



WORKFORCE DEVELOPMENT BOARD OF VENTURA COUNTY

CLEAN/GREEN COMMITTEE MEETING

Friday, January 19, 2018

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

NOTE: CHANGE IN LOCATION

United Food and Commercial Worker's Union (UFCW, Local 770)
816 Camarillo Springs Rd, Camarillo, CA (Suite A)

AGENDA

- | | | |
|-----------|---|-------------------------------------|
| 8:00 a.m. | 1.0 Call to Order and Agenda Review | Anthony Mireles |
| 8:02 a.m. | 2.0 Public Comments | Anthony Mireles |
| | <i>Procedure: 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.</i> | |
| 8:05 a.m. | 3.0 Approval of Minutes: September 15, 2017 | Anthony Mireles |
| | 4.0 Ventura County Regional Strategic Workforce Development Plan | |
| 8:10 a.m. | <ul style="list-style-type: none">Joint Sector Meeting Discussion and Next Steps | Patricia Duffy
Committee Members |
| 8:25 a.m. | <ul style="list-style-type: none">Guest Speaker: Dr. Alexandria Wright
Ventura County Community College District | Alexandria Wright |
| 8:50 a.m. | <ul style="list-style-type: none">SUSTAINABLE VC – Careers in Clean Tech | Darrell Gooden |
| 9:10 a.m. | <ul style="list-style-type: none">Career Pathways Update: | Mary Anne Rooney |
| 9:20 a.m. | <ul style="list-style-type: none">Workgroup Report: Employer Awareness: Update | Patricia Duffy |
| 9:25 a.m. | 5.0 Committee Member Comments | Committee Members |
| 9:30 a.m. | 6.0 Adjournment | Anthony Mireles |

Next Meeting

March 16, 2018– 8:00 -9:30 a.m.

United Food and Commercial Workers (UFCW, Local 770) Suite A
816 Camarillo Springs Rd, 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.



WDB Clean/Green Committee Meeting
September 15, 2017

MINUTES

Meeting Attendees

Committee Members

Anthony Mireles* (Chair)
Holly Chavez
Victor Dollar
Dave Fleisch
Charles Harrington*
Grant Leichtfuss
Valeria Makarova
Darrell Gooden

WDB Staff

Patricia Duffy

Guests

Heidi Hayes (theAgency)
Melissa Livingston (Chief Deputy Director,
Human Services Agency)
Alexandria Wright (Ventura County
Community College District)

**WDB Members*

1.0 Call to Order and Agenda Review

Anthony Mireles (Chair) called the meeting to order at 8:10 a.m. No changes were made to the agenda.

2.0 Public Comments

There were no public comments.

3.0 Approval of Minutes: July 21, 2017

Motion to approve: Charles Harrington
Second: Dave Fleisch
Motion carried

4.0 Ventura County Regional Strategic Workforce Development Plan

- Employer Awareness Workgroup Report

The Employer Awareness Workgroup shared their progress on ways to help businesses understand the value of incorporating sustainability into their business practices. The workgroup is creating short videos of local industry success stories on how sustainable practices in business saves money, grows business, and creates jobs. Ventura Adult and Continuing Education (VACE) Multi Media Program has been providing their program expertise to create these videos for the Committee. Rich Sigerist, Instructor at VACE Multimedia Program, invited workgroup members to view the unedited version of the video footage. Four workgroup members went to the VACE studio to view the footage and discuss edits with Rich Sigerist. The workgroup reported on how pleased they were with the outcome and discussed next steps which is to create an introduction and credits and then distribution. Heidi Hayes from theAgency was present at the meeting and theAgency will be assisting with the introduction and credits to align with the WDB current outreach materials and with the distribution through WDB existing media sources.

- PRME: Principles for Responsible Management Education

Dr. Valeria Makarova spoke about the Progress Report, Principles of Responsible Management Education that was recently produced by California Lutheran's School of Management. Dr. Makarova and another faculty member according to the report "have been championing and coordinating the initiative from the start." "The mission of PRME is to transform management education, research and thought leadership globally by providing the Principles for Responsible Management Education framework, developing learning communities and promoting awareness about the United Nations' Sustainable Development Goals." By providing the tools to students on how to incorporate environmental and social responsibility into their decision making the students will bring sustainable business practices to their jobs. The goal is to bring sustainable education to all levels.

- Deputy Sector Navigator Update:

Holly Chavez reported on the activities they have been involved with in Ventura and the region. Ventura held a two day project based externship program for middle school teachers in June. This was a collaborative effort with the purpose of teacher immersion into the local agriculture industry with emphasis on applied STEM learning and classroom project design. Ms. Chavez also spoke about providing mini grants for water industry internships. Members of the Committee were very interested in supporting this effort in Ventura through internships in the Ventura Water/Wastewater industry. The need for interns in the Agricultural industry was also identified.

- Careers in Ventura Clean Tech Summit

Darrell Gooden, presented a more detailed plan of his idea presented at the last Committee meeting to have a Clean Tech Summit. Committee members reviewed and discussed plans and recommended we develop a workgroup for further discussion. The plan Dr. Gooden presented is to have a Summit sometime in the winter of 2018. The goal is to build support for a community action program that promotes Clean Tech entrepreneurship and aligns industry and education and community efforts in building a technology infrastructure that leverages the County's strengths in the energy, environment & utilities industry pathways.

- Year-End Review

The committee members finalized their work on the Year-End Review.

5.0 Committee Member Comments

6.0 Adjournment

Meeting adjourned at 9:35 a.m.

Next Meeting:

January 19, 2018
United Food and Commercial Workers (UFCW) Local 770 Suite A
816 Camarillo Springs Rd, Camarillo, CA.



JOINT MEETING
WDB REGIONAL SECTOR COMMITTEES
November 16, 2017
***"Skills Attainment for Upward Mobility &
Aligned Services for Shared Prosperity"***

WDB Business Services Committee
WDB Clean/Green Committee
WDB Healthcare Committee
WDB Manufacturing Committee
WDB Programs Committee

MINUTES

Meeting Attendees

Business Services

Heidi Hayes (theAgency)
Paula Hodge (College of
the Canyons, SCCRC)
Payal Kamdar (VSolvit)
Tracy Perez*
Jaime Mata*

Manufacturing

Alex Rivera* (Chair)
Michael Bastine (College
of the Canyons, SCCRC)
Marybeth Jacobsen (WEC)
Marilyn Jansen*
Byron Lindros*
Tiffany Morse (VCOE)
Bill Pratt*
Tre Robinson (Wholesome
Harvest Baking)
Mary Anne Rooney (Civic
Alliance)
Bruce Stenslie*

Programs

Tony Skinner* (Chair)
Roger Rice* (Vice Chair)
Jerry Beckerman (Segue)
Connie Chan*
Mary Navarro-Aldana*

WDB Members

Vic Anselmo* (Chair)
Greg Liu* (Vice Chair)
Brian Gabler*
Patty Schulz*

Clean/Green

Anthony Mireles* (Chair)
John Brooks (City of
Thousand Oaks)
Holly Chavez (Allan
Hancock College)
David Fleisch (County of
Ventura)
Darrell Gooden (VC
Innovates, VCOE)
Charles Harrington*
Grant Leichtfuss (Villa
Park Orchards Assoc.)
Mary Anne Rooney (Civic
Alliance)

Healthcare

Greg Barnes* (Chair)
Richard Trogman* (Vice
Chair)
John Cordova (College of
the Canyons, SCCRC)
Irene Ornelas (VC
Innovates, VCOE)
Michelle Reynolds (VCMC)
Mary Anne
Rooney (Ventura County
Civic Alliance)
Bill Werner (Simi Valley
Hospital)
Celina Zacarias*

WDB Administration

Talia Barrera
Patricia Duffy
Tracy Johnson
Patrick Newburn
Vivian Pettit
Ma Odezza Robite

Guests

Nancy Ambriz (County of Ventura)
Lisa Brunelle (Department of
Rehabilitation)
Lisa Ecklund (VC Innovates, VCOE)
Hillary Howard (VC Innovates, VCOE)
Rachel Linares (County of Ventura)
Melissa Livingston (County of
Ventura)
Susan Mathers (Department of
Rehabilitation)
Richard McNeal
Christy Norton (County of Ventura)
Eileen Rohlfing (Employment
Development Department)
Teresa Serrata (County of Ventura)
Luanne Swanberg (South Central
Coast Regional Consortium)
Steve Thompson (Ventura Adult
Continuing Education)
Carolyn Vang-Walker (Ventura Adult
Continuing Education)
Alexandria Wright (VCCCD)

*WDB Members

1.0 Welcome and Introductions

WDB Chair, Vic Anselmo, welcomed the attendees to the Joint Meeting of the WDB Regional Sector Committees: Business Services, Clean/Green, Healthcare, and Manufacturing. Additional members from the Programs and Outreach Committee, as well as community partners were also in attendance. Vic Anselmo introduced the facilitator/guest speaker from California Workforce Association, Bob Lanter. Mr. Lanter provided a short self-introduction and asked the WDB members and sector committee members to give quick self-introductions.

Bob Lanter introduced his fellow guest speaker, Vinz Koller, from Social Policy Research Associates, who gave an interesting presentation about the Swiss apprenticeship model.

2.0 Apprenticeship 2.0: College without Debt

Mr. Koller provided an informative presentation of the Swiss apprenticeship model and the features of the Swiss education system which allows multitude of career paths. The model includes teaching soft skills that will not create dead-ends, schools focused on teaching communication and advanced math subjects. He emphasized on the practice of the Swiss education system where there is a public and private partnership and strengthened by the Swiss economy which is considered as the sixth largest investor/economy in the world.

He also explained the key feature of apprentices in the Swiss model where students spend three to four days per week with employers while spending only one to two days inside the classroom. In the Swiss model, sixteen-year old students can make decisions and nineteen-year old students already have achieved professional certificates and can earn a living. He compared that the average age of apprentices in the Swiss model is seventeen years old versus twenty-nine years old in USA.

The question was asked, if the employers were required to have apprentices. Mr. Koller responded that "only thirty percent of the employers have apprentices."

He also explained the funding of apprenticeship system, how firms invest in apprentices, measurement tools, background on how the Swiss employees gain experience and soft skills and how skills are best learned. When asked how California can adapt the Swiss system, Mr. Koller shared that it can be achieved by: building ecosystems, establishing permeability, triangulating, rebuilding prestige, focusing on students, and diversifying the registered apprenticeships.

One of the participants asked for the observed best practices in California. Mr. Koller gave an example of the Valley Transit Authority in Santa Clara with one hundred new positions opened for apprentices. Also, Mr. Lanter gave an example where he explained that the veterans in Livermore were trained in engineering at the laboratory.

A participant asked Mr. Koller how to address the transportation issue for young workers since most of the jobs are located outside Ventura County. Mr. Koller responded that the workforce development is a regional affair. He further suggested to look at the local economy and market and to look at where people work. Mr. Lanter provided an example of the apprenticeship Task Force in Washington, D.C. It showed how to expand outside the classic apprenticeship model where small, medium, and large employers can participate. Mr. Koller added that employers should look at apprenticeship on a broader sense and that employees can do training online to address the transportation issue.

Mr. Koller was asked if the apprenticeships were paid by the companies. Mr. Koller responded that it was paid by the State in the Swiss model and that the employees did not pay anything

Mr. Lanter provided a brief explanation and examples of work-based learning namely: registered apprenticeships, on-the-job training, incumbent worker training, career tech education with a workplace component, and transitional jobs/work experience. He mentioned that twenty percent of local youth formula funds are for work experiences such as summer jobs, pre-apprenticeship training, on-the-job training, and internships. He also provided a list of resources for work-based learning.

3.0 A Common Vision

Mr. Lanter facilitated a group brainstorming on what success looks like. Participants were divided into six groups with six to seven members each. Each group provided their response to the question: "What's Going On?" or "What are the current work-based learning activities being practiced in each organization?"

What's Going On?

- Internships – rehabilitation, VCOE (1000 in education offsite)
- On the Job Training – America's Job Center
- Field Trips – middle high (750)
- Training for Employability Skills
- Entrée to Employment (2,000)
- Job Shadows
- Guest Speakers
- Civic engagement
- Construction apprenticeships
- Summer camps
- Trade based charter schools

- Hospitality Industry
- Incumbent Worker Training (lean manufacturing)
- Adult Education Pre-apprenticeships Internships
- Department of Rehabilitation – limited internships/externships
- VC Innovates Adult Education
- CLU Capstone Program (MBA)
- TDC Studies
- CAD Department/ Manufacturing 30
- Manufacturing Week Tours

- Regional Makers Space
- Robotics
- Health Care
- CAL Works Internships
- PathPoint
- CSUCI-Clinical Tech

- County of Ventura – Summer Interns
 - Summer City Hall – Ventura & Oxnard
 - Trades (IBW, etc.) Apprentices
 - Employers (OJT) WIOA
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- AG Supervisor Training at VC Noncredit
 - Externship for Teachers In Engineering
 - NBVC Internships (Primarily Com College)
 - HCA (Health Care Agency) – WPL Revamping, Internships, Job Shadow
 - CTE Programs at H.S Focus on Industry Certificates
 - Career Education Center – Office of ED
-
- On the job training
 - Union apprenticeships
 - University Internships
 - Government Internships
 - Regional Occupation Program
 - Summer in the City – VCCA
 - City Corps
 - Adult Education and Job Placement
 - CMTC
-
- Applied Science Program at Ventura College (Entry level)
 - Internship at Career Education Center (VCOE)
 - Externship with CET
 - Incumbent Worker Training at
 - OJT at multiple companies
 - BOA + EDD – training (unpaid)

Mr. Lanter used the Victory Circle Technique or a visioning exercise which showed the ideal vision of work-based learning for one year from now in Ventura County:

- CWA report to get them involved
- Anchor employers; employers are saying “Thank you!”
- Businesses are retained/created
- They like making money while working
- Engagement scores are high
- Monitoring their responses thru social media
- Youth unemployment goes down in county
- Robust marketing on CTE
- Clear understanding of pathways
- Target industry that are local- here regionally start 2-3
- One-stop site connecting employers to interns
- Listing of all applications and career paths available
- Website and social media for the youth

- Job Seekers/Students say “I love my job!”
- Employers say “Why didn’t we do it before?”
- Cohort of gateway path with Business enrolled in VACE
- Directory of all Work Based learning programs with business partnerships
- Multiple payment methods
- Innovation in public sector employers
- Stable and secure innovation and productive career pathways
- CWA annual report on how sectors is moving to get this done
- Employers want more
- Students feel secure, valued, respected, and engaged
- Youth VI rate decrease in country
- New fast track program works well!

4.0 Contradictions

Mr. Lanter asked each group what obstacles stand in the way of reaching the vision of a unified work-based learning strategy of Ventura County. Each group listed their responses:

Business Engagement

- Sustaining Commitment of Employers
- Partnerships between business and education are needed
- Employer Champions wanted
- Employer engagement
- Not enough employers involved or hiring
- Partner Collaboration and Coordination

Process and Bureaucracy

- Time: Patience for incremental growth
- New things take time
- Re-doing work that’s already been done
- Funding stream
- Red Tape
- Fractured leadership and direction (capacity/priorities)
- WDB + Partners Capacity
- Misaligned incentives (Inability to triangulate)
- No Framework
- Restrictive HR Policies
- Coordination of efforts

Leadership

- Project Champions wanted (Strategic Oversight)
- Actionable Plans needed
- Develop Common Vision-Education among all LEAs
- Common means of communicating work being done
- Funds + Better coordination

Education/Training/Marketing

- Perception of academic learning vs. work-based learning
- Matching training vs. work (INT) schedule (Swiss model: 3-4 vs. 1-2)
- Length of time to get training from idea to classroom
- Need to establish certification/portability
- Education integrated with industry
- Student knowledge of career options
- Limited program information available
- Negative image of Work-Based Learning – Change to Positive

Youth

- Inclusion for all youth
- Transportation
- Supportive transit system not available
- Student career inspiration/ initiative lacking
- Youth missing soft skills

5.0 Commitment and Next Steps

WDB committee members worked in cross-sector groups, reporting to the large group their responses. Below is a summary of the wall notes and committee members' comments during the follow-up discussion. The input will be considered during WDB planning and WDB/WIOA regional and local planning processes:

- Working on task force/ WDB
- Utilize programs that are available (once we find out)
- Office OJT, internships
- Actively network to bring business to table
- Pair with business to provide training
- Advocate on behalf of students
- Work through policies – align education to cut red tape
- Attempt to communicate purpose to students (Entrée to Employment)
- Leveraging resources and activities
- Guide students to meet passion
- Develop student committee for student voice
- Communicating to public at large
- Engage students early (middle school)
- Study what other countries are doing

Summary of Next Steps

Based on the contradictions given aligned with the commitment listed above, Mr. Lanter suggested to provide a follow-through of these ideas with doable action plans with the following focus:

1. Plan to engage business/employers;
2. Plan to streamline the process/bureaucracy;
3. Plan to engage youth in work-based Learning activities;
4. Plan to align activities and market to the public what we are doing; and
5. Plan to align leadership; to have a common platform.

6.0 Close and Adjournment

Vic Anselmo adjourned the meeting at 4:30 p.m.

Next Meeting

Workforce Development Board Meeting

December 7, 2017

America's Job Center of California (AJCC)

3rd Flr, 2901 North Ventura Road, Oxnard



2016-2017 YEAR-END REVIEW

Workforce Development Board of Ventura County

WDB CLEAN/GREEN COMMITTEE

2016-2017 Members

WDB Members: Anthony Mireles, Chair (Laborers International Union of North America), Victor Dollar (Brighton Management), Charles Harrington (SEIU Local 721)

Other Members: John Brooks (City of Thousand Oaks), Holly Chavez (Deputy Sector Navigator South Central Coast Region of California Community Colleges), Rebekah Evans (Ventura County Lodging Association), David Fleisch (County of Ventura Public Works Agency), Eric Humel (Oxnard City Corps), Teresa Johnson (Advisor), Grant Leichtfuss (Villa Park Orchards Association), Valeria Makarova (California Lutheran University), Tiffany Morse (Ventura County Office of Education), Kimberly Nilsson (Solid Waste Solutions, Inc.), Douglas O'Brien (Consultant, Energy Advisor), Wayne Pendrey (Ventura County Contractors Association), Mary Ann Rooney (Ventura County Civic Alliance)

Committee Accomplishments

In support of the WDB's *Ventura County Regional Strategic Workforce Development Plan 2013-2017*, the WDB Clean/Green Committee accomplishments included:

- WDB Cross Sector Meeting:
In August 2016 the WDB had the first Cross Sector Meeting bringing all the WDB Sector Committees together, Clean/Green, Healthcare, Manufacturing and Business Services, to discuss common workforce needs across sectors.
- Employer Awareness Workgroup
The Committee formed and Employer Awareness Workgroup. The workgroup was set up to explore a way to create short videos of local industry success stories on how sustainable practices in business saves money, grows business, and creates jobs. A proposal was submitted to Ventura Adult Continuing Education (VACE) Multimedia Program to work with the Clean/Green Workgroup to produce video interviews in different businesses that incorporate sustainable business practices. The proposal was accepted. Four interview sites were identified and VACE multimedia staff and students have worked with workgroup members to do on-site videos at four locations. The videos will be edited and distributed through the WDB.
- WDBVC Clean/Green Occupational Employment Data
Updated the Clean/Green Occupational Employment Data chart for reference during priority and planning discussions.
- Inventory of Clean/Green Programs
Continued Development of a draft matrix to inventory clean/green-related education and training programs available through the community colleges, adult schools and labor unions in Ventura County. Continued development of industry credential matrix.
- Clean/Green Workforce Development
Discussions to identify the top three Ventura County clean/green workforce development priorities and possible next steps.

2016-2017 YEAR-END REVIEW

Workforce Development Board of Ventura County

Committee Accomplishments (Continued)

- **Regional Survey of Water/Wastewater Industry**
In the previous year, the committee formed a workgroup to identify contacts in the water and waste/water industry. The workgroup developed an extensive list of contacts for Ventura and submitted it to the Deputy Sector Navigator for Agriculture Water and Environmental Technologies, who funded the survey completion. The survey was recently completed with a 42% response rate from the Ventura water/wastewater industries. Valuable information on the current and future water/wastewater workforce needs, for the region, was included in the survey report.
- **Apprenticeship Training**
Continued coordination with the Laborers International Union of North America, Local 585 (LiUNA). The apprenticeship training program in Ventura County is included on the Eligible Training Provider List (ETPL) training list.
- **Career Pathways**
Received updates from the California Career Pathways Trust grant project representatives and discussed opportunities to connect business and education for career awareness and workforce preparation.
- **Environmental Education**
Welcomed Bill Camarillo, CEO of Agromin and Nan Drake, Director of Government Affairs and Public Relations for Harrison Industries, for a presentation on AB 1826, the new legislation and requirements for commercial organics recycling. Discussion on how the legislation is creating new job opportunities and innovative business opportunities.

WDB CLEAN/GREEN COMMITTEE

Insights:

- Need to get more businesses involved.
- Engage the Chambers of Commerce to become involved, distribute Clean/Green videos on sustainable business to the Chambers.
- Continue to create awareness of the value of sustainable business practices.
- There is a need to Increase formal training opportunities in construction and agriculture.
- Include sustainability in hospitality program curriculum.
- Work with current programs (such as the program offered by Ventura Adult and Continuing Education) to help incarcerated individuals prepare for jobs after release and reduce recidivism.
- Work to increase apprenticeship/internship opportunities.

2016-2017 YEAR-END REVIEW
Workforce Development Board of Ventura County

- Need to identify clean energy training programs in Ventura County
- Identify emerging green industries and training needs.
- Work with educators to increase awareness of green jobs in different industry sectors such as agriculture, energy, transportation, hospitality, construction.
- Encourage green entrepreneurship by identifying the skills and talent pipeline needed to support green industries and to create the support network for green industries to recognize Ventura as a green innovation hub.

DRAFT

GREEN JOBS REPORT

VENTURA COUNTY
2018

VENTURA COUNTY COMMUNITY COLLEGE DISTRICT
ECONOMIC & WORKFORCE
DEVELOPMENT DIVISION

Alexandria M. Wright Ph.D.

Ventura County Green Jobs Report

Starting in 2010, the federal Bureau of Labor Statistics received funding to begin collecting data on green jobs.

Green jobs are defined according to two measures:

1. Output Approach: Jobs in businesses that produce goods or provide services that benefit the environment or conserve natural resources. There are five categories:

- *Energy from renewable sources.* Electricity, heat, or fuel generated from renewable sources. These energy sources include wind, biomass, geothermal, solar, ocean, hydropower, and landfill gas and municipal solid waste.
- *Energy efficiency.* Products and services that improve energy efficiency. Included in this group are energy-efficient equipment, appliances, buildings, and vehicles, as well as products and services that improve the energy efficiency of buildings and the efficiency of energy storage and distribution, such as Smart Grid technologies.
- *Pollution reduction and removal, greenhouse gas reduction, and recycling and reuse.* These are products and services that:
 - Reduce or eliminate the creation or release of pollutants or toxic compounds, or remove pollutants or hazardous waste from the environment.
 - Reduce greenhouse gas emissions through methods other than renewable energy generation and energy efficiency, such as electricity generated from nuclear sources.
 - Reduce or eliminate the creation of waste materials; collect, reuse, remanufacture, recycle, or compost waste materials or wastewater.
- *Natural resources conservation.* Products and services that conserve natural resources. Included in this group are products and services related to organic agriculture and sustainable forestry; land management; soil, water, or wildlife conservation; and stormwater management.
- *Environmental compliance, education and training, and public awareness.* These are products and services that:
 - Enforce environmental regulations.
 - Provide education and training related to green technologies and practices.
 - Increase public awareness of environmental issues.

2. Process Approach: Jobs in which workers' duties involve making their establishment's production processes more environmentally friendly or use fewer natural resources. There are four main categories:



- *Energy from renewable sources.* Generating electricity, heat, or fuel from renewable sources primarily for use within the establishment. These energy sources include wind, biomass, geothermal, solar, ocean, hydropower, and landfill gas and municipal solid waste.
- *Energy efficiency.* Using technologies and practices to improve energy efficiency within the establishment. Included in this group is cogeneration (combined heat and power).
- *Pollution reduction and removal, greenhouse gas reduction, and recycling and reuse.* Using technologies and practices within the establishment to:
 - Reduce or eliminate the creation or release of pollutants or toxic compounds, or remove pollutants or hazardous waste from the environment.
 - Reduce greenhouse gas emissions through methods other than renewable energy generation and energy efficiency.
 - Reduce or eliminate the creation of waste materials; collect, reuse, remanufacture, recycle, or compost waste materials or wastewater.
- *Natural resources conservation.* Using technologies and practices within the establishment to conserve natural resources. Included in this group are technologies and practices related to organic agriculture and sustainable forestry; land management; soil, water, or wildlife conservation; and stormwater management.

Environmentally friendly production processes may include the following:

- Conducting research and development of processes to conserve energy or natural resources or to reduce pollution (for example, a chemical engineer who develops a chemical manufacturing process that results in lower air pollution emissions),
- Planning, implementing, and monitoring of these processes (for example, a worker who operates renewable energy generation equipment to produce electricity for use within the establishment),
- Maintaining or installing equipment or infrastructure associated with the processes (for example, a control valve installer in a manufacturing plant who installs systems that reduce water pollution emissions), and
- Measuring and controlling outputs of the process (for example, a chemical technician who tests air samples for pollution emissions levels).



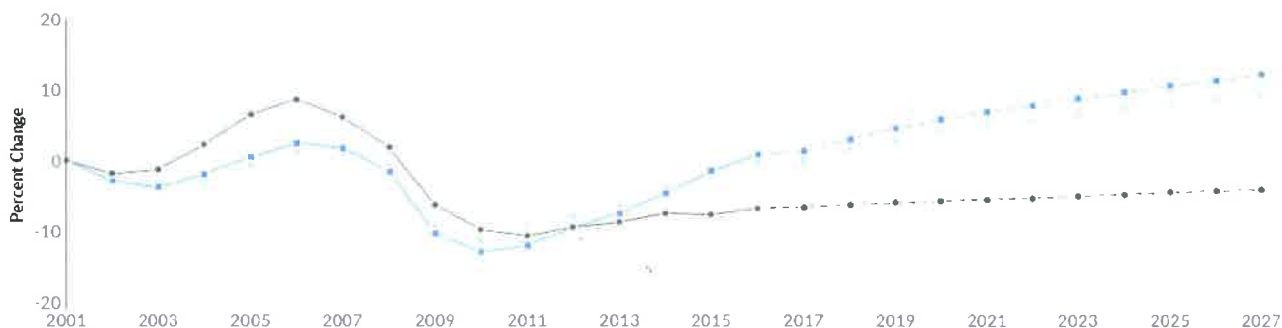
57,975 Jobs (2012) 6% below National average	3.2% % Change (2012-2017) Nation: 8.6%	\$21.72/hr Median Hourly Earnings Nation: \$20.22/hr
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In 2011, the U.S. economy had 3.4 million jobs associated with the production of green goods and services, which represented 2.6 percent of total employment and resulted from an increase of 157,746 jobs from 2010.

Number and percent distribution of establishments in industries where green goods and services are classified, by industry sector, 2009

Industry sector	Number of establishments	Percent distribution
Construction	820,700	38.1
Professional and business services	779,100	36.2
Other services (Repair and maintenance services, Professional organizations)	183,300	8.5
Natural resources and mining	88,700	4.1
Information	77,000	3.6
Manufacturing	77,700	3.6
Trade, transportation, and utilities	49,300	2.3
Public administration	42,100	2.0
Education and health services	26,400	1.2
All other sectors	10,400	0.5
Total	2,154,700	100.0

Regional Job Growth Trends



	Region	2012 Jobs	2017 Jobs	Change	% Change
●	Ventura County	57,975	59,845	1,870	3.2%
●	State	2,802,631	3,137,570	334,939	12.0%
●	Nation	25,685,207	27,905,578	2,220,371	8.6%



Description	2017 Jobs	2012 - 2017 Change	2012 - 2017 % Change	Annual Openings	Competitive Effect	2017 Net Commuters	Annual Replacement Jobs	Median Hourly Earnings	Regional Completions (2015)	2017 Resident Workers
General and Operations Managers	5,376	262	5%	481	(194)	(931)	421	\$49.97	850	6,307
Marketing Managers	470	(26)	(5%)	42	(77)	(159)	40	\$57.73	24	629
Industrial Production Managers	380	(10)	(3%)	28	(29)	(65)	27	\$46.60	760	445
Transportation, Storage, and Distribution Managers	250	(1)	(0%)	21	(25)	(67)	19	\$45.81	824	317
Construction Managers	932	19	2%	81	(18)	(84)	62	\$32.10	760	1,016
Architectural and Engineering Managers	534	0	0%	38	(26)	(66)	36	\$62.74	11	600
Natural Sciences Managers	426	(29)	(6%)	37	(53)	97	35	\$59.99	896	329
Buyers and Purchasing Agents, Farm Products	70	7	11%	9	3	6	8	\$32.64	0	64
Wholesale and Retail Buyers, Except Farm Products	272	9	3%	33	(11)	(149)	30	\$22.44	0	421
Financial Analysts	433	(38)	(8%)	39	(74)	(256)	37	\$37.50	60	689
Personal Financial Advisors	845	28	3%	71	(76)	(159)	61	\$31.39	60	1,004
Architects, Except Landscape and Naval	153	(2)	(1%)	13	(22)	(135)	11	\$27.89	0	288
Landscape Architects	43	1	2%	4	(3)	(20)	3	\$25.17	0	63
Aerospace Engineers	164	(4)	(2%)	10	(5)	(83)	10	\$63.94	0	247
Chemical Engineers	150	5	3%	11	(0)	42	9	\$47.46	0	108
Civil Engineers	606	24	4%	48	(13)	(116)	42	\$49.43	0	722
Electrical Engineers	402	(19)	(5%)	27	(34)	(117)	26	\$49.09	0	519
Electronics Engineers, Except Computer	1,253	43	4%	93	27	198	77	\$51.13	0	1,055
Environmental	163	3	2%	12	(10)	(2)	10	\$38.79	0	165

Engineers										
Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	39	0	0%	3	(3)	(21)	2	\$54.20	0	60
Industrial Engineers	427	(21)	(5%)	29	(46)	(127)	28	\$39.92	0	554
Mechanical Engineers	660	(2)	(0%)	44	(42)	(40)	41	\$45.03	0	700
Nuclear Engineers	12	(1)	(8%)	Insf. Data	(1)	(1)	Insf. Data	\$45.22	0	13
Architectural and Civil Drafters	212	16	8%	21	2	(89)	17	\$26.28	22	301
Electrical and Electronics Engineering Technicians	742	11	2%	70	(1)	46	62	\$37.29	18	696
Electro-Mechanical Technicians	28	(2)	(7%)	3	(2)	(16)	2	\$31.86	2	44
Environmental Engineering Technicians	31	0	0%	3	(3)	(11)	3	\$24.03	2	42
Industrial Engineering Technicians	66	(14)	(18%)	6	(17)	(17)	6	\$23.79	2	83
Zoologists and Wildlife Biologists	43	(1)	(2%)	4	(3)	(12)	4	\$36.15	0	55
Conservation Scientists	33	0	0%	3	(1)	2	3	\$38.26	0	31
Atmospheric and Space Scientists	13	(1)	(7%)	Insf. Data	(2)	(2)	Insf. Data	\$54.12	0	15
Chemists	615	(68)	(10%)	61	(99)	136	57	\$30.72	44	479
Materials Scientists	21	(1)	(5%)	Insf. Data	(2)	(11)	Insf. Data	\$48.82	0	32
Environmental Scientists and Specialists, Including Health	332	(4)	(1%)	31	(26)	(11)	30	\$39.29	37	343
Geoscientists, Except Hydrologists and Geographers	72	(4)	(5%)	7	(4)	(14)	7	\$44.77	5	86
Hydrologists	31	1	3%	3	(1)	0	3	\$54.73	5	31

Urban and Regional Planners	119	2	2%	10	(3)	(28)	9	\$38.58	0	147
Agricultural and Food Science Technicians	97	(3)	(3%)	10	(10)	(5)	10	\$22.52	78	102
Chemical Technicians	89	(24)	(21%)	10	(28)	(42)	9	\$22.50	0	131
Geological and Petroleum Technicians	18	(3)	(14%)	2	(1)	(13)	Insf. Data	\$32.99	0	31
Nuclear Technicians	<10	Insf. Data	Insf. Data	Insf. Data	(1)	Insf. Data	Insf. Data	Insf. Data	0	<10
Environmental Science and Protection Technicians, Including Health	113	0	0%	14	(9)	0	13	\$27.74	37	113
Forest and Conservation Technicians	329	5	2%	42	4	66	37	\$20.36	0	263
Arbitrators, Mediators, and Conciliators	18	2	13%	Insf. Data	(0)	(11)	Insf. Data	\$31.81	28	29
Farm and Home Management Advisors	18	3	20%	2	2	(9)	Insf. Data	\$25.34	78	27
Commercial and Industrial Designers	132	3	2%	13	(10)	(22)	12	\$29.09	0	154
Reporters and Correspondents	52	(2)	(4%)	9	1	(45)	6	\$20.55	41	97
Public Relations Specialists	509	2	0%	54	(40)	(121)	49	\$31.25	279	630
Occupational Health and Safety Specialists	141	3	2%	9	(7)	(5)	7	\$39.14	0	146
Occupational Health and Safety Technicians	32	2	7%	2	(1)	(2)	Insf. Data	\$18.46	0	34
Fish and Game Wardens	<10	Insf. Data	Insf. Data	Insf. Data	0	Insf. Data	Insf. Data	Insf. Data	0	0

Structural Iron and Steel Workers	108	10	10%	13	(6)	(14)	11	\$27.12	0	122
Helpers--Carpenters	71	10	16%	12	(2)	(4)	9	\$14.60	0	75
Construction and Building Inspectors	222	6	3%	25	(8)	(31)	23	\$35.24	8	253
Hazardous Materials Removal Workers	94	10	12%	14	2	(11)	10	\$17.28	0	105
Rail-Track Laying and Maintenance Equipment Operators	<10	Insf. Data	Insf. Data	Insf. Data	(2)	Insf. Data	Insf. Data	Insf. Data	0	<10
Service Unit Operators, Oil, Gas, and Mining	73	(40)	(35%)	14	(6)	6	12	\$26.98	0	67
Continuous Mining Machine Operators	16	0	0%	2	4	Insf. Data	Insf. Data	\$29.11	0	<10
First-Line Supervisors of Mechanics, Installers, and Repairers	785	16	2%	72	(40)	(131)	65	\$34.70	0	916
Electrical and Electronics Repairers, Commercial and Industrial Equipment	93	(4)	(4%)	8	(7)	(32)	8	\$25.36	8	125
Automotive Service Technicians and Mechanics	1,910	169	10%	206	47	(71)	168	\$15.64	39	1,981
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	644	153	31%	86	69	(47)	52	\$21.68	23	691
Industrial Machinery Mechanics	397	(12)	(3%)	38	(57)	(113)	34	\$26.62	0	510
Millwrights	36	3	9%	4	(3)	(13)	3	\$25.87	0	49

Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	762	(20)	(3%)	83	(67)	(178)	76	\$32.65	0	940
Customer Service Representatives	3,846	(203)	(5%)	507	(613)	(1,299)	494	\$17.15	0	5,145
Dispatchers, Except Police, Fire, and Ambulance	374	26	7%	38	(9)	(73)	32	\$17.47	0	447
Production, Planning, and Expediting Clerks	835	28	3%	91	(29)	(281)	82	\$23.76	0	1,116
Shipping, Receiving, and Traffic Clerks	1,755	48	3%	185	(53)	(403)	172	\$15.38	0	2,158
Agricultural Inspectors	65	(4)	(6%)	9	(6)	(23)	9	\$21.46	0	88
Forest and Conservation Workers	126	(3)	(2%)	20	(9)	7	20	\$10.92	0	119
Boilermakers	<10	Insf. Data	Insf. Data	Insf. Data	(2)	Insf. Data	Insf. Data	Insf. Data	0	<10
Carpenters	2,845	183	7%	321	(51)	(42)	250	\$16.91	0	2,887
Cement Masons and Concrete Finishers	522	56	12%	80	(51)	45	56	\$21.46	0	477
Construction Laborers	3,059	303	11%	365	(106)	2	298	\$14.23	0	3,057
Operating Engineers and Other Construction Equipment Operators	755	19	3%	93	(29)	105	82	\$28.01	0	650
Electricians	1,188	85	8%	145	(54)	(182)	123	\$21.39	0	1,370
Insulation Workers, Floor, Ceiling, and Wall	42	7	20%	6	2	0	4	\$17.46	0	42
Plumbers, Pipefitters, and Steamfitters	1,284	387	43%	188	235	91	109	\$22.43	0	1,193
Roofers	379	(20)	(5%)	42	(54)	(19)	37	\$23.24	0	398
Sheet Metal Workers	387	122	46%	58	81	43	33	\$20.64	0	344

Helpers--Installation, Maintenance, and Repair Workers	175	14	9%	24	(4)	(83)	21	\$14.97	0	258
First-Line Supervisors of Production and Operating Workers	1,094	(27)	(2%)	112	(71)	(198)	107	\$28.66	0	1,292
Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	63	(9)	(13%)	7	(7)	(8)	7	\$20.22	0	71
Electrical and Electronic Equipment Assemblers	1,420	46	3%	181	39	185	160	\$15.22	0	1,235
Engine and Other Machine Assemblers	74	(1)	(1%)	8	(6)	15	8	\$17.21	0	59
Structural Metal Fabricators and Fitters	104	15	17%	13	9	(34)	10	\$15.88	38	138
Team Assemblers	1,958	101	5%	245	(90)	(84)	219	\$13.88	0	2,042
Computer-Controlled Machine Tool Operators, Metal and Plastic	329	26	9%	36	(0)	(29)	31	\$21.78	38	358
Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	311	1	0%	37	9	(37)	35	\$14.37	0	348
Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic	47	(1)	(2%)	5	2	(7)	5	\$13.61	0	54
Machinists	1,060	18	2%	114	(33)	(32)	105	\$19.95	38	1,092
Welders, Cutters, Solderers, and Brazers	789	47	6%	92	23	(25)	80	\$16.93	21	814

Nuclear Power Reactor Operators	<10	Insf. Data	Insf. Data	Insf. Data	(0)	Insf. Data	Insf. Data	Insf. Data	0	<10
Power Plant Operators	157	(31)	(16%)	17	(29)	29	15	\$39.90	0	128
Chemical Plant and System Operators	43	(13)	(23%)	5	(14)	7	5	\$23.72	0	36
Chemical Equipment Operators and Tenders	169	(31)	(16%)	20	(34)	46	20	\$19.83	0	123
Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	162	(1)	(1%)	19	(22)	(1)	17	\$20.18	0	163
Mixing and Blending Machine Setters, Operators, and Tenders	577	26	5%	76	(11)	98	63	\$10.87	0	479
Inspectors, Testers, Sorters, Samplers, and Weighers	1,368	(49)	(3%)	170	(117)	(105)	163	\$18.23	0	1,473
Bus Drivers, Transit and Intercity	339	(33)	(9%)	46	(53)	(88)	41	\$11.74	11	427
Heavy and Tractor-Trailer Truck Drivers	2,467	22	1%	291	(178)	(187)	261	\$19.75	11	2,654
Railroad Conductors and Yardmasters	18	1	6%	Insf. Data	(0)	(7)	Insf. Data	\$25.72	11	25
Transportation Inspectors	61	(1)	(2%)	6	(4)	(11)	6	\$27.14	0	72
Industrial Truck and Tractor Operators	1,175	44	4%	139	(116)	(64)	127	\$14.69	0	1,239
Laborers and Freight, Stock, and Material Movers, Hand	4,939	218	5%	721	(332)	(1,385)	652	\$12.21	0	6,324
Refuse and Recyclable Material Collectors	285	(13)	(4%)	40	(26)	(34)	34	\$26.99	0	319
Total	59,845	1,870	3%	6,720	(2,882)	(7,181)	5,858			67,022