



Program Endorsement Brief:

College of the Redwoods: Organic and Sustainable Agriculture
North/Far North Center of Excellence, January 2019

INTRODUCTION

College of the Redwoods is considering a revision of their Agricultural program offerings to include a new, one-year Organic and Sustainable Agriculture Certificate. This program would include the skills and knowledge necessary for students to gain entry into this industry. This report provides a brief overview of labor market demand and supply for automotive service technicians and mechanics in the North/Far North regions and the sub-region comprising Del Norte, Humboldt, Mendocino, and Trinity counties.

Key findings include:

- Projected occupational growth is 7% for the North and Far North regions. Projections indicate a decline in jobs for the four-county sub-region through 2022.
- Difference in wages between first-line supervisors and workers is significant, though median wages for each occupation studied are below living wage.
- Job posting data may not be a reliable measure of workforce demand.
- The three-year average number of program completions for 5 colleges in the Far North region is 51 degrees and 1 certificate. Projected annual openings for the region are 1,862.
- It is important to note that annual openings included in this report are at the 6-digit SOC code level, yet the agricultural occupational sector is defined at the 8-digit level. As a result, annual openings data will reflect more demand than exists because openings data includes occupations for which the program will not train. For example, aquaculture occupations are included in SOC 45-1011, first-line supervisors of farming, fishing, and forestry workers while this program will train in organic and sustainable agriculture.

Findings in this report were determined using labor market data from EMSI and Burning Glass. Education supply data is sourced from the Community College Chancellor's Office MIS via Datamart and Launchboard.

This report contains the following sections:

- Occupational demand
- Wages and job postings
- Educational attainment and supply, and
- Findings and recommendations

OCCUPATIONAL DEMAND

The following Standard Occupational Classification (SOC) codes were analyzed in relation to the proposed program¹:

11-9013.00 - Farmers, Ranchers, and Other Agricultural Managers

Plan, direct, or coordinate the management or operation of farms, ranches, greenhouses, aquacultural operations, nurseries, timber tracts, or other agricultural establishments. May hire, train, and supervise farm workers or contract for services to carry out the day-to-day activities of the managed operation. May engage in or supervise planting, cultivating, harvesting, and financial and marketing activities.

45-2092.00 - Farmworkers and Laborers, Crop, Nursery, and Greenhouse

Manually plant, cultivate, and harvest vegetables, fruits, nuts, horticultural specialties, and field crops. Use hand tools, such as shovels, trowels, hoes, tampers, pruning hooks, shears, and knives. Duties may include tilling soil and applying fertilizers; transplanting, weeding, thinning, or pruning crops; applying pesticides; or cleaning, grading, sorting, packing, and loading harvested products. May construct trellises, repair fences and farm buildings, or participate in irrigation activities.

45-1011.00 - First-Line Supervisors of Farming, Fishing, and Forestry Workers

Directly supervise and coordinate the activities of agricultural, forestry, aquacultural, and related workers.

Exhibit 1 summarizes job trends per the SOC codes in Del Norte, Humboldt, Mendocino, and Trinity counties, the 15-county Far North region, and the 22-county North/Far North region.

Exhibit 1: Employment and projected occupational demand²

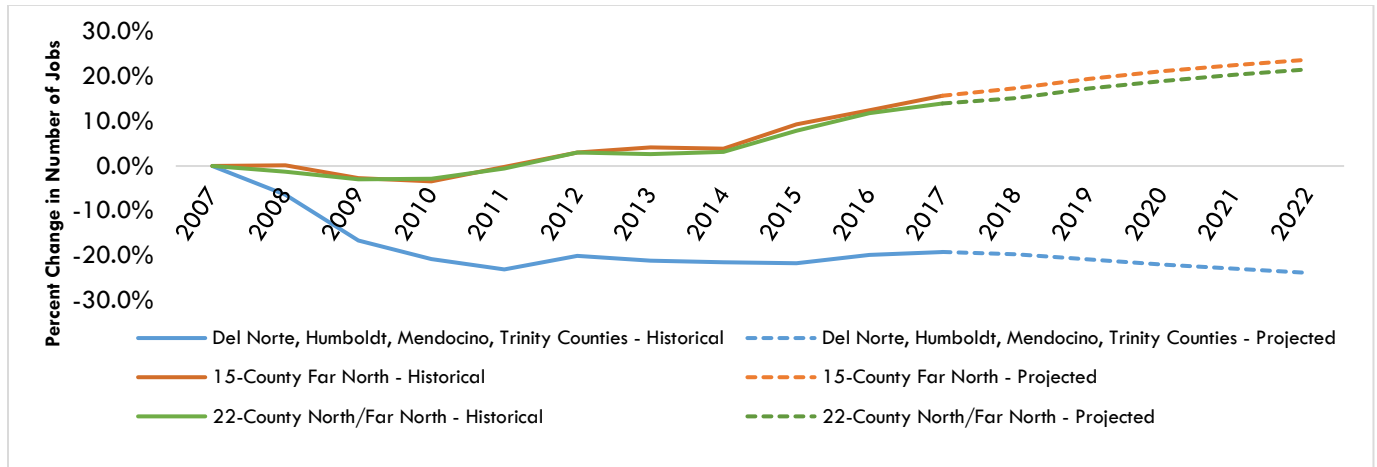
Occupation	SOC	2007 Jobs	2017 Jobs	2022 Jobs	2017-22 Jobs % Change	Annual Openings
Farmers, Ranchers, and Other Agricultural Managers	11-9013	547	430	385	-10%	30
First-Line Supervisors of Farming, Fishing, and Forestry Workers	45-1011	216	150	145	-3%	20
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	45-2092	1,711	1,419	1,354	-5%	213
Del Norte, Humboldt, Mendocino, and Trinity Counties	TOTAL	2,474	1,999	1,884	-6%	263
Farmers, Ranchers, and Other Agricultural Managers	11-9013	2,058	2,223	2,255	1%	184
First-Line Supervisors of Farming, Fishing, and Forestry Workers	45-1011	685	663	716	8%	102
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	45-2092	7,533	9,006	9,748	8%	1,576
15-County Far North Region	TOTAL	10,276	11,892	12,719	7%	1,862
Farmers, Ranchers, and Other Agricultural Managers	11-9013	3,545	3,720	3,734	0%	300
First-Line Supervisors of Farming, Fishing, and Forestry Workers	45-1011	1,175	1,139	1,224	7%	173
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	45-2092	13,936	16,407	17,731	8%	2,863
22-County North/Far North Region	TOTAL	18,656	21,266	22,689	7%	3,336

Exhibit 2 shows the percentage change in number of jobs between 2007 through 2017 and occupational projections from 2017 through 2022. The rate of change is indexed to the total number of jobs in 2007 as the base year and compares Del Norte, Humboldt, Mendocino, and Trinity Counties, the 15-county Far North region, and the 22-county North/Far North region.

¹ <https://www.onetonline.org>

² Emsi 2018.4; QCEW Employees, Non-QCEW Employees and Self-Employed. The fifteen-county Far North region includes Butte, Colusa, Del Norte, Glenn, Humboldt, Lake, Lassen, Mendocino, Modoc, Plumas, Shasta, Sierra, Siskiyou, Tehama and Trinity. The 22-county North/Far North region includes the aforementioned counties as well as El Dorado, Placer, Nevada, Sacramento, Sutter, Yolo and Yuba.

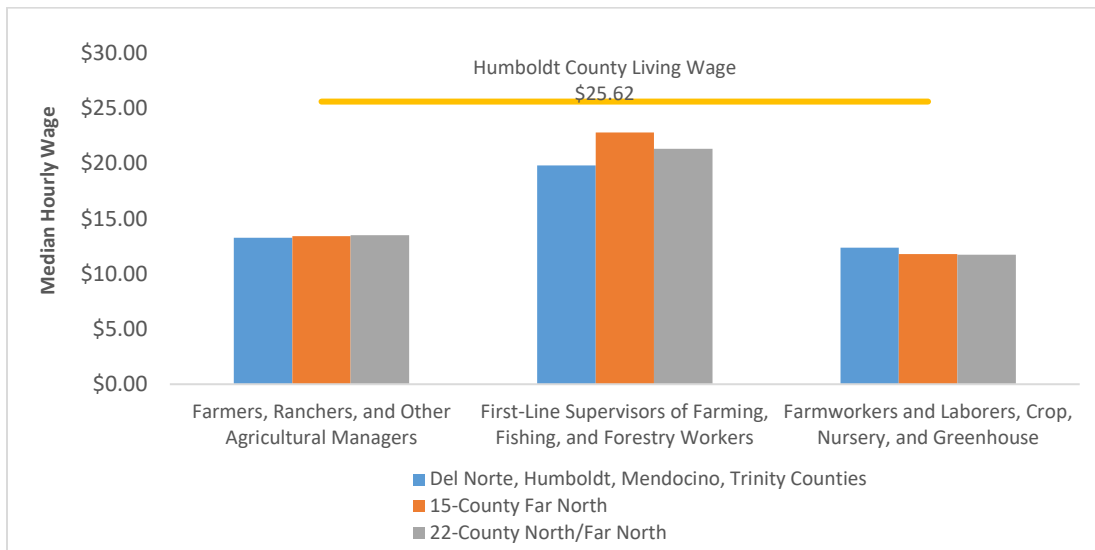
Exhibit 2: Rate of change for selected occupations³



WAGES AND JOB POSTINGS

Exhibit 3 displays hourly wages for the three occupations in the Far North region compared to the Humboldt County living wage for a one-adult, one-child household.⁴ There is little difference in hourly wages within each occupation across regions, yet the difference between wages of first-line supervisors of farming, fishing, and forestry workers and both agricultural managers and workers is significant.

Exhibit 3: Wages for selected occupations⁵



Burning Glass data for job postings for the representative SOC codes identified a pool of 138 listings in the North/Far North region during the past year. The majority of job postings in the North/Far North region are

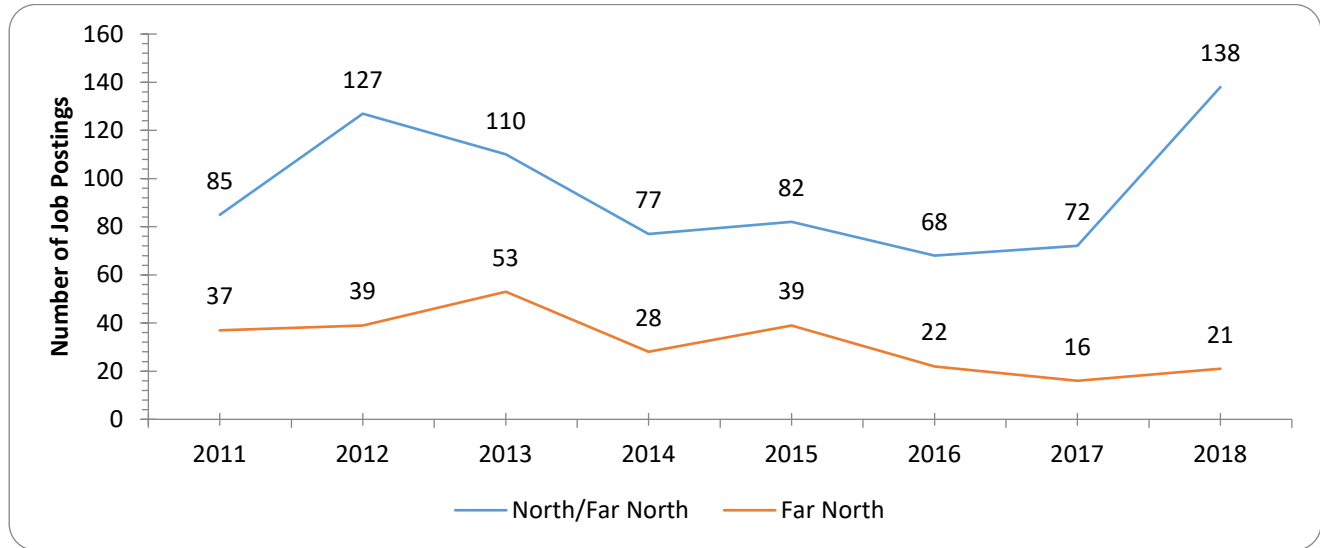
³ Ibid.

⁴ Living Wage Calculator: Counties and Metropolitan Statistical Areas in California, <http://livingwage.mit.edu/states/06/locations>.

⁵ Emsi 2018.4.

located in the Greater Sacramento area. Exhibit 4 shows job posting trends since 2011 for these occupations for each region. Data for the four-county sub-region is not included due to low numbers.

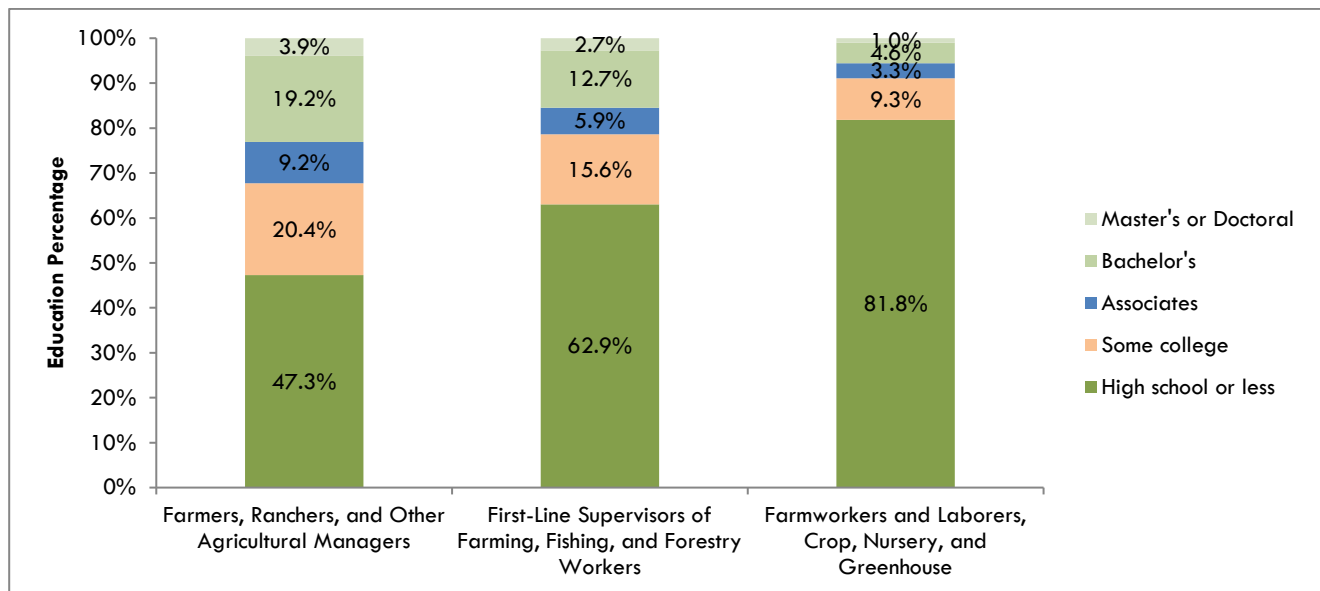
Exhibit 4. Job posting trends for selected occupations⁶



EDUCATIONAL ATTAINMENT AND SUPPLY

At the national level, the occupations selected are not required to have advanced education for an entry-level position. Exhibit 6 shows educational attainment percentages of all workers in the industry. More than half of agricultural managers and more than one third of first-line supervisors typically have at least some college education.

Exhibit 6. Typical educational attainment for selected occupations nationally⁷



⁶ Burning Glass.

⁷ Current Population Survey, Educational Attainment for Workers 25 Years and Older by Detailed Occupation, 2016-17, https://www.bls.gov/emp/ep_table_111.htm.

To estimate supply, this study used the Taxonomy of Programs (TOP) code that relates to organic and sustainable agriculture, Agriculture Technology and Sciences, General (0101.00). There are 5 schools in the Far North region that awarded certificates or associate degrees related to this TOP code during the previous three years.

Exhibits 7a and 7b show the number of awards conferred by Far North community colleges during the past three academic years. Associate degrees are the primary award received by students.

Exhibit 7a: Total awards conferred by Far North community colleges, 2015-2018⁸

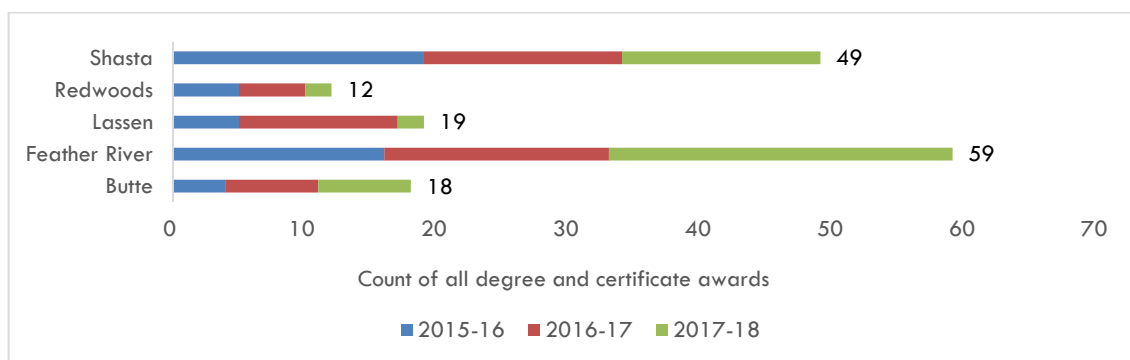


Exhibit 7b: Annual awards conferred by Far North community colleges, 2015-2018⁹

	Certificate				Associate Degree			
	2015-16	2016-17	2017-18	3-Yr Avg	2015-16	2016-17	2017-18	3-Yr Avg
Butte	0	0	0	0	4	7	7	4
Feather River	0	0	0	0	16	17	26	16
Lassen	0	2	1	0	5	10	1	5
Redwoods	0	0	0	0	5	5	2	5
Shasta	1	0	0	1	18	15	15	18
Total	1	2	1	1	48	54	51	51

FINDINGS AND RECOMMENDATION

- While annual job openings numbers are overstated at 1,862 for the Far North, supply data suggest a gap since an average of 52 degrees annually have been awarded over the past three years.
- Although growth is projected to decline in the four-county sub-region, there are more than 250 projected annual openings through 2022.
- Job posting analysis (Burning Glass) found agriculture positions related to management require a Bachelor’s degree, while national Census Bureau educational attainment data indicate most managers have completed some college or a high school diploma; thus, the COE recommends an emphasis on management positions requiring a certificate or associate degree as well as developing transfer pathways to four-year degrees.

⁸ California Community Colleges Chancellor’s Office Data Mart, 2/8/19.

⁹ Ibid.

COE Recommendation

- Move forward with program
- Program is not recommended
- Additional information needed

APPENDIX A: SOURCES

Sources used for data analysis purposes in this report include:

- U.S. Department of Labor/Employment and Training Administration (DOLETA) O*NET Online
- Burning Glass, Labor Insight/Jobs
- Economic Modeling Specialists, International (EMSI)
- California Employment Development Department, Labor Market Information Division (EDD, LMID)
- California Community Colleges Chancellor's Office Management Information Systems (MIS Datamart)
- California Community Colleges Chancellor's Office, Cal-PASS Plus LaunchBoard

For more information, please contact:

Sara Phillips

Director, Far North Center of Excellence for Labor Market Research

sphillips@shastacollege.edu or 530.242.7635