

Program Endorsement Brief:

Utility Vegetation Management in the North region

North/Far North Center of Excellence, November 2019

INTRODUCTION

This report provides an overview of the labor market demand and educational program supply for utility vegetation management occupations in the 7-county North region and the broader 22-county North/Far North region.

SUMMARY OF KEY FINDINGS

- Utility vegetation management occupations are projected to have almost 300 annual openings over the next five years.
- Median hourly wages for the selected occupations are above the regional living wage for a single adult. Hourly wages range from \$12 to \$24 per hour.
- The typical entry-level education for utility management occupations range from high school diploma to an associate's degree. Most occupations will also require short to moderate lengths of on-the-job training for entry-level workers.
- There are no training programs in the North region.

The report contains the following sections:

- Occupational demand,
- Wages and job postings,
- Education and training,
- Regional program supply, and
- Findings and recommendations.

OCCUPATIONAL DEMAND

The following Standard Occupational Classification (SOC) codes related to the proposed program were included in the analysis:¹

19-4093.00 - Forest and Conservation Technicians	
Description:	Provide technical assistance regarding the conservation of soil, water, forests, or related natural resources. May compile data pertaining to size, content, condition, and other characteristics of forest tracts, under the direction of foresters; or train and lead forest workers in forest propagation, fire prevention and suppression. May assist conservation scientists in managing, improving, and protecting rangelands and wildlife habitats.
Sample job titles:	Biological Science Aide, Conservationist, County Ranger, Forest Technician, Forestry Aide, Forestry Technician, Resource Manager, Resource Specialist, Resource Technician, Timber Appraiser
33-2022.00 - Forest Fire Inspectors and Prevention Specialists	
Description:	Enforce fire regulations, inspect forest for fire hazards and recommend forest fire prevention or control measures. May report forest fires and weather conditions.
Sample job titles:	Fire Management Officer, Fire Operations Forester, Fire Prevention Officer, Fire Prevention Technician, Fire Technician, Forest Officer, Forest Patrolman, Forestry Patrolman, Wildfire Mitigation Specialist, Wildfire Prevention Specialist
37-3013.00 - Tree Trimmers and Pruners	
Description:	Using sophisticated climbing and rigging techniques, cut away dead or excess branches from trees or shrubs to maintain right-of-way for roads, sidewalks, or utilities, or to improve appearance, health, and value of tree. Prune or treat trees or shrubs using handsaws, hand pruners, clippers, and power pruners. Works off the ground in the tree canopy and may use truck-mounted lifts.
Sample job titles:	Arborist, Climber, Ground Worker, Groundsman, Laborer, Line Clearance Foreman, Plant Health Care Technician, Tree Climber, Tree Trimmer, Trimmer
45-4011.00 - Forest and Conservation Workers	
Description:	Under supervision, perform manual labor necessary to develop, maintain, or protect areas such as forests, forested areas, woodlands, wetlands, and rangelands through such activities as raising and transporting seedlings; combating insects, pests, and diseases harmful to plant life; and building structures to control water, erosion, and leaching of soil. Includes forester aides, seedling pullers, and tree planters.
Sample job titles:	Conservation Officer, Crew Leader, Field Laborer, Foreman, Forest Resource Specialist, Forestry Support Specialist, Geographic Information Systems Coordinator (GIS Coordinator), Park Maintainer, Reforestation Worker, Tree Planter

¹O*NET OnLine. U.S. Department of Labor Education & Training Administration. Accessed November 22, 2019. <https://www.onetonline.org/>.

Exhibit 1 summarizes the job trends by SOC codes in the 7-county North region, 22-county North/Far North region, and California.²

Exhibit 1. Employment and projected occupational demand³

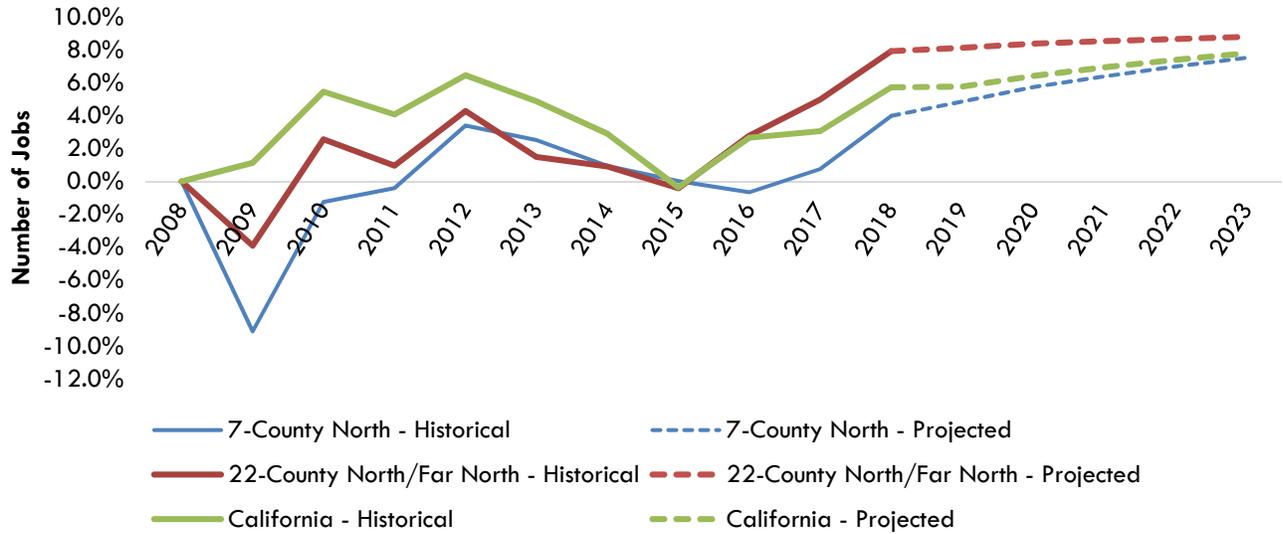
Occupation	SOC	2008 Jobs	2018 Jobs	2023 Jobs	2018-23 % Change	Annual Openings
Forest and Conservation Technicians	19-4093	686	771	779	1.0%	101
Forest Fire Inspectors and Prevention Specialists	33-2022	132	154	168	9.1%	20
Tree Trimmers and Pruners	37-3013	518	635	691	8.8%	89
Forest and Conservation Workers	45-4011	522	372	360	-3.2%	84
NORTH	TOTALS	1,858	1,932	1,998	3.4%	294
Forest and Conservation Technicians	19-4093	2,361	2,538	2,498	-1.6%	332
Forest Fire Inspectors and Prevention Specialists	33-2022	135	161	177	10.0%	20
Tree Trimmers and Pruners	37-3013	774	951	1,030	8.2%	136
Forest and Conservation Workers	45-4011	1,132	1,102	1,085	-1.5%	213
NORTH/FAR NORTH	TOTALS	4,403	4,751	4,790	0.8%	701
Forest and Conservation Technicians	19-4093	7,042	7,126	7,154	0.4%	945
Forest Fire Inspectors and Prevention Specialists	33-2022	260	376	421	11.8%	47
Tree Trimmers and Pruners	37-3013	9,444	10,358	10,699	3.3%	1,418
Forest and Conservation Workers	45-4011	2,875	2,883	2,877	-0.2%	571
CALIFORNIA	TOTALS	19,621	20,744	21,150	2.0%	2,981

² The 7-county North region includes El Dorado, Placer, Nevada, Sacramento, Sutter, Yolo and Yuba. The 15-county Far North region includes the Butte, Colusa, Del Norte, Glenn, Humboldt, Lake, Lassen, Mendocino, Modoc, Plumas, Shasta, Sierra, Siskiyou, Tehama and Trinity counties. The 22-county North/Far North region is the combination of the 7-county North and 15-county Far North regions.

³ Emsi 2019.4; QCEW Employees, Non-QCEW Employees and Self-Employed.

Exhibit 2 compares the rates of change of the total number of jobs between 2008 and 2018 in the North region, the North/Far North region, and California. It also compares occupational demand projections from 2018 through 2023 across the same areas. The rate of change is indexed to the base year 2008 total number of jobs.

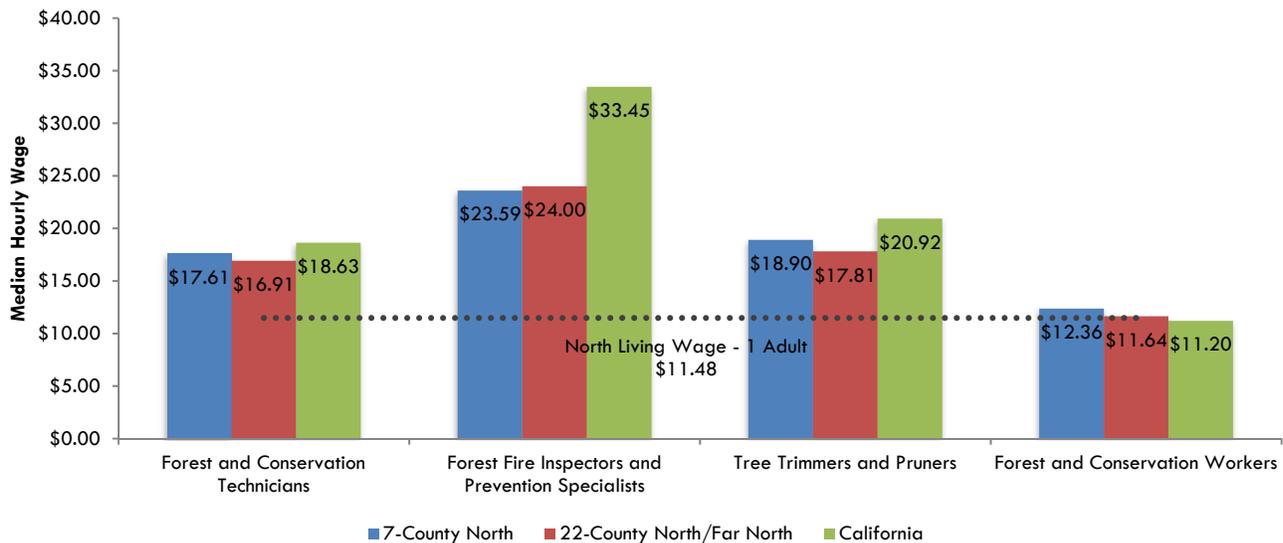
Exhibit 2. Rate of Change for Selected Occupations⁴



WAGES AND JOB POSTINGS

Exhibit 3 compares the median hourly wages of the selected occupations in the study regions to the North region's 7-county average living wage for a one-adult household.⁵

Exhibit 3. Wages for selected occupations⁶



Burning Glass identified a pool of 200 job postings in the North region for the selected occupations. This data represents job listings posted online within the last year, from November 1, 2018, through October 31, 2019.

⁴ Ibid.

⁵ "Family Needs Calculator (Formerly the Self-Sufficiency Standard)." Insight Center for Community Economic Development, February 2018. <https://insightccd.org/2018-family-needs-calculator/>.

⁶ Emsi 2019.4; QCEW Employees, Non-QCEW Employees and Self-Employed.

Exhibit 4 compares the 12-month job posting trends of the selected occupations to the median number of job postings in the North region.

Exhibit 4: Job postings trend for selected occupations⁷

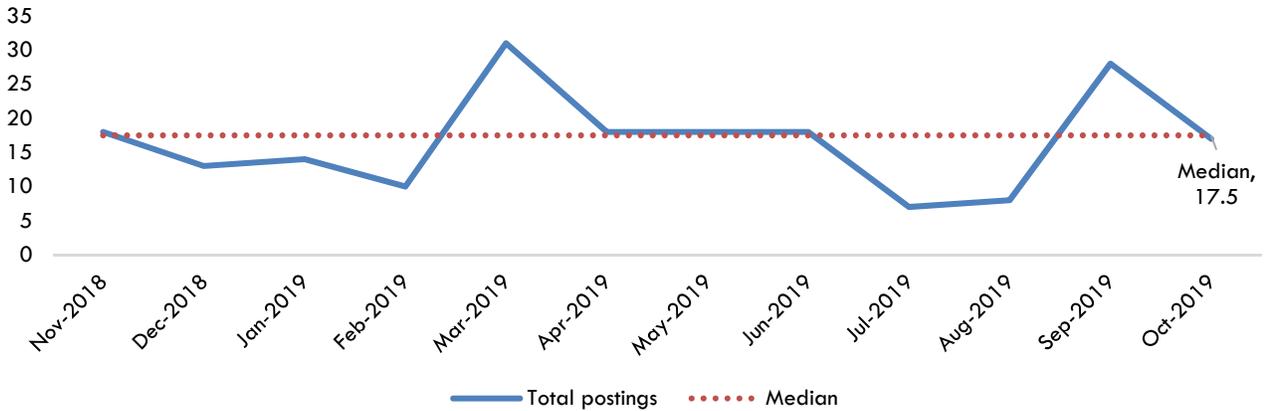


Exhibit 5 shows the number of job postings in the North region, by county, for the selected occupations.

Exhibit 5. Top job postings locations for selected occupations⁸

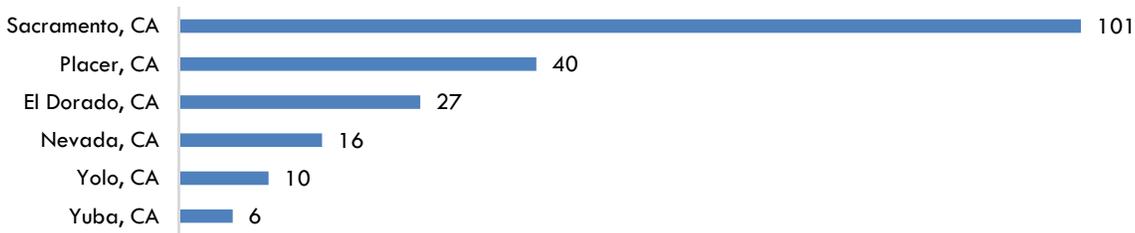


Exhibit 6 lists North region employers with the most job openings for the selected occupations. 164 of the 200 job postings included the employer’s name.

Exhibit 6: Top employers by number of job postings⁹

Employer	North (n = 164)	
	Number of Postings	Percent of Postings
Forest Service	23	14%
Arborwell	6	4%
State of California	5	3%
US Department of Agriculture	5	3%
Haman Landscape And Tree Service	5	3%
Davey Tree Expert Company	5	3%
A Plus Tree Service	5	3%
Titan Tree Service	4	2%
Security Industry Specialists, Inc.	4	2%
Equity Lifestyle Properties	4	2%

⁷ Burning Glass Technologies, “Labor Insight Real-Time Labor Market Information Tool,” <http://www.burning-glass.com>, 2019.

⁸ Ibid.

⁹ Ibid.

Exhibit 7 shows the top job titles for the selected occupations in the North region. All 200 job postings included a job title.

Exhibit 7. Top job titles by number of job postings¹⁰

Title	North (n = 200)	
	Job Postings	% Job Posting
Tree Climber	59	29%
Trimmer	24	12%
Forestry Technician	14	7%
Ranger	12	6%
Forestry Technician, Recreation	10	5%
Water Resources Technician	7	3%
Mobile Patrol Specialist	6	3%
Forestry Aide	6	3%
Climber/Foreman	6	3%
Technician	5	2%

Exhibit 8 shows the skills most in-demand for the selected occupations in the North region. All 200 job postings included skills information.

Exhibit 8. Top skills by number of job postings¹¹

Skills	North (n=200)	
	Job Postings	% Job Posting
Natural Resources	31	15%
Project Planning and Development Skills	28	14%
Watershed Management	27	13%
Range Management	25	12%
Scheduling	24	12%
Wildlife Management	22	11%
Soil Science	22	11%
Hand Tools	20	10%
Resource Management	19	9%
Cryptography	17	8%

¹⁰ Ibid.

¹¹ Ibid.

EDUCATION AND TRAINING

Exhibit 9 shows the average level of educational attainment for workers 25 years and older by occupation across the U.S.

Exhibit 9. Typical educational attainment for selected occupations, nationally¹²

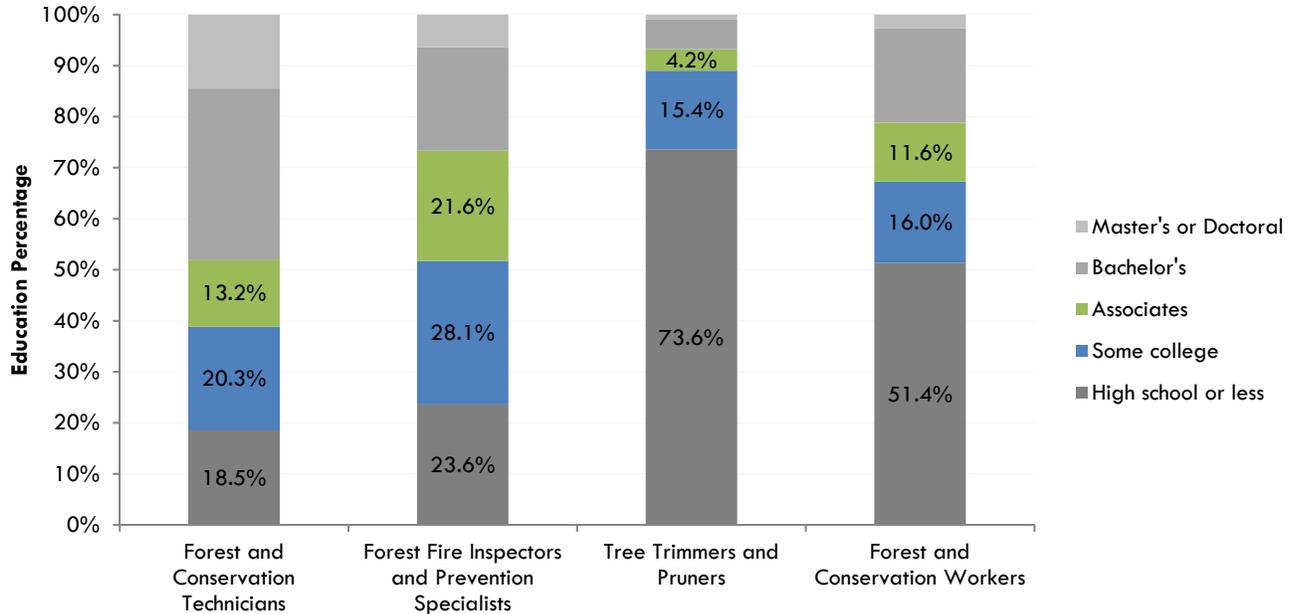


Exhibit 10 shows the typical entry-level education requirements, on-the-job training, and work experience requirements for the selected occupations in the North region.

Exhibit 10. Typical education, training, and work experience for selected occupations¹³

Occupations	SOC	Typical Entry-Level Education	Typical On-The-Job Training	Work Experience Required
Forest and Conservation Technicians	19-4093	Associate's degree	None	None
Forest Fire Inspectors and Prevention Specialists	33-2022	High school diploma or equivalent	Moderate-term on-the-job training	Less than 5 years
Tree Trimmers and Pruners	37-3013	High school diploma or equivalent	Short-term on-the-job training	None
Forest and Conservation Workers	45-4011	High school diploma or equivalent	Moderate-term on-the-job training	None

¹² "Educational Attainment for Workers 25 Years and Older by Detailed Occupation." U.S. Bureau of Labor Statistics. U.S. Department of Labor, September 4, 2019. <https://www.bls.gov/emp/tables/educational-attainment.htm>.

¹³ Emsi 2019.4; QCEW Employees, Non-QCEW Employees and Self-Employed.

PROGRAM SUPPLY

Analysis of existing educational programs shows that there is one Taxonomy of Program (TOP) code related to training for utility vegetation management occupations: 01 14.00 - Forestry. The corresponding Classification of Instructional Programs (CIP) code is 03.0501 – Forestry, General.

There are no training programs in forestry in the North region.

FINDINGS

- Between 2008 and 2018, utility vegetation management occupations added 74 jobs in the North region. The studied occupations are expected to continue to add 66 more jobs over the next five years - a projected growth rate of 3%.
- Utility vegetation management occupations are projected to have almost 300 annual openings over the next five years.
- Jobs in utility vegetation management in the North region are projected to grow faster than jobs in the North/Far North region and the state.
- Median hourly wages for the selected occupations are above the regional living wage for a single adult. Hourly wages in the North region range from \$12 to \$24 per hour.
- Between 20% and 50% of incumbent workers in the selected occupations have attended some college or hold an associate degree. The typical entry-level education for most occupations is a high school diploma. Forest and conservation technicians are required to have an associate degree.
- There are no forestry training programs in the North region.

RECOMMENDATIONS

- Based on a three-year average of annual award in forestry (0 certificates and degrees), and projected yearly openings for related occupations (294 openings), the region appears to have some demand for programs related to the occupation.

COE Recommendation		
Move forward with program	Program is not recommended	Additional information needed
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

METHODOLOGY

Occupations in this report were identified using O*Net. Findings in this report were determined using labor market data from the Bureau of Labor Statistics (BLS), U.S. Census Bureau data from Emsi, and jobs posting data from Burning Glass.

APPENDIX A: DATA 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)
- Bureau of Labor Statistics, Occupational Employment Statistics (OES)
- California Community Colleges Chancellor's Office, Cal-PASS Plus LaunchBoard
- Living Insight Center for Community Economic Development, Self-Sufficiency Standard Tool for California
- California Community Colleges Chancellor's Office Management Information Systems (MIS Data Mart)
- U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS)

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