 2014; The Conference Board Help Wanted OnLine™ (HWOL) Data Series, 120-day period ending July 24, 2015.

¹⁰ Total job openings are the sum of new jobs and replacement job openings.

Skill Requirements in the Hospitality and Tourism Cluster

The table below lists the 10 top skills required for top occupations in the Hospitality and Tourism cluster, categorized by entry-level education requirements. Active listening and critical thinking are the most commonly shared skills, followed by monitoring and speaking. The skills and work activities identified for each occupation are from the U.S. Department of Labor's Occupational Information Network (O*NET).

Occupations	Skills																		
	Active Learning	Active Listening	Coordination	Critical Thinking	Instruction	Judgment and Decision Making	Learning Strategies	Management of Personnel Resources	Mathematics	Monitoring	Operation and Control	Operation Monitoring	Persuasion	Quality Control Analysis	Reading Comprehension	Service Orientation	Social Perceptiveness	Speaking	Systems Analysis
Requires a Bachelor's Degree or Higher																			
General and Operations Managers	•	•	•	•				•		•					•		•	•	
Coaches and Scouts		•		•	•	•	•	•		•							•	•	•
Accountants and Auditors ¹¹	•	•		•		•			•	•					•			•	•
Sales Managers			•	•		•		•		•			•				•	•	
Captains, Mates, and Pilots of Water Vessels ¹²			•	•		•		•		•	•	•			•			•	
Requires Some College, Postsecondary Non-Degree Award, or Associate's Degree																			
Massage Therapists	•	•		•		•				•					•	•	•	•	
Skincare Specialists	•	•	•	•		•				•					•	•	•	•	
Manicurists and Pedicurists	•	•	•	•						•					•	•	•	•	•
Computer Network Support Specialists	•	•		•		•	•			•					•			•	•
Requires a High School Diploma or Equivalent or Less																			
Combined Food Preparation and Serving Workers, Including Fast Food		•	•	•	•		•						•		•	•	•	•	
Waiters and Waitresses		•	•	•			•			•			•		•	•	•	•	
Cooks, Restaurant	•	•	•	•	•					•				•				•	
Cooks, Fast Food	•	•	•	•						•			•		•	•	•	•	
First-Line Supervisors of Food Preparation and Serving Workers			•	•				•		•					•	•	•	•	•

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

¹¹ Skills listed represent Accountants, a specialty occupation of Accountants and Auditors.

¹² Skills listed represent Ship and Boat Captains, a specialty occupation of Captains, Mates, and Pilots of Water Vessels.

Work Activities in the Hospitality and Tourism Cluster

The table below lists the 10 top work activities required for top occupations in the Hospitality and Tourism cluster, categorized by entry-level education requirements. The most common include coordinating the work and activities of others; establishing and maintaining interpersonal relationships; and organizing, planning, and prioritizing work.

Occupations	Work Activities																			
	Analyzing Data or Information	Assisting and Caring for Others	Coaching and Developing Others	Communicating with Persons Outside Organization	Communicating with Supervisors, Peers, or Subordinates	Controlling Machines and Processes	Coordinating the Work and Activities of Others	Establishing and Maintaining Interpersonal Relationships	Evaluating Information to Determine Compliance with Standards	Getting Information	Guiding, Directing, and Motivating Subordinates	Handling and Moving Objects	Identifying Objects, Actions, and Events	Inspecting Equipment, Structures, or Material	Interacting With Computers	Judging the Qualities of Things, Services, or People	Making Decisions and Solving Problems	Monitor Processes, Materials, or Surroundings	Monitoring and Controlling Resources	Operating Vehicles, Mechanized Devices, or Equipment
Requires a Bachelor's Degree or Higher																				
General and Operations Managers				•	•		•	•									•	•	•	
Coaches and Scouts			•				•	•				•				•			•	
Accountants and Auditors ¹³	•				•			•	•	•							•		•	
Sales Managers			•	•	•		•	•			•						•			
Captains, Mates, and Pilots of Water Vessels ¹⁴						•	•				•		•			•	•			•
Requires Some College, Postsecondary Non-Degree Award, or Associate's Degree																				
Massage Therapists		•		•				•		•		•				•			•	•
Skincare Specialists		•					•	•				•					•		•	•
Manicurists and Pedicurists		•		•				•				•					•		•	•
Computer Network Support Specialists					•			•	•					•			•		•	•
Requires a High School Diploma or Equivalent or Less																				
Combined Food Preparation and Serving Workers, Including Fast Food			•		•		•	•		•		•	•						•	•
Waiters and Waitresses				•		•	•	•				•	•					•	•	
Cooks, Restaurant				•		•	•					•	•			•		•		•
Cooks, Fast Food			•	•			•					•	•				•		•	•
First-Line Supervisors of Food Preparation and Serving Workers		•				•	•			•	•	•					•			

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

¹³ Work Activities listed represent Accountants, a specialty occupation of Accountants and Auditors.

¹⁴ Work Activities listed represent Ship and Boat Captains, a specialty occupation of Captains, Mates, and Pilots of Water Vessels.

Related Occupations for the Hospitality and Tourism Cluster

The table below lists top occupations in the Hospitality and Tourism cluster by entry-level education requirements and provides a sample of related occupations. These related occupations match many of the skills, education, and work experience needed for the top Hospitality and Tourism cluster occupations.

Hospitality and Tourism Occupations	Related Occupations
Requires a Bachelor's Degree or Higher	
General and Operations Managers	<ul style="list-style-type: none"> • First-Line Supervisors of Office and Administrative Support Workers • Logistics Managers • Lodging Managers
Coaches and Scouts	<ul style="list-style-type: none"> • Recreation Workers • Secondary School Teachers, Except Special and Career/Technical Education • Training and Development Managers
Accountants and Auditors	<ul style="list-style-type: none"> • Financial Analysts • Risk Management Specialists • Treasurers and Controllers
Sales Managers	<ul style="list-style-type: none"> • Financial Managers, Branch or Department • Public Relations and Fundraising Managers • Marketing Managers
Captains, Mates, and Pilots of Water Vessels	<ul style="list-style-type: none"> • First-Line Supervisors of Mechanics, Installers, and Repairers • Municipal Firefighters • Ship Engineers
Requires Some College, Postsecondary Non-Degree Award, or Associate's Degree	
Massage Therapists	<ul style="list-style-type: none"> • Hairdressers, Hairstylists, and Cosmetologists • Skincare Specialists • Teacher Assistants
Skincare Specialists	<ul style="list-style-type: none"> • Dental Assistants • Massage Therapists • Medical Assistants
Manicurists and Pedicurists	<ul style="list-style-type: none"> • Barbers • Hairdressers, Hairstylists, and Cosmetologists • Skincare Specialists
Computer Network Support Specialists	<ul style="list-style-type: none"> • N/A
Requires a High School Diploma or Equivalent or Less	
Combined Food Preparation and Serving Workers, Including Fast Food	<ul style="list-style-type: none"> • Cashiers • Counter Attendants, Cafeteria, Food Concession, and Coffee Shop • Food Preparation Workers
Waiters and Waitresses	<ul style="list-style-type: none"> • Food Servers, Nonrestaurant • Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop • Stock Clerks, Sales Floor
Cooks, Restaurant	<ul style="list-style-type: none"> • Cooks, Institution and Cafeteria • Cooks, Short Order • Packers and Packagers, Hand
Cooks, Fast Food	<ul style="list-style-type: none"> • Combined Food Preparation and Serving Workers, Including Fast Food • Cooks, Institution and Cafeteria • Food Preparation Workers
First-Line Supervisors of Food Preparation and Serving Workers	<ul style="list-style-type: none"> • Bartenders • Chefs and Head Cooks • Cooks, Restaurant

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

Employer Demand for the Hospitality and Tourism Cluster

The following table lists the Ventura County Economic Sub-Market employers in the Hospitality and Tourism cluster who posted the most job advertisements during the 120-day period ending July 24, 2015. The table also includes the number of job advertisements from the previous year's period, as well as the numerical change and year-over percent change in these postings for the same 120-day period.

Hospitality and Tourism Cluster Employers	Recent Job Advertisements ¹⁵ (120-day period)	Prior Year Job Advertisements (120-day period)	Numerical Change	Year-Over Percent Change (HWOL Job Advertisements)
Taco Bell	35	4	31	775.0%
Red Robin	29	4	25	625.0%
Embassy Suites	27	26	1	3.8%
Hilton Hotels & Resorts	25	18	7	38.9%
La Quinta Inn	21	13	8	61.5%
24 Hour Fitness	17	16	1	6.3%
Panda Express	15	32	-17	-53.1%
G6 Hospitality, LLC	14	8	6	75.0%
AAA Motor Club	12	0	12	—
Med Travelers	11	11	0	0.0%
Sodexo, Inc.	11	19	-8	-42.1%
Chipotle	10	8	2	25.0%
P.F. Chang's China Bistro	9	3	6	200.0%
Ojai Valley Inn & Spa	8	3	5	166.7%
Marriott	6	5	1	20.0%
LQ Management, LLC	6	0	6	—
Five Guys Burgers and Fries	5	1	4	400.0%
National Park Service	5	0	5	—
The Cheesecake Factory	4	11	-7	-63.6%
Crowne Plaza	4	1	3	300.0%

Source: The Conference Board Help Wanted OnLine™ (HWOL) Data Series: Period ending July 24, 2015.

¹⁵ Totals do not include employers with anonymous job advertisements.

Instructional Programs for the Top Hospitality and Tourism Cluster Occupations

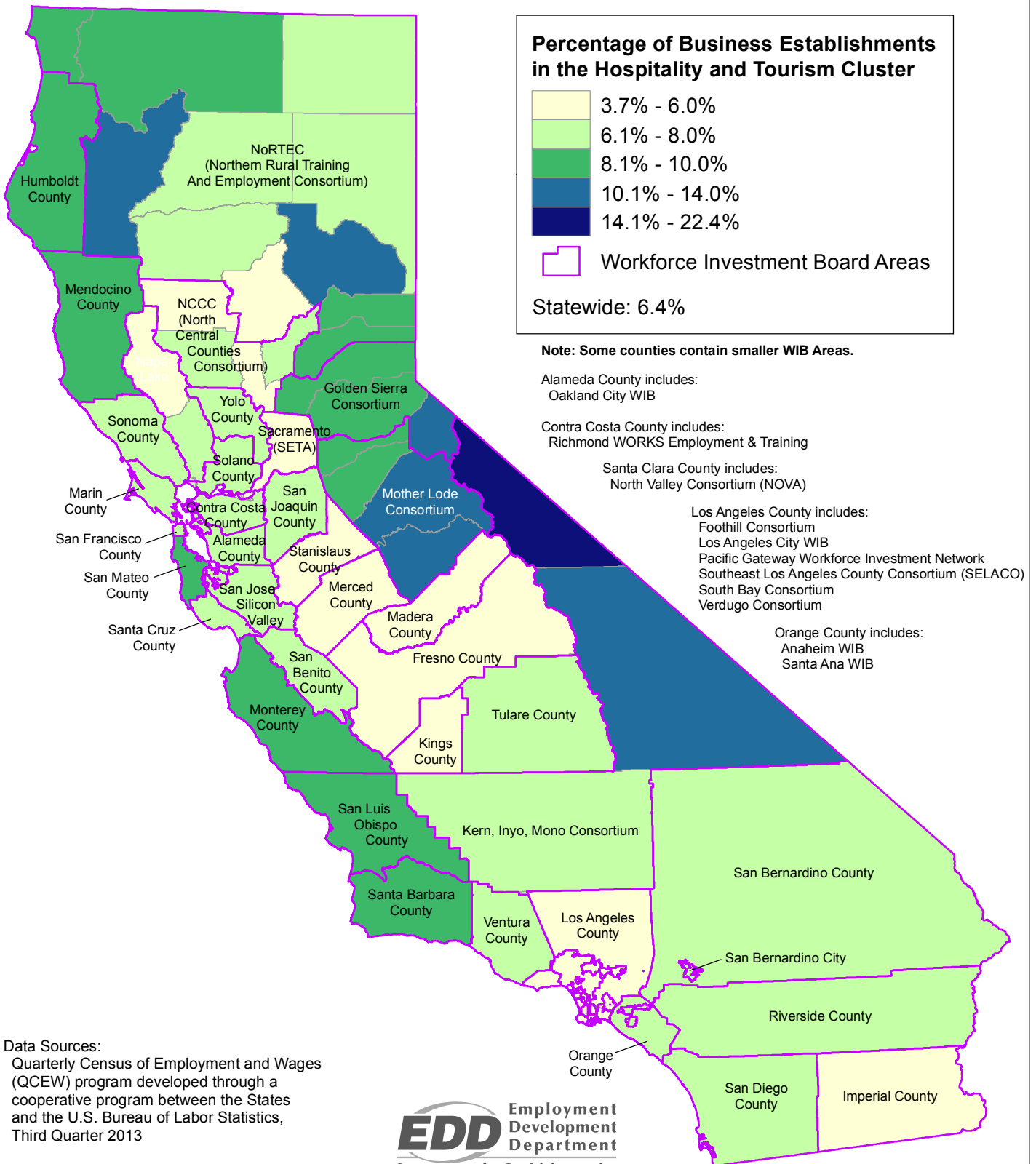
The table below provides examples of instructional programs related to some of the top occupations in the Hospitality and Tourism cluster, particularly those that require less than a bachelor's degree. These programs train individuals for occupations throughout many industries and are not limited to the Hospitality and Tourism cluster. To view a more complete list of training programs, select the source links under the table below. The Taxonomy of Programs categorizes and describes instructional programs only for California Community Colleges.

Occupations	Classification of Instructional Program (CIP)		Taxonomy of Programs (TOP)	
	CIP Code	CIP Title	TOP Code	TOP Title
Massage Therapists	51.3501	Massage Therapy/Therapeutic Massage	126200	Massage Therapy
	51.3502	Asian Bodywork Therapy		
	51.3503	Somatic Bodywork		
Skincare Specialists	12.0401	Cosmetology/Cosmetologist, General	300700	Cosmetology and Barbering
	12.0408	Facial Treatment Specialist/Facialist		
	12.0409	Aesthetician/Esthetician and Skin Care Specialist		
Manicurists and Pedicurists	12.0401	Cosmetology/Cosmetologist, General	300700	Cosmetology and Barbering
	12.0410	Nail Technician/Specialist and Manicurist		
Computer Network Support Specialists	11.0201	Computer Programming/Programmer, General	070710	Computer Programming
	11.0701	Computer Science	070800	Computer Infrastructure and Support
	11.0901	Computer Systems Networking and Telecommunications	070810	Computer Networking
Cooks, Restaurant	12.0500	Cooking and Related Culinary Arts, General	130630	Culinary Arts
	12.0503	Culinary Arts/Chef Training		
First-Line Supervisors of Food Preparation and Serving Workers	12.0500	Cooking and Related Culinary Arts, General	130620	Dietetic Services and Management
	12.0504	Restaurant, Culinary, and Catering Management/Manager	130630	Culinary Arts
	12.0507	Food Service, Waiter/Waitress, and Dining Room Management/ Manager	130710	Restaurant and Food Services and Management

Source: U.S. Department of Education [Integrated Postsecondary Education Data System \(IPEDS\)](https://nces.ed.gov/ipeds/data/) at [www.nces.ed.gov](https://nces.ed.gov/ipeds/data/); [California Community Colleges TOP-to-CIP Crosswalk](https://www.cccco.edu) 7th Edition (2010), www.cccco.edu.

California Hospitality and Tourism Cluster

Percentage of Total County Establishments, 2013



Data Sources:
Quarterly Census of Employment and Wages (QCEW) program developed through a cooperative program between the States and the U.S. Bureau of Labor Statistics, Third Quarter 2013

Cartography by:
Labor Market Information Division
California Employment Development Department
<http://www.labormarketinfo.edd.ca.gov>
July 2014

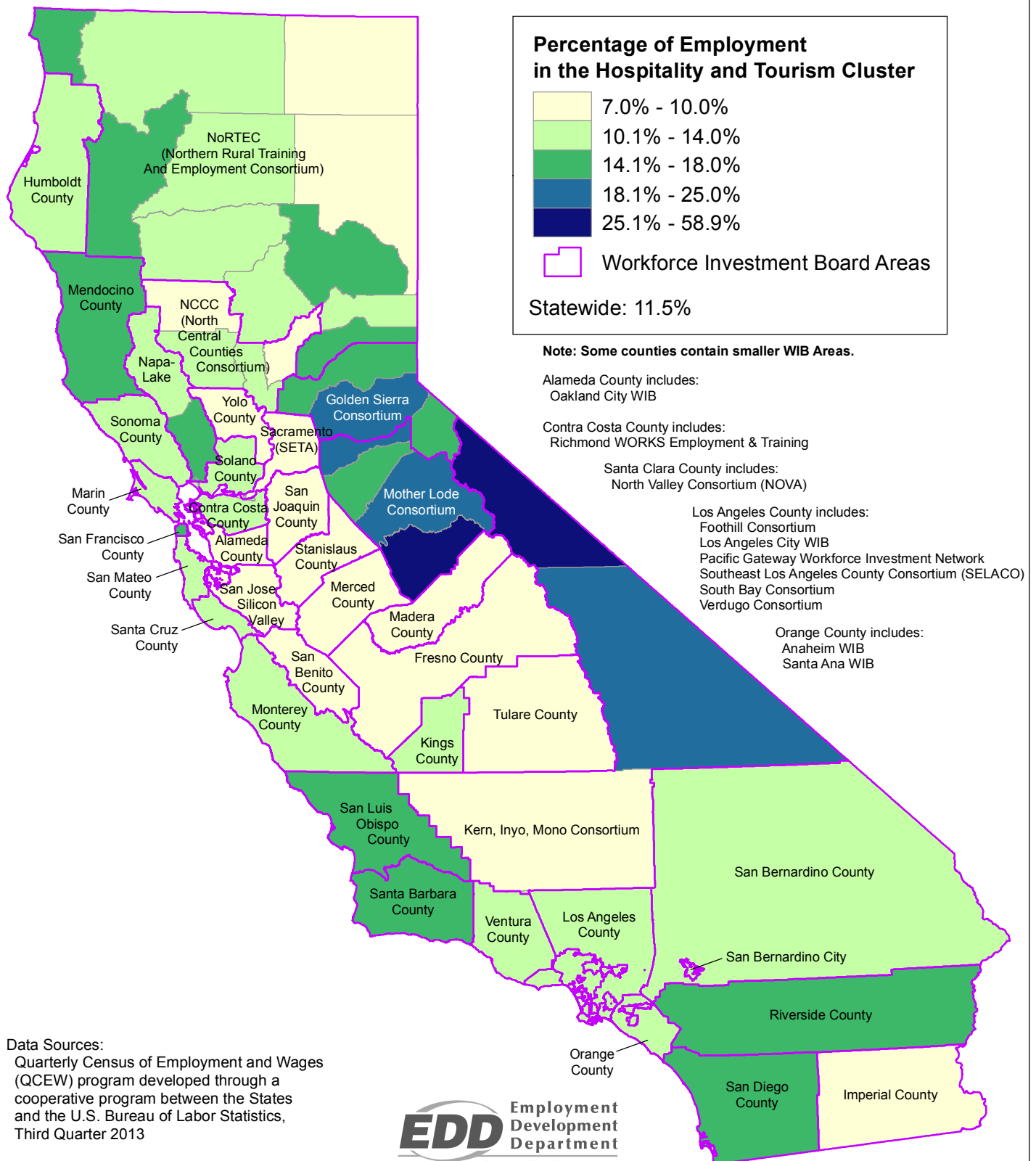
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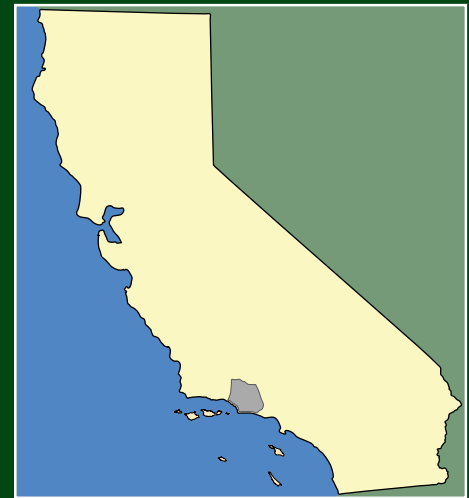
California Hospitality and Tourism Cluster

Percentage of Total County Employment, 2013



Data Sources:
Quarterly Census of Employment and Wages (QCEW) program developed through a cooperative program between the States and the U.S. Bureau of Labor Statistics, Third Quarter 2013

Cartography by:
Labor Market Information Division
California Employment Development Department
<http://www.labormarketinfo.edd.ca.gov>
July 2014



Occupational Analysis: Oil and Gas Products and Services Cluster

Ventura County Economic Sub-Market

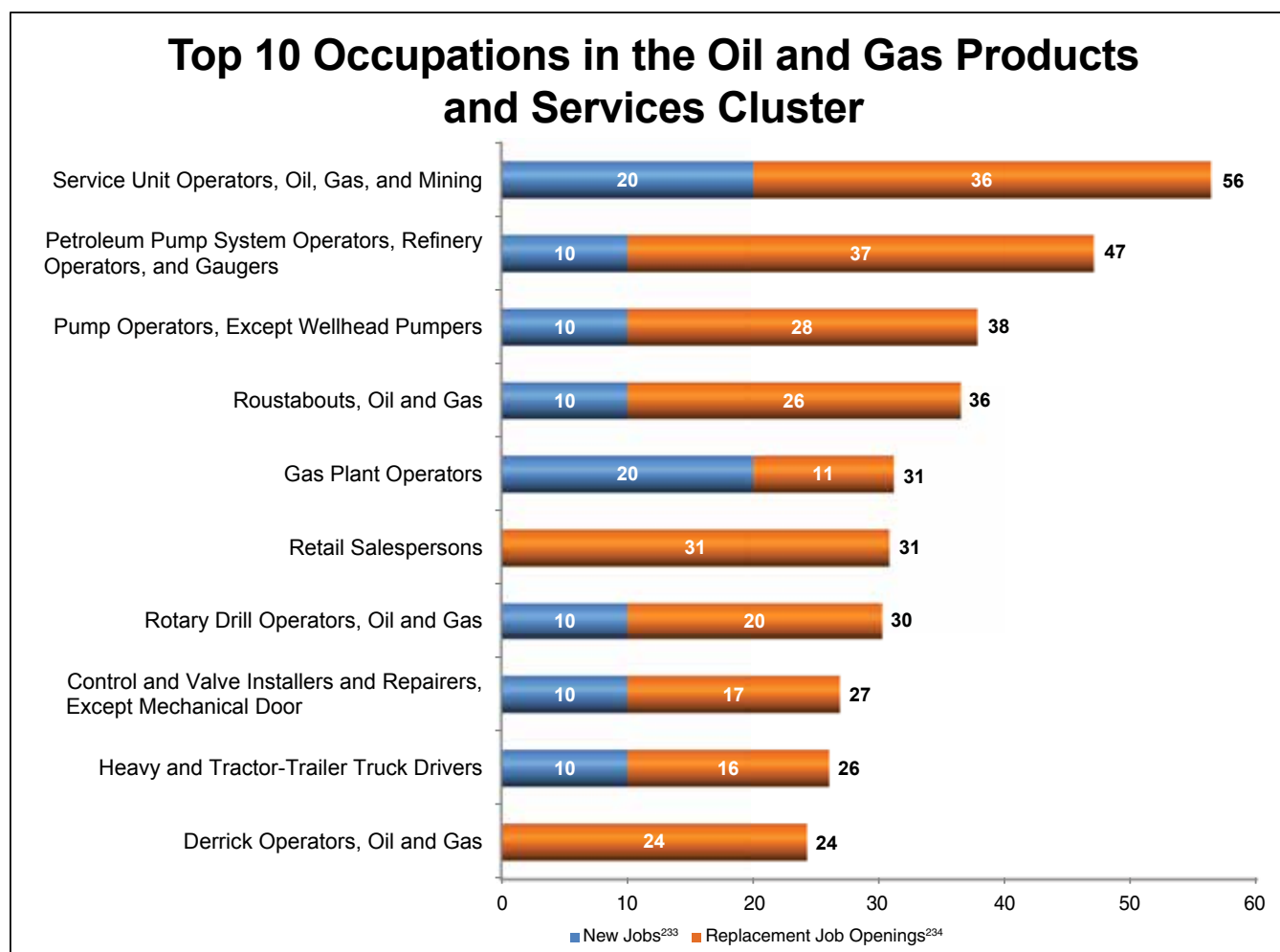
July 2015

What is the Oil and Gas Products and Services Cluster?

The Oil and Gas Products and Services industry cluster is comprised of 10 industries, with establishments involved in the extraction, storage, distribution, and selling of crude oil, natural gas, and petroleum. The workers employed within this cluster span all skill levels and share skills and work activities both within the cluster and in many other industry clusters, suggesting the potential for skills transference and upward mobility with additional training.

Top 10 Occupations in the Oil and Gas Products and Services Cluster

The graph below identifies the top 10 occupations in the Oil and Gas Products and Services cluster, based on the Ventura County Economic Sub-Market's new job growth plus replacement openings. In sum, these 10 occupations represent more than one-half of the 680 total job openings projected in this cluster between 2012 and 2022. Moreover, many share the same required skills such as critical thinking, monitoring, reading comprehension, operation and control, operation monitoring, and quality control analysis.²³²



Source: California Employment Development Department, *Projections of Employment 2012-2022*. Industry and occupational employment projections for 2012-2022 in this report may not be directly comparable to the published 2012-2022 employment projections available online at www.labormarketinfo.edd.ca.gov.

²³² U.S. Department of Labor's [Occupational Information Network \(O*NET\)](http://www.onetonline.org) at www.onetonline.org.

²³³ New jobs are only openings due to growth and do not include job declines. If an occupation's employment change is negative, there is no job growth and new jobs are set to zero.

²³⁴ Replacement job openings estimate the number of job openings created when workers retire or permanently leave an occupation and need to be replaced.

Top 10 Occupations and Recent Job Demand in the Oil and Gas Products and Services Cluster

The table below further profiles the Ventura County Economic Sub-Market's top 10 occupations in the Oil and Gas Products and Services cluster by listing the total job openings for 2012-2022, median hourly and annual wages, and entry-level education requirements. Also included are online job advertisements extracted from The Conference Board Help Wanted OnLine™ (HWOL) data series over a 120-day period. HWOL compiles, analyzes, and categorizes job advertisements from numerous online job boards, including CalJOBSSM (www.caljobs.ca.gov), California's online job listing system.

Occupations	Total Job Openings ²³⁵ (2012-2022)	Median Hourly Wage (2014)	Median Annual Wage (2014)	Entry Level Education ²³⁶	HWOL Job Ads ²³⁷ (120 days)
Service Unit Operators, Oil, Gas, and Mining	56	\$25.32	\$52,669	Less than high school	1
Petroleum Pump System Operators, Refinery Operators, and Gaugers	47	\$26.50	\$55,113	High school diploma or equivalent	0
Pump Operators, Except Wellhead Pumpers	38	N/A	N/A	Less than high school	0
Roustabouts, Oil and Gas	36	\$19.48	\$40,519	Less than high school	3
Gas Plant Operators	31	N/A	N/A	High school diploma or equivalent	3
Retail Salespersons	31	\$10.80	\$22,481	Less than high school	945
Rotary Drill Operators, Oil and Gas	30	N/A	N/A	Less than high school	0
Control and Valve Installers and Repairers, Except Mechanical Door	27	\$32.28	\$67,144	High school diploma or equivalent	4
Heavy and Tractor-Trailer Truck Drivers	26	\$22.09	\$45,961	Postsecondary non-degree award	606
Derrick Operators, Oil and Gas	24	N/A	N/A	Less than high school	0

Source: California Employment Development Department, Projections of Employment 2012-2022; Occupational Employment Statistics Wage Survey, updated to 4th Q, 2014; The Conference Board Help Wanted OnLine™ (HWOL) Data Series, 120-day period ending July 24, 2015.

²³⁵ Total job openings are the sum of new jobs and replacement job openings.

²³⁶ U.S. Department of Labor, Bureau of Labor Statistics (BLS) 2012 education levels.

²³⁷ Totals represent job advertisements from employers in all industries. One job opening may be represented in more than one job advertisement.

Top Occupations for the Oil and Gas Products and Services Cluster by Education Level

The table below identifies the occupations with the most total job openings, categorized by Bureau of Labor Statistics (BLS) 2012 entry-level education requirements, within the Oil and Gas Products and Services cluster. The table includes the Ventura County Economic Sub-Market's projected total job openings and median hourly and annual wages. In addition, recent totals of online job advertisements over 120-day period are included. Grouping occupations by education levels allows individuals to better gauge the potential for skills transference and upward mobility within the cluster.

Occupations	Total Job Openings ²³⁸ (2012-2022)	Median Hourly Wage (2014)	Median Annual Wage (2014)	HWOL Job Ads (120 days)
Requires a Bachelor's Degree or Higher				
Petroleum Engineers	18	\$58.54	\$121,764	8
General and Operations Managers	13	\$51.15	\$106,377	202
Geoscientists, Except Hydrologists and Geographers	13	\$43.66	\$90,822	5
Administrative Services Managers	10	\$42.13	\$87,617	10
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	10	\$41.19	\$85,662	190
Requires Some College, Postsecondary Non-Degree Award, or Associate's Degree				
Heavy and Tractor-Trailer Truck Drivers	26	\$22.09	\$45,961	606
First-Line Supervisors of Production and Operating Workers	21	\$26.22	\$54,534	341
Geological and Petroleum Technicians	11	\$25.09	\$52,199	6
Requires a High School Diploma or Equivalent or Less				
Service Unit Operators, Oil, Gas, and Mining	56	\$25.32	\$52,669	1
Petroleum Pump System Operators, Refinery Operators, and Gaugers	47	\$26.50	\$55,113	0
Pump Operators, Except Wellhead Pumps	38	N/A	N/A	0
Roustabouts, Oil and Gas	36	\$19.48	\$40,519	3
Gas Plant Operators	31	N/A	N/A	3

Source: California Employment Development Department, Projections of Employment 2012-2022; Occupational Employment Statistics Wage Survey, updated to 4th Q, 2014; The Conference Board Help Wanted OnLine™ (HWOL) Data Series, 120-day period ending July 24, 2015.

²³⁸ Total job openings are the sum of new jobs and replacement job openings.

The table below lists the 10 top skills required for top occupations in the Oil and Gas Products and Services cluster, categorized by entry-level education requirements. Critical thinking, active listening, and reading comprehension are the most commonly shared skills, followed by monitoring. The skills and work activities identified for each occupation are from the U.S. Department of Labor's Occupational Information Network (O*NET).

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

Labor Market Information Division

Work Activities in the Oil and Gas Products and Services Cluster

The table below lists the 10 top work activities required for top occupations in the Oil and Gas Products and Services cluster, categorized by entry-level education requirements. The most common include establishing and maintaining interpersonal relationships; making decisions and solving problems; and communicating with supervisors, peers, or subordinates.

Occupations	Work Activities																																		
	Analyzing Data or Information	Assisting and Caring for Others	Coaching and Developing Others	Communicating with Persons Outside Organization	Communicating with Supervisors, Peers, or Subordinates	Controlling Machines and Processes	Coordinating the Work and Activities of Others	Documenting/Recording Information	Establishing and Maintaining Interpersonal Relationships	Estimating the Quantifiable Characteristics of Products, Events, or Information	Evaluating Information to Determine Compliance with Standards	Getting Information	Guiding, Directing, and Motivating Subordinates	Handling and Moving Objects	Identifying Objects, Actions, and Events	Inspecting Equipment, Structures, or Material	Interpreting the Meaning of Information for Others	Judging the Qualities of Things, Services, or People	Making Decisions and Solving Problems	Monitor Processes, Materials, or Surroundings	Monitoring and Controlling Resources	Operating Vehicles, Mechanized Devices, or Equipment	Organizing, Planning, and Prioritizing Work	Performing Administrative Activities	Performing General Physical Activities	Processing Information	Provide Consultation and Advice to Others	Repairing and Maintaining Mechanical Equipment	Resolving Conflicts and Negotiating with Others	Scheduling Work and Activities	Selling or Influencing Others	Thinking Creatively	Training and Teaching Others	Updating and Using Relevant Knowledge	
Requires a Bachelor's Degree or Higher																																			
Petroleum Engineers	●			●					●		●								●	●			●			●				●				●	
General and Operations Managers				●	●	●		●											●	●	●		●						●	●		●			
Geoscientists, Except Hydrologists and Geographers	●										●				●		●		●				●		●	●						●		●	
Administrative Services Managers				●	●		●	●	●		●								●				●	●		●									
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products				●	●				●		●								●				●					●		●		●			●
Requires Some College, Postsecondary Non-Degree Award, or Associate's Degree																																			
Heavy and Tractor-Trailer Truck Drivers					●				●		●		●	●	●				●			●	●	●											
First-Line Supervisors of Production and Operating Workers			●		●	●	●		●				●	●													●		●	●					
Geological and Petroleum Technicians ²⁴⁰	●				●	●		●	●						●					●		●			●		●								●
Requires a High School Diploma or Equivalent or Less																																			
Service Unit Operators, Oil, Gas, and Mining		●				●	●		●					●						●	●		●			●		●							
Petroleum Pump System Operators, Refinery Operators, and Gaugers					●	●				●					●	●			●	●						●								●	●
Pump Operators, Except Wellhead Pumps						●			●	●				●		●		●	●	●					●	●									
Roustabouts, Oil and Gas					●	●			●	●				●	●	●				●				●											●
Gas Plant Operators					●	●		●	●							●			●	●					●			●							●

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

²⁴⁰ Work Activities represent Geophysical Data Technicians, a specialty occupation of Geological and Petroleum Technicians.

Related Occupations for the Oil and Gas Products and Services Cluster

The table below lists top occupations in the Oil and Gas Products and Services cluster by entry-level education requirements and provides a sample of related occupations. These related occupations match many of the skills, education, and work experience needed for the top Oil and Gas Products and Services cluster occupations.

Oil and Gas Products and Services Occupations	Related Occupations
Requires a Bachelor's Degree or Higher	
Petroleum Engineers	<ul style="list-style-type: none"> • Civil Engineers • Energy Engineers • Logistics Engineers
General and Operations Managers	<ul style="list-style-type: none"> • First-Line Supervisors of Office and Administrative Support Workers • Purchasing Managers • Storage and Distribution Managers
Geoscientists, Except Hydrologists and Geographers	<ul style="list-style-type: none"> • Geophysical Data Technicians • Petroleum Engineers • Validation Engineers
Administrative Services Managers	<ul style="list-style-type: none"> • Executive Secretaries and Executive Administrative Assistants • First-Line Supervisors of Office and Administrative Support Workers • Wholesale and Retail Buyers, Except Farm Products
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	<ul style="list-style-type: none"> • Copy Writers • Insurance Sales Agents • Market Research Analysts and Marketing Specialists
Requires Some College, Postsecondary Non-Degree Award, or Associate's Degree	
Heavy and Tractor-Trailer Truck Drivers	<ul style="list-style-type: none"> • Light Truck or Delivery Services Drivers • Motorboat Operators • Pile-Driver Operators
First-Line Supervisors of Production and Operating Workers	<ul style="list-style-type: none"> • Aircraft Cargo Handling Supervisors • First-Line Supervisors of Mechanics, Installers, and Repairers • Non-Destructive Testing Specialists
Geological and Petroleum Technicians	<ul style="list-style-type: none"> • Environmental Science and Protection Technicians, Including Health • Geographic Information Systems Technicians • Petroleum Engineers
Requires a High School Diploma or Equivalent or Less	
Service Unit Operators, Oil, Gas, and Mining	<ul style="list-style-type: none"> • Excavating and Loading Machine and Dragline Operators • Gas Compressor and Gas Pumping Station Operators • Helpers -Extraction Workers
Petroleum Pump System Operators, Refinery Operators, and Gaugers	<ul style="list-style-type: none"> • Gas Plant Operators • Power Plant Operators • Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders
Pump Operators, Except Wellhead Pumps	<ul style="list-style-type: none"> • Chemical Plant and System Operators • Cooling and Freezing Equipment Operators and Tenders • Mixing and Blending Machine Setters, Operators, and Tenders
Roustabouts, Oil and Gas	<ul style="list-style-type: none"> • Construction Laborers • Helpers -Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters • Paving, Surfacing, and Tamping Equipment Operators
Gas Plant Operators	<ul style="list-style-type: none"> • Gas Compressor and Gas Pumping Station Operators • Manufacturing Production Technicians • Pump Operators, Except Wellhead Pumps

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

Employer Demand for the Oil and Gas Products and Services Cluster

The following table lists the Ventura County Economic Sub-Market employers in the Oil and Gas Products and Services cluster who posted the most job advertisements during the 120-day period ending July 24, 2015. The table also includes the number of job advertisements from the previous year's period, as well as the numerical change and year-over percent change in these postings for the same 120-day period.

Social Services Cluster Employers	Recent Job Advertisements²⁴¹ (120-day period)	Prior Year Job Advertisements (120-day period)	Numerical Change	Year-Over Percent Change (HWOL Job Advertisements)
Schlumberger	6	2	4	200.0%
Baker Hughes	4	14	-10	-71.4%
AmeriGas	3	0	3	—
Weatherford	2	0	2	—
D-COR	1	0	1	—
Veolia Water	1	0	1	—
NANA Development Corporation	1	0	1	—
Direct Energy	1	0	1	—

Source: The Conference Board Help Wanted OnLine™ (HWOL) Data Series: Period ending July 24, 2015.

²⁴¹ Totals do not include employers with anonymous job advertisements.

Instructional Programs for the Top Oil and Gas Products and Services Cluster Occupations

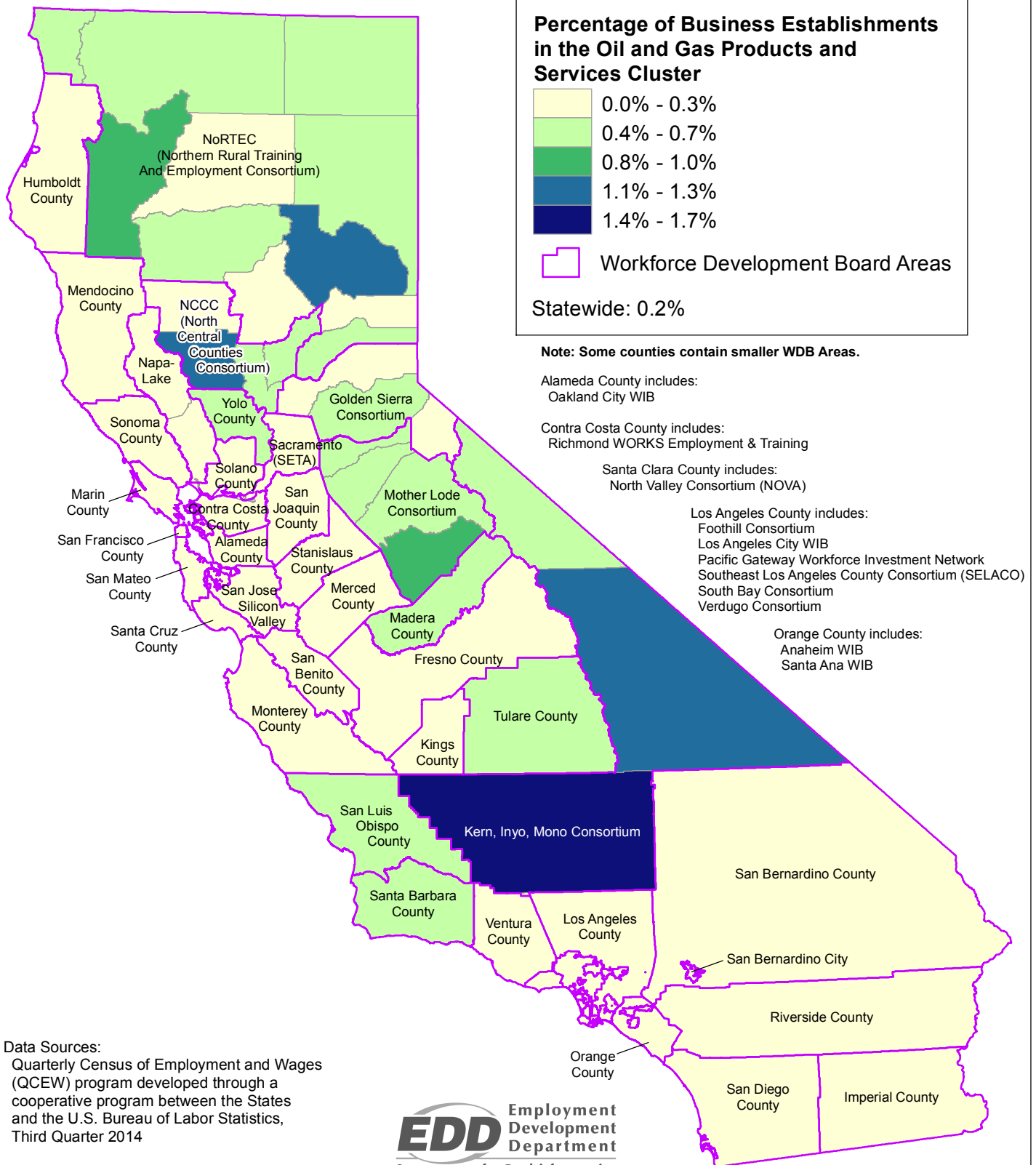
The table below provides examples of instructional programs related to some of the top occupations in the Oil and Gas Products and Services cluster, particularly those that require less than a bachelor's degree. These programs train individuals for occupations throughout many industries and are not limited to the Oil and Gas Products and Services cluster. To view a more complete list of training programs, select the source links under the table below. The Taxonomy of Programs categorizes and describes instructional programs only for California Community Colleges.

Occupations	Classification of Instructional Program (CIP)		Taxonomy of Programs (TOP)	
	CIP Code	CIP Title	TOP Code	TOP Title
Heavy and Tractor-Trailer Truck Drivers	49.0205	Truck and Bus Driver/Commercial Vehicle Operator and Instructor	094750	Truck and Bus Driving
First-Line Supervisors of Production and Operating Workers	52.0205	Operations Management and Supervision	N/A	N/A
Geological and Petroleum Technicians	15.0903 15.0999	Petroleum Technology/Technician Mining and Petroleum Technologies/Technicians, Other	095430	Petroleum Technology
Service Unit Operators, Oil, Gas, and Mining	15.0901	Mining Technology/Technician	N/A	N/A

Source: U.S. Department of Education [Integrated Postsecondary Education Data System \(IPEDS\)](http://www.nces.ed.gov/ipeds) at www.nces.ed.gov; [California Community Colleges TOP-to-CIP Crosswalk](http://www.cccco.edu) 7th Edition (2010), www.cccco.edu.

California Oil and Gas Products and Services Cluster

Percentage of Total County Establishments, 2014



Data Sources:
Quarterly Census of Employment and Wages (QCEW) program developed through a cooperative program between the States and the U.S. Bureau of Labor Statistics, Third Quarter 2014

Cartography by:
Labor Market Information Division
California Employment Development Department
<http://www.labormarketinfo.edd.ca.gov>
September 2015

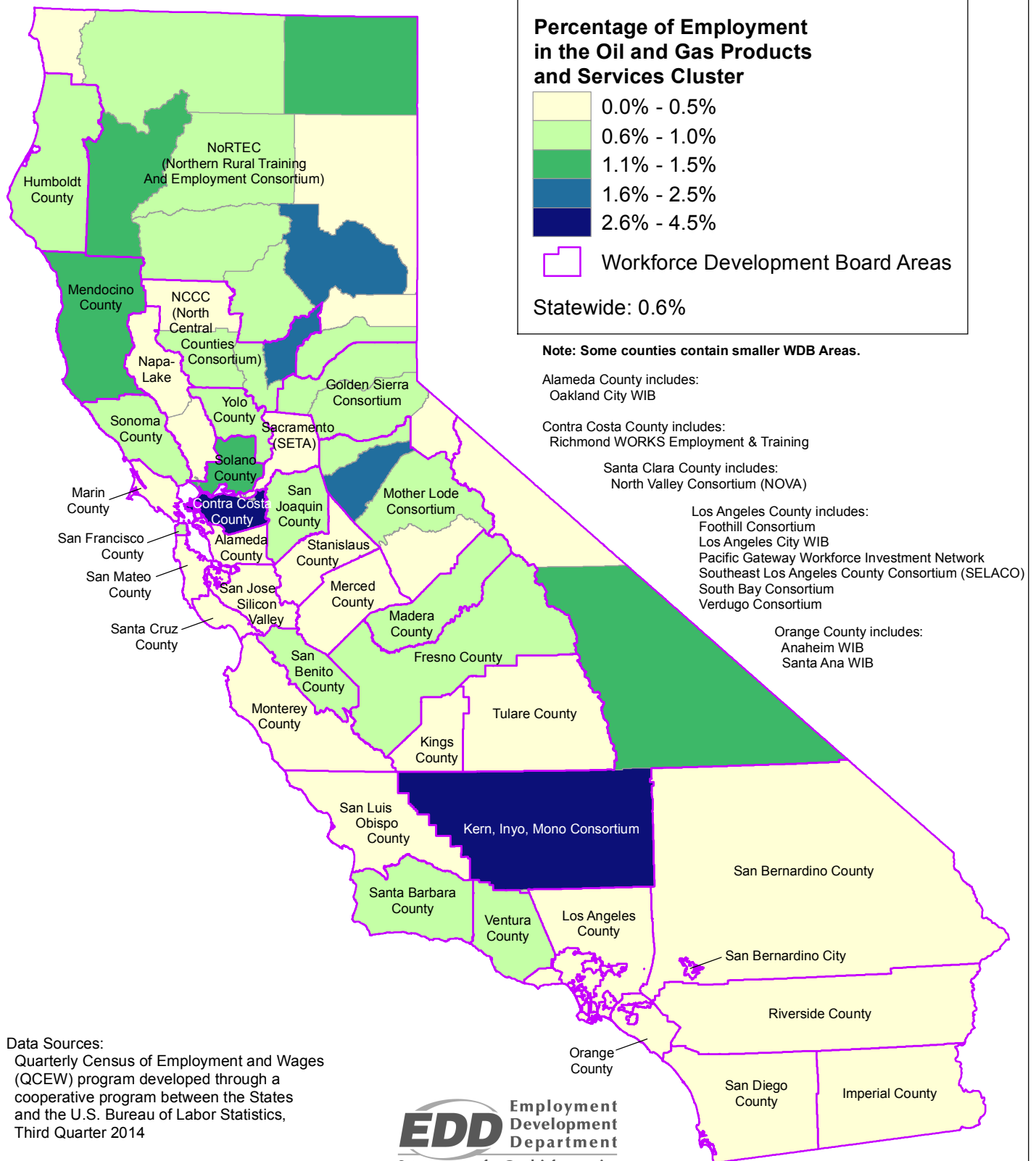
EDD Employment Development Department
State of California

LaborMarketInfo

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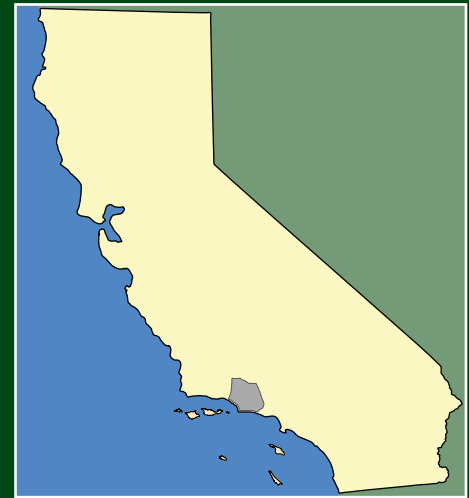
Oil and Gas Products and Services Cluster

Percentage of Total County Employment, 2014



Data Sources:
Quarterly Census of Employment and Wages (QCEW) program developed through a cooperative program between the States and the U.S. Bureau of Labor Statistics, Third Quarter 2014

Cartography by:
Labor Market Information Division
California Employment Development Department
<http://www.labormarketinfo.edd.ca.gov>
September 2015



Occupational Analysis: Transportation and Logistics Cluster

Ventura County Economic Sub-Market

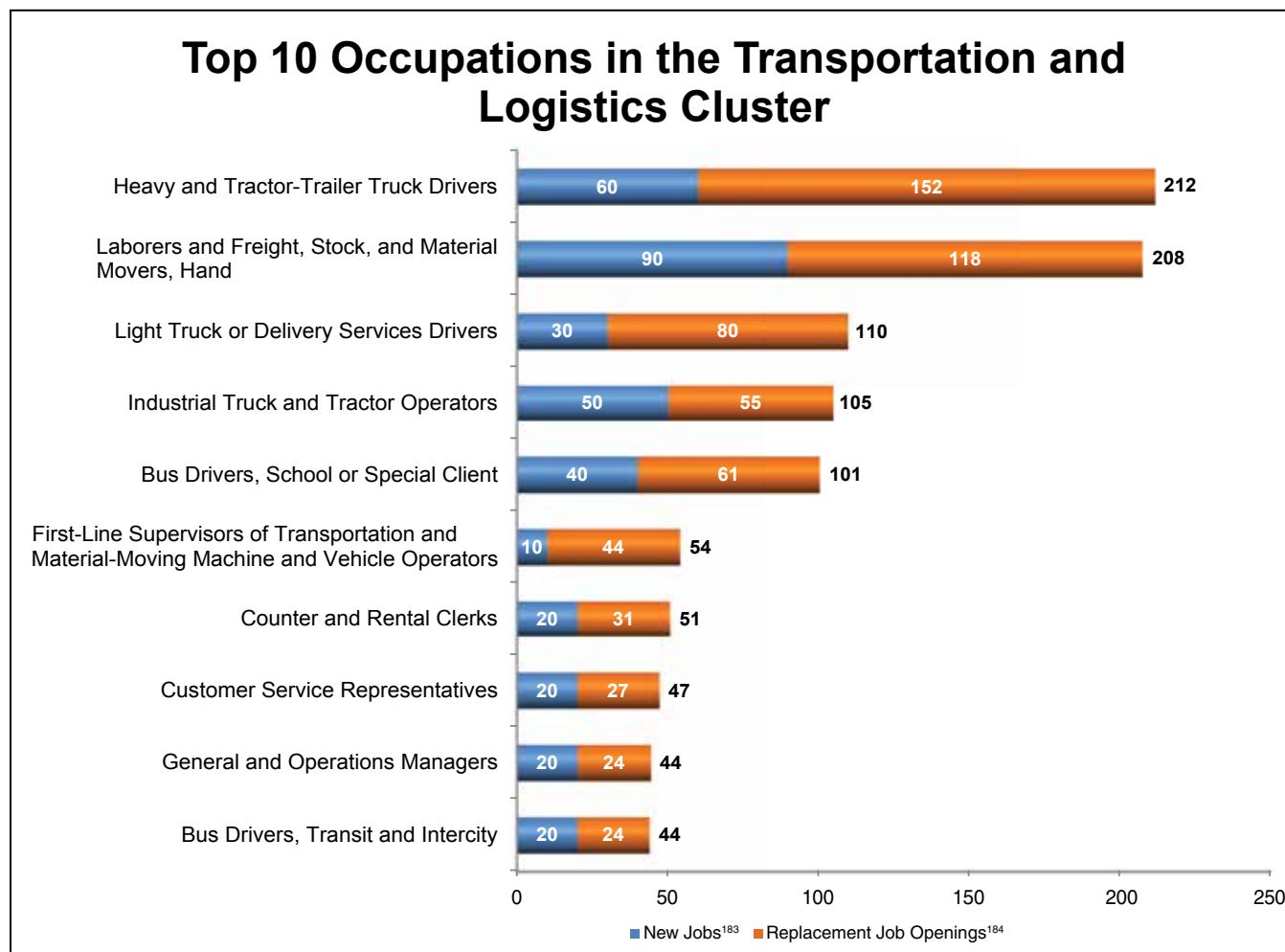
July 2015

What is the Transportation and Logistics Cluster?

The Transportation and Logistics cluster is comprised of 26 industries related to moving people or goods by land, sea, or air. This cluster includes trucking and taxi companies, airlines, rail transportation, as well as warehousing and storage. The workers employed within this cluster span all skill levels and share skills and work activities both within the cluster and in many other industry clusters, suggesting the potential for skills transference and upward mobility with additional training.

Top 10 Occupations in the Transportation and Logistics Cluster

The graph below identifies the top 10 occupations in the Transportation and Logistics cluster, based on the Ventura County Economic Sub-Market's new job growth plus replacement openings. In sum, these 10 occupations represent more than one-half of the 1,660 total job openings projected in this cluster between 2012 and 2022. Moreover, many share the same required skills such as active listening, coordination, critical thinking, monitoring, reading comprehension, and speaking.¹⁸²



Source: California Employment Development Department, *Projections of Employment 2012-2022*. Industry and occupational employment projections for 2012-2022 in this report may not be directly comparable to the published 2012-2022 employment projections available online at www.labormarketinfo.edd.ca.gov.

¹⁸² U.S. Department of Labor's [Occupational Information Network \(O*NET\)](http://www.onetonline.org) at www.onetonline.org.

¹⁸³ New jobs are only openings due to growth and do not include job declines. If an occupation's employment change is negative, there is no job growth and new jobs are set to zero.

¹⁸⁴ Replacement job openings estimate the number of job openings created when workers retire or permanently leave an occupation and need to be replaced.

Top 10 Occupations and Recent Job Demand in the Transportation and Logistics Cluster

The table below further profiles the Ventura County Economic Sub-Market's top 10 occupations in the Transportation and Logistics cluster by listing the total job openings for 2012-2022, median hourly and annual wages, and entry-level education requirements. Also included are online job advertisements extracted from The Conference Board Help Wanted OnLine™ (HWOL) data series over a 120-day period. HWOL compiles, analyzes, and categorizes job advertisements from numerous online job boards, including CalJOBSSM (www.caljobs.ca.gov), California's online job listing system.

Occupations	Total Job Openings ¹⁸⁵ (2012-2022)	Median Hourly Wage (2014)	Median Annual Wage (2014)	Entry Level Education ¹⁸⁶	HWOL Job Ads ¹⁸⁷ (120 days)
Heavy and Tractor-Trailer Truck Drivers	212	\$22.09	\$45,961	Postsecondary non-degree award	606
Laborers and Freight, Stock, and Material Movers, Hand	208	\$11.78	\$24,495	Less than high school	259
Light Truck or Delivery Services Drivers	110	\$17.05	\$35,468	High school diploma or equivalent	254
Industrial Truck and Tractor Operators	105	\$14.53	\$30,224	Less than high school	94
Bus Drivers, School or Special Client	101	\$17.23	\$35,818	High school diploma or equivalent	24
First-Line Supervisors of Transportation and Material- Moving Machine and Vehicle Operators	54	\$26.06	\$54,207	High school diploma or equivalent	124
Counter and Rental Clerks	51	\$13.70	\$28,496	Less than high school	43
Customer Service Representatives	47	\$17.58	\$36,558	High school diploma or equivalent	768
General and Operations Managers	44	\$51.15	\$106,377	Bachelor's degree	202
Bus Drivers, Transit and Intercity	44	\$20.72	\$43,088	High school diploma or equivalent	10

Source: California Employment Development Department, *Projections of Employment 2012-2022*; *Occupational Employment Statistics Wage Survey*, updated to 4th Q, 2014; *The Conference Board Help Wanted OnLine™ (HWOL) Data Series*, 120-day period ending July 24, 2015.

¹⁸⁵ Total job openings are the sum of new jobs and replacement job openings.

¹⁸⁶ U.S. Department of Labor, Bureau of Labor Statistics (BLS) 2012 education levels.

¹⁸⁷ Totals represent job advertisements from employers in all industries. One job opening may be represented in more than one job advertisement.

Top Occupations for the Transportation and Logistics Cluster by Education Level

The table below identifies the occupations with the most total job openings, categorized by Bureau of Labor Statistics (BLS) 2012 entry-level education requirements, within the Transportation and Logistics cluster. The table includes the Ventura County Economic Sub-Market's projected total job openings and median hourly and annual wages. In addition, recent totals of online job advertisements over 120-day period are included. Grouping occupations by education levels allows individuals to better gauge the potential for skills transference and upward mobility within the cluster.

Occupations	Total Job Openings ¹⁸⁸ (2012-2022)	Median Hourly Wage (2014)	Median Annual Wage (2014)	HWOL Job Ads (120 days)
Requires a Bachelor's Degree or Higher				
General and Operations Managers	44	\$51.15	\$106,377	202
Captains, Mates, and Pilots of Water Vessels	19	\$27.60	\$57,408	5
Airline Pilots, Copilots, and Flight Engineers	3	N/A	\$105,542	7
Administrative Services Managers	2	\$42.13	\$87,617	10
Requires Some College, Postsecondary Non-Degree Award, or Associate's Degree				
Heavy and Tractor-Trailer Truck Drivers	212	\$22.09	\$45,961	606
Aircraft Mechanics and Service Technicians	16	\$29.10	\$60,548	27
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	5	\$20.28	\$42,179	100
Prepress Technicians and Workers	3	\$20.97	\$43,618	0
Commercial Divers	2	N/A	N/A	1
Requires a High School Diploma or Equivalent or Less				
Laborers and Freight, Stock, and Material Movers, Hand	208	\$11.78	\$24,495	259
Light Truck or Delivery Services Drivers	110	\$17.05	\$35,468	254
Industrial Truck and Tractor Operators	105	\$14.53	\$30,224	94
Bus Drivers, School or Special Client	101	\$17.23	\$35,818	24
First-Line Supervisors of Transportation and Material- Moving Machine and Vehicle Operators	54	\$26.06	\$54,207	124

Source: California Employment Development Department, *Projections of Employment 2012-2022*; *Occupational Employment Statistics Wage Survey*, updated to 4th Q, 2014; *The Conference Board Help Wanted OnLine™ (HWOL) Data Series*, 120-day period ending July 24, 2015.

¹⁸⁸ Total job openings are the sum of new jobs and replacement job openings.

Skill Requirements in the Transportation and Logistics Cluster

The table below lists the 10 top skills required for top occupations in the Transportation and Logistics cluster, categorized by entry-level education requirements. Critical thinking and reading comprehension are the most commonly shared skills, followed by active listening and monitoring. The skills and work activities identified for each occupation are from the U.S. Department of Labor's Occupational Information Network (O*NET).

Occupations	Skills																		
	Active Learning	Active Listening	Complex Problem Solving	Coordination	Critical Thinking	Equipment Maintenance	Installation	Instructing	Judgment and Decision Making	Management of Personnel Resources	Monitoring	Operation and Control	Operation Monitoring	Quality Control Analysis	Reading Comprehension	Repairing	Service Orientation	Social Perceptiveness	Speaking
Requires a Bachelor's Degree or Higher																			
General and Operations Managers	●	●		●	●					●	●				●			●	●
Captains, Mates, and Pilots of Water Vessels ¹⁸⁹				●	●				●	●	●	●	●		●			●	●
Airline Pilots, Copilots, and Flight Engineers	●	●			●			●	●		●	●	●		●				●
Administrative Services Managers		●		●	●					●	●				●			●	●
Requires Some College, Postsecondary Non-Degree Award, or Associate's Degree																			
Aircraft Mechanics and Service Technicians		●	●		●	●			●				●	●	●	●			●
Heating, Air Conditioning, and Refrigeration Mechanics and Installers ¹⁹⁰		●		●	●	●	●							●	●	●		●	●
Prepress Technicians and Workers	●		●		●				●		●		●		●			●	●
Commercial Divers		●	●	●	●						●	●	●	●	●			●	
Requires a High School Diploma or Equivalent or Less																			
Laborers and Freight, Stock, and Material Movers, Hand	●	●	●	●							●	●	●		●			●	●
Light Truck or Delivery Services Drivers	●			●							●	●	●		●		●	●	●
Industrial Truck and Tractor Operators	●		●	●	●			●			●	●	●		●				●
Bus Drivers, School or Special Client	●		●	●							●	●	●		●		●	●	
First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	●	●	●	●				●	●	●					●			●	●

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

¹⁸⁹ Skills represent Ship and Boat Captains, a specialty occupation of Captains, Mates, and Pilots of Water Vessels.

¹⁹⁰ Skills represent Heating and Air Conditioning Mechanics and Installers, a specialty occupation of Heating, Air Conditioning, and Refrigeration Mechanics and Installers.

Work Activities in the Transportation and Logistics Cluster

The table below lists the 10 top work activities required for top occupations in the Transportation and Logistics cluster, categorized by entry-level education requirements. The most common include organizing, planning, and prioritizing work; making decisions and solving problems; and monitoring processes, materials, or surroundings.

Occupations	Work Activities																			
	Analyzing Data or Information	Assisting and Caring for Others	Communicating with Persons Outside Organization	Communicating with Supervisors, Peers, or Subordinates	Controlling Machines and Processes	Coordinating the Work and Activities of Others	Documenting/Recording Information	Establishing and Maintaining Interpersonal Relationships	Evaluating Information to Determine Compliance with Standards	Getting Information	Guiding, Directing, and Motivating Subordinates	Handling and Moving Objects	Identifying Objects, Actions, and Events	Inspecting Equipment, Structures, or Material	Judging the Qualities of Things, Services, or People	Making Decisions and Solving Problems	Monitor Processes, Materials, or Surroundings	Monitoring and Controlling Resources	Operating Vehicles, Mechanized Devices, or Equipment	Organizing, Planning, and Prioritizing Work
Requires a Bachelor's Degree or Higher																				
General and Operations Managers			●	●	●	●										●	●	●		
Captains, Mates, and Pilots of Water Vessels ¹⁹¹					●	●				●			●			●	●	●		●
Airline Pilots, Copilots, and Flight Engineers	●			●					●			●	●			●	●	●	●	●
Administrative Services Managers			●	●	●	●	●	●	●							●	●		●	
Requires Some College, Postsecondary Non-Degree Award, or Associate's Degree																				
Heavy and Tractor-Trailer Truck Drivers				●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Aircraft Mechanics and Service Technicians				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Heating, Air Conditioning, and Refrigeration Mechanics and Installers ¹⁹²	●			●							●	●	●	●	●	●	●	●	●	●
Prepress Technicians and Workers			●			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Commercial Divers			●	●	●						●	●	●	●	●	●	●	●	●	●
Requires a High School Diploma or Equivalent or Less																				
Laborers and Freight, Stock, and Material Movers, Hand			●	●		●	●				●	●				●	●	●	●	●
Light Truck or Delivery Services Drivers		●	●			●	●	●	●	●	●	●				●	●	●	●	●
Industrial Truck and Tractor Operators			●	●		●					●	●	●	●	●	●	●	●	●	●
Bus Drivers, School or Special Client	●					●	●				●	●	●	●	●	●	●	●	●	●
First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators			●	●	●	●			●					●	●	●	●		●	●

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

¹⁹¹ Work Activities represent Ship and Boat Captains, a specialty occupation of Captains, Mates, and Pilots of Water Vessels.

¹⁹² Work Activities represent Heating and Air Conditioning Mechanics and Installers, a specialty occupation of Heating, Air Conditioning, and Refrigeration Mechanics and Installers.

Related Occupations for the Transportation and Logistics Cluster

The table below lists top occupations in the Transportation and Logistics cluster by entry-level education requirements and provides a sample of related occupations. These related occupations match many of the skills, education, and work experience needed for the top Transportation and Logistics cluster occupations.

Transportation and Logistics Occupations	Related Occupations
Requires a Bachelor's Degree or Higher	
General and Operations Managers	<ul style="list-style-type: none"> • Lodging Managers • Logistics Managers • First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators
Captains, Mates, and Pilots of Water Vessels	<ul style="list-style-type: none"> • First-Line Supervisors of Mechanics, Installers, and Repairers • Pilots, Ship • Ship Engineers
Airline Pilots, Copilots, and Flight Engineers	<ul style="list-style-type: none"> • Airfield Operations Specialists • Commercial Pilots • Geodetic Surveyors
Administrative Services Managers	<ul style="list-style-type: none"> • First-Line Supervisors of Office and Administrative Support Workers • General and Operations Managers • Human Resources Specialists
Requires Some College, Postsecondary Non-Degree Award, or Associate's Degree	
Heavy and Tractor-Trailer Truck Drivers	<ul style="list-style-type: none"> • Light Truck or Delivery Services Drivers • Motorboat Operators • Pile-Driver Operators
Aircraft Mechanics and Service Technicians	<ul style="list-style-type: none"> • Electrical and Electronics Repairers, Commercial and Industrial Equipment • Robotics Technicians • Ship Engineers
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	<ul style="list-style-type: none"> • Electricians • Maintenance and Repair Workers, General • Refrigeration Mechanics and Installers
Prepress Technicians and Workers	<ul style="list-style-type: none"> • Computer User Support Specialists • Computer Operators • Electronics Engineering Technicians
Commercial Divers	<ul style="list-style-type: none"> • Electrical Power-Line Installers and Repairers • Municipal Firefighters • Pipe Fitters and Steamfitters
Requires a High School Diploma or Equivalent or Less	
Laborers and Freight, Stock, and Material Movers, Hand	<ul style="list-style-type: none"> • Packaging and Filling Machine Operators and Tenders • Pipelayers • Rail-Track Laying and Maintenance Equipment Operators
Light Truck or Delivery Services Drivers	<ul style="list-style-type: none"> • Heavy and Tractor-Trailer Truck Drivers • Postal Service Mail Carriers • Refuse and Recyclable Material Collectors
Industrial Truck and Tractor Operators	<ul style="list-style-type: none"> • Excavating and Loading Machine and Dragline Operators • Molding and Casting Workers • Welders, Cutters, and Welder Fitters
Bus Drivers, School or Special Client	<ul style="list-style-type: none"> • Subway and Streetcar Operators • Taxi Drivers and Chauffeurs • Transportation Attendants, Except Flight Attendants
First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	<ul style="list-style-type: none"> • First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand • Logistics Managers • Postmasters and Mail Superintendents

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

Employer Demand for the Transportation and Logistics Cluster

The following table lists the Ventura County Economic Sub-Market employers in the Transportation and Logistics cluster who posted the most job advertisements during the 120-day period ending July 24, 2015. The table also includes the number of job advertisements from the previous year's period, as well as the numerical change and year-over percent change in these postings for the same 120-day period.

Transportation and Logistics Cluster Employers	Recent Job Advertisements ¹⁹³ (120-day period)	Prior Year Job Advertisements (120-day period)	Numerical Change	Year-Over Percent Change (HWOL Job Advertisements)
U.S. Xpress	27	2	25	1,250.0%
Swift Transportation	18	10	8	80.0%
The Hertz Corporation	14	10	4	40.0%
Lowe's	10	11	-1	-9.1%
Kane is Able, Inc.	8	2	6	300.0%
Target Corporation	8	1	7	700.0%
Western Merchandise Express, Inc.	7	0	7	—
Sears Holdings Corporation	5	12	-7	-58.3%
Enterprise Rent-A-Car Company	5	12	-7	-58.3%
Columbia Sportswear Company	5	2	3	150.0%
Werner Enterprises	5	1	4	400.0%
Dedicated Services	5	0	5	—
Armellini Express Lines	4	0	4	—
Transco Lines	4	0	4	—
Ryder	4	6	-2	-33.3%
CRST	4	1	3	300.0%
RR Express	4	0	4	—
Gordon Trucking, Inc.	4	2	2	100.0%
FedEx	3	14	-11	-78.6%
Durham School Services	3	4	-1	-25.0%

Source: The Conference Board Help Wanted OnLine™ (HWOL) Data Series: Period ending July 24, 2015.

¹⁹³ Totals do not include employers with anonymous job advertisements.

Instructional Programs for the Top Transportation and Logistics Cluster Occupations

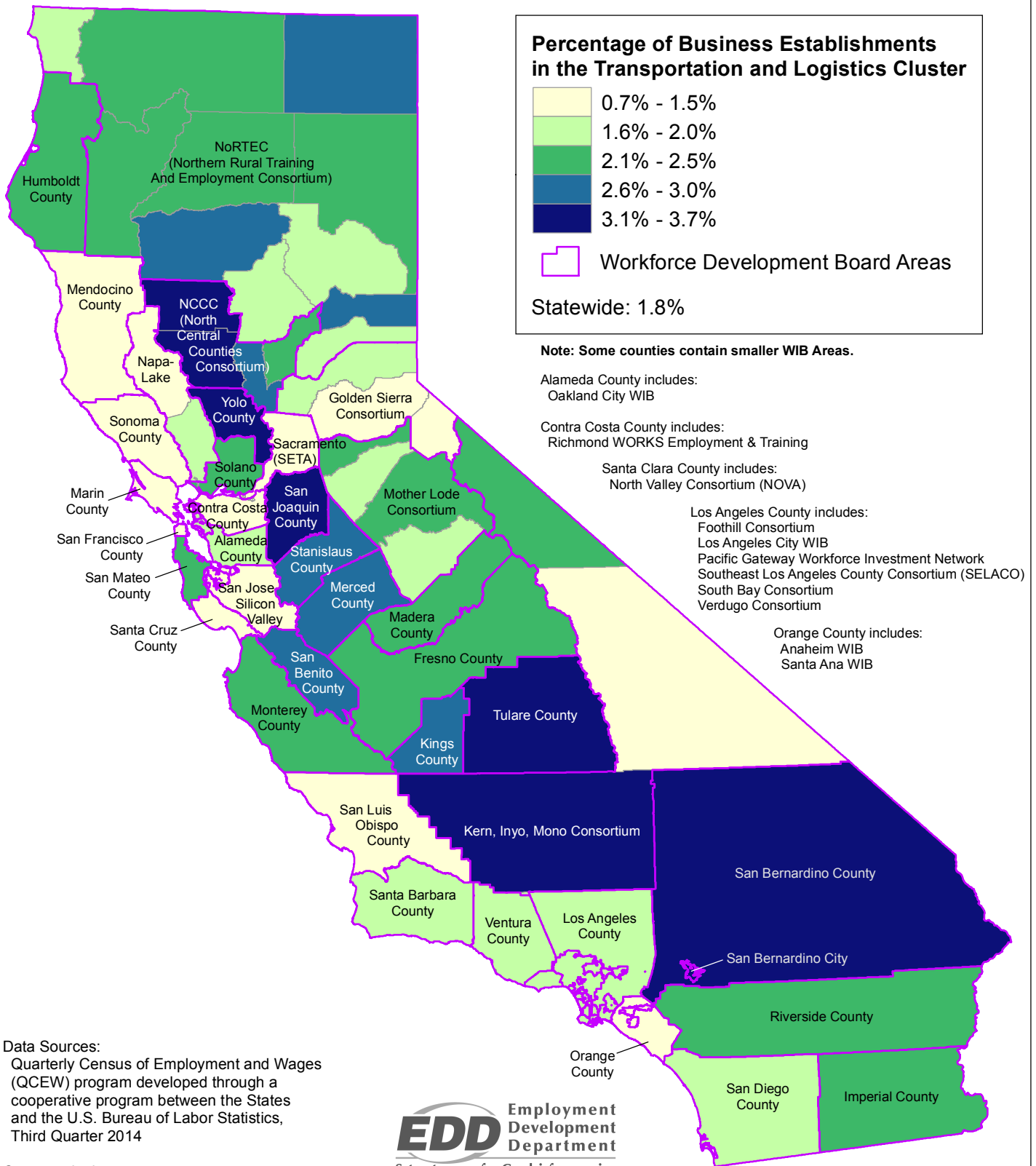
The table below provides examples of instructional programs related to some of the top occupations in the Transportation and Logistics cluster, particularly those that require less than a bachelor's degree. These programs train individuals for occupations throughout many industries and are not limited to the Transportation and Logistics cluster. To view a more complete list of training programs, select the source links under the table below. The Taxonomy of Programs categorizes and describes instructional programs only for California Community Colleges.

Occupations	Classification of Instructional Program (CIP)		Taxonomy of Programs (TOP)	
	CIP Code	CIP Title	TOP Code	TOP Title
Heavy and Tractor-Trailer Truck Drivers	49.0205	Truck and Bus Driver/Commercial Vehicle Operator and Instructor	094750	Truck and Bus Driving
Aircraft Mechanics and Service Technicians	01.0205	Agricultural Mechanics and Equipment/ Machine Technology	011600	Agricultural Power Equipment Technology
	47.0607	Airframe Mechanics and Aircraft Maintenance Technology/Technician	095000	Aeronautical and Aviation Technology
	47.0608	Aircraft Powerplant Technology/ Technician	095010	Aviation Airframe Mechanics
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	15.0501	Heating, Ventilation, Air Conditioning and Refrigeration Engineering Technology/Technician	094600	Environmental Control Technology
	47.0201	Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Technician		
Prepress Technicians and Workers	10.0301	Graphic Communications, General	061400	Digital Media
	10.0302	Printing Management	061450	Desktop Publishing
	10.0303	Prepress/Desktop Publishing and Digital Imaging Design	093600	Printing and Lithography
Light Truck or Delivery Services Drivers	49.0205	Truck and Bus Driver/Commercial Vehicle Operator and Instructor	094750	Truck and Bus Driving
Bus Drivers, School or Special Client	49.0205	Truck and Bus Driver/Commercial Vehicle Operator and Instructor	094750	Truck and Bus Driving
First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	49.0208	Railroad and Railway Transportation	N/A	N/A

Source: U.S. Department of Education [Integrated Postsecondary Education Data System \(IPEDS\)](http://www.nces.ed.gov/ipeds) at www.nces.ed.gov; [California Community Colleges TOP-to-CIP Crosswalk](http://www.cccco.edu) 7th Edition (2010), www.cccco.edu.

California Transportation and Logistics Cluster

Percentage of Total County Establishments, 2014



Data Sources:
Quarterly Census of Employment and Wages (QCEW) program developed through a cooperative program between the States and the U.S. Bureau of Labor Statistics, Third Quarter 2014

Cartography by:
Labor Market Information Division
California Employment Development Department
<http://www.labormarketinfo.edd.ca.gov>
August 2015

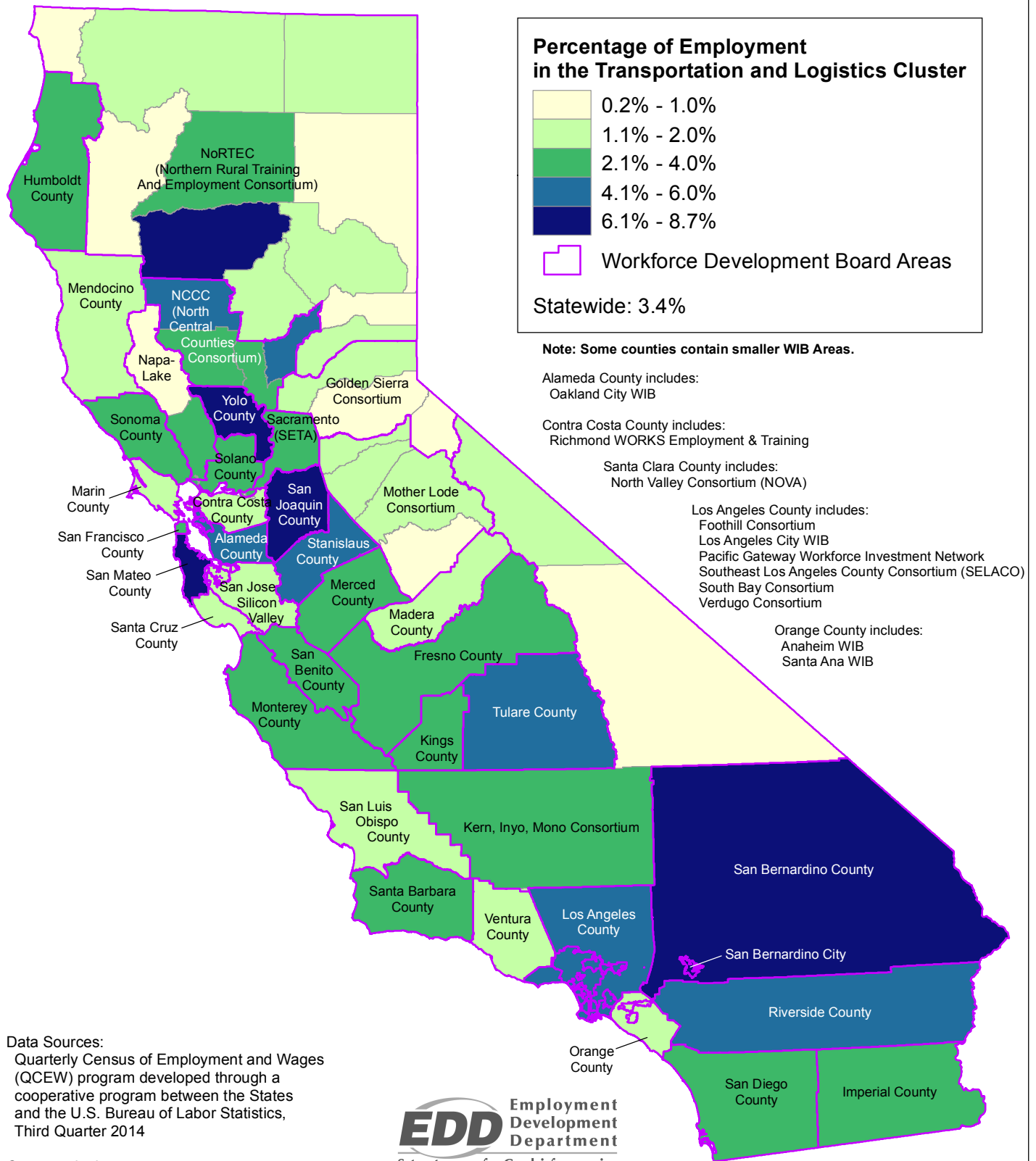
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California Transportation and Logistics Cluster

Percentage of Total County Employment, 2014



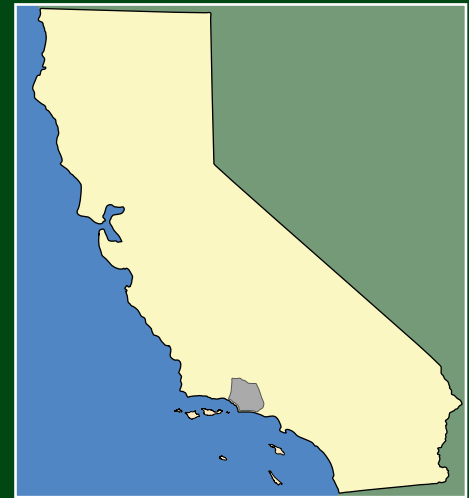
Data Sources:
Quarterly Census of Employment and Wages (QCEW) program developed through a cooperative program between the States and the U.S. Bureau of Labor Statistics, Third Quarter 2014

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Occupational Analysis: Agriculture, Food, and Beverage Processing Cluster

Ventura County Economic Sub-Market

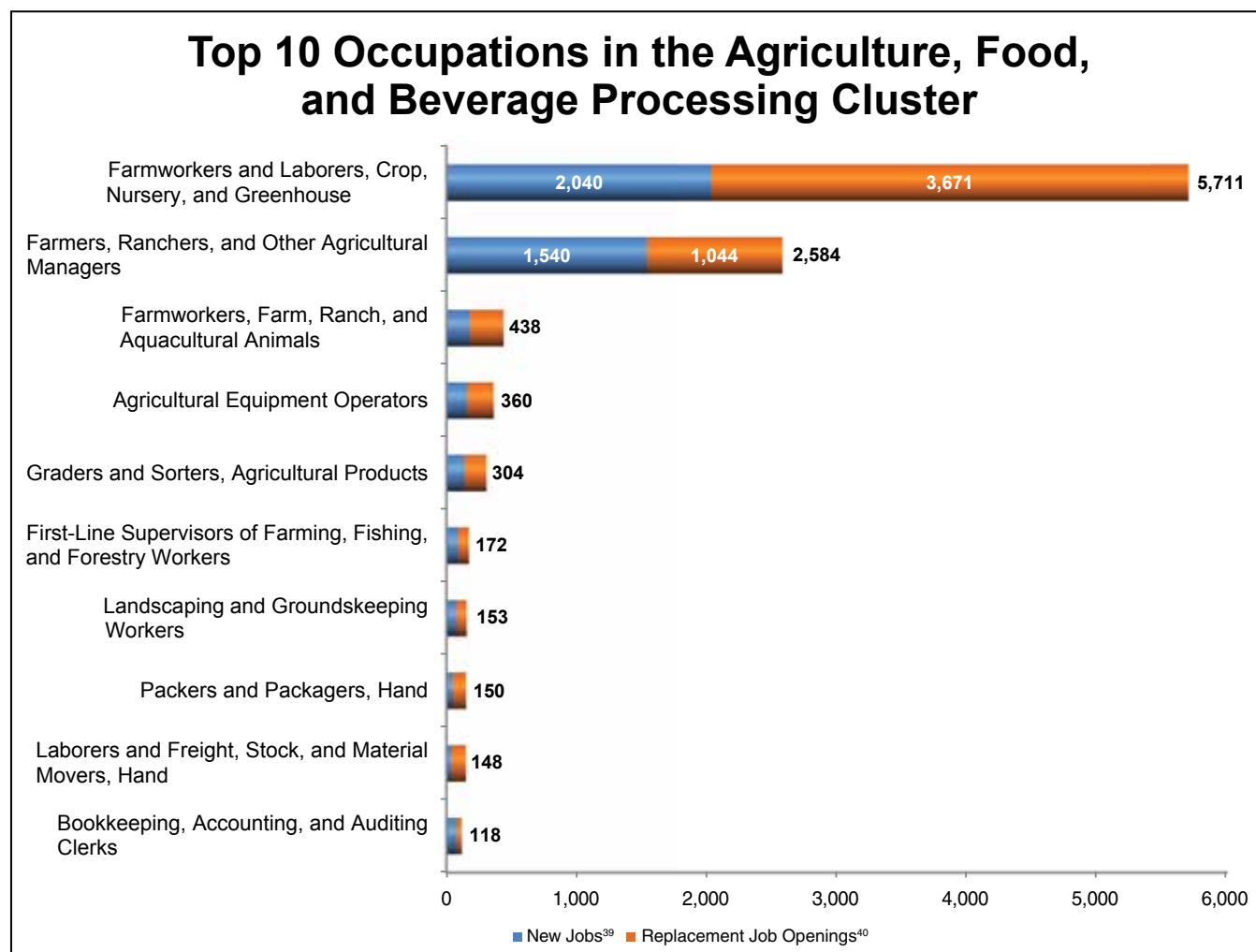
July 2015

What is the Agriculture, Food, and Beverage Processing Cluster?

The Agriculture, Food, and Beverage Processing cluster is comprised of 26 industries related to crop and animal farming as well as food and beverage manufacturing. The workers employed within this cluster span all skill levels and share skills and work activities both within the cluster and in many other industry clusters, suggesting the potential for skills transference and upward mobility with additional training.

Top 10 Occupations in the Agriculture, Food, and Beverage Processing Cluster

The graph below identifies the top 10 occupations in the Agriculture, Food, and Beverage Processing cluster, based on the Ventura County Economic Sub-Market's new job growth plus replacement openings. In sum, these 10 occupations represent more than three-quarters of the 12,199 total job openings projected in this cluster between 2012 and 2022. Moreover, many share the same required skills such as active listening, coordination, critical thinking, monitoring, and speaking.³⁸



Source: California Employment Development Department, *Projections of Employment 2012-2022*. Industry and occupational employment projections for 2012-2022 in this report may not be directly comparable to the published 2012-2022 employment projections available online at www.labormarketinfo.edd.ca.gov.

³⁸ U.S. Department of Labor's [Occupational Information Network \(O*NET\)](http://www.onetonline.org) at www.onetonline.org.

³⁹ New jobs are only openings due to growth and do not include job declines. If an occupation's employment change is negative, there is no job growth and new jobs are set to zero.

⁴⁰ Replacement job openings estimate the number of job openings created when workers retire or permanently leave an occupation and need to be replaced.

Top 10 Occupations and Recent Job Demand in the Agriculture, Food, and Beverage Processing Cluster

The table below further profiles the Ventura County Economic Sub-Market's top 10 occupations in the Agriculture, Food, and Beverage Processing cluster by listing the total job openings for 2012-2022, median hourly and annual wages, and entry-level education requirements. Also included are online job advertisements extracted from The Conference Board Help Wanted OnLine™ (HWOL) data series over a 120-day period. HWOL compiles, analyzes, and categorizes job advertisements from numerous online job boards, including CalJOBSSM (www.caljobs.ca.gov), California's online job listing system.

Occupations	Total Job Openings ⁴¹ (2012-2022)	Median Hourly Wage (2014)	Median Annual Wage (2014)	Entry Level Education ⁴²	HWOL Job Ads ⁴³ (120 days)
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	5,711	\$9.21	\$19,155	Less than high school	23
Farmers, Ranchers, and Other Agricultural Managers	2,584	\$38.87	\$80,846	High school diploma or equivalent	20
Farmworkers, Farm, Ranch, and Aquacultural Animals	438	\$11.83	\$24,612	Less than high school	36
Agricultural Equipment Operators	360	\$15.58	\$32,397	Less than high school	2
Graders and Sorters, Agricultural Products	304	\$9.42	\$19,592	Less than high school	4
First-Line Supervisors of Farming, Fishing, and Forestry Workers	172	\$16.44	\$34,175	High school diploma or equivalent	2
Landscaping and Groundskeeping Workers	153	\$13.55	\$28,169	Less than high school	200
Packers and Packagers, Hand	150	\$9.60	\$19,969	Less than high school	44
Laborers and Freight, Stock, and Material Movers, Hand	148	\$11.78	\$24,495	Less than high school	259
Bookkeeping, Accounting, and Auditing Clerks	118	\$20.50	\$42,640	High school diploma or equivalent	475

Source: California Employment Development Department, *Projections of Employment 2012-2022*; *Occupational Employment Statistics Wage Survey*, updated to 4th Q, 2014; The Conference Board Help Wanted OnLine™ (HWOL) Data Series, 120-day period ending July 24, 2015.

⁴¹ Total job openings are the sum of new jobs and replacement job openings.

⁴² U.S. Department of Labor, Bureau of Labor Statistics (BLS) 2012 education levels.

⁴³ Totals represent job advertisements from employers in all industries. One job opening may be represented in more than one job advertisement.

Top Occupations for the Agriculture, Food, and Beverage Processing Cluster by Education Level

The table below identifies the occupations with the most total job openings, categorized by Bureau of Labor Statistics (BLS) 2012 entry-level education requirements, within the Agriculture, Food, and Beverage Processing cluster. The table includes the Ventura County Economic Sub-Market's projected total job openings and median hourly and annual wages. In addition, recent totals of online job advertisements over 120-day period are included. Grouping occupations by education levels allows individuals to better gauge the potential for skills transference and upward mobility within the cluster.

Occupations	Total Job Openings ⁴⁴ (2012-2022)	Median Hourly Wage (2014)	Median Annual Wage (2014)	HWOL Job Ads (120 days)
Requires a Bachelor's Degree or Higher				
Industrial Production Managers	91	\$44.60	\$92,767	23
Accountants and Auditors	56	\$34.49	\$71,730	334
General and Operations Managers	52	\$51.15	\$106,377	202
Financial Managers	23	\$54.71	\$113,789	168
Chief Executives	19	>90.00	>187,200	13
Requires Some College, Postsecondary Non-Degree Award, or Associate's Degree				
Heavy and Tractor-Trailer Truck Drivers	93	\$22.09	\$45,961	606
Agricultural and Food Science Technicians	24	\$13.87	\$28,848	9
First-Line Supervisors of Production and Operating Workers	13	\$26.22	\$54,534	341
Electrical and Electronics Repairers, Commercial and Industrial Equipment	12	\$30.77	\$64,000	2
Computer, Automated Teller, and Office Machine Repairers	4	\$19.83	\$41,245	5
Requires a High School Diploma or Equivalent or Less				
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	5,711	\$9.21	\$19,155	23
Farmers, Ranchers, and Other Agricultural Managers	2,584	\$38.87	\$80,846	20
Farmworkers, Farm, Ranch, and Aquacultural Animals	438	\$11.83	\$24,612	36
Agricultural Equipment Operators	360	\$15.58	\$32,397	2
Graders and Sorters, Agricultural Products	304	\$9.42	\$19,592	4

Source: California Employment Development Department, *Projections of Employment 2012-2022*; *Occupational Employment Statistics Wage Survey*, updated to 4th Q, 2014; *The Conference Board Help Wanted OnLine™ (HWOL) Data Series*, 120-day period ending July 24, 2015.

⁴⁴ Total job openings are the sum of new jobs and replacement job openings.

Skill Requirements in the Agriculture, Food, and Beverage Processing Cluster

The table below lists the 10 top skills required for top occupations in the Agriculture, Food, and Beverage Processing cluster, categorized by entry-level education requirements. Active listening and critical thinking are the most commonly shared skills, followed by monitoring, reading comprehension, and speaking. The skills and work activities identified for each occupation are from the U.S. Department of Labor's Occupational Information Network (O*NET).

Occupations	Skills																			
	Active Learning	Active Listening	Complex Problem Solving	Coordination	Critical Thinking	Equipment Maintenance	Instruction	Judgment and Decision Making	Learning Strategies	Management of Financial Resources	Management of Personnel Resources	Mathematics	Monitoring	Negotiation	Operation and Control	Operation Monitoring	Persuasion	Quality Control Analysis	Reading Comprehension	Repairing
Requires a Bachelor's Degree or Higher																				
Industrial Production Managers	•	•		•	•			•		•		•						•		
Accountants and Auditors ⁴⁵	•	•			•			•				•	•					•		
General and Operations Managers	•	•		•	•					•		•						•		
Financial Managers ⁴⁶	•	•			•				•			•					•	•		
Chief Executives		•	•	•				•		•	•	•					•			
Requires Some College, Postsecondary Non-Degree Award, or Associate's Degree																				
Heavy and Tractor-Trailer Truck Drivers		•	•		•	•							•		•	•		•		
Agricultural and Food Science Technicians ⁴⁷	•	•	•		•							•	•					•	•	•
First-Line Supervisors of Production and Operating Workers		•		•	•					•		•						•	•	•
Electrical and Electronics Repairers, Commercial and Industrial Equipment		•	•		•	•									•	•		•	•	•
Computer, Automated Teller, and Office Machine Repairers	•	•			•							•			•	•		•	•	
Requires a High School Diploma or Equivalent or Less																				
Farmworkers and Laborers, Crop, Nursery, and Greenhouse ⁴⁸		•		•	•	•	•			•		•			•	•		•		
Farmers, Ranchers, and Other Agricultural Managers ⁴⁹				•	•			•				•	•	•			•	•		•
Farmworkers, Farm, Ranch, and Aquacultural Animals		•		•	•			•				•			•	•		•		•
Agricultural Equipment Operators		•		•	•	•									•	•		•		•
Graders and Sorters, Agricultural Products		•	•	•	•			•				•					•	•		•

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

⁴⁵ Skills represent Accountants, a specialty occupation of Accountants and Auditors.

⁴⁶ Skills represent Financial Managers, Branch or Department, a specialty occupation of Financial Managers.

⁴⁷ Skills represent Agricultural Technicians, a specialty occupation of Agricultural and Food Science Technicians.

⁴⁸ Skills represent Farmworkers and Laborers, Crop, a specialty occupation of Farmworkers and Laborers, Crop, Nursery, and Greenhouse.

⁴⁹ Skills represent Farm and Ranch Managers, a specialty occupation of Farmers, Ranchers, and Other Agricultural Managers.

Work Activities in the Agriculture, Food, and Beverage Processing Cluster

The table below lists the 10 top work activities required for top occupations in the Agriculture, Food, and Beverage Processing cluster, categorized by entry-level education requirements. The most common include making decisions and solving problems; organizing, planning, and prioritizing work; establishing and maintaining interpersonal relationships; and communicating with supervisors, peers, or subordinates.

Occupations	Work Activities																																
	Analyzing Data or Information	Coaching and Developing Others	Communicating with Persons Outside Organization	Communicating with Supervisors, Peers, or Subordinates	Controlling Machines and Processes	Coordinating the Work and Activities of Others	Developing Objectives and Strategies	Documenting/Recording Information	Establishing and Maintaining Interpersonal Relationships	Evaluating Information to Determine Compliance with Standards	Getting Information	Guiding, Directing, and Motivating Subordinates	Handling and Moving Objects	Identifying Objects, Actions, and Events	Inspecting Equipment, Structures, or Material	Interacting With Computers	Making Decisions and Solving Problems	Monitor Processes, Materials, or Surroundings	Monitoring and Controlling Resources	Operating Vehicles, Mechanized Devices, or Equipment	Organizing, Planning, and Prioritizing Work	Performing Administrative Activities	Performing General Physical Activities	Processing Information	Provide Consultation and Advice to Others	Repairing and Maintaining Electronic Equipment	Repairing and Maintaining Mechanical Equipment	Resolving Conflicts and Negotiating with Others	Scheduling Work and Activities	Thinking Creatively	Training and Teaching Others	Updating and Using Relevant Knowledge	
Requires a Bachelor's Degree or Higher																																	
Industrial Production Managers				●		●			●			●					●	●	●		●							●	●				●
Accountants and Auditors ⁵⁰	●			●					●	●	●						●				●	●		●									●
General and Operations Managers			●	●		●			●								●		●		●							●	●	●			
Financial Managers ⁵¹		●		●		●			●			●				●	●				●							●					●
Chief Executives			●	●			●		●			●					●		●		●				●			●					
Requires Some College, Postsecondary Non-Degree Award, or Associate's Degree																																	
Heavy and Tractor-Trailer Truck Drivers					●				●		●		●	●	●		●			●	●		●										
Agricultural and Food Science Technicians ⁵²											●		●	●			●	●			●		●	●						●			●
First-Line Supervisors of Production and Operating Workers		●		●	●	●			●			●	●												●			●	●				
Electrical and Electronics Repairers, Commercial and Industrial Equipment				●				●	●				●				●	●			●					●	●						●
Computer, Automated Teller, and Office Machine Repairers				●					●					●	●	●					●					●	●			●			●
Requires a High School Diploma or Equivalent or Less																																	
Farmworkers and Laborers, Crop, Nursery, and Greenhouse ⁵³					●				●		●	●	●	●						●			●									●	●
Farmers, Ranchers, and Other Agricultural Managers ⁵⁴							●				●		●				●		●	●	●	●	●							●		●	
Farmworkers, Farm, Ranch, and Aquacultural Animals				●	●								●	●	●		●	●		●			●				●						
Agricultural Equipment Operators					●					●		●		●		●	●		●	●	●	●	●				●						
Graders and Sorters, Agricultural Products				●	●	●			●		●		●		●						●	●											●

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

⁵⁰ Work Activities represent Accountants, a specialty occupation of Accountants and Auditors.

⁵¹ Work Activities represent Financial Managers, Branch or Department, a specialty occupation of Financial Managers.

⁵² Work Activities represent Agricultural Technicians, a specialty occupation of Agricultural and Food Science Technicians.

⁵³ Work Activities represent Farmworkers and Laborers, Crop, a specialty occupation of Farmworkers and Laborers, Crop, Nursery, and Greenhouse.

⁵⁴ Work Activities represent Farm and Ranch Managers, a specialty occupation of Farmers, Ranchers, and Other Agricultural Managers.

Related Occupations for the Agriculture, Food, and Beverage Processing Cluster

The table below lists top occupations in the Agriculture, Food, and Beverage Processing cluster by entry-level education requirements and provides a sample of related occupations. These related occupations match many of the skills, education, and work experience needed for the top Agriculture, Food, and Beverage Processing cluster occupations.

Agriculture, Food, and Beverage Processing Occupations	Related Occupations
Requires a Bachelor's Degree or Higher	
Industrial Production Managers	<ul style="list-style-type: none"> • General and Operations Managers • Logistics Managers • Storage and Distribution Managers
Accountants and Auditors	<ul style="list-style-type: none"> • Bookkeeping, Accounting, and Auditing Clerks • Financial Analysts • Personal Financial Advisors
General and Operations Managers	<ul style="list-style-type: none"> • First-Line Supervisors of Office and Administrative Support Workers • First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators • Logistics Managers
Financial Managers	<ul style="list-style-type: none"> • Sales Agents, Financial Services • Sales Agents, Securities and Commodities • Sales Managers
Chief Executives	<ul style="list-style-type: none"> • Sales Managers • Supply Chain Managers • Treasurers and Controllers
Requires Some College, Postsecondary Non-Degree Award, or Associate's Degree	
Heavy and Tractor-Trailer Truck Drivers	<ul style="list-style-type: none"> • Light Truck or Delivery Services Drivers • Motorboat Operators • Pile-Driver Operators
Agricultural and Food Science Technicians	<ul style="list-style-type: none"> • Inspectors, Testers, Sorters, Samplers, and Weighers • Pharmacy Technicians • Precision Agriculture Technicians
First-Line Supervisors of Production and Operating Workers	<ul style="list-style-type: none"> • First-Line Supervisors of Agricultural Crop and Horticultural Workers • First-Line Supervisors of Construction Trades and Extraction Workers • First-Line Supervisors of Mechanics, Installers, and Repairers
Electrical and Electronics Repairers, Commercial and Industrial Equipment	<ul style="list-style-type: none"> • Industrial Machinery Mechanics • Manufacturing Production Technicians • Robotics Technicians
Computer, Automated Teller, and Office Machine Repairers	<ul style="list-style-type: none"> • Computer User Support Specialists • Electrical Engineering Technicians • Telecommunications Equipment Installers and Repairers, Except Line Installers
Requires a High School Diploma or Equivalent or Less	
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	<ul style="list-style-type: none"> • Construction Laborers • Landscaping and Groundskeeping Workers • Janitors and Cleaners, Except Maids and Housekeeping Cleaners
Farmers, Ranchers, and Other Agricultural Managers	<ul style="list-style-type: none"> • First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators • Food Scientists and Technologists • Soil and Water Conservationists
Farmworkers, Farm, Ranch, and Aquacultural Animals	<ul style="list-style-type: none"> • Fishers and Related Fishing Workers • Helpers -Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters • Septic Tank Servicers and Sewer Pipe Cleaners
Agricultural Equipment Operators	<ul style="list-style-type: none"> • Helpers -Carpenters • Pile-Driver Operators • Riggers
Graders and Sorters, Agricultural Products	<ul style="list-style-type: none"> • Food Preparation Workers • Maids and Housekeeping Cleaners • Stock Clerks -Stockroom, Warehouse, or Storage Yard

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

Employer Demand for the Agriculture, Food, and Beverage Processing Cluster

The following table lists the Ventura County Economic Sub-Market employers in the Agriculture, Food, and Beverage Processing cluster who posted the most job advertisements during the 120-day period ending July 24, 2015. The table also includes the number of job advertisements from the previous year's period, as well as the numerical change and year-over percent change in these postings for the same 120-day period.

Agriculture, Food, and Beverage Processing Cluster Employers	Recent Job Advertisements ⁵⁵ (120-day period)	Prior Year Job Advertisements (120-day period)	Numerical Change	Year-Over Percent Change (HWOL Job Advertisements)
Dairy Farmers of America	14	9	5	55.6%
Reiter Affiliated Companies	11	27	-16	-59.3%
Ventura Coastal, LLC	6	11	-5	-45.5%
Pepsico	5	5	0	0.0%
Coca-Cola Enterprises	5	5	0	0.0%
Dr Pepper Snapple Group	3	1	2	200.0%
Wholesome Harvest Baking	3	0	3	—
Crop Production Services	2	0	2	—
The J.M. Smucker Company	2	4	-2	-50.0%
Farmers Insurance Group	2	0	2	—
Poly-Tainer, Inc.	2	3	-1	-33.3%
Tree Top, Inc.	2	1	1	100.0%
Limoneira	1	1	0	0.0%
Spatz Laboratories	1	2	-1	-50.0%
Scarborough Farms	1	1	0	0.0%
Reiter Affiliated Companies	1	0	1	—
Acosta, Inc.	1	0	1	—
Brokaw Nursery	1	0	1	—
Dole Food Company	1	1	0	0.0%
Rich Products Corporation	1	0	1	—

Source: The Conference Board Help Wanted OnLine™ (HWOL) Data Series: Period ending July 24, 2015.

⁵⁵ Totals do not include employers with anonymous job advertisements.

Instructional Programs for the Top Agriculture, Food, and Beverage Processing Cluster Occupations

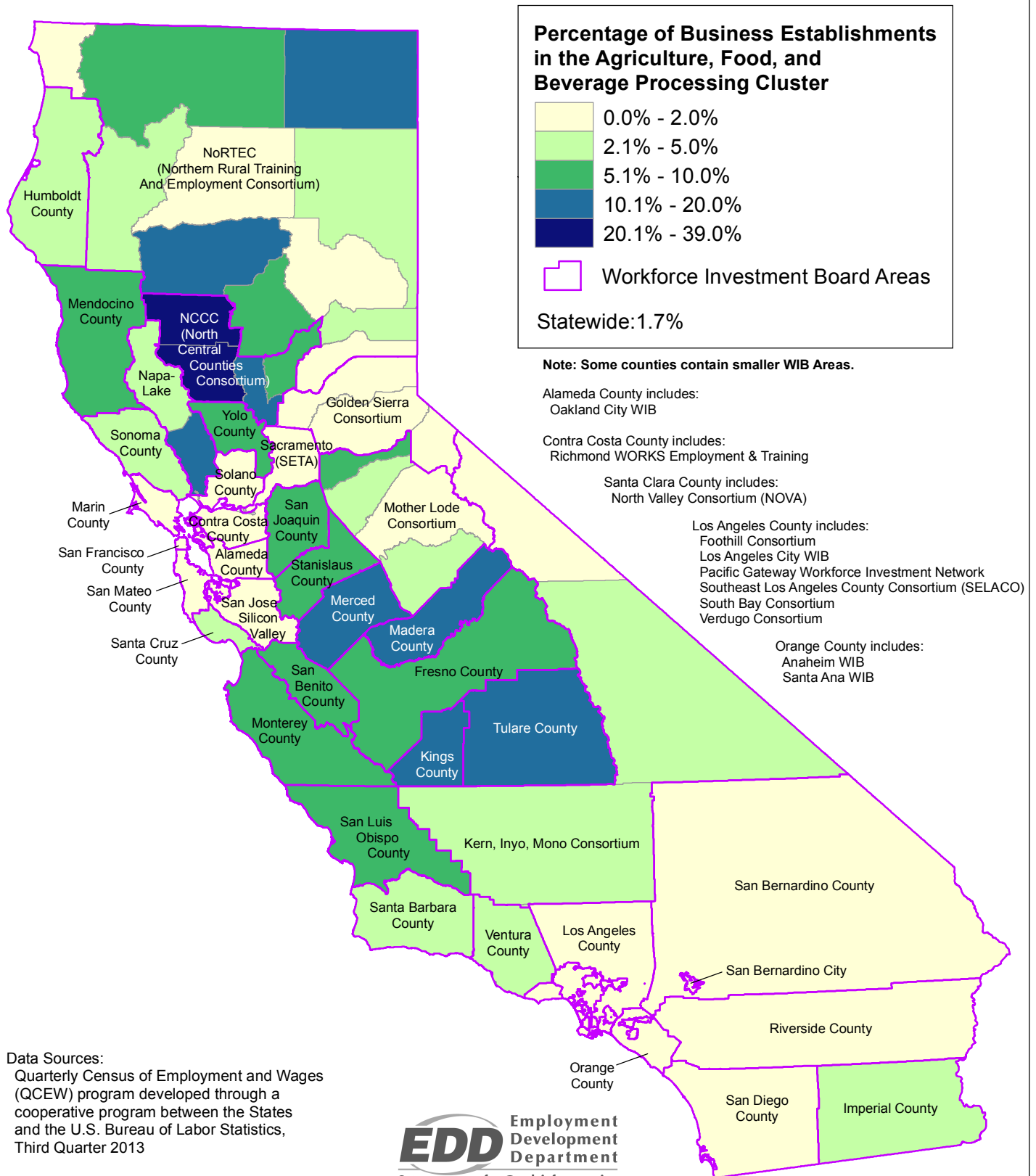
The table below provides examples of instructional programs related to some of the top occupations in the Agriculture, Food, and Beverage Processing cluster, particularly those that require less than a bachelor's degree. These programs train individuals for occupations throughout many industries and are not limited to the Agriculture, Food, and Beverage Processing cluster. To view a more complete list of training programs, select the source links under the table below. The Taxonomy of Programs categorizes and describes instructional programs only for California Community Colleges.

Occupations	Classification of Instructional Program (CIP)		Taxonomy of Programs (TOP)	
	CIP Code	CIP Title	TOP Code	TOP Title
Heavy and Tractor-Trailer Truck Drivers	49.0205	Truck and Bus Driver/Commercial Vehicle Operator and Instructor	094750	Truck and Bus Driving
Agricultural and Food Science Technicians	01.1002	Food Technology and Processing	011300	Food Processing and Related Technologies
First-Line Supervisors of Production and Operating Workers	52.0205	Operations Management and Supervision	N/A	N/A
Electrical and Electronics Repairers, Commercial and Industrial Equipment	47.0104	Computer Installation and Repair	093410	Computer Electronics
	47.0105	Technology/Technician Industrial Electronics Technology/Technician	093420	Industrial Electronics
Computer, Automated Teller, and Office Machine Repairers	47.0102	Business Machine Repair	093410	Computer Electronics
	47.0104	Computer Installation and Repair Technology/Technician		
Farmers, Ranchers, and Other Agricultural Managers	01.0101	Agricultural Business and Management, General	010200	Animal Science
	01.0102	Agribusiness/Agricultural Business Operations	010220	Artificial Inseminator (Licensed)
	01.0304	Crop Production	011200	Agriculture Business, Sales and Service
Agricultural Equipment Operators	01.0204	Agricultural Power Machinery Operation	N/A	N/A
Graders and Sorters, Agricultural Products	01.0105	Agricultural/Farm Supplies Retailing and Wholesaling	N/A	N/A

Source: U.S. Department of Education [Integrated Postsecondary Education Data System \(IPEDS\)](http://www.nces.ed.gov/ipeds) at www.nces.ed.gov; [California Community Colleges TOP-to-CIP Crosswalk](http://www.cccco.edu) 7th Edition (2010), www.cccco.edu.

California Agriculture, Food, and Beverage Processing Cluster

Percentage of Total County Establishments, 2013



Data Sources:
Quarterly Census of Employment and Wages (QCEW) program developed through a cooperative program between the States and the U.S. Bureau of Labor Statistics, Third Quarter 2013

Cartography by:
Labor Market Information Division
California Employment Development Department
<http://www.labormarketinfo.edd.ca.gov>
July 2014

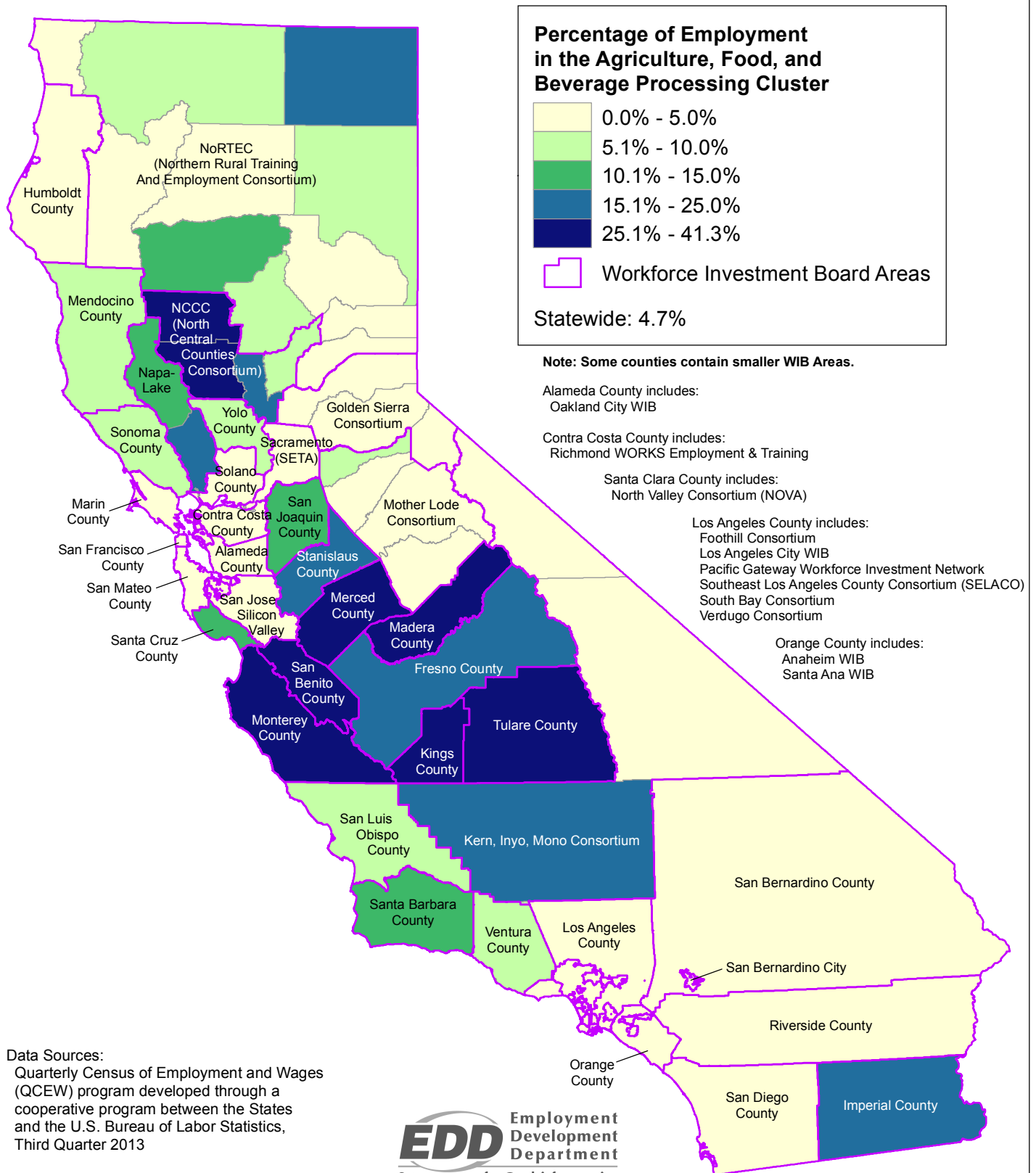
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California Agriculture, Food, and Beverage Processing Cluster

Percentage of Total County Employment, 2013



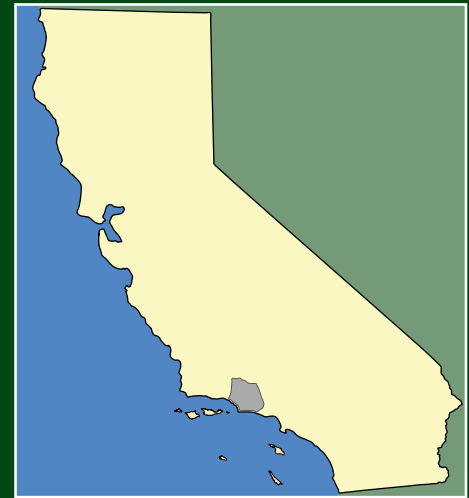
Data Sources:
Quarterly Census of Employment and Wages (QCEW) program developed through a cooperative program between the States and the U.S. Bureau of Labor Statistics, Third Quarter 2013

Cartography by:
Labor Market Information Division
California Employment Development Department
<http://www.labormarketinfo.edd.ca.gov>
July 2014

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Occupational Analysis: Construction Materials and Services Cluster

Ventura County Economic Sub-Market
July 2015

What is the Construction Materials and Services Cluster?

The Construction Materials and Services cluster comprises 14 industries related to the construction of buildings, bridges, and roads, as well as the manufacture of materials needed to erect them. Employers in this cluster include equipment and finishing contractors, builders of electrical, heating, and plumbing systems, and contractors who specialize in framing or tile work. Workers employed within this cluster often share skills and work activities both within the cluster and in many other industry clusters, suggesting the potential for skills transference and upward mobility with additional training.

Top 10 Occupations in the Construction Materials and Services Cluster

The graph below identifies the top 10 occupations in the Construction Materials and Services cluster, based on the Ventura County Economic Sub-Market's new job growth plus replacement openings. In sum, these 10 occupations represent more than one-half of the 6,737 total job openings projected in this cluster between 2012 and 2022. Moreover, many share the same required skills such as active listening, coordination, critical thinking, monitoring, reading comprehension, and speaking.⁸⁸



Source: California Employment Development Department, *Projections of Employment 2012-2022*. Industry and occupational employment projections for 2012-2022 in this report may not be directly comparable to the published 2012-2022 employment projections available online at www.labormarketinfo.edd.ca.gov.

⁸⁸ U.S. Department of Labor's [Occupational Information Network \(O*NET\)](http://www.onetonline.org) at www.onetonline.org.

⁸⁹ New jobs are only openings due to growth and do not include job declines. If an occupation's employment change is negative, there is no job growth and new jobs are set to zero.

⁹⁰ Replacement job openings estimate the number of job openings created when workers retire or permanently leave an occupation and need to be replaced.

Top 10 Occupations and Recent Job Demand in the Construction Materials and Services Cluster

The table below further profiles the Ventura County Economic Sub-Market's top 10 occupations in the Construction Materials and Services cluster by listing the total job openings for 2012-2022, median hourly and annual wages, and entry-level education requirements. Also included are online job advertisements extracted from The Conference Board Help Wanted OnLine™ (HWOL) data series over a 120-day period. HWOL compiles, analyzes, and categorizes job advertisements from numerous online job boards, including CalJOBSSM (www.caljobs.ca.gov), California's online job listing system.

Occupations	Total Job Openings ⁹¹ (2012-2022)	Median Hourly Wage (2014)	Median Annual Wage (2014)	Entry Level Education ⁹²	HWOL Job Ads ⁹³ (120 days)
Construction Laborers	725	\$19.37	\$40,295	Less than high school	140
Cement Masons and Concrete Finishers	450	\$23.53	\$48,933	Less than high school	18
Carpenters	442	\$22.30	\$46,379	High school diploma or equivalent	154
Electricians	376	\$29.36	\$61,072	High school diploma or equivalent	112
Painters, Construction and Maintenance	324	\$15.32	\$31,867	Less than high school	88
Operating Engineers and Other Construction Equipment Operators	282	\$35.50	\$73,842	High school diploma or equivalent	14
First-Line Supervisors of Construction Trades and Extraction Workers	243	\$34.36	\$71,470	High school diploma or equivalent	133
Cost Estimators	226	\$28.37	\$59,006	Bachelor's degree	24
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	204	\$20.28	\$42,179	Postsecondary non-degree award	100
General and Operations Managers	194	\$51.15	\$106,377	Bachelor's degree	202

Source: California Employment Development Department, *Projections of Employment 2012-2022*; *Occupational Employment Statistics Wage Survey*, updated to 4th Q, 2014; The Conference Board Help Wanted OnLine™ (HWOL) Data Series, 120-day period ending July 24, 2015.

⁹¹ Total job openings are the sum of new jobs and replacement job openings.

⁹² U.S. Department of Labor, Bureau of Labor Statistics (BLS) 2012 education levels.

⁹³ Totals represent job advertisements from employers in all industries. One job opening may be represented in more than one job advertisement.

Top Occupations for the Construction Materials and Services Cluster by Education Level

The table below identifies the occupations with the most total job openings, categorized by Bureau of Labor Statistics (BLS) 2012 entry-level education requirements, within the Construction Materials and Services cluster. The table includes the Ventura County Economic Sub-Market's projected total job openings and median hourly and annual wages. In addition, recent totals of online job advertisements over 120-day period are included. Grouping occupations by education levels allows individuals to better gauge the potential for skills transference and upward mobility within the cluster.

Occupations	Total Job Openings ⁹⁴ (2012-2022)	Median Hourly Wage (2014)	Median Annual Wage (2014)	HWOL Job Ads (120 days)
Requires a Bachelor's Degree or Higher				
Cost Estimators	226	\$28.37	\$59,006	24
General and Operations Managers	194	\$51.15	\$106,377	202
Construction Managers	116	\$44.90	\$93,403	47
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	46	\$41.19	\$85,662	190
Accountants and Auditors	37	\$34.49	\$71,730	334
Requires Some College, Postsecondary Non-Degree Award, or Associate's Degree				
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	204	\$20.28	\$42,179	100
Heavy and Tractor-Trailer Truck Drivers	112	\$22.09	\$45,961	606
Telecommunications Equipment Installers and Repairers, Except Line Installers	44	\$32.41	\$67,401	41
First-Line Supervisors of Production and Operating Workers	21	\$26.22	\$54,534	341
Electrical and Electronics Engineering Technicians	12	\$34.74	\$72,271	95
Requires a High School Diploma or Equivalent or Less				
Construction Laborers	725	\$19.37	\$40,295	140
Cement Masons and Concrete Finishers	450	\$23.53	\$48,933	18
Carpenters	442	\$22.30	\$46,379	154
Electricians	376	\$29.36	\$61,072	112
Painters, Construction and Maintenance	324	\$15.32	\$31,867	88

Source: California Employment Development Department, *Projections of Employment 2012-2022*; *Occupational Employment Statistics Wage Survey*, updated to 4th Q, 2014; *The Conference Board Help Wanted OnLine™ (HWOL) Data Series*, 120-day period ending July 24, 2015.

⁹⁴ Total job openings are the sum of new jobs and replacement job openings.

Skill Requirements in the Construction Materials and Services Cluster

The table below lists the 10 top skills required for top occupations in the Construction Materials and Services cluster, categorized by entry-level education requirements. Critical thinking, active listening, and reading comprehension are the most commonly shared skills, followed by monitoring and speaking. The skills and work activities identified for each occupation are from the U.S. Department of Labor's Occupational Information Network (O*NET).

Occupations	Skills																									
	Active Learning	Active Listening	Complex Problem Solving	Coordination	Critical Thinking	Equipment Maintenance	Installation	Judgment and Decision Making	Learning Strategies	Management of Financial Resources	Management of Personnel Resources	Mathematics	Monitoring	Negotiation	Operation and Control	Operation Monitoring	Persuasion	Quality Control Analysis	Reading Comprehension	Repairing	Social Perceptiveness	Speaking	Systems Analysis	Time Management	Troubleshooting	Writing
Requires a Bachelor's Degree or Higher																										
Cost Estimators	●	●	●		●					●		●	●						●			●				●
General and Operations Managers	●	●		●	●						●		●						●		●	●				●
Construction Managers		●		●	●			●					●	●					●		●		●		●	●
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	●	●		●	●									●			●		●		●	●				●
Accountants and Auditors ⁹⁵	●	●			●			●				●	●						●			●	●			●
Requires Some College, Postsecondary Non-Degree Award, or Associate's Degree																										
Heating, Air Conditioning, and Refrigeration Mechanics and Installers ⁹⁶		●		●	●	●	●											●	●	●		●			●	
Heavy and Tractor-Trailer Truck Drivers		●	●		●	●							●		●	●			●			●		●		
Telecommunications Equipment Installers and Repairers, Except Line Installers		●	●		●								●			●		●	●	●		●			●	
First-Line Supervisors of Production and Operating Workers		●		●	●						●		●						●		●	●		●		●
Electrical and Electronics Engineering Technicians ⁹⁷	●	●	●		●							●	●			●		●	●						●	
Requires a High School Diploma or Equivalent or Less																										
Construction Laborers		●	●	●	●	●							●		●	●			●			●				
Cement Masons and Concrete Finishers		●	●	●	●							●	●		●			●			●		●			
Carpenters ⁹⁸		●		●	●			●				●	●					●	●			●		●		
Electricians				●	●	●	●		●				●					●	●	●					●	
Painters, Construction and Maintenance		●		●	●			●			●		●						●		●	●		●		

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

⁹⁵ Skills represent Accountants, a specialty occupation of Accountants and Auditors.

⁹⁶ Skills represent Heating and Air Conditioning Mechanics and Installers, a specialty occupation of Heating, Air Conditioning, and Refrigeration Mechanics and Installers.

⁹⁷ Skills represent Electrical Engineering Technicians, a specialty occupation of Electrical and Electronics Engineering Technicians.

⁹⁸ Skills represent Construction Carpenters, a specialty occupation of Carpenters.

Work Activities in the Construction Materials and Services Cluster

The table below lists the 10 top work activities required for top occupations in the Construction Materials and Services cluster, categorized by entry-level education requirements. The most common include organizing, planning, and prioritizing work; making decisions and solving problems; communicating with supervisors, peers, or subordinates; and updating and using relevant knowledge.

Occupations	Work Activities																																				
	Analyzing Data or Information	Coaching and Developing Others	Communicating with Persons Outside Organization	Communicating with Supervisors, Peers, or Subordinates	Controlling Machines and Processes	Coordinating the Work and Activities of Others	Developing and Building Teams	Documenting/Recording Information	Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment	Establishing and Maintaining Interpersonal Relationships	Estimating the Quantifiable Characteristics of Products, Events, or Information	Evaluating Information to Determine Compliance with Standards	Getting Information	Guiding, Directing, and Motivating Subordinates	Handling and Moving Objects	Identifying Objects, Actions, and Events	Inspecting Equipment, Structures, or Material	Interacting With Computers	Judging the Qualities of Things, Services, or People	Making Decisions and Solving Problems	Monitor Processes, Materials, or Surroundings	Monitoring and Controlling Resources	Operating Vehicles, Mechanized Devices, or Equipment	Organizing, Planning, and Prioritizing Work	Performing Administrative Activities	Performing for or Working Directly with the Public	Performing General Physical Activities	Processing Information	Provide Consultation and Advice to Others	Repairing and Maintaining Electronic Equipment	Repairing and Maintaining Mechanical Equipment	Resolving Conflicts and Negotiating with Others	Scheduling Work and Activities	Selling or Influencing Others	Thinking Creatively	Updating and Using Relevant Knowledge	
Requires a Bachelor’s Degree or Higher																																					
Cost Estimators	●			●			●			●		●								●				●				●	●								●
General and Operations Managers			●	●		●				●			●							●		●		●									●	●		●	
Construction Managers			●	●		●	●			●			●							●				●									●	●			
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products			●	●						●			●							●				●						●			●		●		●
Accountants and Auditors ⁹⁹	●			●						●	●	●								●				●	●			●									●
Requires Some College, Postsecondary Non-Degree Award, or Associate’s Degree																																					
Heating, Air Conditioning, and Refrigeration Mechanics and Installers ¹⁰⁰	●			●											●	●			●					●			●		●		●						●
Heavy and Tractor-Trailer Truck Drivers				●					●		●		●		●	●	●		●		●		●	●		●											
Telecommunications Equipment Installers and Repairers, Except Line Installers			●						●						●						●			●		●	●			●						●	●
First-Line Supervisors of Production and Operating Workers		●		●	●	●			●					●	●													●				●	●				
Electrical and Electronics Engineering Technicians ¹⁰¹				●			●	●	●									●		●								●		●						●	●
Requires a High School Diploma or Equivalent or Less																																					
Construction Laborers				●	●											●	●			●	●		●				●					●					●
Cement Masons and Concrete Finishers				●												●	●	●		●		●	●		●	●		●								●	●
Carpenters ¹⁰²				●	●	●									●	●					●		●	●		●		●									●
Electricians					●											●	●	●		●				●		●		●									●
Painters, Construction and Maintenance				●	●				●					●	●					●	●			●				●								●	

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

⁹⁹ Work Activities represent Accountants, a specialty occupation of Accountants and Auditors.

¹⁰⁰ Work Activities represent Heating and Air Conditioning Mechanics and Installers, a specialty occupation of Heating, Air Conditioning, and Refrigeration Mechanics and Installers.

¹⁰¹ Work Activities represent Electrical Engineering Technicians, a specialty occupation of Electrical and Electronics Engineering Technicians.

¹⁰² Work Activities represent Construction Carpenters, a specialty occupation of Carpenters.

Related Occupations for the Construction Materials and Services Cluster

The table below lists top occupations in the Construction Materials and Services cluster by entry-level education requirements and provides a sample of related occupations. These related occupations match many of the skills, education, and work experience needed for the top Construction Materials and Services cluster occupations.

Construction Materials and Services Occupations	Related Occupations
Requires a Bachelor's Degree or Higher	
Cost Estimators	<ul style="list-style-type: none"> Financial Analysts Risk Management Specialists Transportation Planners
General and Operations Managers	<ul style="list-style-type: none"> First-Line Supervisors of Office and Administrative Support Workers Logistics Managers Storage and Distribution Managers
Construction Managers	<ul style="list-style-type: none"> Architectural and Engineering Managers Energy Engineers General and Operations Managers
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	<ul style="list-style-type: none"> Insurance Sales Agents Market Research Analysts and Marketing Specialists Personal Financial Advisors
Accountants and Auditors	<ul style="list-style-type: none"> Bookkeeping, Accounting, and Auditing Clerks Financial Analysts Personal Financial Advisors
Requires Some College, Postsecondary Non-Degree Award, or Associate's Degree	
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	<ul style="list-style-type: none"> Electricians Pipe Fitters and Steamfitters Plumbers
Heavy and Tractor-Trailer Truck Drivers	<ul style="list-style-type: none"> Light Truck or Delivery Services Drivers Pile-Driver Operators Service Unit Operators, Oil, Gas, and Mining
Telecommunications Equipment Installers and Repairers, Except Line Installers	<ul style="list-style-type: none"> Electrical and Electronics Repairers, Commercial and Industrial Equipment Electricians Heating and Air Conditioning Mechanics and Installers
First-Line Supervisors of Production and Operating Workers	<ul style="list-style-type: none"> First-Line Supervisors of Construction Trades and Extraction Workers First-Line Supervisors of Mechanics, Installers, and Repairers Non-Destructive Testing Specialists
Electrical and Electronics Engineering Technicians	<ul style="list-style-type: none"> Computer User Support Specialists Manufacturing Production Technicians Mechanical Engineering Technicians
Requires a High School Diploma or Equivalent or Less	
Construction Laborers	<ul style="list-style-type: none"> Cement Masons and Concrete Finishers Helpers -Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters Helpers -Carpenters
Cement Masons and Concrete Finishers	<ul style="list-style-type: none"> Construction Carpenters Insulation Workers, Mechanical Reinforcing Iron and Rebar Workers
Carpenters	<ul style="list-style-type: none"> Brickmasons and Blockmasons Cement Masons and Concrete Finishers Rough Carpenters
Electricians	<ul style="list-style-type: none"> Heating and Air Conditioning Mechanics and Installers Pipe Fitters and Steamfitters Refrigeration Mechanics and Installers
Painters, Construction and Maintenance	<ul style="list-style-type: none"> Helpers -Carpenters Insulation Workers, Floor, Ceiling, and Wall Roofers

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

Employer Demand for the Construction Materials and Services Cluster

The following table lists the Ventura County Economic Sub-Market employers in the Construction Materials and Services cluster who posted the most job advertisements during the 120-day period ending July 24, 2015. The table also includes the number of job advertisements from the previous year's period, as well as the numerical change and year-over percent change in these postings for the same 120-day period.

Construction Materials and Services Cluster Employers	Recent Job Advertisements ¹⁰³ (120-day period)	Prior Year Job Advertisements (120-day period)	Numerical Change	Year-Over Percent Change (HWOL Job Advertisements)
Solarcity	24	28	-4	-14.3%
Pentair	13	11	2	18.2%
Parker Hannifin, Corp.	13	11	2	18.2%
Thor Solutions, LLC	10	4	6	150.0%
Milgard Manufacturing, Inc.	8	27	-19	-70.4%
Pride Industries	7	3	4	133.3%
Michael Page	4	1	3	300.0%
Superior Fire, Inc.	4	0	4	—
Abrisa Glass	3	4	-1	-25.0%
American Water Company	3	0	3	—
Granite Construction, Inc.	3	3	0	0.0%
System Pavers, Inc.	3	5	-2	-40.0%
Lend Lease	2	0	2	—
Cabrillo Economic Development, Corp.	2	8	-6	-75.0%
HBE Corporation	2	9	-7	-77.8%
American Concrete Institute	2	0	2	—
Navigant	2	0	2	—
Garnica's Construction, Inc.	2	0	2	—
Envel Design, Corp.	2	0	2	—
BKM Office Environments	2	0	2	—

Source: The Conference Board Help Wanted OnLine™ (HWOL) Data Series: Period ending July 24, 2015.

¹⁰³ Totals do not include employers with anonymous job advertisements.

Instructional Programs for the Top Construction Materials and Services Cluster Occupations

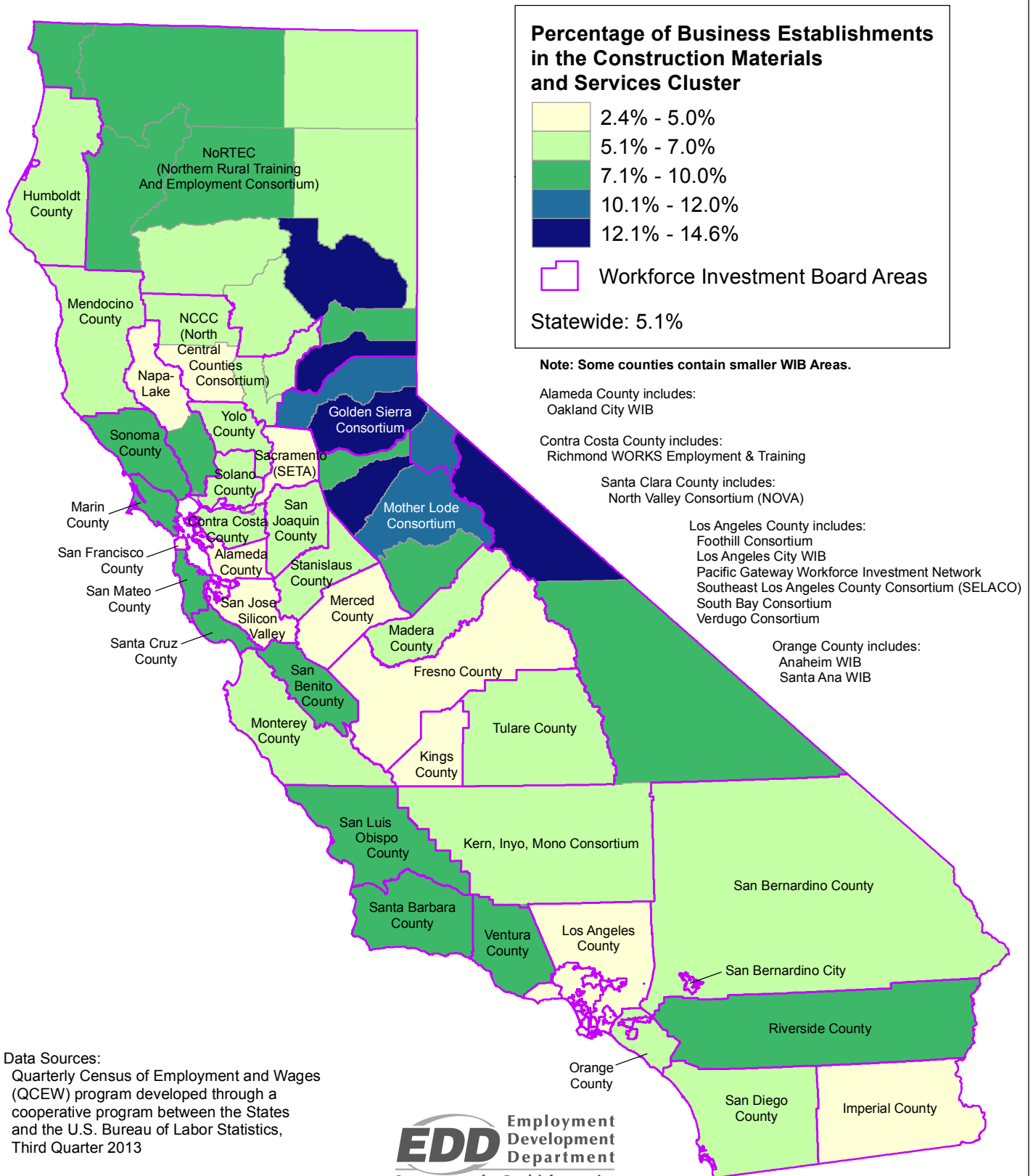
The table below provides examples of instructional programs related to some of the top occupations in the Construction Materials and Services cluster, particularly those that require less than a bachelor's degree. These programs train individuals for occupations throughout many industries and are not limited to the Construction Materials and Services cluster. To view a more complete list of training programs, select the source links under the table below. The Taxonomy of Programs categorizes and describes instructional programs only for California Community Colleges.

Occupations	Classification of Instructional Program (CIP)		Taxonomy of Programs (TOP)	
	CIP Code	CIP Title	TOP Code	TOP Title
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	15.0501	Heating, Ventilation, Air Conditioning and Refrigeration Engineering Technology/Technician	094600	Environmental Control Technology
	47.0201	Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Technician		
Heavy and Tractor-Trailer Truck Drivers	49.0205	Truck and Bus Driver/Commercial Vehicle Operator and Instructor	094750	Truck and Bus Driving
Telecommunications Equipment Installers and Repairers, Except Line Installers	47.0103	Communications Systems Installation and Repair Technology	N/A	N/A
First-Line Supervisors of Production and Operating Workers	52.0205	Operations Management and Supervision	N/A	N/A
Electrical and Electronics Engineering Technicians	15.0303	Electrical, Electronic and Communications Engineering Technology/Technician	N/A	N/A
	15.0305	Telecommunications Technology/Technician		
	15.0399	Electrical and Electronic Engineering Technologies/Technicians, Other		
Cement Masons and Concrete Finishers	46.0402	Concrete Finishing/Concrete Finisher	N/A	N/A
Carpenters	46.0201	Carpentry/Carpenter	095210	Carpentry
Electricians	46.0302	Electrician	095220	Electrical
Painters, Construction and Maintenance	46.0408	Painting/Painter and Wall Coverer	095270	Painting, Decorating, and Flooring

Source: U.S. Department of Education [Integrated Postsecondary Education Data System \(IPEDS\)](http://www.nces.ed.gov/ipeds) at www.nces.ed.gov; [California Community Colleges TOP-to-CIP Crosswalk](http://www.cccco.edu) 7th Edition (2010), www.cccco.edu.

California Construction Materials and Services Cluster

Percentage of Total County Establishments, 2013



Data Sources:
Quarterly Census of Employment and Wages (QCEW) program developed through a cooperative program between the States and the U.S. Bureau of Labor Statistics, Third Quarter 2013

Cartography by:
Labor Market Information Division
California Employment Development Department
<http://www.labormarketinfo.edd.ca.gov>
March 2015

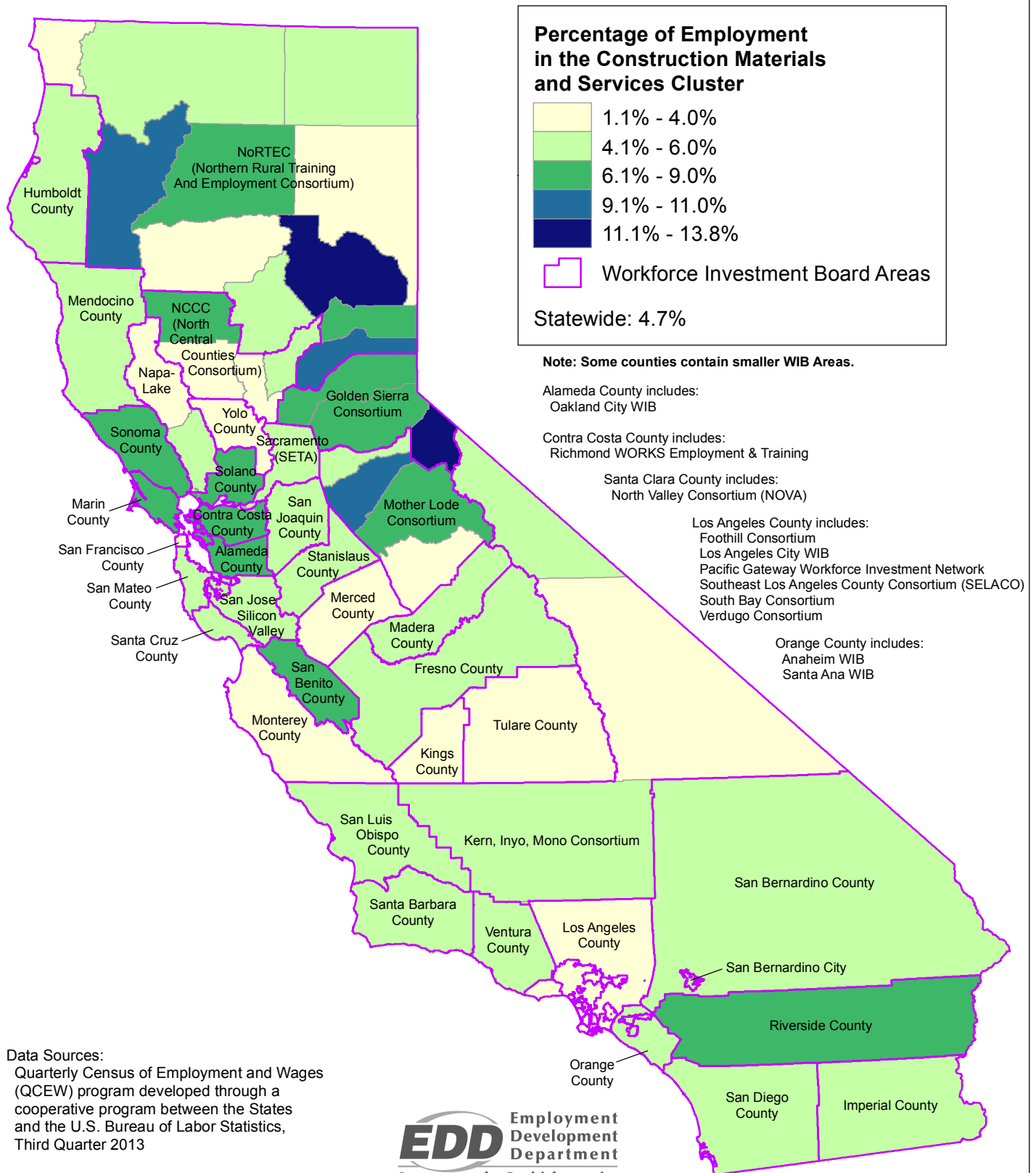
EDD Employment Development Department
State of California

LaborMarketInfo

File T036

California Construction Materials and Services Cluster

Percentage of Total County Employment, 2013



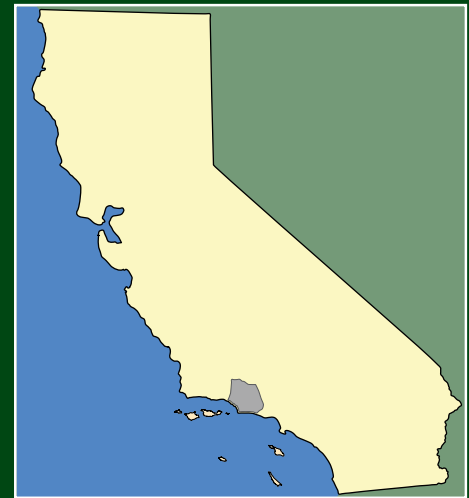
Data Sources:
Quarterly Census of Employment and Wages (QCEW) program developed through a cooperative program between the States and the U.S. Bureau of Labor Statistics, Third Quarter 2013

Cartography by:
Labor Market Information Division
California Employment Development Department
<http://www.labormarketinfo.edd.ca.gov>
March 2015

EDD Employment Development Department
State of California

LaborMarketInfo

File T036



Occupational Analysis: Forest Products, Forestry, and Primary Wood Processing Cluster

Ventura County Economic Sub-Market

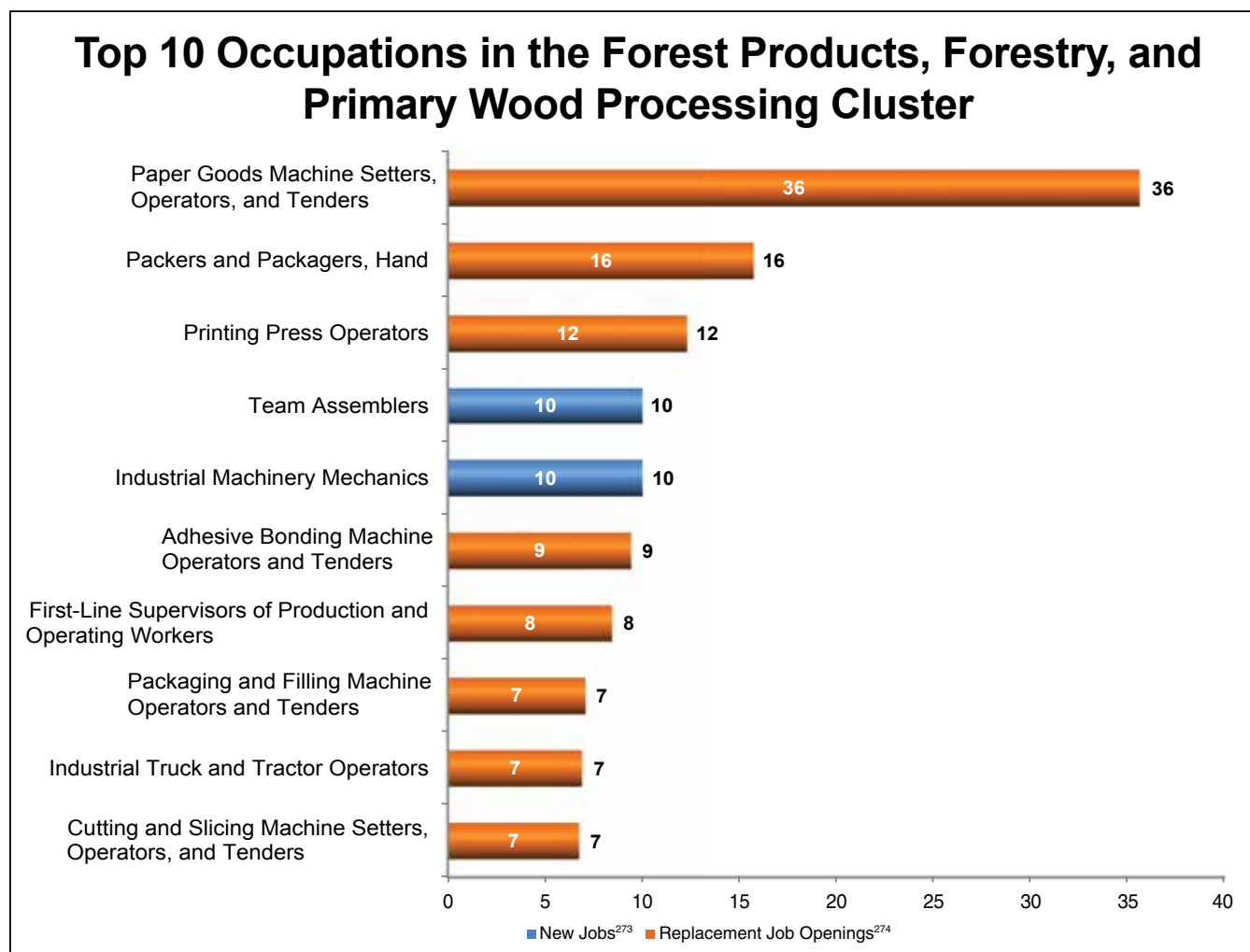
July 2015

What is the Forest Products, Forestry, and Primary Wood Processing Cluster?

The Forest Products, Forestry, and Primary Wood Processing industry cluster is comprised of eight industries that engage in activities ranging from harvesting trees and cutting timber to producing paper and finished wood products. The workers employed within this cluster span all skill levels and share skills and work activities both within the cluster and in many other industry clusters, suggesting the potential for skills transference and upward mobility with additional training.

Top 10 Occupations in the Forest Products, Forestry, and Primary Wood Processing Cluster

The graph below identifies the top 10 occupations in the Forest Products, Forestry, and Primary Wood Processing cluster, based on the Ventura County Economic Sub-Market's new job growth plus replacement openings. In sum, these 10 occupations represent nearly three-quarters of the 178 total job openings projected in this cluster between 2012 and 2022. Moreover, many share the same required skills such as active listening, coordination, critical thinking, monitoring, and operation and control.²⁷²



Source: California Employment Development Department, *Projections of Employment 2012-2022*. Industry and occupational employment projections for 2012-2022 in this report may not be directly comparable to the published 2012-2022 employment projections available online at www.labormarketinfo.edd.ca.gov.

²⁷² U.S. Department of Labor's [Occupational Information Network \(O*NET\)](http://www.onetonline.org) at www.onetonline.org.

²⁷³ New jobs are only openings due to growth and do not include job declines. If an occupation's employment change is negative, there is no job growth and new jobs are set to zero.

²⁷⁴ Replacement job openings estimate the number of job openings created when workers retire or permanently leave an occupation and need to be replaced.

Top 10 Occupations and Recent Job Demand in the Forest Products, Forestry, and Primary Wood Processing Cluster

The table below further profiles the Ventura County Economic Sub-Market's top 10 occupations in the Forest Products, Forestry, and Primary Wood Processing cluster by listing the total job openings for 2012-2022, median hourly and annual wages, and entry-level education requirements. Also included are online job advertisements extracted from The Conference Board Help Wanted OnLine™ (HWOL) data series over a 120-day period. HWOL compiles, analyzes, and categorizes job advertisements from numerous online job boards, including CalJOBSSM (www.caljobs.ca.gov), California's online job listing system.

Occupations	Total Job Openings ²⁷⁵ (2012-2022)	Median Hourly Wage (2014)	Median Annual Wage (2014)	Entry Level Education ²⁷⁶	HWOL Job Ads ²⁷⁷ (120 days)
Paper Goods Machine Setters, Operators, and Tenders	36	\$27.70	\$57,605	High school diploma or equivalent	3
Packers and Packagers, Hand	16	\$9.60	\$19,969	Less than high school	44
Printing Press Operators	12	\$14.92	\$31,032	High school diploma or equivalent	34
Team Assemblers	10	\$12.90	\$26,842	High school diploma or equivalent	34
Industrial Machinery Mechanics	10	\$26.23	\$54,553	High school diploma or equivalent	53
Adhesive Bonding Machine Operators and Tenders	9	\$16.95	\$35,262	High school diploma or equivalent	0
First-Line Supervisors of Production and Operating Workers	8	\$26.22	\$54,534	Postsecondary non-degree award	341
Packaging and Filling Machine Operators and Tenders	7	\$11.58	\$24,077	High school diploma or equivalent	43
Industrial Truck and Tractor Operators	7	\$14.53	\$30,224	Less than high school	94
Cutting and Slicing Machine Setters, Operators, and Tenders	7	\$17.30	\$35,986	High school diploma or equivalent	0

Source: California Employment Development Department, *Projections of Employment 2012-2022*; *Occupational Employment Statistics Wage Survey*, updated to 4th Q, 2014; The Conference Board Help Wanted OnLine™ (HWOL) Data Series, 120-day period ending July 24, 2015.

²⁷⁵ Total job openings are the sum of new jobs and replacement job openings.

²⁷⁶ U.S. Department of Labor, Bureau of Labor Statistics (BLS) 2012 education levels.

²⁷⁷ Totals represent job advertisements from employers in all industries. One job opening may be represented in more than one job advertisement.

Top Occupations for the Forest Products, Forestry, and Primary Wood Processing Cluster by Education Level

The table below identifies the occupations with the most total job openings, categorized by Bureau of Labor Statistics (BLS) 2012 entry-level education requirements, within the Forest Products, Forestry, and Primary Wood Processing cluster. The table includes the Ventura County Economic Sub-Market's projected total job openings and median hourly and annual wages. In addition, recent totals of online job advertisements over 120-day period are included. Grouping occupations by education levels allows individuals to better gauge the potential for skills transference and upward mobility within the cluster.

Occupations	Total Job Openings ²⁷⁸ (2012-2022)	Median Hourly Wage (2014)	Median Annual Wage (2014)	HWOL Job Ads (120 days)
Requires a Bachelor's Degree or Higher				
Accountants and Auditors	6	\$34.49	\$71,730	334
General and Operations Managers	6	\$51.15	\$106,377	202
Industrial Production Managers	5	\$44.60	\$92,767	23
Requires Some College, Postsecondary Non-Degree Award, or Associate's Degree				
First-Line Supervisors of Production and Operating Workers	8	\$26.22	\$54,534	341
Requires a High School Diploma or Equivalent or Less				
Paper Goods Machine Setters, Operators, and Tenders	36	\$27.70	\$57,605	3
Packers and Packagers, Hand	16	\$9.60	\$19,969	44
Printing Press Operators	12	\$14.92	\$31,032	34
Industrial Machinery Mechanics	10	\$26.23	\$54,553	34
Team Assemblers	10	\$12.90	\$26,842	53

Source: California Employment Development Department, *Projections of Employment 2012-2022*; *Occupational Employment Statistics Wage Survey*, updated to 4th Q, 2014; *The Conference Board Help Wanted OnLine™ (HWOL) Data Series*, 120-day period ending July 24, 2015.

²⁷⁸ Total job openings are the sum of new jobs and replacement job openings.

Skill Requirements in the Forest Products, Forestry, and Primary Wood Processing Cluster

The table below lists the 10 top skills required for top occupations in the Forest Products, Forestry, and Primary Wood Processing cluster, categorized by entry-level education requirements. Active listening and critical thinking are the most commonly shared skills, followed by monitoring, reading comprehension, and speaking. The skills and work activities identified for each occupation are from the U.S. Department of Labor's Occupational Information Network (O*NET).

Occupations	Skills																
	Active Learning	Active Listening	Coordination	Critical Thinking	Equipment Maintenance	Judgment and Decision Making	Management of Personnel Resources	Mathematics	Monitoring	Operation and Control	Operation Monitoring	Quality Control Analysis	Reading Comprehension	Repairing	Social Perceptiveness	Speaking	Systems Analysis
Requires a Bachelor's Degree or Higher																	
Accountants and Auditors ²⁷⁹	●	●		●		●	●	●					●			●	●
General and Operations Managers	●	●	●	●			●		●				●		●	●	
Industrial Production Managers	●	●	●	●		●	●		●				●		●		●
Requires Some College, Postsecondary Non-Degree Award, or Associate's Degree																	
First-Line Supervisors of Production and Operating Workers		●	●	●			●		●				●		●	●	●
Requires a High School Diploma or Equivalent or Less																	
Paper Goods Machine Setters, Operators, and Tenders		●	●	●					●	●	●	●			●	●	●
Packers and Packagers, Hand		●	●	●		●			●			●	●		●		●
Printing Press Operators		●	●	●	●				●	●	●	●	●		●		
Industrial Machinery Mechanics	●	●		●	●					●	●	●	●	●			●
Team Assemblers		●	●	●					●	●	●	●	●		●		●

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

²⁷⁹ Skills represent Accountants, a specialty occupation of Accountants and Auditors.

Work Activities in the Forest Products, Forestry, and Primary Wood Processing Cluster

The table below lists the 10 top work activities required for top occupations in the Forest Products, Forestry, and Primary Wood Processing cluster, categorized by entry-level education requirements. The most common include communicating with supervisors, peers, or subordinates and establishing and maintaining interpersonal relationships.

Occupations	Work Activities																													
	Analyzing Data or Information	Coaching and Developing Others	Communicating with Persons Outside Organization	Communicating with Supervisors, Peers, or Subordinates	Controlling Machines and Processes	Coordinating the Work and Activities of Others	Documenting/Recording Information	Establishing and Maintaining Interpersonal Relationships	Evaluating Information to Determine Compliance with Standards	Getting Information	Guiding, Directing, and Motivating Subordinates	Handling and Moving Objects	Identifying Objects, Actions, and Events	Inspecting Equipment, Structures, or Material	Judging the Qualities of Things, Services, or People	Making Decisions and Solving Problems	Monitor Processes, Materials, or Surroundings	Monitoring and Controlling Resources	Operating Vehicles, Mechanized Devices, or Equipment	Organizing, Planning, and Prioritizing Work	Performing Administrative Activities	Performing General Physical Activities	Processing Information	Provide Consultation and Advice to Others	Repairing and Maintaining Mechanical Equipment	Resolving Conflicts and Negotiating with Others	Scheduling Work and Activities	Thinking Creatively	Updating and Using Relevant Knowledge	
Requires a Bachelor’s Degree or Higher																														
Accountants and Auditors ²⁸⁰	●			●				●	●	●						●				●	●		●						●	
General and Operations Managers			●	●		●		●								●		●		●							●	●	●	
Industrial Production Managers				●		●		●			●					●	●	●		●							●	●		
Requires Some College, Postsecondary Non-Degree Award, or Associate’s Degree																														
First-Line Supervisors of Production and Operating Workers		●		●	●	●		●			●	●													●		●	●		
Requires a High School Diploma or Equivalent or Less																														
Paper Goods Machine Setters, Operators, and Tenders				●	●			●				●		●						●		●	●			●		●		
Packers and Packagers, Hand				●	●			●		●		●	●				●			●		●					●			
Printing Press Operators					●							●	●	●	●	●	●					●				●				●
Industrial Machinery Mechanics				●	●							●		●			●		●	●		●				●				●
Team Assemblers				●	●	●	●	●	●			●				●	●					●								

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

²⁸⁰ Work Activities represent Accountants, a specialty occupation of Accountants and Auditors.

Related Occupations for the Forest Products, Forestry, and Primary Wood Processing Cluster

The table below lists top occupations in the Forest Products, Forestry, and Primary Wood Processing cluster by entry-level education requirements and provides a sample of related occupations. These related occupations match many of the skills, education, and work experience needed for the top Forest Products, Forestry, and Primary Wood Processing cluster occupations.

Forest Products, Forestry, and Primary Wood Processing Occupations	Related Occupations
Requires a Bachelor's Degree or Higher	
Accountants and Auditors	<ul style="list-style-type: none"> • Bookkeeping, Accounting, and Auditing Clerks • Budget Analysts • Credit Analysts
General and Operations Managers	<ul style="list-style-type: none"> • Administrative Services Managers • Lodging Managers • Logistics Managers
Industrial Production Managers	<ul style="list-style-type: none"> • First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators • Industrial Engineering Technicians • Industrial Engineers
Requires Some College, Postsecondary Non-Degree Award, or Associate's Degree	
First-Line Supervisors of Production and Operating Workers	<ul style="list-style-type: none"> • Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders • First-Line Supervisors of Logging Workers • Non-Destructive Testing Specialists
Requires a High School Diploma or Equivalent or Less	
Paper Goods Machine Setters, Operators, and Tenders	<ul style="list-style-type: none"> • Cutting and Slicing Machine Setters, Operators, and Tenders • Engine and Other Machine Assemblers • Sawing Machine Setters, Operators, and Tenders, Wood
Packers and Packagers, Hand	<ul style="list-style-type: none"> • Inspectors, Testers, Sorters, Samplers, and Weighers • Marking Clerks • Shipping, Receiving, and Traffic Clerks
Printing Press Operators	<ul style="list-style-type: none"> • Computer-Controlled Machine Tool Operators, Metal and Plastic • Machinists • Print Binding and Finishing Workers
Industrial Machinery Mechanics	<ul style="list-style-type: none"> • Electrical and Electronics Repairers, Commercial and Industrial Equipment • Machinists • Maintenance and Repair Workers, General
Team Assemblers	<ul style="list-style-type: none"> • Forging Machine Setters, Operators, and Tenders, Metal and Plastic • Print Binding and Finishing Workers • Sawing Machine Setters, Operators, and Tenders, Wood

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

Employer Demand for the Forest Products, Forestry, and Primary Wood Processing Cluster

The following table lists the Ventura County Economic Sub-Market employers in the Forest Products, Forestry, and Primary Wood Processing cluster who posted the most job advertisements during the 120-day period ending July 24, 2015. The table also includes the number of job advertisements from the previous year's period, as well as the numerical change and year-over percent change in these postings for the same 120-day period.

Forest Products, Forestry, and Primary Wood Processing Cluster Employers	Recent Job Advertisements²⁸¹ (120-day period)	Prior Year Job Advertisements (120-day period)	Numerical Change	Year-Over Percent Change (HWOL Job Advertisements)
Soliant	8	6	2	33.3%

Source: The Conference Board Help Wanted OnLine™ (HWOL) Data Series: Period ending July 24, 2015.

²⁸¹ Totals do not include employers with anonymous job advertisements.

Instructional Programs for the Top Forest Products, Forestry, and Primary Wood Processing Occupations

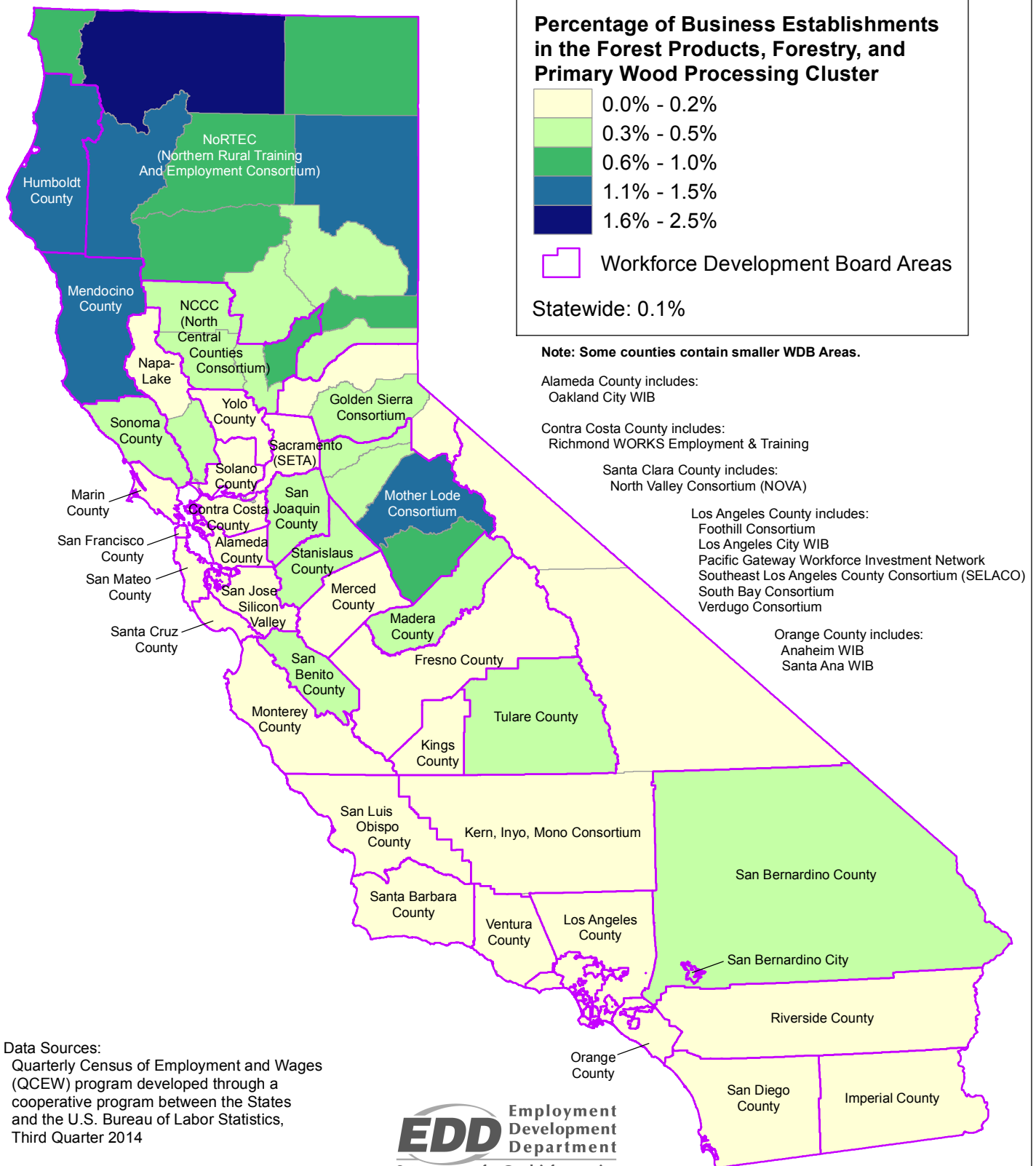
The table below provides examples of instructional programs related to some of the top occupations in the Forest Products, Forestry, and Primary Wood Processing cluster, particularly those that require less than a bachelor's degree. These programs train individuals for occupations throughout many industries and are not limited to the Forest Products, Forestry, and Primary Wood Processing cluster. To view a more complete list of training programs, select the source links under the table below. The Taxonomy of Programs categorizes and describes instructional programs only for California Community Colleges.

Occupations	Classification of Instructional Program (CIP)		Taxonomy of Programs (TOP)	
	CIP Code	CIP Title	TOP Code	TOP Title
First-Line Supervisors of Production and Operating Workers	52.0205	Operations Management and Supervision	N/A	N/A
Printing Press Operators	10.0302 10.0305 10.0307	Printing Management Graphic and Printing Equipment Operator, General Production Printing Press Operator	093600	Printing and Lithography
Industrial Machinery Mechanics	47.0303	Industrial Mechanics and Maintenance Technology	N/A	N/A

Source: U.S. Department of Education [Integrated Postsecondary Education Data System \(IPEDS\)](http://www.nces.ed.gov/ipeds) at www.nces.ed.gov; [California Community Colleges TOP-to-CIP Crosswalk](http://www.cccco.edu) 7th Edition (2010), www.cccco.edu.

California Forest Products, Forestry, and Primary Wood Processing Cluster

Percentage of Total County Establishments, 2014



Data Sources:
Quarterly Census of Employment and Wages (QCEW) program developed through a cooperative program between the States and the U.S. Bureau of Labor Statistics, Third Quarter 2014

Cartography by:
Labor Market Information Division
California Employment Development Department
<http://www.labormarketinfo.edd.ca.gov>
September 2015

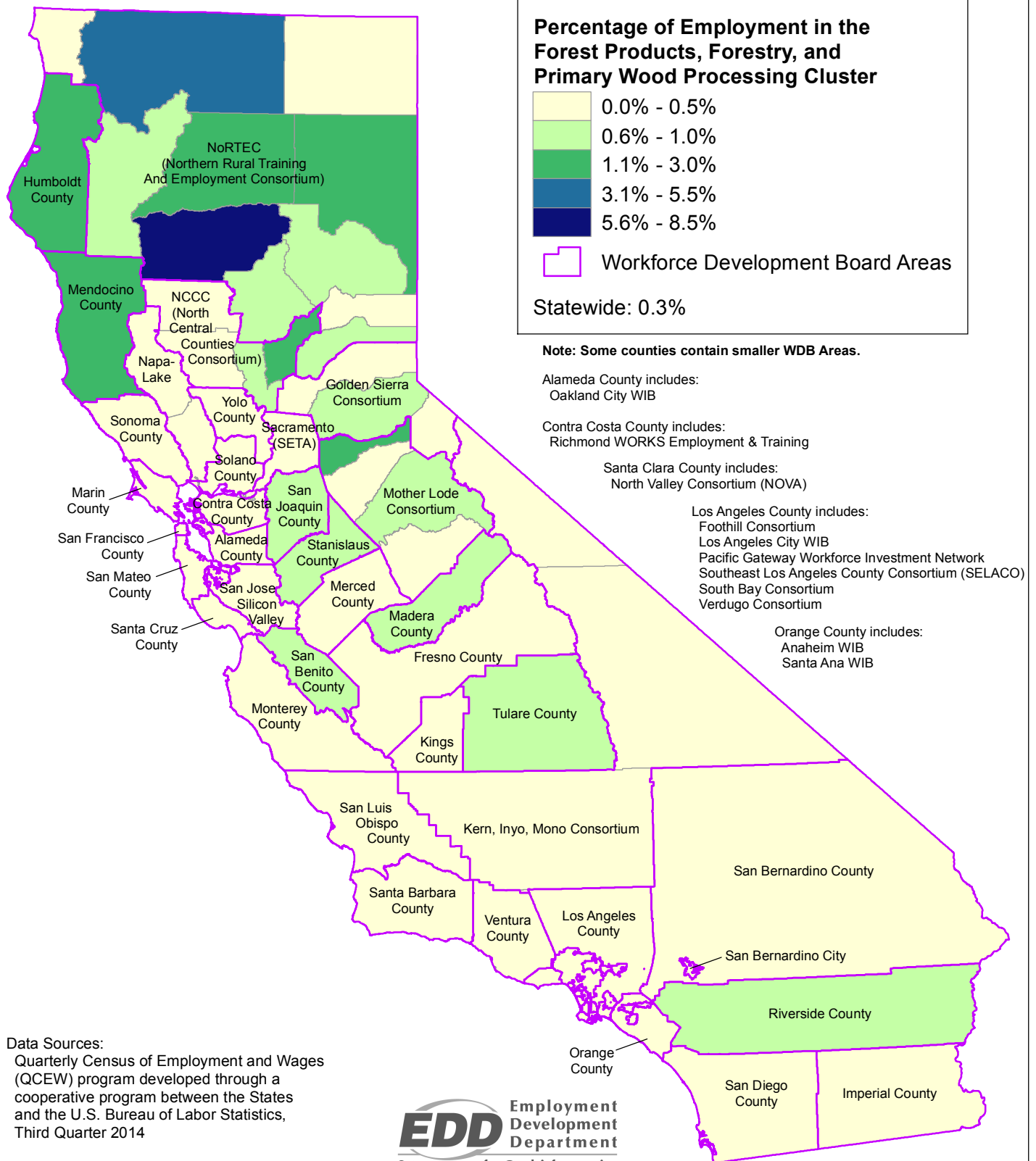
EDD Employment Development Department
State of California

LaborMarketInfo

File T036

California Forest Products, Forestry, and Primary Wood Processing Cluster

Percentage of Total County Employment, 2014



Data Sources:
Quarterly Census of Employment and Wages (QCEW) program developed through a cooperative program between the States and the U.S. Bureau of Labor Statistics, Third Quarter 2014

Cartography by:
Labor Market Information Division
California Employment Development Department
<http://www.labormarketinfo.edd.ca.gov>
September 2015

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State of California

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