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# Labor Market Analysis

## Bakers and Related Workers



Prepared by Central Valley/Mother Lode Center of Excellence



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# Summary

The Central Valley/Mother Lode Center of Excellence developed this report for Columbia College to determine whether there is demand in the local labor market that is not being met by the supply from postsecondary programs. This report summarizes labor market demand, wages, skills, and postsecondary supply for:

- Bakers (SOC 51-3011)
- Chefs and Head Cooks (SOC 35-1011)

## Key Findings

- **Occupational Demand** — Occupations related to *Baking* have a labor market demand of 262 annual job openings in the North Central Valley/Northern Mother Lode (NCV/NML) subregion. Between 2022 and 2027, *Bakers* are projected to have the most demand with 149 annual job openings.
- **Wages** — The occupations studied in this report have an entry-level hourly wage of \$16.03/hour, which is above the living wage in the NCV/NML subregion – \$12.65/hour for a single adult.<sup>1</sup>
- **Employers and Job Titles** — Employers in the NCV/NML subregion include Save Mart Supermarkets, Compass Group, and Panera Bread. The most common job title is Baker.
- **Skills and Certifications** — The most common baseline skill is customer service; the most common specialized skill is food safety and sanitation; and the most common software skill is Microsoft Excel. The most in-demand certification is a Food Handler's Card.
- **Education** — No formal education is typically required for *bakers* while a high school diploma or equivalent is typically required for *chefs and head cooks*.
- **Supply and Demand Analysis** — Based on 262 annual openings (i.e., demand) and an average of 64 postsecondary degrees awarded (i.e., supply), an analysis of supply and demand suggests there is an undersupply of 198 workers in the NCV/NML subregion. In the CVML region, 114 awards were conferred suggesting an undersupply of 539 workers (based on 653 annual openings in the CVML region).

## Recommendation

Based on a comparison of supply and demand, there is an undersupply of trained workers in the NCV/NML subregion and the CVML region. The Center of Excellence recommends that Columbia College work with the regional directors, the college's advisory board, and local industry in the development of programs to address the shortage of workers.

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<sup>1</sup> 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://insightcced.org/tools-metrics/self-sufficiency-standard-tool-for-california/>.

# Introduction

The Central Valley/Mother Lode Center of Excellence developed this report to provide Columbia College with labor market information for *Bakers and related workers*. The geographical focus for this report is the North Central Valley/Northern Mother Lode (NCV/NML) subregion, but regional supply and demand data has been included for broader applicability and use. Analysis of the program and occupational data related to *Baking* is included in the report. The Standard Occupational Classification (SOC) System codes and occupational titles used in this report are from the Bureau of Labor Statistics and O\*NET OnLine.

## **Bakers (SOC 51-3011)**

- **Job Description:** Mix and bake ingredients to produce breads, rolls, cookies, cakes, pies, pastries, or other baked goods.
- **Knowledge:** Production and Processing, Customer and Personal Service, Food Production, English Language, Mathematics
- **Skills:** Monitoring, Active Learning, Active Listening, Coordination, Critical Thinking

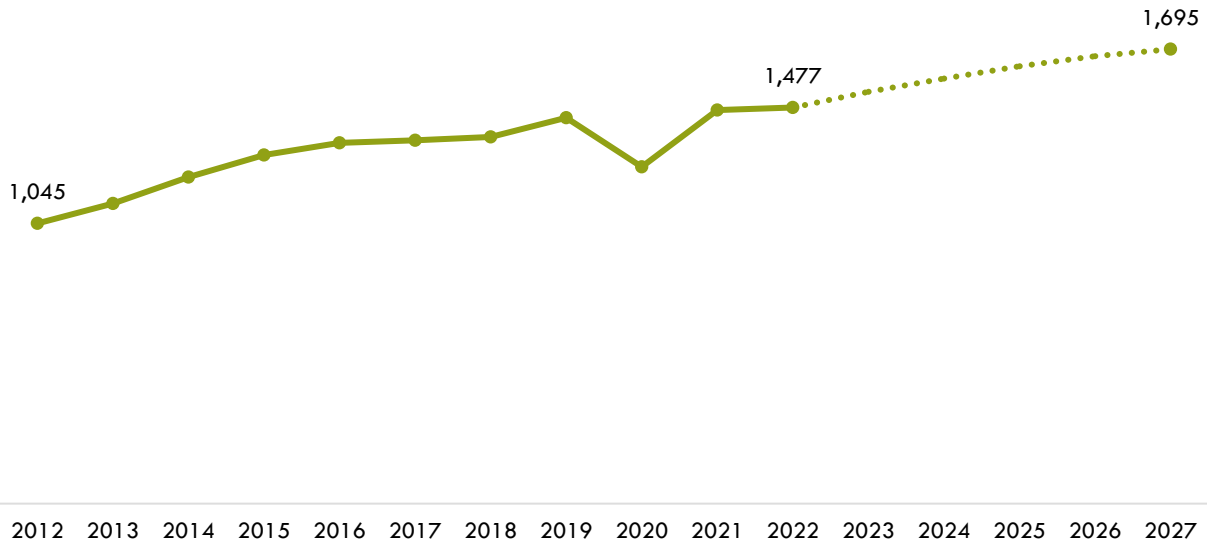
## **Chefs and Head Cooks (SOC 35-1011)**

- **Job Description:** Direct and may participate in the preparation, seasoning, and cooking of salads, soups, fish, meats, vegetables, desserts, or other foods. May plan and price menu items, order supplies, and keep records and accounts.
- **Knowledge:** Food Production, Customer and Personal Service, Administration and Management, Production and Processing, Personnel and Human Resources
- **Skills:** Coordination, Monitoring, Speaking, Time Management, Active Listening

# Employment

Exhibit 1a shows the employment trends for *Baking-related occupations* in the NCV/NML subregion. Between 2022 to 2027, the number of jobs for these occupations is projected to increase by 218 (growth of 15%).

**Exhibit 1a. Historical employment and projected demand for Baking-related occupations in the NCV/NML subregion, 2012-2027**



Occupations related to *Baking* in the NCV/NML subregion employed 1,477 workers in 2022 (Exhibit 1b). *Bakers* are projected to have 149 annual openings.

**Exhibit 1b. Current employment and projected occupational demand for occupations related to *Baking* in the NCV/NML subregion, 2022-2027**

Occupation	2022 Jobs	2027 Jobs	5-Year Change	5-Year % Change	Annual Openings
Bakers	834	946	112	13%	149
Chefs and Head Cooks	643	749	106	16%	113
<b>TOTAL</b>	<b>1,477</b>	<b>1,695</b>	<b>218</b>	<b>15%</b>	<b>262</b>

# Wages

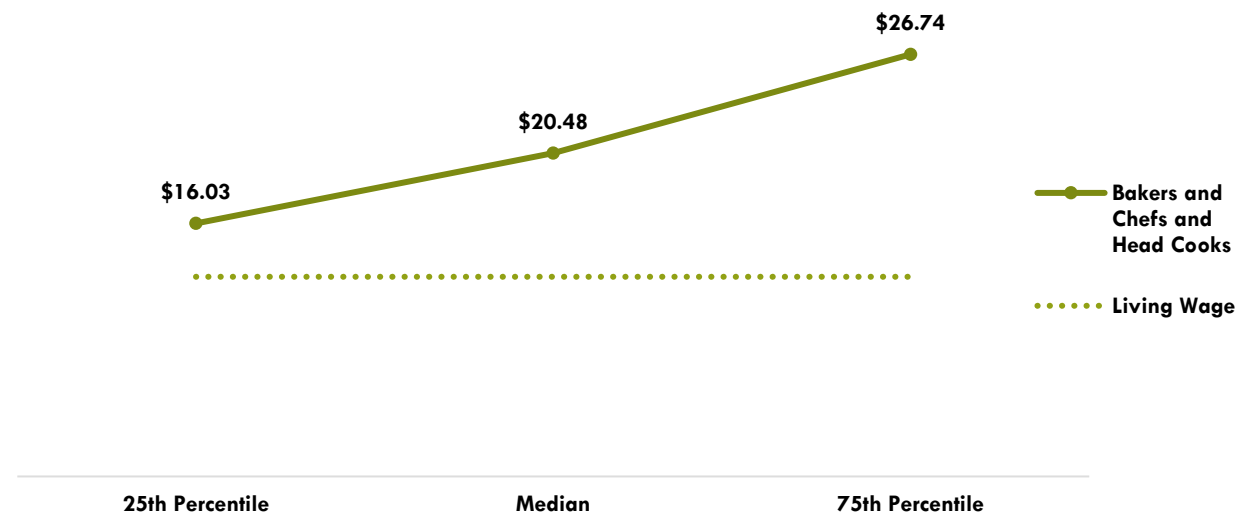
The average living wage for a single adult in the NCV/NML subregion is \$12.65/hour.<sup>2</sup> Exhibit 2a shows the hourly wages for the two occupations of interest.

**Exhibit 2a. Hourly wages for occupations related to *Baking* in the NCV/NML subregion**

Occupation	25 <sup>th</sup> Percentile Hourly Earnings	Median Hourly Earnings	75 <sup>th</sup> Percentile Hourly Earnings
Bakers	\$14.78	\$16.99	\$18.98
Chefs and Head Cooks	\$17.28	\$23.96	\$34.49

Exhibit 2b shows the average hourly wages for the two occupations of interest; all three average hourly wages are above the living wage for the NCV/NML subregion.

**Exhibit 2b. Average hourly wages for occupations related to *Baking* in the NCV/NML subregion**



<sup>2</sup> 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/>.

# Job Postings

There were 312 unique job postings for occupations related to *Baking* in the NCV/NML subregion from January to December 2023.<sup>3</sup>

## Top Employers

The employers with the most job postings are listed in Exhibit 3. The top employers in online job postings were Save Mart Supermarkets, Compass Group, and Panera Bread.

### Exhibit 3. Top employers of *Baking* occupations

Employer
Save Mart Supermarkets
Compass Group
Panera Bread
Texas Roadhouse
Safeway
University of California
Sprouts Farmers Market
Aramark
WinCo Foods
Fine Foods International

## Top Job Titles

Exhibit 4 shows the top job titles for occupations related to *Baking* in the NCV/NML subregion.

### Exhibit 4. Top job titles for *Baking* occupations

Job Title
Bakers
Cake Decorators
Multi-Purpose Clerks
Deli/Bakery Managers
Sous Chef

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<sup>3</sup> Other than occupational titles and job titles, the categories below can be counted one or multiple times per job posting, and across several areas in a single posting. For example, a skill can be counted in two different skill types, and an employer can indicate more than one education level.

## Salaries

Exhibit 5 shows the “Market Salaries” for *Baking-related occupations*. These are calculated by Lightcast using a machine learning model built from millions of job postings every year. This accounts for adjustments based on location, industry, skills, experience, education, among other variables.

**Exhibit 5. Market salaries for *Baking occupations***

Market Salary	Job Postings
\$32,000-\$35,999	45
\$36,000-\$39,999	87
\$40,000-\$64,999	23

## Education

Of the 312 unique job postings, 90 listed a preferred or minimum educational requirement for the position being filled. Among those, 56% requested a high school or GED (Exhibit 6).

**Exhibit 6. Education levels requested in job postings for *Baking occupations***

Education Level	Job Postings
High school or GED	50
Associate degree	13
Bachelor’s degree	27

## Baseline, Specialized, and Software Skills

Exhibit 7 shows the top baseline, specialized, and software skills in job postings. The most common baseline skill is customer service. The most common specialized skill is food safety and sanitation. The most common software skill is Microsoft Excel.

**Exhibit 7. In-demand baseline, specialized, and software skills for *Baking occupations***

Baseline Skills	Specialized Skills	Software Skills
Customer Service	Food Safety and Sanitation	Microsoft Excel
Sanitation	Baking	Microsoft Outlook
Operations	Cake Decorating	Microsoft PowerPoint
Time Management	Restaurant Operation	Microsoft Word
Cleanliness	Food Preparation	Test Kitchen



## Certifications

Of the job postings listing a desired certification, 49% indicated a need for a Food Handler's Card, followed by 24% requiring a ServSafe Certification (Exhibit 8).

**Exhibit 8. Top certifications requested in job postings for Baking**

Certifications	% of Job Postings
Food Handler's Card	49%
ServSafe Certification	24%
Valid Driver's License	10%
Food Safety Certification	7%

## Education, Work Experience, & Training

No formal education is typically required for bakers while a high school diploma or equivalent is typically required for *chefs and head cooks* (Exhibit 9).

**Exhibit 9. Education, work experience, training, and Current Population Survey results for occupations related to Baking<sup>4</sup>**

Occupation	Typical Entry-level Education	Work Experience Required	Typical On-The-Job Training	CPS
Bakers	No Formal Educational Credential	None	Long-term	29%
Chefs and Head Cooks	High school diploma or equivalent	5 years or more	None	38%

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<sup>4</sup> "Labor Force Statistics from the Current Population Survey," Bureau of Labor Statistics, <https://www.bls.gov/cps/>.

# Supply

An analysis of program data from the Integrated Postsecondary Education Data System (IPEDS) for the last three program years shows that, on average, 64 awards were conferred in the NCV/NML subregion (Exhibits 10 and 11).

## Exhibit 10. TOP and CIP codes relevant to Culinary Arts

TOP Titles	CIP Titles
1306.30 – Culinary Arts	12.0501 – Baking and Pastry Arts/Baker/Pastry Chef

## Exhibit 11. Postsecondary supply data related to Culinary Arts

TOP Code	Program	College	2019-2020 Awards	2020-2021 Awards	2021-2022 Awards	3-Year Award Average
1306.30	Culinary Arts	Columbia	25	20	11	19
		Merced	10	2	8	7
		Modesto	1	-	-	0
		San Joaquin Delta	54	33	28	38
		<b>NCV/NML Subtotal</b>	<b>90</b>	<b>55</b>	<b>47</b>	<b>64</b>
		Bakersfield	17	9	32	19
		Sequoias	4	4	3	4
		<b>SCV/SML Subtotal</b>	<b>21</b>	<b>13</b>	<b>35</b>	<b>23</b>
<b>Supply Subtotal/Average</b>			<b>111</b>	<b>68</b>	<b>82</b>	<b>87</b>

For a comprehensive regional supply analysis, it is also important to consider the supply from other institutions in the region that provide training programs for the two occupations. Exhibit 12 shows the annual and two-year average number of awards conferred by these institutions in the related Classification of Instructional Programs (CIP) Code:

- Baking and Pastry Arts/Baker/Pastry Chef (12.0501)

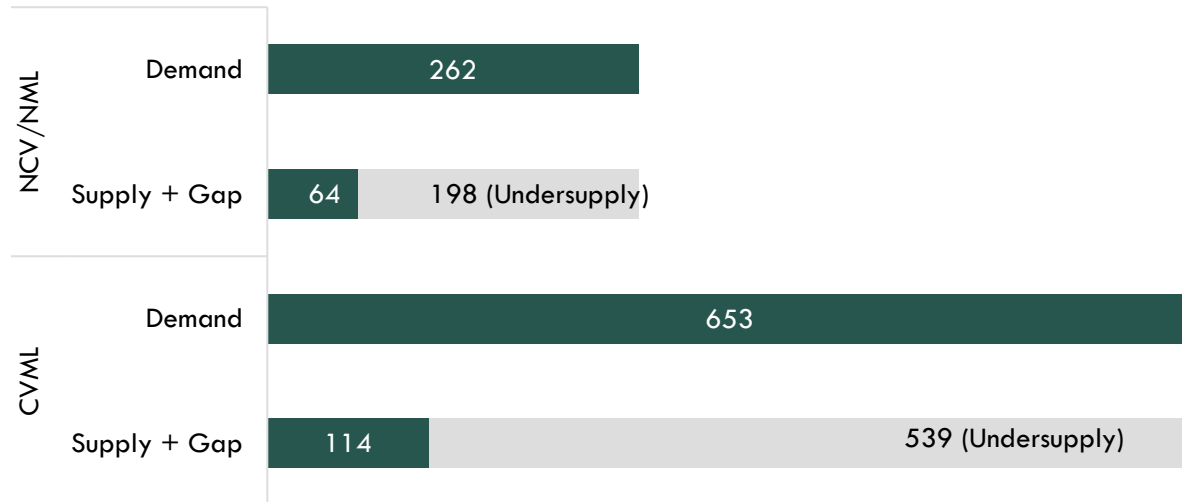
Due to different data collection periods, the most recent two-year period of available data is from 2019 to 2021. Between 2019 and 2021, non-community colleges in the region conferred an average of 27 awards annually in a related training program.

## Exhibit 12. Non-Community College Awards in the CVML region

CIP Code	Program	College	2019-2020 Awards	2020-2021 Awards	2-Year Award Average
12.0501	Baking and Pastry Arts/Baker/Pastry Chef	Institute of Technology	28	26	27
<b>Supply Total/Average</b>			<b>28</b>	<b>26</b>	<b>27</b>

There is an undersupply of 198 workers in the NCV/NML subregion and an undersupply of 539 workers in the CVML region (Exhibit 13).

**Exhibit 13. Workforce demand (annual job openings), postsecondary awards (supply), and additional students needed to fill gap in the NCV/NML subregion and CVML region**



## Recommendation

This report suggests there is a shortage of 198 workers in the NCV/NML subregion and a shortage of 539 workers in the CVML region for *Bakers and Chefs and Head Cooks*. Based on these findings, it is recommended that Columbia College work with the regional directors, the college's advisory board, and local industry in the development of programs to address the shortage of workers in the region.

# Appendix: 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. (Lightcast). Lightcast occupational employment data are based on final Lightcast industry data and final Lightcast 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 Lightcast 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: <a href="https://www.bls.gov/emp/tables/educational-attainment.htm">https://www.bls.gov/emp/tables/educational-attainment.htm</a> .
LaunchBoard	Chancellor’s LaunchBoard. <a href="https://www.calpassplus.org/LaunchBoard/SWP.aspx">https://www.calpassplus.org/LaunchBoard/SWP.aspx</a>
Labor Force, Employment and Unemployment Estimates	California Employment Development Department, Labor Market Information Division: <a href="http://labormarketinfo.edd.ca.gov">labormarketinfo.edd.ca.gov</a> .
Job Posting and Skills Data	Burning Glass: <a href="http://burning-glass.com/">burning-glass.com/</a> .
Additional Education Requirements/ Employer Preferences	The O*NET Job Zone database includes over 900 as well as information on skills, abilities, knowledge, work activities and interests associated with specific occupations: <a href="http://onetonline.org">onetonline.org</a> .

## 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. (LIGHTCAST) formula that includes historical employment and economic indicators along with national, state and local trends.

**LaunchBoard (Attained the Living Wage):** Among SWP students who exited college and did not transfer to any postsecondary institution, the proportion who attained the district county living wage for a single adult measured immediately following academic year of exit.

**LaunchBoard (Median Annual Earnings):** Among SWP students who exited the community college system and who did not transfer to any postsecondary institution, median earnings following the academic year of exit.

**LaunchBoard (Median Change in Earnings):** Among SWP students who exited and who did not transfer to any postsecondary institution, median change in earnings between the second quarter prior to the beginning of the academic year of entry and the second quarter after the end of the academic year of exit from the last college attended.

**LaunchBoard (Job Closely Related to Field of Study):** Among SWP students who responded to the CTE Outcomes Survey and did not transfer to any postsecondary institution, the proportion who reported that they are working in a job very closely or closely related to their field of study.

**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.