

March 2020

Labor Market Analysis

Veterinary Assisting



California
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Colleges



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Prepared by the Central Valley/Mother Lode Center of Excellence

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Summary

This study conducted by the Central Valley/Mother Lode Center of Excellence examines labor market demand, wages, skills, and postsecondary supply for veterinary assisting. Four occupations related to veterinary assisting were identified for College of the Sequoias:

- 39-2021 Nonfarm Animal Caretakers
- 31-9096 Veterinary Assistants and Laboratory Animal Caretakers
- 29-2056 Veterinary Technologists and Technicians
- 45-2021 Animal Breeders

Key findings:

- **Occupational demand** — More than 2,400 workers were employed in jobs related to veterinary assisting in 2018 in the South Central Valley/Southern Mother Lode (SCV/SML) subregion. The largest occupation is nonfarm animal caretakers with 1,704 workers in 2018, a projected growth rate of 13% over the next five years, and 340 annual openings.
- **Wages** — Animal breeders have the highest entry-level earnings, \$12.62/hour in the subregion and \$12.83/hour in the region.
- **Employers** — Employers with the most job postings in the subregion are Petco, Banfield Pet Hospital, and PetSmart.
- **Job titles** — The most common occupational title in job postings in the subregion is nonfarm animal caretakers. The most common job title is pet sitting.
- **Skills and certifications** — The top baseline skill is written communication, the top specialized skill is customer service, and the top software skill is Microsoft Outlook. The most in-demand certification is a Certified Veterinary Technician.
- **Education** — An associate degree is typically required for veterinary technologists and technicians, and a high school diploma with short-term on-the-job training is typically required for veterinary assistants and laboratory animal caretakers.
- **Supply** — Analysis of postsecondary completions in the region shows that on average 65 awards were conferred in the Central Valley/Mother Lode region each year.

Based on a comparison of occupational demand and supply, there is an undersupply of 430 trained workers in the subregion and 765 workers in the region. The Center of Excellence recommends that College of the Sequoias work with the Agriculture, Water and Environmental Technologies Regional Director, the college's advisory board, and local industry in the expansion of programs to address the shortage of veterinary assisting workers in the region.

Introduction

The Central Valley/Mother Lode Center of Excellence was asked by College of the Sequoias to provide labor market information for veterinary assisting. Review of the Taxonomy of Programs (TOP) and Classification of Instructional Programs (CIP) found the following program is appropriate for this analysis:

- Animal Science-010200

The geographical focus for this report is the South Central Valley/Southern Mother Lode (SCV/SML) subregion, but regional demand and supply data has been included for broader applicability and use. The average living wage for a single adult in the South Central Valley/Southern Mother Lode (SCV/SML) subregion is \$10.30/hour.¹ Analysis of the program and occupational data related to veterinary assisting resulted in the identification of veterinary assisting applicable occupations. The Standard Occupational Classification (SOC) System codes and titles used in this report are:

- 39-2021 Nonfarm Animal Caretakers
- 31-9096 Veterinary Assistants and Laboratory Animal Caretakers
- 29-2056 Veterinary Technologists and Technicians
- 45-2021 Animal Breeders

The occupational titles, job descriptions, sample job titles, and knowledge and skills from the Bureau of Labor Statistics and O*NET OnLine are shown below.

Nonfarm Animal Caretakers

Job Description: Feed, water, groom, bathe, exercise, or otherwise care for pets and other nonfarm animals, such as dogs, cats, ornamental fish or birds, zoo animals, and mice. Work in settings such as kennels, animal shelters, zoos, circuses, and aquariums. May keep records of feedings, treatments, and animals received or discharged. May clean, disinfect, and repair cages, pens, or fish tanks.

Sample Job Titles: Animal Care Giver (ACG), Aquarist, Dog Bather, Dog Groomer, Groomer, Kennel Attendant, Kennel Technician (Kennel Tech), Pet Groomer, Pet Stylist, Zookeeper

Knowledge: Customer and Personal Service, Clerical, English Language

Skills: Monitoring, Active Listening, Coordination, Judgment and Decision Making, Reading Comprehension

Veterinary Assistants and Laboratory Animal Caretakers

Job Description: Feed, water, and examine pets and other nonfarm animals for signs of illness, disease, or injury in laboratories and animal hospitals and clinics. Clean and disinfect cages and work areas and sterilize laboratory and surgical equipment. May provide routine post-operative care, administer medication orally or topically, or prepare samples for laboratory examination under the supervision of veterinary or laboratory animal technologists or technicians, veterinarians, or scientists.

Sample Job Titles: Animal Care Provider, Animal Caregiver, Avian Keeper, Emergency Veterinary Assistant, Research Animal Attendant, Small Animal Caretaker, Technician Assistant, Veterinarian Assistant, Veterinary Assistant (Vet Assistant), Veterinary Technician Assistant (Vet Tech Assistant)

Knowledge: Customer and Personal Service, Biology, English Language, Mathematics, Sales and Marketing

¹ The term "living wage" in Center of Excellence reports is calculated by averaging the self-sufficiency wages from the Insight Center's California Family Needs Calculator for each county in the subregion: <https://insightccd.org/tools-metrics/self-sufficiency-standard-tool-for-california/>.

Skills: Active Listening, Monitoring, Service Orientation, Active Learning, Complex Problem Solving

Veterinary Technologists and Technicians

Job Description: Perform medical tests in a laboratory environment for use in the treatment and diagnosis of diseases in animals. Prepare vaccines and serums for prevention of diseases. Prepare tissue samples, take blood samples, and execute laboratory tests, such as urinalysis and blood counts. Clean and sterilize instruments and materials and maintain equipment and machines. May assist a veterinarian during surgery.

Sample Job Titles: Certified Veterinary Technician (CVT), Emergency Veterinary Technician, Internal Medicine Veterinary Technician, Licensed Veterinary Technician (LVT), Medical Technologist, Registered Veterinary Technician (RVT), Veterinary Assistant, Veterinary Laboratory Technician (Veterinary Lab Tech), Veterinary Nurse, Veterinary Technician (Vet Tech)

Knowledge: Customer and Personal Service, English Language, Biology, Mathematics, Medicine and Dentistry

Skills: Active Listening, Critical Thinking, Reading Comprehension, Speaking, Monitoring

Animal Breeders

Job Description: Select and breed animals according to their genealogy, characteristics, and offspring. May require knowledge of artificial insemination techniques and equipment use. May involve keeping records on heats, birth intervals, or pedigree.

Sample Job Titles: Animal Technician, Artificial Insemination Technician (AI Technician), Artificial Inseminator, Breeder, Breeding Manager, Broodmare Foreman, Dog Breeder, Donor Manager, Large Herd Specialist, Stallion Manager

Knowledge: Customer and Personal Service, Sales and Marketing, Administration and Management, Biology, English Language

Skills: Critical Thinking, Active Learning, Active Listening, Complex Problem Solving, Judgement and Decision Making

Occupational Demand

The South Central Valley/Southern Mother Lode subregion employed 2,436 workers in veterinary assisting occupations in 2018 (Exhibit 1). The largest occupation is nonfarm animal caretakers with 1,704 workers in 2018. This occupation is projected to grow by 13% over the next five years and has the greatest number of projected annual openings, 340.

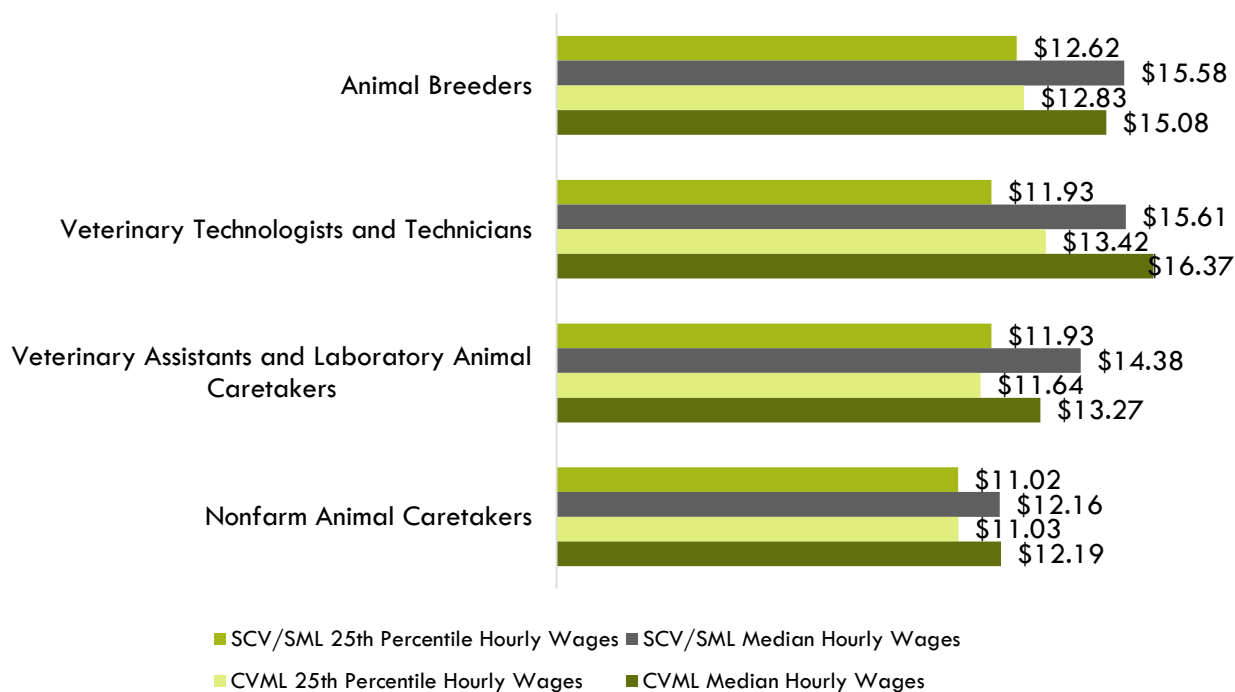
Exhibit 1. Veterinary assisting employment and occupational projections in the SCV/SML subregion

Occupation	2018 Jobs	2023 Jobs	5-year Change	5-year % Change	Annual Openings
Nonfarm Animal Caretakers	1,704	1,934	230	13%	340
Veterinary Assistants and Laboratory Animal Caretakers	270	325	55	20%	59
Veterinary Technologists and Technicians	300	364	64	21%	39
Animal Breeders	162	158	(4)	(2%)	27
Total	2,436	2,781	345	14%	465

Wages

Exhibit 2 compares the entry-level and experienced wages of the veterinary assisting occupations. Animal breeders have the highest entry-level earnings, \$12.62/hour in the subregion and \$12.83/hour in the region.

Exhibit 2. Entry-level and experienced wage comparison in the SCV/SML subregion and region



Job Postings

There were 174 job postings for the four occupations in the SCV/SML subregion from September 2019 to February 2020. The employers with the most job postings are listed in Exhibit 3.

Exhibit 3. Top employers of veterinary assisting by number of job postings

Employer	Job Postings
Petco	19
Banfield Pet Hospital	16
PetSmart	16
Brittney's Bark and Stay	4
4 Paws Pet Hospital	3
Barking Beauties	3
Brittney's Bark Avenue	3
California State University	3
Clinica Sierra Vista	3
Kern County Superintendent of Schools	3

Job posting analysis also included the top industries hiring positions related to veterinary assisting (Exhibit 4).

Exhibit 4. Top industries for veterinary assisting by number of job postings

Industry	Job Postings
Other Miscellaneous Store Retailers	38
Other Professional, Scientific, and Technical Services	32
Other Personal Services	10
General Medical and Surgical Hospitals	8
Executive, Legislative, and Other General Government Support	4
Animal Slaughtering and Processing	3
Colleges, Universities, and Professional Schools	3
Museums, Historical Sites, and Similar Institutions	3
Personal Care Services	3
Home Health Care Services	2

Job Titles

Exhibit 5 shows how job postings for the targeted occupations in the SCV/SML subregion are distributed across four O*NET OnLine occupations. The occupational title nonfarm animal caretakers is listed in the most job postings, 127, followed by veterinary technologists and technicians, 23 job postings. Note that job postings are heavily dominated by the occupational title nonfarm animal caretakers.

Exhibit 5. Top occupational titles in job postings for veterinary assisting

Occupational Title	Job Postings
Nonfarm Animal Caretakers	127
Veterinary Technologists and Technicians	23
Veterinary Assistants and Laboratory Animal Caretakers	22
Animal Breeders	2

Analysis of the 174 advertised job titles for the targeted occupations reveals the top title is pet sitting, occurring in 22 job postings, followed by veterinary technician, 22 job postings (Exhibit 6).

Exhibit 6. Top job titles by number of job postings for veterinary assisting

Job Title	Job Postings
Pet Sitting	22
Veterinary Technician	22
Veterinary Assistant	20
Pet Care	15
Dog Groomer	10
Pet Groomer	10
Pet Stylist	10
Salon Manager	10
Bather	7
Animal Caretaker	3

Salaries

Exhibit 7 shows the “Market Salaries” for veterinary assisting occupations that are calculated by Burning Glass which uses a machine learning model built off of millions of job postings every year, and accounts for adjustments based on locations, industry, skills, experience, education requirements, among other variables.

Exhibit 7. Salaries for veterinary assisting

Market Salary Percentile	Salary Amount
10th Percentile	23,366
25th Percentile	26,977
50th Percentile	34,633
75th Percentile	40,784
90th Percentile	44,951

Education

Of the 174 job postings, 55 listed an education level preferred for the positions being filled. Of those, 87% requested a high school diploma or vocational training, 16% requested an associate degree, and 2% requested a bachelor’s degree (Exhibit 8).

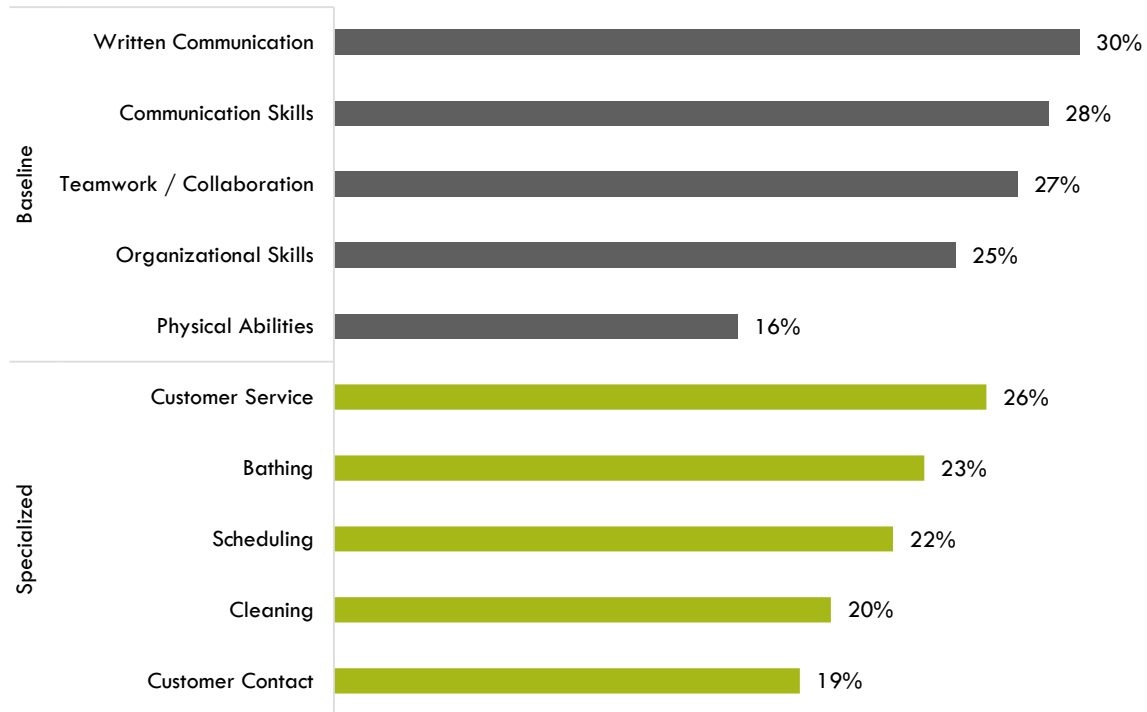
Exhibit 8. Education levels requested in job postings for veterinary assisting

Education level	% of Job Postings
High school or vocational training	87%
Associate degree	16%
Bachelor's degree	2%
Master's degree	2%
Doctoral degree	2%

Baseline and Specialized Skills

Exhibit 9 depicts the top baseline and specialized skills for the targeted occupations. The three most important baseline skills are written communication, 30% of job postings, communication, 28%, and teamwork/collaboration, 27%. The top three specialized skills are customer service, 26% of job postings, bathing, 23%, and scheduling, 22%.

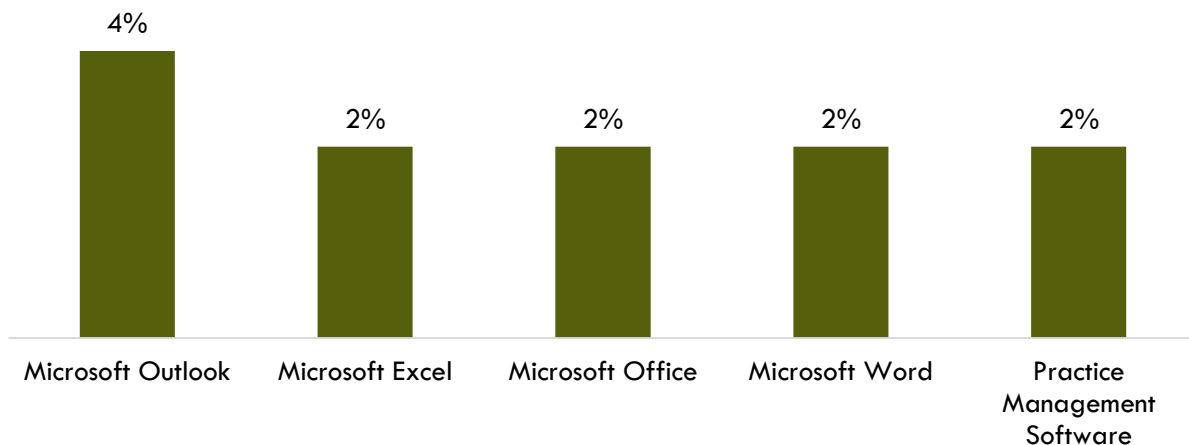
Exhibit 9. In-demand veterinary assisting baseline and specialized skills



Software Skills

Analysis also included the software skills most in demand by employers. Microsoft Outlook and Microsoft Excel rank first and second (Exhibit 10).

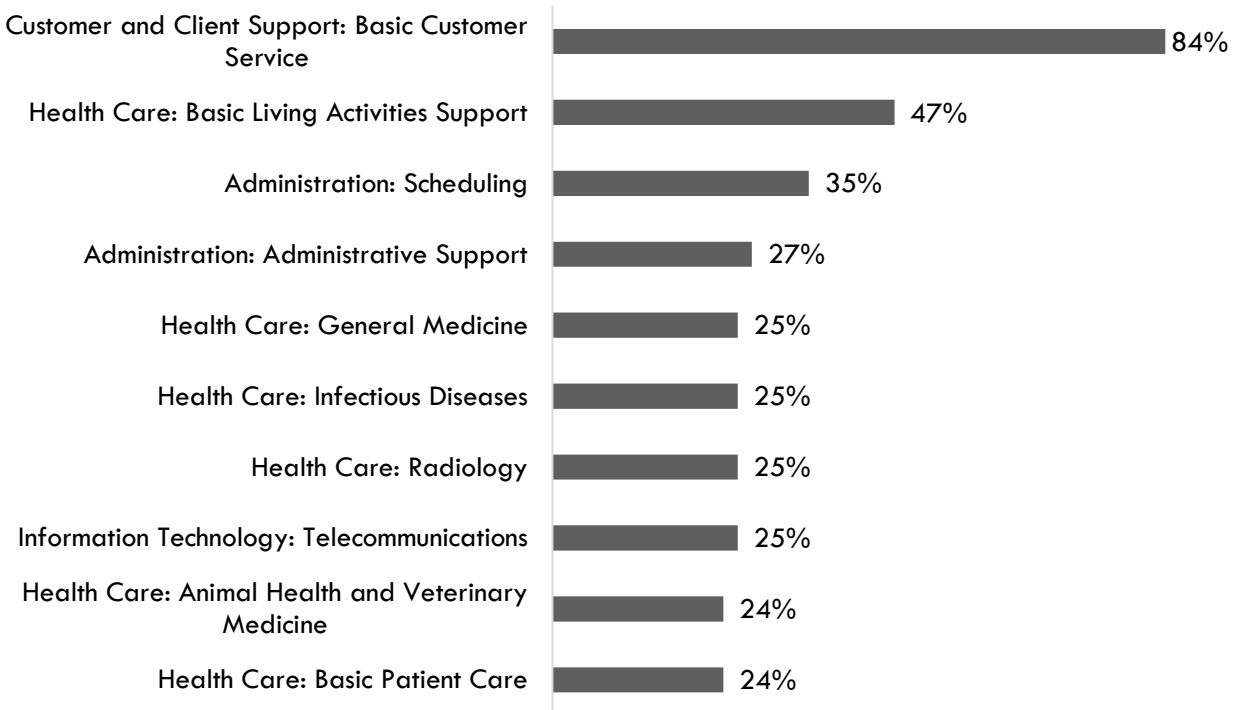
Exhibit 10. In-demand veterinary assisting software skills



Skill Cluster Projections

Of the 174 job postings, 51 postings contained skill projections. An evaluation of the skill clusters that will have the greatest gains in level of importance shows that the top areas are Customer and Client Support: Basic Customer Service, 84%; Health Care: Basic Living Activities Support, 47%; Administration: Scheduling, 35% (Exhibit 11).

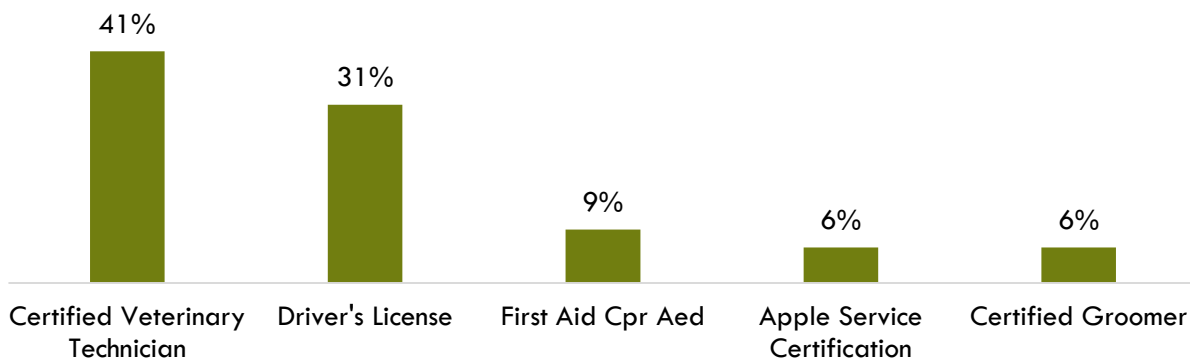
Exhibit 11. Skill cluster projections for veterinary assisting



Certifications

Of the 174 job postings, 32 contained certification data. Of those, 41% indicated a need for a Certified Veterinary Technician. The next top certifications are driver's license and first aid/CPR/AED (Exhibit 12). (Due to the low number of job postings with certifications listed, the chart below may not be representative of the full sample.)

Exhibit 12. Top veterinary assisting certifications requested in job postings



Education, Work Experience & Training

An associate degree is typically required for veterinary technologists and technicians, and a high school diploma with short-term on-the-job training is typically required for veterinary assistants and laboratory animal caretakers (Exhibit 13). Nonfarm animal caretakers and animal breeders are considered below-middle-skill occupations.

Exhibit 13. Education, work experience, training and Current Population Survey results for veterinary assisting occupations²

Occupation	Typical Entry-level Education	Work Experience Required	Typical On-The-Job Training	CPS
Veterinary Technologists and Technicians	Associate degree	None	None	55.7%
Veterinary Assistants and Laboratory Animal Caretakers	High school diploma or equivalent	None	Short-term	46.6%
Nonfarm Animal Caretakers	High school diploma or equivalent	None	Short-term	37.8%
Animal Breeders	High school diploma or equivalent	None	Short-term	13.7%

Supply

Analysis of program data from the California Community Colleges Chancellor's Office Data Mart included the TOP code: Animal Science-010200. Analysis of the last three years of TOP code data shows that, on average, 65 awards were conferred in the Central Valley/Mother Lode region each year (Exhibit 14).

Exhibit 14. Postsecondary supply for veterinary assisting occupations in the region

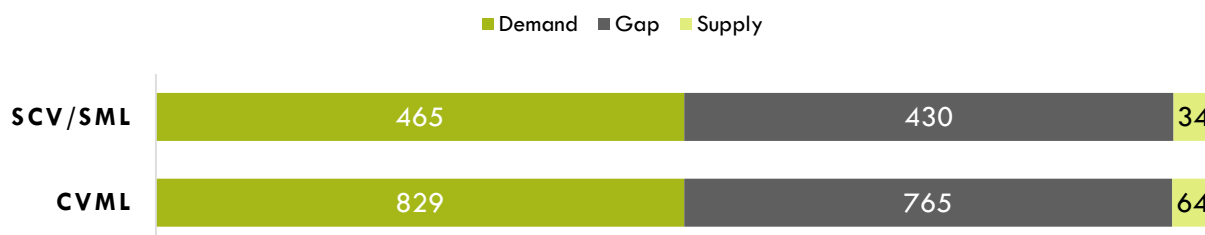
TOP Title-Code	College	Certificates	Degrees	Subtotal
Animal Science-010200	Bakersfield	3	11	14
	Merced		6	6
	Modesto Junior		23	23
	Reedley College	3	10	13
	San Joaquin Delta	0		0
	Sequoias	2	5	7
Total		8	55	64

Gap Analysis

There is an undersupply of 430 veterinary assisting workers in the SCV/SML subregion and 765 workers in the region (Exhibit 15).

² "Labor Force Statistics from the Current Population Survey," Bureau of Labor Statistics, <https://www.bls.gov/cps/>.

Exhibit 15. Veterinary assisting workforce annual demand and supply in the SCV/SML subregion and region



Student Outcomes

Exhibit 16 summarizes employment and wage outcomes from the California Community College Chancellor’s Cal-PASS Plus LaunchBoard for the TOP code related to veterinary assisting. Across the region, 69 animal science students received a degree/certificate and 64 transferred. Of the students who completed a program, 76% reported a median change in earnings, and 52% attained a living wage.

Exhibit 16. Regional metrics for the TOP code related to veterinary assisting

Metric	Animal Science 010200
Students Who Got a Degree or Certificate	69
Number of Students Who Transferred	64
Job Closely Related to Field of Study	62%
Median Change in Earnings	76%
Attained a Living Wage	52%
* denotes data not available.	

Conclusion

The entry-level wages of the four occupations exceed the SCV/SML subregion’s average living wage. There were 174 job postings in the past six months for occupations related to veterinary assisting in the subregion. Analysis of skills and certification requirements in job postings indicates:

- The top baseline skill is written communication, and the top specialized skill is customer service.
- The top software skill is Microsoft Outlook.
- The top certification is a Certified Veterinary Technician.

There is an undersupply of trained workers, a shortage of 430 in the SCV/SML subregion and 765 in the region.

Recommendation

Based on these findings, it is recommended that College of the Sequoias work with the Agriculture, Water and Environmental Technologies Regional Director, the college’s advisory board, and local industry in the expansion of programs to address the shortage of veterinary assisting in the region.

Appendix A: Methodology & Data Sources

Data Sources

Labor market and educational supply data compiled in this report derive from a variety of sources. Data were drawn from external sources, including the Economic Modeling Specialists, Inc., the California Community Colleges Chancellor’s Office Management Information Systems Data Mart and the National Center for Educational Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS). Below is the summary of the data sources found in this study.

Data Type	Source
Labor Market Information/Population Estimates and Projections/Educational Attainment	Economic Modeling Specialists, Intl. (EMSI). EMSI occupational employment data are based on final EMSI industry data and final EMSI staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates also affected by county-level EMSI earnings by industry: economicmodeling.com .
Typical Education Level and On-the-job Training	Bureau of Labor Statistics (BLS) uses a system to assign categories for entry-level education and typical on-the-job training to each occupation for which BLS publishes projections data: https://www.bls.gov/emp/tables/educational-attainment.htm .
Labor Force, Employment and Unemployment Estimates	California Employment Development Department, Labor Market Information Division: labormarketinfo.edd.ca.gov .
Job Posting and Skills Data	Burning Glass: burning-glass.com/ .
Additional Education Requirements/ Employer Preferences	The O*NET Job Zone database includes over 900 occupations as well as information on skills, abilities, knowledge, work activities and interests associated with specific occupations: onetonline.org .

Key Terms and Concepts

Annual Job Openings: Annual openings are calculated by dividing the number of years in the projection period by total job openings.

Education Attainment Level: The highest education attainment level of workers age 25 years or older.

Employment Estimate: The total number of workers currently employed.

Employment Projections: Projections of employment are calculated by a proprietary Economic Modeling Specialists, Intl. (EMSI) formula that includes historical employment and economic indicators along with national, state and local trends.

Living Wage: The cost of living in a specific community or region for one adult and no children. The cost increases with the addition of children.

Occupation: An occupation is a grouping of job titles that have a similar set of activities or tasks that employees perform.

Percent Change: Rate of growth or decline in the occupation for the projected period; this does not factor in replacement openings.

Replacements: Estimate of job openings resulting from workers retiring or otherwise permanently leaving an occupation. Workers entering an occupation often need training. These replacement needs, added to job openings due to growth, may be used to assess the minimum number of workers who will need to be trained for an occupation.

Total Job Openings (New + Replacements): Sum of projected growth (new jobs) and replacement needs. When an occupation is expected to lose jobs, or retain the current employment level, number of openings will equal replacements.

Typical Education Requirement: represents the typical education level most workers need to enter an occupation.

Typical On-The-Job Training: indicates the typical on-the-job training needed to attain competency in the skills needed in the occupation.