LABOR MARKET INFORMATION

SUPPLY GAP ANALYSIS

2026 EDITION

PREPARED FOR THE

COORDINATING COUNCIL FOR WORKFORCE DEVELOPMENT

by the Labor Market Information Division of the South Carolina Department of Employment and Workforce (DEW)

SOUTH CAROLINA DEPARTMENT OF
Employment and Workforce
dew

2026
SUPPLY GAP ANALYSIS

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INTRODUCTION

The labor market evolves in response to constant advances in technology, population growth, and shifts in industry composition. As the ***fastest growing state in the nation in terms of population***, and as home to several of the ***fastest growing private companies in terms of revenue*** in the US, it is essential that South Carolina adapt to the changing labor market. To that end, the Statewide Education and Workforce Development Act (S.C. Code Ann. § 41-30-540(B)(6)) directs the creation of an annual supply gap analysis to identify the needs of South Carolina's workforce and employers. This report details key findings of the Supply Gap Analysis (SGA) by career cluster and education level. For a condensed version of this analysis, refer to the ***Supply Gap Analysis Overview***.

The supply gap is the difference between the number of workers qualified for a given occupation and the number of new positions in demand in the same year within the occupation. Additionally, we highlight the demand-supply ratio: the number of new positions in demand in a given year in an occupation divided by the number of qualified workers in the same year. Whereas the supply gap indicates the overall change in labor demand that is unmet by labor supply within an occupation in the state, the demand supply ratio shows how the supply of qualified workers compares to changes in need.

This second edition of the Supply Gap Analysis builds on the work of the first edition in two ways:

- First, by drawing on Standard Occupational Classification (SOC) code data provided by the state's employers to produce empirical estimates of labor supply by education and occupation.
- Second, by adding an analysis of the supply of, and demand for, high school graduates in the state labor market.

The first edition of the Supply Gap Analysis modeled the path between education and occupation using a series of assumptions; this edition relies on SOC code data. The previous analysis was also limited to jobs requiring a post-secondary credential, but this edition includes jobs requiring only a high school diploma.

Approximately ***40 percent*** of South Carolina's high school graduates enter the SC labor market within a year of graduating, and 46 percent of the state's total supply gap is for jobs requiring a high school diploma or equivalent. This is a comprehensive survey of South Carolina's labor market since high school graduates compose a fundamental portion of the state workforce. Future versions of this analysis will incorporate additional categories of skilled workers as requisite data become available.

The Supply Gap Analysis is one resource among many that can provide insight into South Carolina's labor market. It is a tool that may be used by students, career counselors, higher education administrators, and industry leaders, among other stakeholders, to understand and respond to changes in the labor market.

In particular, the SGA may be a useful resource for high school students and their career counselors when evaluating possible career paths, whether those paths begin with post-secondary education or entering the labor force directly. The SGA may also be a useful resource to education administrators during the process of program creation—as secondary and post-secondary institutions evaluate and adjust their program offerings, the SGA can help determine areas where schools may need to expand or create new programs. In addition, the SGA may serve as a resource for identifying high-demand low-supply industries and initiating partnerships with impacted stakeholders.

The Supply Gap Analysis is based on available retrospective data and should be considered alongside other key data points that provide insights on supply and demand in a dynamic labor economy. These additional data points might include trends in ***industry level employment***, ***occupation level job postings***, ***employment outcomes by major***, and in ***labor in/out migration from the state***.

The supply gap across all occupations in South Carolina is about 73,000 workers per year.

- Entry-level occupations that require a high school diploma or equivalent education comprise 46 percent of the supply gap (about 34,000 workers).
- The supply gap for entry-level occupations that require any post-secondary education comprises 53 percent (about 39,000 workers) of the total supply gap statewide.
    - Approximately 27 percent (20,000) of the supply gap is for occupations typically requiring a bachelor's degree.
    - About 20 percent (14,000) of the supply gap is for occupations typically requiring some college, such as an associate degree or post-secondary non-degree award.
    - Another 6 percent (5,000) represents occupations typically requiring a graduate degree, such as a master's degree, a professional degree, or a doctoral degree.

Within this report, occupations are categorized into 14 **career clusters** based on their occupation group. Industry groups and occupation groups are not the same. **Industry classification is based on business activities, while occupation classification is based on job duties**.

Each cluster is given a rating to reflect the size of the resulting gap—**narrow, moderate, or wide**. The rating allows for comparison across career clusters by standardizing a combination of the supply gap, which measures overall need for qualified graduates, and the demand-supply ratio, which measures need as a multiple of output. **A narrow gap does not imply that there are few openings or a limited need for those jobs; in many cases, it reflects strong alignment between the state's labor supply and labor demand**. Career cluster supply gap ratings for Plan Year 2025 are summarized in the table below.

SUPPLY GAP METER RATING BY CAREER CLUSTER

Career Clusters	Narrow Gap	Moderate Gap	Wide Gap
Advanced Manufacturing		●	
Agriculture	●		
Arts, Entertainment, and Design	●		
Construction			●
Digital Technology			●
Education	●		
Energy and Natural Resources		●	
Financial Services		●	
Healthcare and Human Services			●
Hospitality, Events, and Tourism		●	
Management and Entrepreneurship		●	
Marketing and Sales			●
Public Service and Safety	●		
Supply Chain and Transportation		●	

At the career cluster level, the largest supply gaps are in:

- Healthcare and Human Services (17,900)
- Marketing and Sales (9,220)
- Supply Chain and Transportation (6,700)

The clusters with the smallest supply gaps are:

- Agriculture (550)
- Education (570)
- Energy and Natural Resources (1,450)

While the supply gap provides insight into the number of workers needed to meet overall demand, the demand-supply ratio presents the number of open jobs per qualified applicant, offering us another perspective on lags in the supply pipeline. The Digital Technology and Construction clusters stand out for their high rations when looking at the gap through the demand-supply ratio metric:

- Digital Technology (4.8 – 1,220 graduates for 5,940 openings)
- Construction (3.6 – 2,450 graduates for 8,890 openings)
- Energy and Natural Resources (3.5 – 580 graduates for 2,030 openings)

At the occupation level, the largest supply gaps across all occupations requiring a high school degree or equivalent are:

- First-Line Supervisors of Retail Sales Workers (4,640)
- Maintenance and Repair Workers, General (2,740)
- First-Line Supervisors of Food Preparation and Serving Workers (2,560)
- Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel (1,890)
- Security Guards (1,650)
- Secretaries and Administrative Assistants, Except Legal, Medical, and Executive (1,440)
- Social and Human Service Assistants (1,360)
- First-Line Supervisors of Office and Administrative Support Workers (1,280)
- Customer Service Representatives (1,230)
- Merchandise Displayers and Window Trimmers (1,050)

Among these occupations, the largest demand-supply ratios were found among:

- Social and Human Service Assistants (16.1 — 90 graduates for 1,450 openings)
- First-Line Supervisors of Retail Sales Workers (15.5 — 320 graduates for 4,960 openings)
- Merchandise Displayers and Window Trimmers (14.1 — 80 graduates for 1,130 openings)

At the occupation level, the largest supply gaps across all occupations requiring a post-secondary credential are:

- Registered Nurses (3,160)

- Heavy and Tractor-Trailer Truck Drivers (2,400)
- Medical and Health Services Managers (1,760)
- Securities, Commodities, and Financial Services Sales Agents (1,200)
- Computer User Support Specialists (1,070)
- Software Developers (1,070)
- Human Resources Specialists (1,050)
- Management Analysts (1,020)
- Business Operations Specialists, All Other (1,020)
- Bookkeeping, Accounting, and Auditing Clerks (820)

Among these occupations, the largest demand supply ratios were found among:

- Securities, Commodities, and Financial Services Sales Agents (18.1 — 70 graduates for 1,270 openings)
- Medical and Health Services Managers (12.7 — 150 graduates for 1,910 openings)
- Computer User Support Specialists (6.1 — 210 graduates for 1,280 openings)

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HOW TO USE THIS REPORT

The supply gap is calculated by subtracting an estimated number of qualified graduates from the estimated new demand for graduates within each occupation. The supply gap analysis answers the question: Does our supply pipeline match the rate of job creation? If not, then a supply gap exists.

We clarify the definitions, assumptions, and the limitations of this analysis below.

DEFINITIONS, ASSUMPTIONS, AND LIMITATIONS

- The **supply gap** is defined as the difference between the estimated number of **migration-adjusted graduates** who are qualified for a given occupation and estimated new annual demand within the occupation. The supply gap measures how well the supply of qualified workers can fulfill the new annual demand for qualified workers.
- **Migration adjustment** adjusts the estimated number of qualified workers in each occupation by their likelihood of entering/departing the state's labor supply.
- The **demand supply ratio** is calculated by dividing estimated **new annual demand** within an occupation by the estimated number of **migration-adjusted graduates** qualified for the occupation.
    - E.g. 1,270 openings (new annual demand) divided by 70 graduates = demand-supply ratio of 18.1
- Estimated **new annual demand** in this context refers to newly created jobs or positions resulting from occupation growth plus jobs that were formerly filled by individuals who exited the labor force or transferred to a new occupation.
- New annual demand, when referenced in this report, **does not include** unfilled jobs resulting from turnover or demand that carried over from previous years. New annual demand in this context, therefore, **is not equivalent to the total number of current job openings or job postings**.
- Due to data limitations, this analysis does not account for labor supply qualified through continuing education, non-credit college programs, or training or credentials offered by private firms.
- Occupations are defined according to the **2018 Standard Occupational Classification (SOC) System**, a federal standard for classifying workers into occupations based on job duties. This report analyzes the supply gap at the most detailed occupation level, and the occupations are aggregated into their corresponding **career clusters**.
- **Career clusters**, as defined in The National Career Cluster Framework ***(Advance CTE 2025)***, are 14 broad categorizations of occupations. The framework allows us to examine the supply gap at general and specific levels, providing a snapshot where demand for new labor outpaces supply.
- We present some results organized by typical entry-level education. Typical entry-level education is determined by the Bureau of Labor Statistics. However, those seeking employment in a given role could benefit from advanced training that exceeds the typical entry-level.

UNDERSTANDING SUPPLY GAP AND DEMAND SUPPLY RATIO

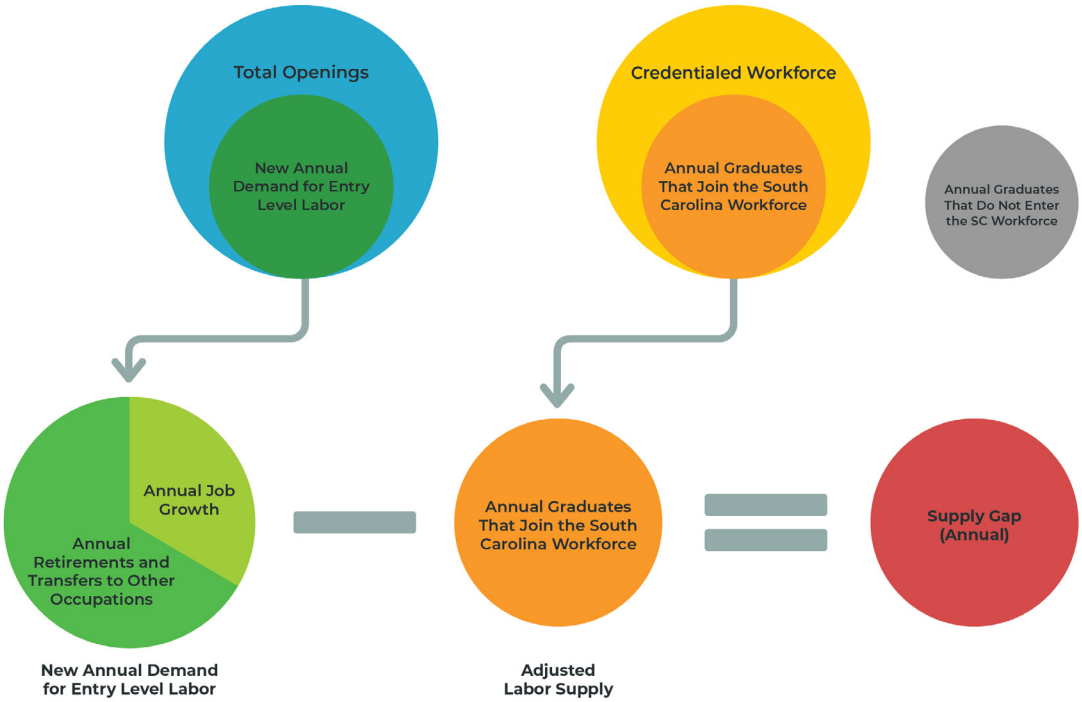
The supply gap is the primary indicator of a change in need for qualified workers. A positive supply gap suggests that there are not enough new qualified candidates to meet the new annual demand for a given occupation. The greater the supply gap, the greater the increase in need. A negative supply gap suggests that the number of potential

candidates for a given occupation exceeds the new annual demand.

A general explanation of our methodology is provided in **Exhibit 1**. We estimate the supply gap as the difference between the new annual demand for labor and the annual supply of graduates, adjusted for migration into and out of the South Carolina labor force, from our state's secondary and post-secondary institutions. As the chart indicates, new annual demand is a subset of the total number of job openings in the state; new annual demand includes two types of job openings: those generated by the creation of new jobs and those generated by someone vacating a position to either join another occupation or to leave the labor market.

In addition, so that we are appropriately matching new graduates with new openings, we constrain the analysis, and consequently, the jobs that are included in new annual demand, to entry-level positions, i.e., those that typically require less than five years of experience. We subtract from this new annual demand for entry level labor within each occupation the number of qualified graduates from secondary and post-secondary institutions to produce an estimate of the annual supply gap in each occupation. The number of qualified graduates for each occupation is estimated from South Carolina wage and education records. Our methodology is further detailed in the ***Appendix***.

EXHIBIT 1: SUPPLY GAP AND COMPONENTS DIAGRAM



The demand supply ratio compares the change in new annual demand to the supply of qualified candidates and is shown in **Exhibit 2**. A demand supply ratio of 1.00 indicates that supply of qualified candidates equals demand exactly. A ratio less than 1.00 implies that supply exceeds demand, and **a ratio greater than 1.00 implies that supply does not meet demand, meaning a supply gap is present**.

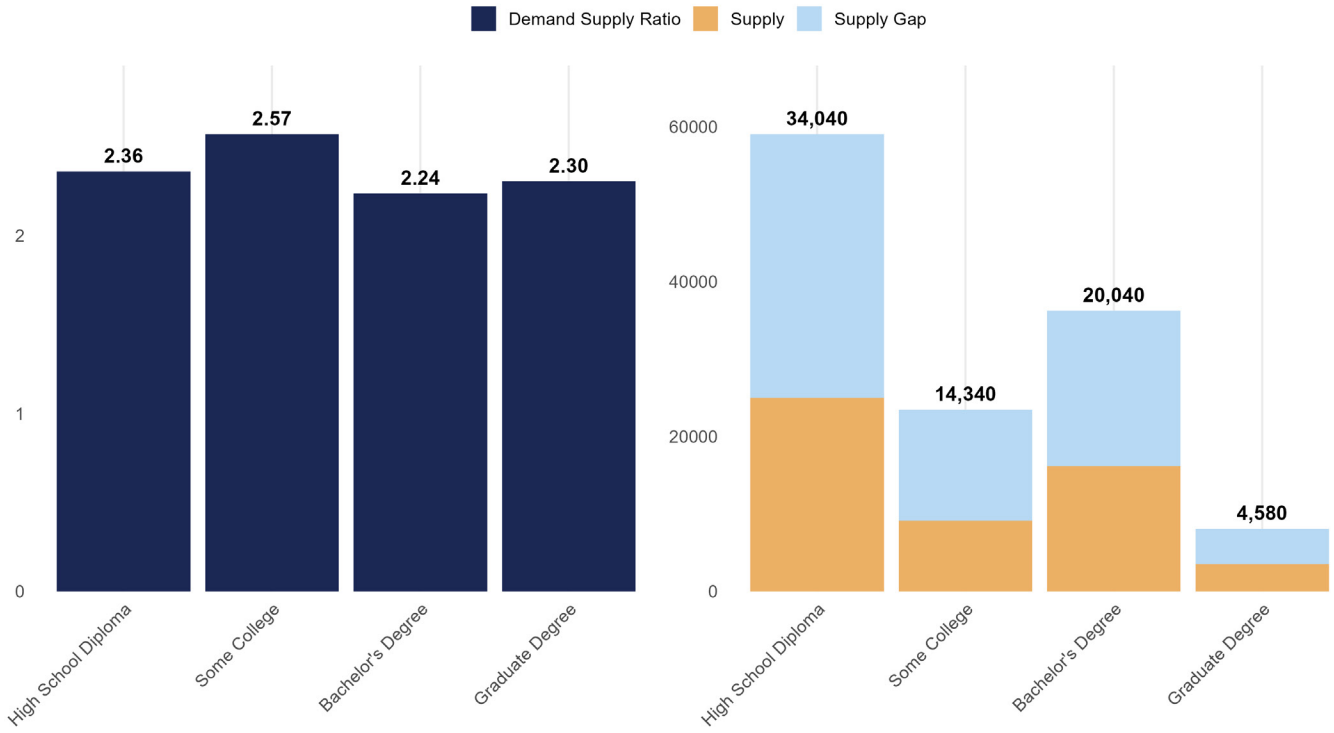
EXHIBIT 2: DEMAND/SUPPLY RATIO

OVERALL SUPPLY GAP

The supply gap across all occupations in South Carolina is about 73,000 annual workers. The supply gap for entry-level occupations that require a high school diploma or equivalent education comprises 46 percent (34,040 annual workers) of the total supply gap. The supply gap for entry-level occupations that require any post-secondary education comprises 53 percent (about 38,960 workers) of the total supply gap statewide. Approximately 27 percent (20,040) of the supply gap is for occupations typically requiring a bachelor's degree. About 20 percent (14,340) of the supply gap is for occupations typically requiring some college but less than a bachelor's degree, such as some years of college attendance, an associate's degree, or post-secondary non-degree award. Another 6 percent (4,580) represents occupations typically requiring a graduate degree, such as a master's degree, a professional degree, or a doctoral degree.

These results are shown in **Exhibit 3** below. The demand supply ratio is displayed in the bar graph on the left, which shows a proportional amount of demand for each qualified graduate across all education levels, i.e. for each qualified graduate there are more than two job openings. In the bar graph on the right the yellow bars represent the supply of graduates, and the light blue bars show the extent to which demand exceeds the available supply, or the supply gap. The estimate of the supply gap at each level of education is also displayed in bold above each bar. From this figure, we can see that the supply gap for high school graduates (34,040) exceeds that of any other level of education. However, many of these open jobs may be filled by students who are enrolled in post-secondary education while working. Since these workers are not accounted for in our analysis, the large gap for this group may be an overestimate. The next largest gap is for bachelor's degrees at 20,040.

EXHIBIT 3: STATE TOTAL SUPPLY GAP BY EDUCATION



SUPPLY GAP BY CAREER CLUSTER

In addition to examining the supply gap by education level, it is possible to evaluate the supply gap by career cluster, as shown in **Exhibit 4**, to determine areas of the state's economy where demand most exceeds supply.

At the career cluster level, the largest supply gaps are in:

1. Healthcare and Human Services
2. Marketing and Sales
3. Supply Chain and Transportation

Meanwhile, the smallest supply gaps are in:

1. Agriculture
2. Education
3. Energy and Natural Resources

EXHIBIT 4: SOUTH CAROLINA SUPPLY GAP BY CAREER CLUSTER

Career Cluster	Supply Gap	Demand Supply Ratio	Supply	Demand
All Career Clusters	73,000	2.36	53,870	126,870
Healthcare and Human Services	17,900	2.27	14,130	32,030
Marketing and Sales	9,220	3.15	4,290	13,510
Supply Chain and Transportation	6,700	3.16	3,100	9,800
Construction	6,440	3.63	2,450	8,890
Advanced Manufacturing	5,850	1.93	6,260	12,110
Financial Services	5,440	2.81	3,010	8,450
Management and Entrepreneurship	5,040	1.89	5,670	10,710
Hospitality, Events, and Tourism	5,000	3.36	2,120	7,120
Digital Technology	4,720	4.87	1,220	5,940
Public Service and Safety	2,610	1.90	2,890	5,500
Arts, Entertainment, and Design	1,510	2.35	1,120	2,630
Energy and Natural Resources	1,450	3.50	580	2,030
Education	570	1.09	6,300	6,870
Agriculture	550	1.75	730	1,280

LARGEST SUPPLY GAPS BY EDUCATION AND OCCUPATION

Supply gaps are also calculated at the occupation level and by minimum required education.

At the occupation level, the largest supply gaps across all occupations requiring a high school degree or equivalent are:

- First-Line Supervisors of Retail Sales Workers (4,640)
- Maintenance and Repair Workers, General (2,740)
- First-Line Supervisors of Food Preparation and Serving Workers (2,560)
- Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel (1,890)
- Security Guards (1,650)
- Secretaries and Administrative Assistants, Except Legal, Medical, and Executive (1,440)
- Social and Human Service Assistants (1,360)
- First-Line Supervisors of Office and Administrative Support Workers (1,280)
- Customer Service Representatives (1,230)
- Merchandise Displayers and Window Trimmers (1,050)
- Among these occupations, the largest demand supply ratios were found among:
- Social and Human Service Assistants (16.1 — 90 graduates for 1,450 openings)
- First-Line Supervisors of Retail Sales Workers (15.5 — 320 graduates for 4,960 openings)
- Merchandise Displayers and Window Trimmers (14.1 — 80 graduates for 1,130 openings)

At the occupation level, the largest supply gaps across all occupations requiring a post-secondary credential are:

- Registered Nurses (3,160)
- Heavy and Tractor-Trailer Truck Drivers (2,400)[1]
- Medical and Health Services Managers (1,760)
- Securities, Commodities, and Financial Services Sales Agents (1,200)
- Computer User Support Specialists (1,070)
- Software Developers (1,070)
- Human Resources Specialists (1,050)
- Management Analysts (1,020)
- Business Operations Specialists, All Other (1,020)

[1]*This analysis only considers degrees obtained through the postsecondary education system and therefore does not account for industry credentials. Consequently, this gap may be overstated.*

- Bookkeeping, Accounting, and Auditing Clerks (820)

Among these occupations, the largest demand supply ratios were found among:

- Securities, Commodities, and Financial Services Sales Agents (18.1 - 70 graduates for 1,270 openings)
- Medical and Health Services Managers (12.7 - 150 graduates for 1,910 openings)
- Computer User Support Specialists (6.1 - 210 graduates for 1,280 openings)

These data are summarized in **Exhibit 5 and Exhibit 6**.

EXHIBIT 5: LARGEST SUPPLY GAPS BY OCCUPATIONS REQUIRING A HIGH SCHOOL DIPLOMA

Rank	Demand		Supply	Supply Gap	Demand Supply Ratio	Occupation	SOC Code
1	4,960	- ÷	320	= 4,640	= 15.50	First-Line Supervisors of Retail Sales Workers	41-1011
2	3,150	- ÷	410	= 2,740	= 7.68	Maintenance and Repair Workers, General	49-9071
3	2,970	- ÷	410	= 2,560	= 7.24	First-Line Supervisors of Food Preparation and Serving Workers	35-1012
4	2,140	- ÷	250	= 1,890	= 8.56	Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	41-3091
5	1,940	- ÷	290	= 1,650	= 6.69	Security Guards	33-9032
6	1,870	- ÷	430	= 1,440	= 4.35	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	43-6014
7	1,450	- ÷	90	= 1,360	= 16.11	Social and Human Service Assistants	21-1093
8	1,400	- ÷	120	= 1,280	= 11.67	First-Line Supervisors of Office and Administrative Support Workers	43-1011
9	2,920	- ÷	1,690	= 1,230	= 1.73	Customer Service Representatives	43-4051
10	1,130	- ÷	80	= 1,050	= 14.12	Merchandise Displayers and Window Trimmers	27-1026

EXHIBIT 6: LARGEST SUPPLY GAPS BY OCCUPATIONS REQUIRING POST-SECONDARY EDUCATION

Rank	Demand		Supply	Supply Gap	Demand Supply Ratio	Occupation	SOC Code
1	5,800	-	2,640	= 3,160	= 2.20	Registered Nurses	29-1141
		÷					
2	2,600	-	180	= 2,420	= 14.44	Heavy and Tractor-Trailer Truck Drivers	53-3032
		÷					
3	1,910	-	150	= 1,760	= 12.73	Medical and Health Services Managers	11-9111
		÷					
4	1,270	-	70	= 1,200	= 18.14	Securities, Commodities, and Financial Services Sales Agents	41-3031
		÷					
5	1,280	-	210	= 1,070	= 6.10	Computer User Support Specialists	15-1232
		÷					
6	1,290	-	220	= 1,070	= 5.86	Software Developers	15-1252
		÷					
7	1,280	-	230	= 1,050	= 5.57	Human Resources Specialists	13-1071
		÷					
8	1,190	-	170	= 1,020	= 7.00	Management Analysts	13-1111
		÷					
9	1,540	-	520	= 1,020	= 2.96	Business Operations Specialists, All Other	13-1199
		÷					
10	1,130	-	310	= 820	= 3.65	Bookkeeping, Accounting, and Auditing Clerks	43-3031
		÷					

CAREER CLUSTERS

ADVANCED MANUFACTURING*

The ***Advanced Manufacturing*** cluster is a blend of innovative technologies and practices to enhance design and production. It covers areas such as engineering, research and development, automation and artificial intelligence, equipment maintenance, safety protocols, and quality control.

The ten occupations with the largest supply gaps in the Advanced Manufacturing cluster are shown in **Exhibit 7** below.

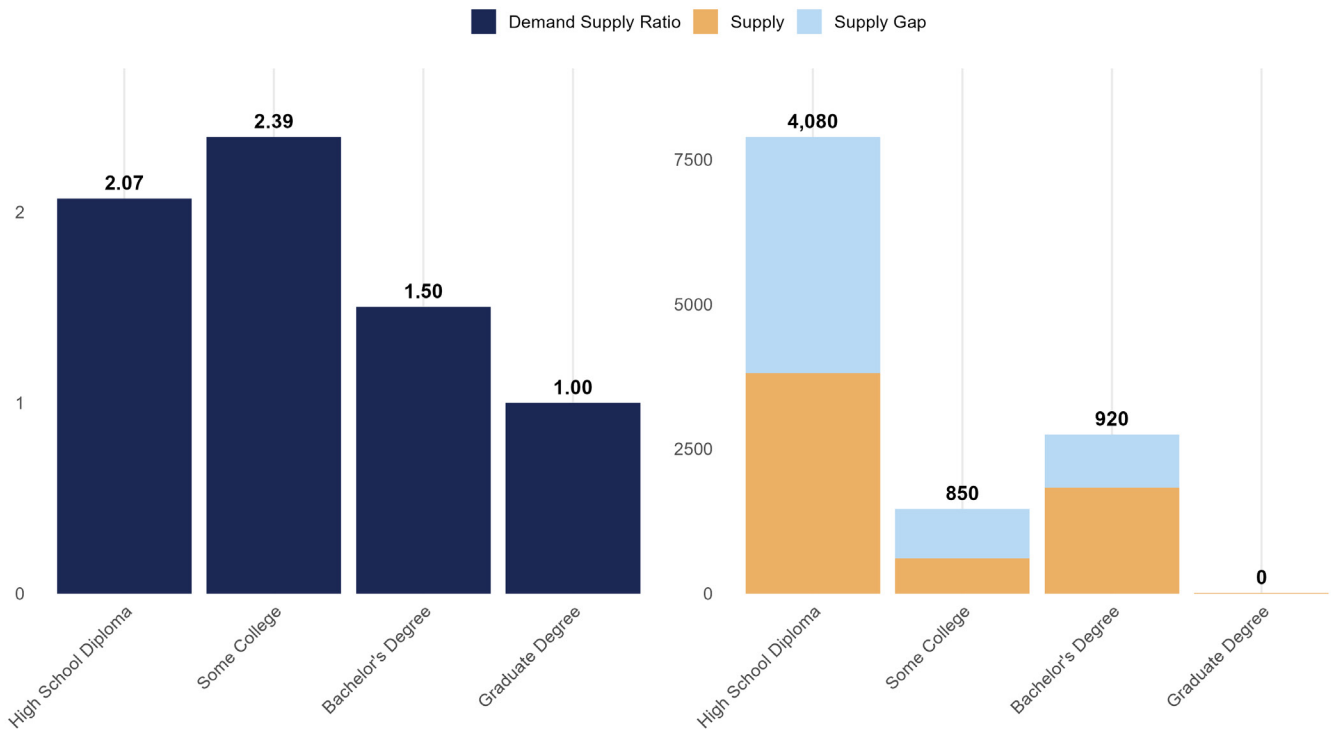
EXHIBIT 7: ADVANCED MANUFACTURING CLUSTER [STATE SUPPLY BY OCCUPATION]

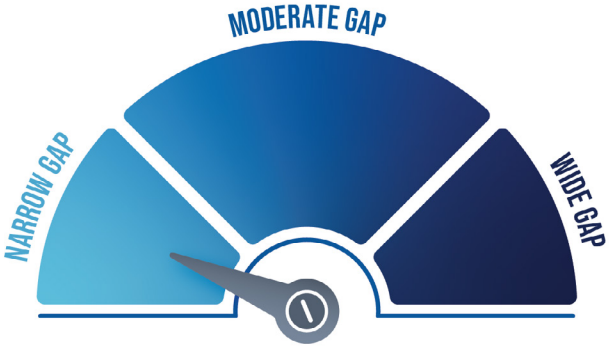
Rank	Demand		Supply	Supply Gap	Demand Supply Ratio	Occupation	SOC Code	Typical Entry-Level Education
1	1,000	- ÷	70	= 930	= 14.29	First-Line Supervisors of Production and Operating Workers	51-1011	High School Diploma
2	880	- ÷	40	= 840	= 22.00	First-Line Supervisors of Mechanics, Installers, and Repairers	49-1011	High School Diploma
3	1,100	- ÷	320	= 780	= 3.44	Industrial Engineers	17-2112	Bachelor's Degree
4	800	- ÷	190	= 610	= 4.21	Inspectors, Testers, Sorters, Samplers, and Weighers	51-9061	High School Diploma
5	460	- ÷	70	= 390	= 6.57	Electrical Engineers	17-2071	Bachelor's Degree
6	320	- ÷	30	= 290	= 10.67	Occupational Health and Safety Specialists	19-5011	Bachelor's Degree
7	400	- ÷	120	= 280	= 3.33	Industrial Machinery Mechanics	49-9041	High School Diploma
8	370	- ÷	120	= 250	= 3.08	Machinists	51-4041	High School Diploma
9	550	- ÷	300	= 250	= 1.83	Welders, Cutters, Solderers, and Brazers	51-4121	High School Diploma
10	1,310	- ÷	1,060	= 250	= 1.24	Production Workers, All Other	51-9199	High School Diploma

***NOTE:** South Carolina employers often identify mechatronics roles as being critically in-demand; however, SOC titles do not always include the term mechatronics, which may mask demand for these roles. Based on O*NET OnLine's analysis of job tasks, these priority occupations are the most likely to make use of mechatronics training.*

We can aggregate these data to look at the supply gap by education level. These data are summarized in **Exhibit 8**.

EXHIBIT 8: ADVANCED MANUFACTURING CLUSTER: SUPPLY GAP BY EDUCATION LEVEL





AGRICULTURE

The ***Agriculture*** cluster focuses on scientific advancement of agriscience, cultivation, processing, and distribution of agricultural products, employing advanced technologies and sustainable practices to optimize global food systems.

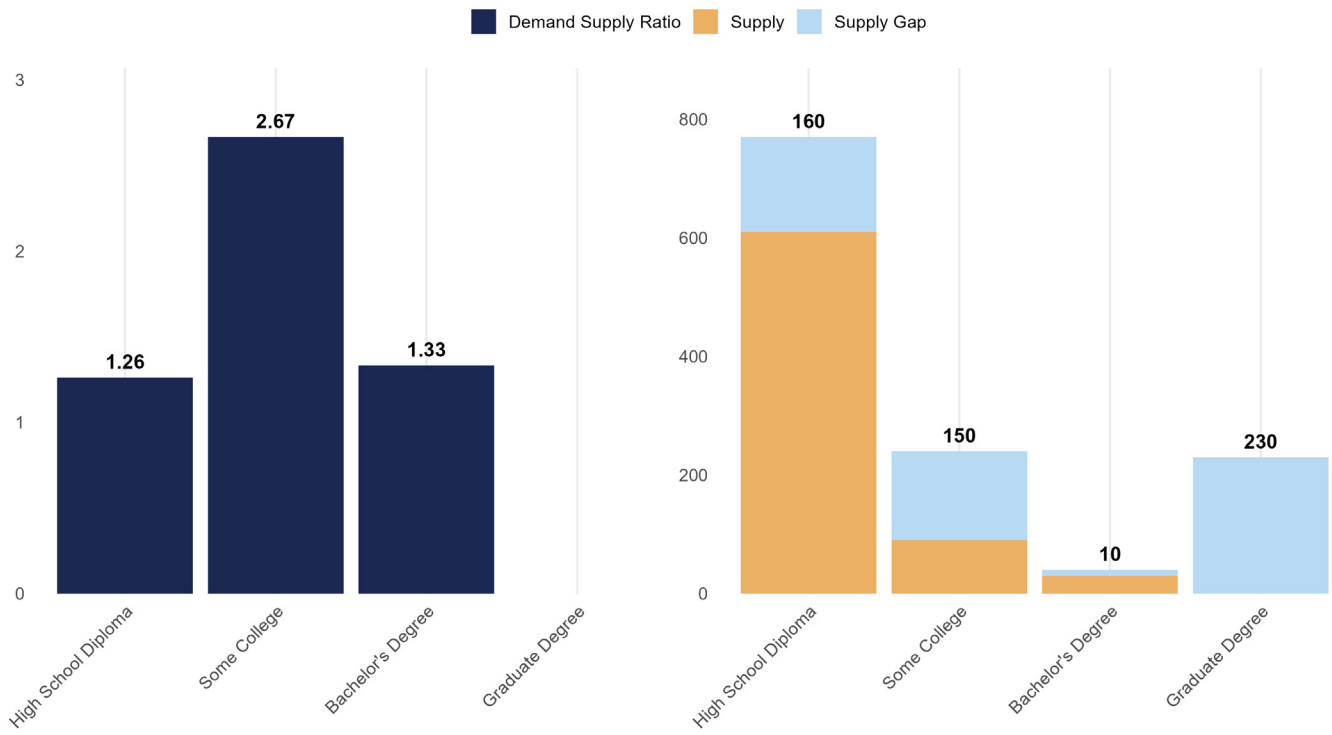
The ten occupations with the largest supply gaps in the Agriculture cluster are shown in **Exhibit 9** below.

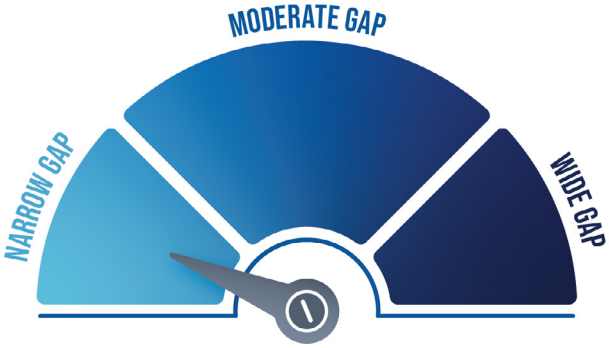
EXHIBIT 9: AGRICULTURE CLUSTER [STATE SUPPLY BY OCCUPATION]

Rank	Demand		Supply	Supply Gap	Demand Supply Ratio	Occupation	SOC Code	Typical Entry-Level Education
1	230	- ÷	0	= 230	N/A	Veterinarians	29-1131	Graduate Degree
2	230	- ÷	60	= 170	= 3.83	Pest Control Workers	37-2021	High School Diploma
3	200	- ÷	70	= 130	= 2.86	Veterinary Technologists and Technicians	29-2056	Some College
4	290	- ÷	230	= 60	= 1.26	Animal Caretakers	39-2021	High School Diploma
5	30	- ÷	10	= 20	= 3.00	Food Science Technicians	19-4013	Some College
6	30	- ÷	10	= 20	= 3.00	Animal Trainers	39-2011	High School Diploma
7	20	- ÷	0	= 20	N/A	Agricultural Inspectors	45-2011	Bachelor's Degree
8	10	- ÷	0	= 10	N/A	Food Scientists and Technologists	19-1012	Bachelor's Degree
9	20	- ÷	10	= 10	= 2.00	Farm Equipment Mechanics and Service Technician	49-3041	High School Diploma
10	0	- ÷	0	= 0	N/A	Agricultural Engineers	17-2021	Bachelor's Degree

We can aggregate these data to look at the supply gap by education level. These data are summarized in **Exhibit 10**.

EXHIBIT 10: AGRICULTURE CLUSTER: SUPPLY GAP BY EDUCATION LEVEL





ARTS, ENTERTAINMENT, AND DESIGN

The ***Arts, Entertainment, and Design*** cluster is a combination of creative roles in visual and performing arts, film, journalism, fashion, interior design, and creative technologies. This cluster focuses on creating, producing, and sharing artistic and design work across multiple platforms, aiming to entertain, inform, beautify, and inspire.

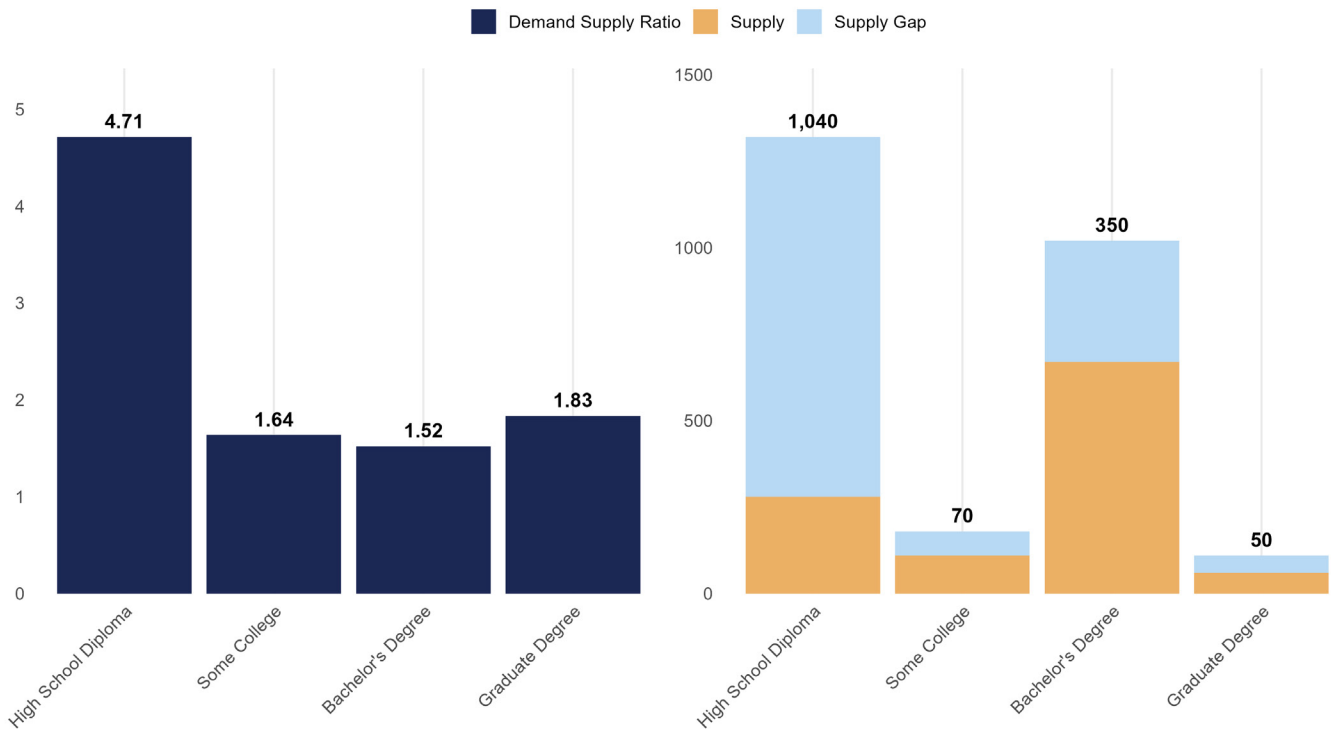
The ten occupations with the largest supply gaps in the Arts, Entertainment, and Design cluster are shown in **Exhibit 11** below.

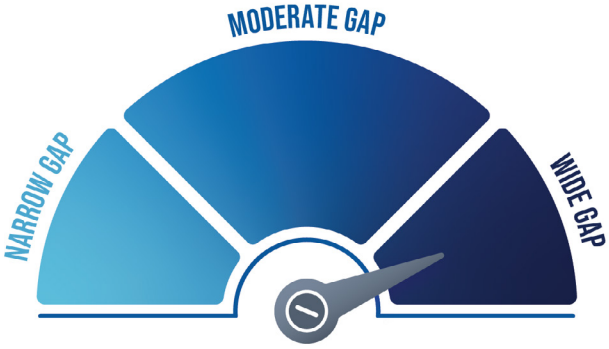
EXHIBIT 11: ARTS, ENTERTAINMENT, AND DESIGN CLUSTER [STATE SUPPLY BY OCCUPATION]

Rank	Demand		Supply	Supply Gap	Demand Supply Ratio	Occupation	SOC Code	Typical Entry-Level Education
1	1,130	- ÷	80	= 1,050	= 14.12	Merchandise Displayers and Window Trimmers	27-1026	High School Diploma
2	180	- ÷	70	= 110	= 2.57	Graphic Designers	27-1024	Bachelor's Degree
3	120	- ÷	20	= 100	= 6.00	Technical Writers	27-3042	Bachelor's Degree
4	100	- ÷	30	= 70	= 3.33	Interior Designers	27-1025	Bachelor's Degree
5	100	- ÷	30	= 70	= 3.33	Producers and Directors	27-2012	Bachelor's Degree
6	100	- ÷	30	= 70	= 3.33	Audio and Video Technicians	27-4011	Some College
7	70	- ÷	10	= 60	= 7.00	Writers and Authors	27-3043	Bachelor's Degree
8	80	- ÷	30	= 50	= 2.67	Photographers	27-4021	High School Diploma
9	60	- ÷	20	= 40	= 3.00	Personal Service Managers, All Other	11-9179	High School Diploma
10	80	- ÷	40	= 40	= 2.00	News Analysts, Reporters, and Journalists	27-3023	Bachelor's Degree

We can aggregate these data to look at the supply gap by education level. These data are summarized in **Exhibit 12**.

EXHIBIT 12: ARTS, ENTERTAINMENT, AND DESIGN CLUSTER: SUPPLY GAP BY EDUCATION LEVEL





CONSTRUCTION

The ***Construction*** cluster includes professions involved in designing, planning, managing, and executing projects in the built environment.

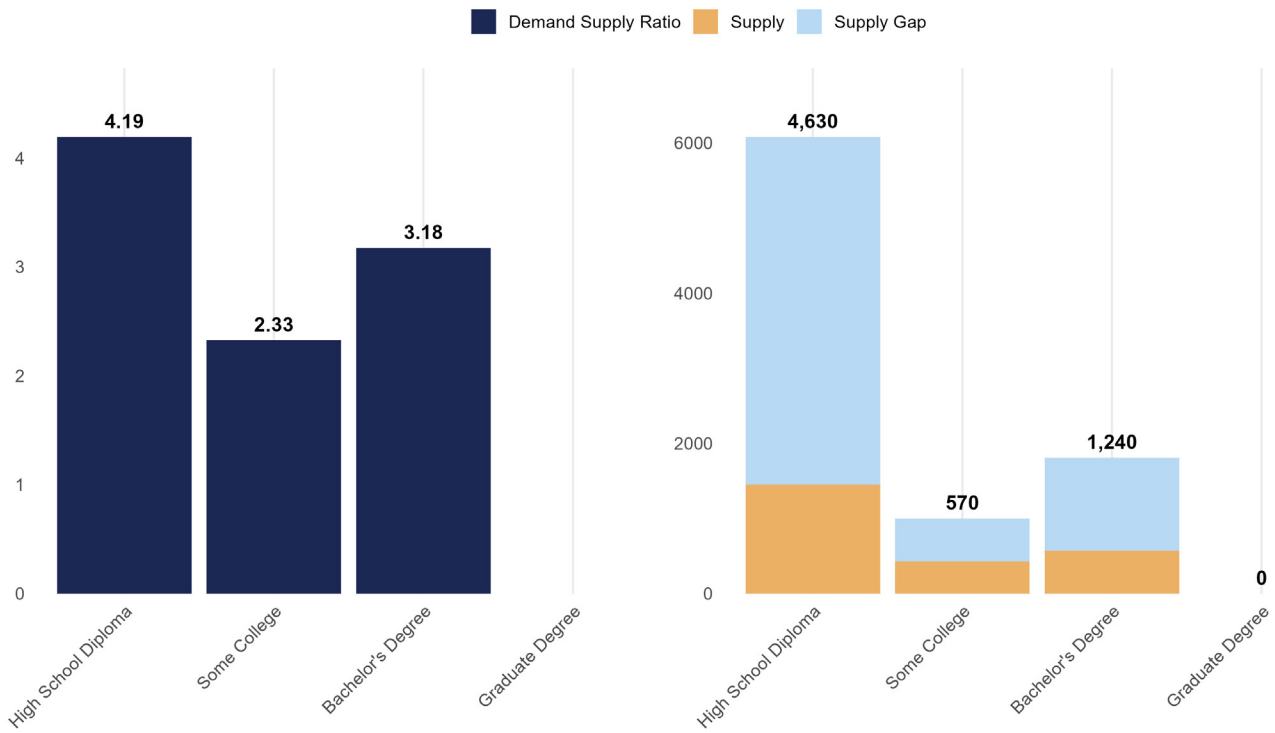
The ten occupations with the largest supply gaps in the Construction cluster are shown in **Exhibit 13** below.

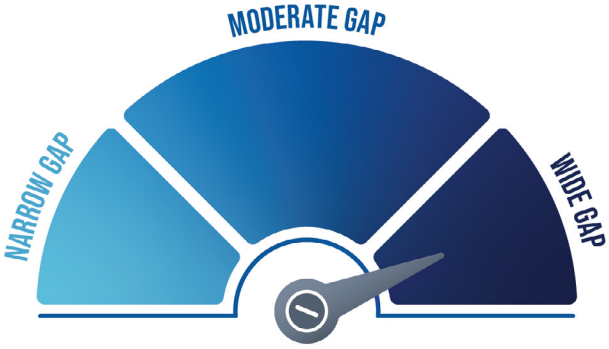
EXHIBIT 13: CONSTRUCTION CLUSTER [STATE SUPPLY BY OCCUPATION]

Rank	Demand		Supply	Supply Gap	Demand Supply Ratio	Occupation	SOC Code	Typical Entry-Level Education
1	3,150	- ÷	410	= 2,740	= 7.68	Maintenance and Repair Workers, General	49-9071	High School Diploma
2	690	- ÷	130	= 560	= 5.31	Construction Managers	11-9021	Bachelor's Degree
3	580	- ÷	170	= 410	= 3.41	Electricians	47-2111	High School Diploma
4	610	- ÷	210	= 400	= 2.90	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	49-9021	Some College
5	660	- ÷	280	= 380	= 2.36	Civil Engineers	17-2051	Bachelor's Degree
6	470	- ÷	90	= 380	= 5.22	Operating Engineers and Other Construction Equipment Operators	47-2073	High School Diploma
7	360	- ÷	90	= 270	= 4.00	Plumbers, Pipefitters, and Steamfitters	47-2152	High School Diploma
8	290	- ÷	40	= 250	= 7.25	Carpenters	47-2031	High School Diploma
9	240	- ÷	40	= 200	= 6.00	Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	51-2028	High School Diploma
10	230	- ÷	50	= 180	= 4.60	Cost Estimators	13-1051	Bachelor's Degree

We can aggregate these data to look at the supply gap by education level. These data are summarized in **Exhibit 14**.

EXHIBIT 14: CONSTRUCTION CLUSTER: SUPPLY GAP BY EDUCATION LEVEL





DIGITAL TECHNOLOGY

The ***Digital Technology*** cluster focuses on developing digital systems for communication and data storage using critical technologies such as artificial intelligence, data analytics, and cybersecurity.

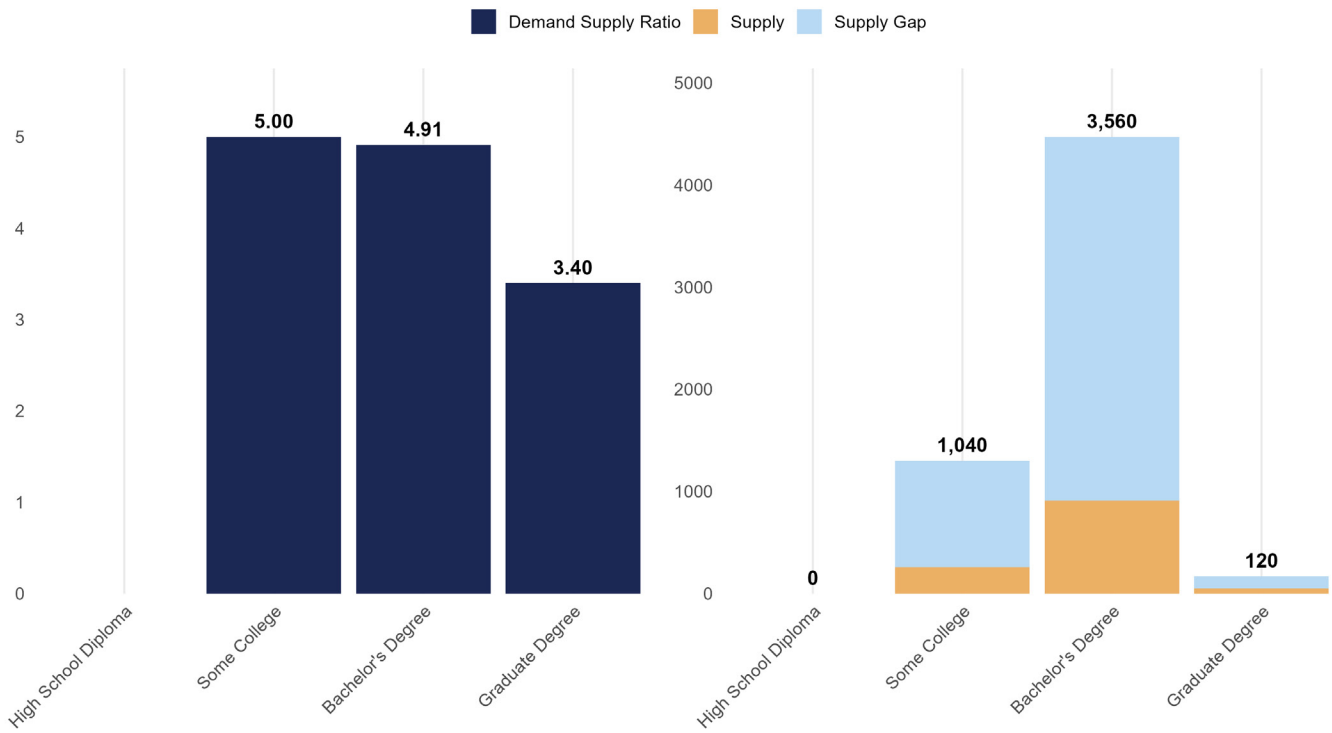
The ten occupations with the largest supply gaps in the Digital Technology cluster are shown in **Exhibit 15** below.

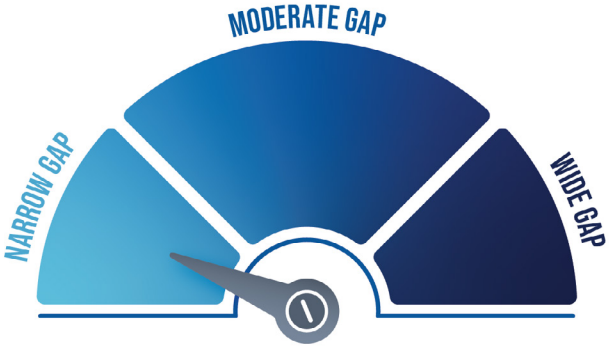
EXHIBIT 15: DIGITAL TECHNOLOGY CLUSTER [STATE SUPPLY BY OCCUPATION]

Rank	Demand		Supply	Supply Gap	Demand Supply Ratio	Occupation	SOC Code	Typical Entry-Level Education
1	1,280	- ÷	210	= 1,070	= 6.10	Computer User Support Specialists	15-1232	Some College
2	1,290	- ÷	220	= 1,070	= 5.86	Software Developers	15-1252	Bachelor's Degree
3	840	- ÷	120	= 720	= 7.00	Computer Occupations, All Other	15-1299	Bachelor's Degree
4	700	- ÷	40	= 660	= 17.50	Network and Computer Systems Administrators	15-1244	Bachelor's Degree
5	380	- ÷	60	= 320	= 6.33	Information Security Analysts	15-1212	Bachelor's Degree
6	460	- ÷	160	= 300	= 2.88	Computer Systems Analysts	15-1211	Bachelor's Degree
7	210	- ÷	20	= 190	= 10.50	Software Quality Assurance Analysts and Testers	15-1253	Bachelor's Degree
8	210	- ÷	80	= 130	= 2.62	Data Scientists	15-2051	Bachelor's Degree
9	120	- ÷	20	= 100	= 6.00	Web Developers	15-1254	Bachelor's Degree
10	130	- ÷	40	= 90	= 3.25	Computer and Information Research Scientists	15-1221	Graduate Degree

We can aggregate these data to look at the supply gap by education level. These data are summarized in **Exhibit 16**.

EXHIBIT 16: DIGITAL TECHNOLOGY CLUSTER: SUPPLY GAP BY EDUCATION LEVEL





EDUCATION

The ***Education*** cluster includes careers aimed at fostering learning from early childhood to adulthood, including teaching, instructional design, counseling services, community engagement, learner support, and educator training.

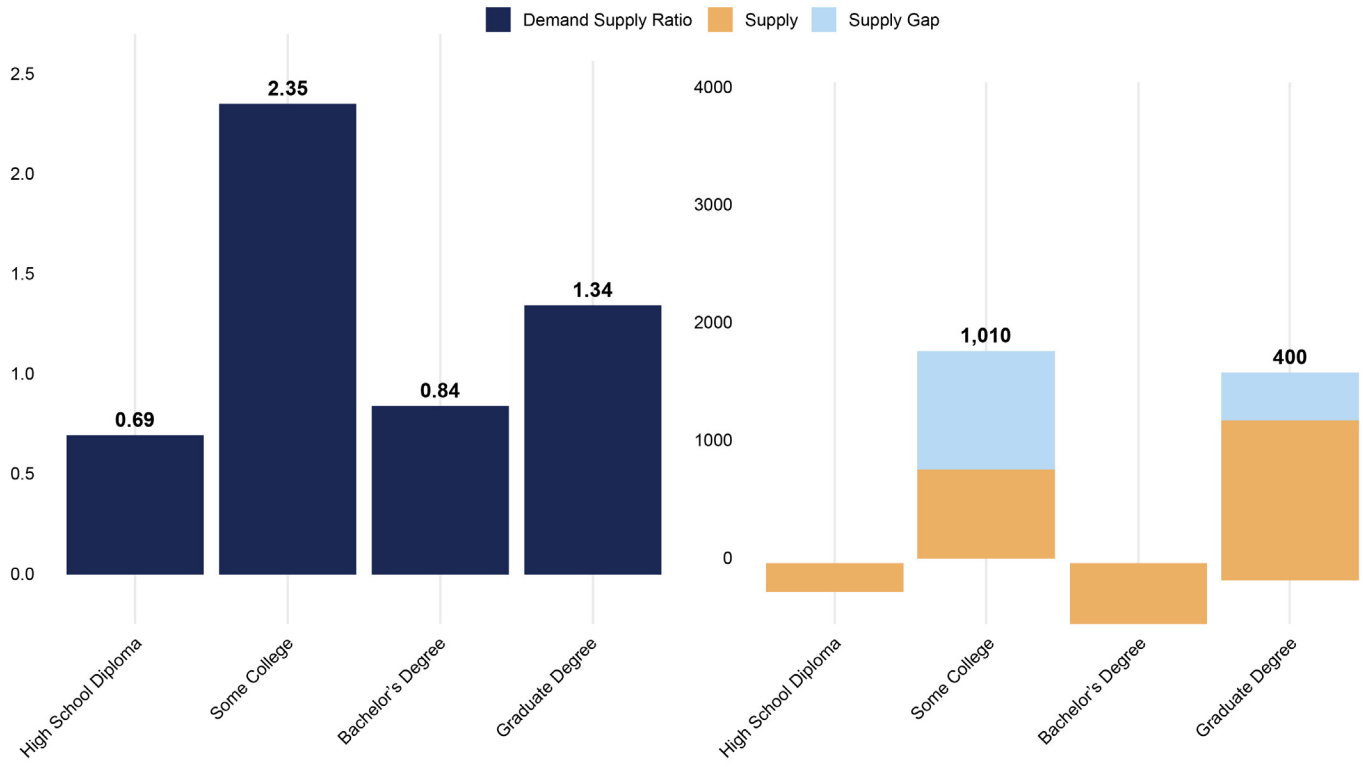
The ten occupations with the largest supply gaps in the Education cluster are shown in **Exhibit 17** below.

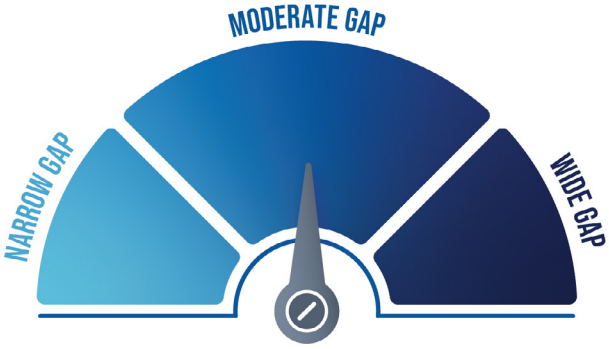
EXHIBIT 17: EDUCATION CLUSTER [STATE SUPPLY BY OCCUPATION]

Rank	Demand		Supply	Supply Gap	Demand Supply Ratio	Occupation	SOC Code	Typical Entry-Level Education
1	690	- ÷	160	= 530	= 4.31	Preschool Teachers, Except Special Education	25-2011	Some College
2	740	- ÷	370	= 370	= 2.00	Teaching Assistants, Except Postsecondary	25-9045	Some College
3	350	- ÷	100	= 250	= 3.50	Special Education Teachers, Kindergarten and Elementary	25-2052	Bachelor's Degree
4	240	- ÷	60	= 180	= 4.00	Education Administrators, Postsecondary	11-9033	Graduate Degree
5	220	- ÷	80	= 140	= 2.75	Life, Physical, and Social Science Technicians, All Other	19-4099	Some College
6	160	- ÷	30	= 130	= 5.33	Health Specialties Teachers, Postsecondary	25-1071	Graduate Degree
7	160	- ÷	30	= 130	= 5.33	Career/Technical Education Teachers, Postsecondary	25-1194	Bachelor's Degree
8	560	- ÷	430	= 130	= 1.30	Secondary School Teachers, Except Special and Career/Technical Education	25-2031	Bachelor's Degree
9	100	- ÷	10	= 90	= 10.00	Interpreters and Translators	27-3091	Bachelor's Degree
10	80	- ÷	20	= 60	= 4.00	Business Teachers, Postsecondary	25-1011	Graduate Degree

We can aggregate these data to look at the supply gap by education level. These data are summarized in **Exhibit 18**.

EXHIBIT 18: EDUCATION CLUSTER: SUPPLY GAP BY EDUCATION LEVEL





ENERGY AND NATURAL RESOURCES

The ***Energy and Natural Resources*** cluster concentrates on traditional and renewable fuel production, power generation and energy conversion, utilities, environmental preservation, ecological research, and resource extraction. These industries focus on efficient and responsible resource management, including conservation, transmission, distribution and storage, to minimize environmental impacts and meet global energy needs.

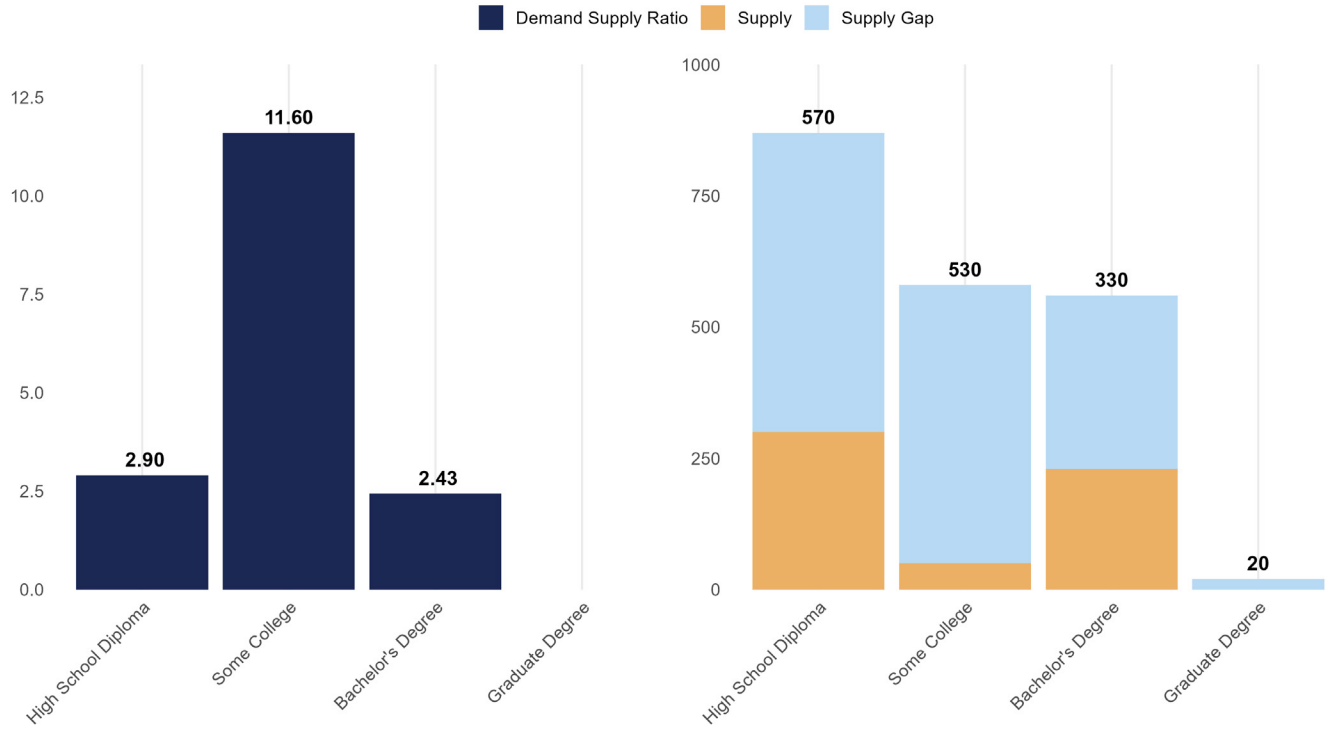
The ten occupations with the largest supply gaps in the Energy and Natural Resources cluster are shown in **Exhibit 19** below.

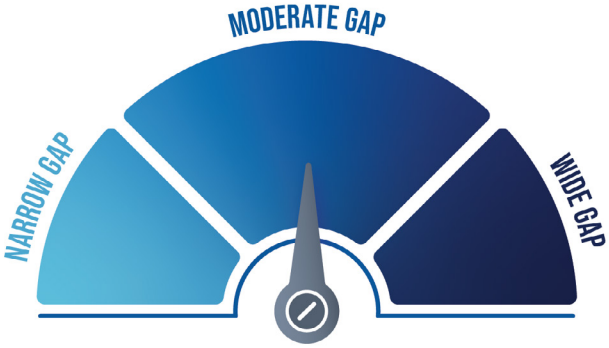
EXHIBIT 19: ENERGY AND NATURAL RESOURCES CLUSTER [STATE SUPPLY BY OCCUPATION]

Rank	Demand		Supply	Supply Gap	Demand Supply Ratio	Occupation	SOC Code	Typical Entry-Level Education
1	400	- ÷	20	= 380	= 20.00	Telecommunications Equipment Installers and Repairers, Except Line Installers	49-2022	Some College
2	180	- ÷	20	= 160	= 9.00	Telecommunications Line Installers and Repairers	49-9052	High School Diploma
3	150	- ÷	40	= 110	= 3.75	Water and Wastewater Treatment Plant and System Operators	51-8031	High School Diploma
4	150	- ÷	70	= 80	= 2.14	Surveying and Mapping Technicians	17-3031	High School Diploma
5	80	- ÷	10	= 70	= 8.00	Electronics Engineers, Except Computer	17-2072	Bachelor's Degree
6	90	- ÷	20	= 70	= 4.50	Environmental Engineering Technologists and Technicians	17-3025	Some College
7	160	- ÷	90	= 70	= 1.78	Electrical Power-Line Installers and Repairers	49-9051	High School Diploma
8	70	- ÷	10	= 60	= 7.00	Conservation Scientists	19-1031	Bachelor's Degree
9	100	- ÷	50	= 50	= 2.00	Environmental Engineers	17-2081	Bachelor's Degree
10	100	- ÷	50	= 50	= 2.00	Environmental Scientists and Specialists, Including Health	19-2041	Bachelor's Degree

We can aggregate these data to look at the supply gap by education level. These data are summarized in **Exhibit 20**.

EXHIBIT 20: ENERGY AND NATURAL RESOURCES CLUSTER: SUPPLY GAP BY EDUCATION LEVEL





FINANCIAL SERVICES

The ***Financial Services*** cluster encompasses careers in managing and advising financial transactions, including banking, lending, corporate finance, debt management, accounting, insurance, and real estate.

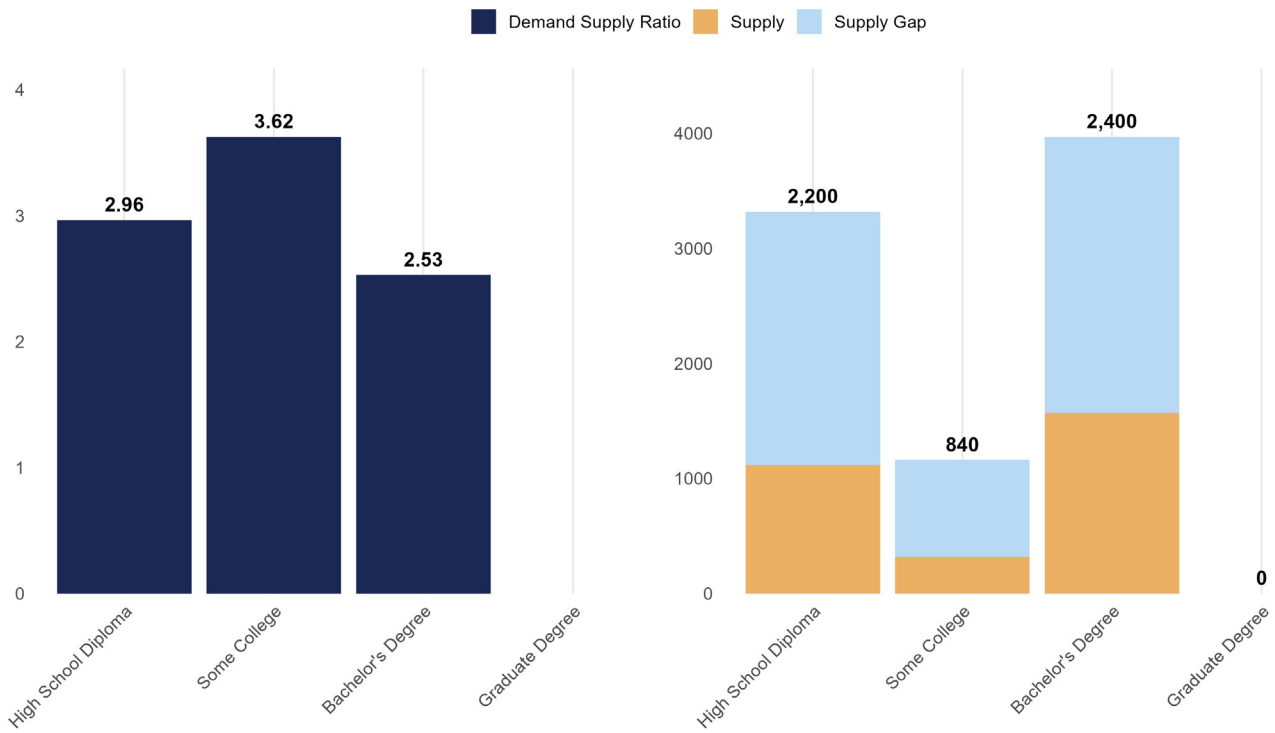
The ten occupations with the largest supply gaps in the Financial Services cluster are shown in **Exhibit 21** below.

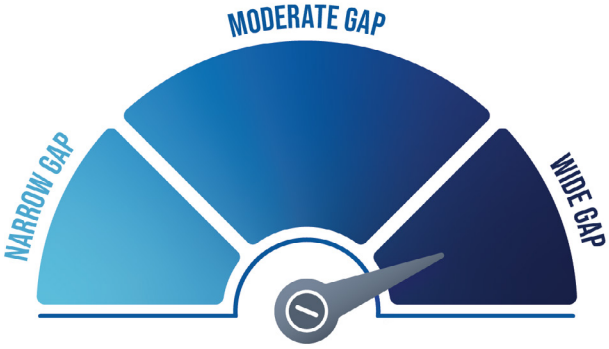
EXHIBIT 21: FINANCIAL SERVICES CLUSTER [STATE SUPPLY BY OCCUPATION]

Rank	Demand		Supply	Supply Gap	Demand Supply Ratio	Occupation	SOC Code	Typical Entry-Level Education
1	1,270	- ÷	70	= 1,200	= 18.14	Securities, Commodities, and Financial Services Sales Agents	41-3031	Bachelor's Degree
2	1,130	- ÷	310	= 820	= 3.65	Bookkeeping, Accounting, and Auditing Clerks	43-3031	Some College
3	1,380	- ÷	650	= 730	= 2.12	Accountants and Auditors	13-2011	Bachelor's Degree
4	650	- ÷	180	= 470	= 3.61	Insurance Sales Agents	41-3021	High School Diploma
5	590	- ÷	190	= 400	= 3.11	Property, Real Estate, and Community Association Managers	11-9141	High School Diploma
6	490	- ÷	190	= 300	= 2.58	Tellers	43-3071	High School Diploma
7	340	- ÷	60	= 280	= 5.67	Real Estate Sales Agents	41-9022	High School Diploma
8	320	- ÷	60	= 260	= 5.33	Loan Officers	13-2072	Bachelor's Degree
9	280	- ÷	50	= 230	= 5.60	Bill and Account Collectors	43-3011	High School Diploma
10	250	- ÷	40	= 210	= 6.25	Claims Adjusters, Examiners, and Investigators	13-1031	High School Diploma

We can aggregate these data to look at the supply gap by education level. These data are summarized in **Exhibit 22**.

EXHIBIT 22: FINANCIAL SERVICES CLUSTER: SUPPLY GAP BY EDUCATION LEVEL





HEALTHCARE AND HUMAN SERVICES

The ***Healthcare and Human Services*** cluster promotes health in individuals and communities through a diverse array of services. This sector includes technical, mental, and therapeutic services and personal care, supported by medical and social sciences.

The ten occupations with the largest supply gaps in the Healthcare and Human Services cluster are shown in **Exhibit 23** below.

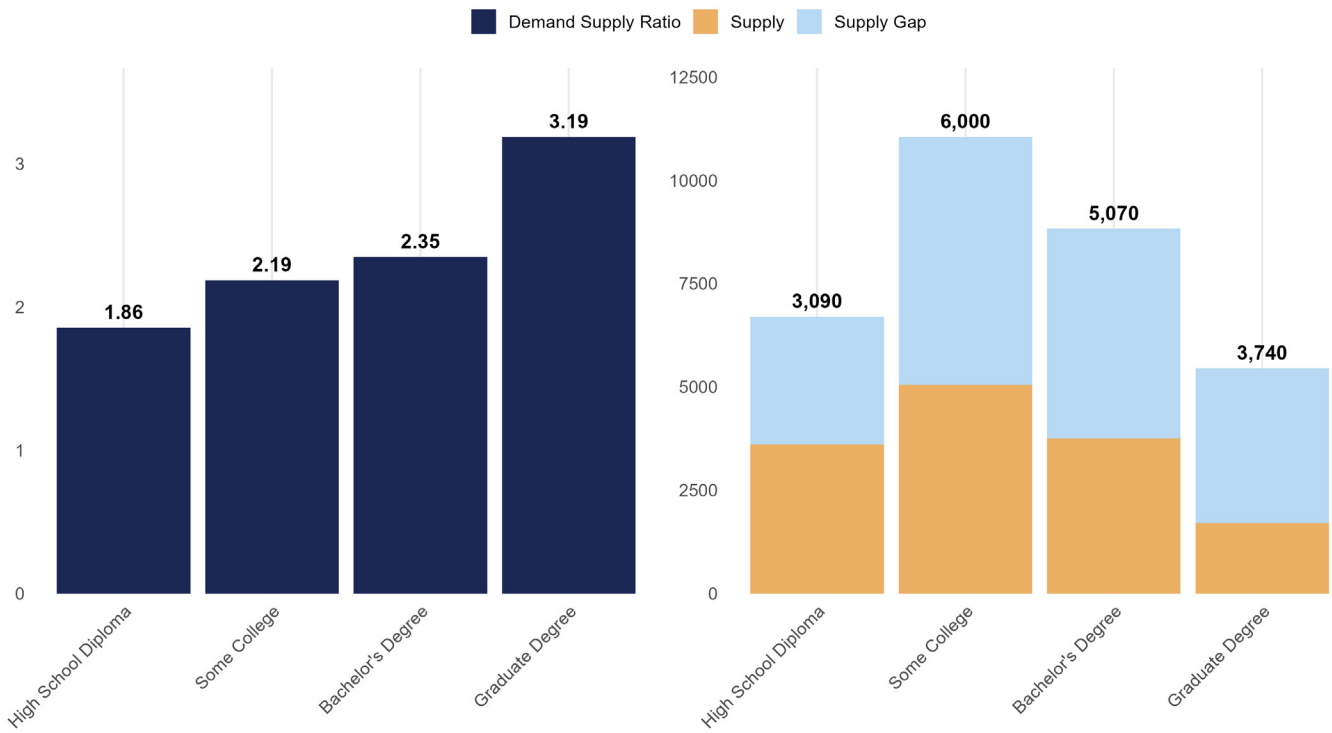
EXHIBIT 23: HEALTHCARE AND HUMAN SERVICESS CLUSTER [STATE SUPPLY BY OCCUPATION]

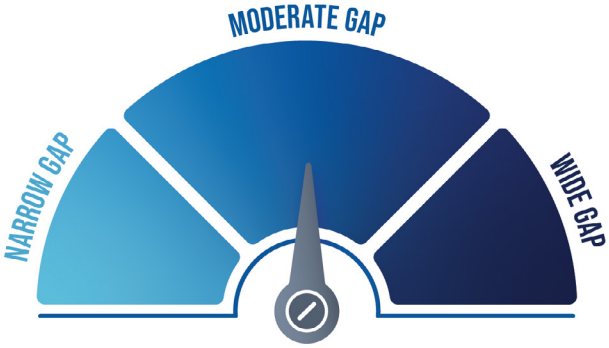
Rank	Demand		Supply	Supply Gap	Demand Supply Ratio	Occupation	SOC Code	Typical Entry-Level Education
1	5,800	- ÷	2,640	= 3,160	= 2.20	Registered Nurses	29-1141	Bachelor's Degree[2]
2	1,910	- ÷	150	= 1,760	= 12.73	Medical and Health Services Managers	11-9111	Bachelor's Degree
3	1,450	- ÷	90	= 1,360	= 16.11	Social and Human Service Assistants	21-1093	High School Diploma
4	1,100	- ÷	210	= 890	= 5.24	Pharmacy Technicians	29-2052	High School Diploma
5	960	- ÷	160	= 800	= 6.00	Radiologic Technologists and Technicians	29-2034	Some College
6	950	- ÷	170	= 780	= 5.59	Physical Therapists	29-1123	Graduate Degree
7	1,200	- ÷	440	= 760	= 2.73	Medical Secretaries and Administrative Assistants	43-6013	High School Diploma
8	1,250	- ÷	530	= 720	= 2.36	Licensed Practical and Licensed Vocational Nurses	29-2061	Some College
9	1,570	- ÷	850	= 720	= 1.85	Nursing Assistants	31-1131	Some College
10	1,140	- ÷	630	= 510	= 1.81	Medical Assistants	31-9092	Some College

[2] *Bachelor's degree is the typical entry-level education according to BLS, but associate level RN programs can also facilitate entry into this occupation.*

We can aggregate these data to look at the supply gap by education level. These data are summarized in **Exhibit 24**.

EXHIBIT 24: HEALTHCARE AND HUMAN SERVICES CLUSTER: SUPPLY GAP BY EDUCATION LEVEL





HOSPITALITY, EVENTS, AND TOURISM

The ***Hospitality, Events, and Tourism*** cluster encompasses a broad range of services and experiences related to food and beverage, lodging, travel, events, and conferences. This Cluster focuses on delivering quality customer service, memorable experiences, and seamless logistics to cater to the needs and preferences of guests, tourists, and event participants.

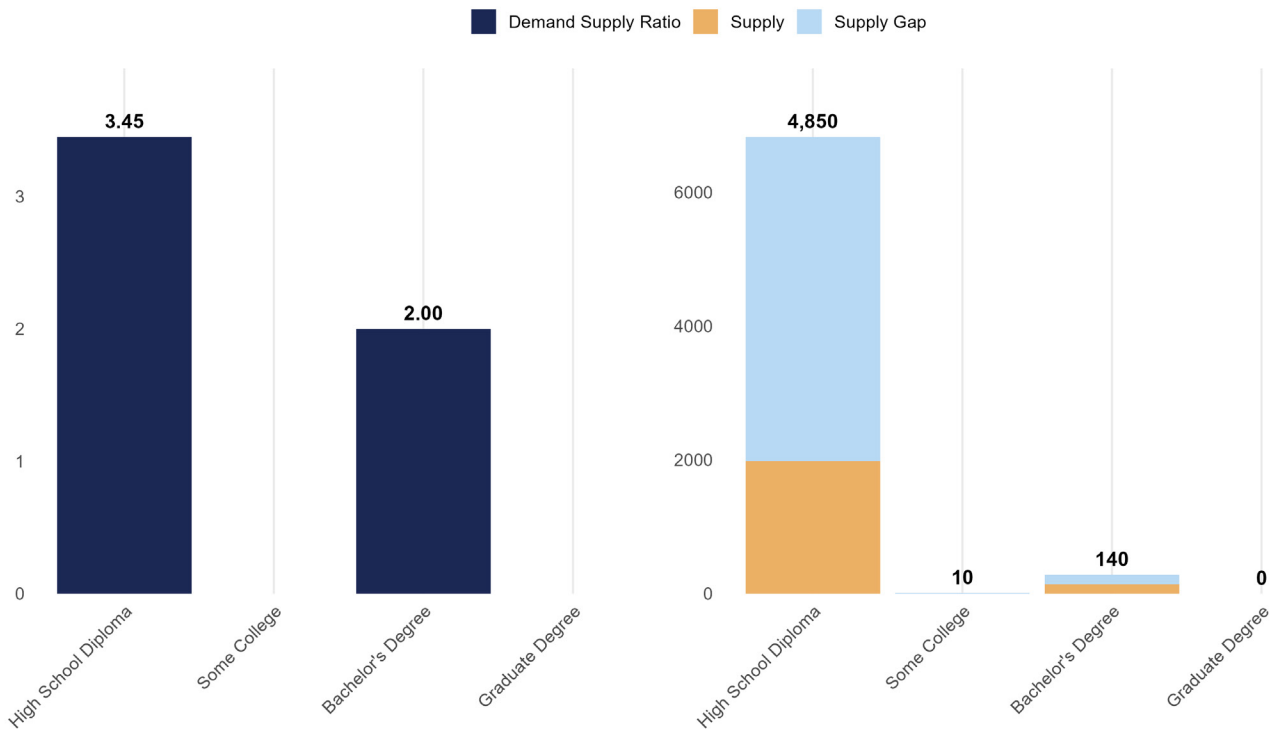
The ten occupations with the largest supply gaps in the Hospitality, Events, and Tourism cluster are shown in **Exhibit 25** below.

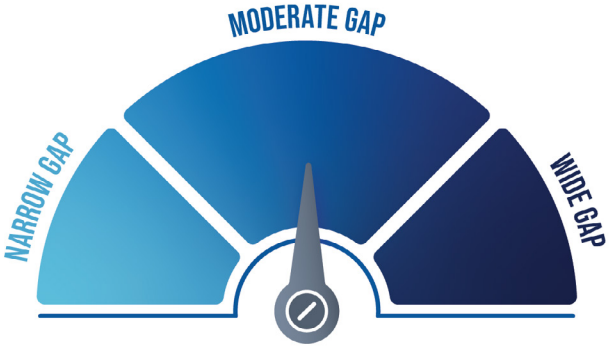
EXHIBIT 25: HOSPITALITY, EVENTS, AND TOURISM CLUSTER [STATE SUPPLY BY OCCUPATION]

Rank	Demand		Supply	Supply Gap	Demand Supply Ratio	Occupation	SOC Code	Typical Entry-Level Education
1	2,970	- ÷	410	= 2,560	= 7.24	First-Line Supervisors of Food Preparation and Serving Workers	35-1012	High School Diploma
2	830	- ÷	210	= 620	= 3.95	Food Service Managers	11-9051	High School Diploma
3	470	- ÷	30	= 440	= 15.67	First-Line Supervisors of Housekeeping and Janitorial Workers	37-1011	High School Diploma
4	610	- ÷	230	= 380	= 2.65	Hotel, Motel, and Resort Desk Clerks	43-4081	High School Diploma
5	800	- ÷	470	= 330	= 1.70	Receptionists and Information Clerks	43-4171	High School Diploma
6	150	- ÷	40	= 110	= 3.75	Tree Trimmers and Pruners	37-3013	High School Diploma
7	150	- ÷	50	= 100	= 3.00	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	37-1012	High School Diploma
8	100	- ÷	10	= 90	= 10.00	Lodging Managers	11-9081	High School Diploma
9	170	- ÷	80	= 90	= 2.12	Meeting, Convention, and Event Planners	13-1121	Bachelor's Degree
10	70	- ÷	10	= 60	= 7.00	Reservation and Transportation Ticket Agents and Travel Clerks	43-4181	High School Diploma

We can aggregate these data to look at the supply gap by education level. These data are summarized in **Exhibit 26**.

EXHIBIT 26: HOSPITALITY, EVENTS, AND TOURISM CLUSTER: SUPPLY GAP BY EDUCATION LEVEL





MANAGEMENT AND ENTREPRENEURSHIP

The ***Management and Entrepreneurship*** cluster involves skills and occupations that are essential across all industries, focusing on business administration, operations optimization, strategic planning, workforce management, and entrepreneurship. It merges key areas such as data management and analysis, human resources, general operations, administrative support, project management, and organizational leadership.

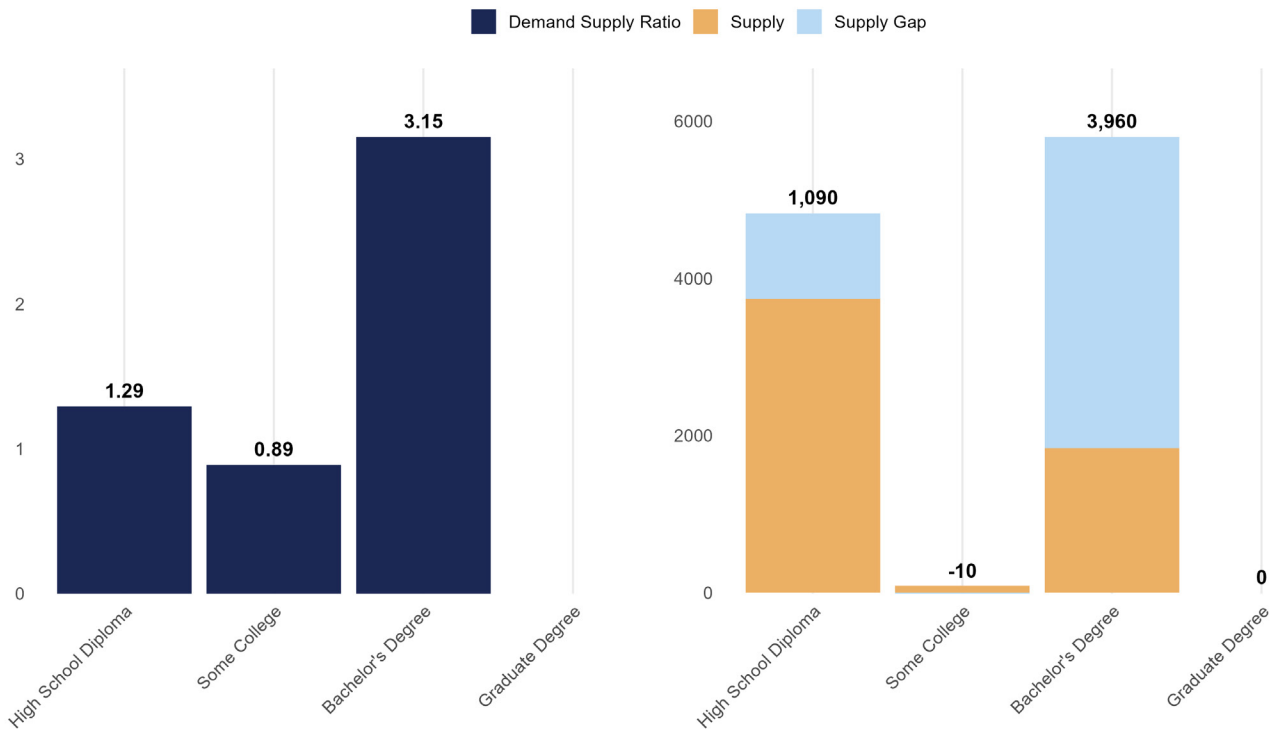
The ten occupations with the largest supply gaps in the Management and Entrepreneurship cluster are shown in **Exhibit 27** below.

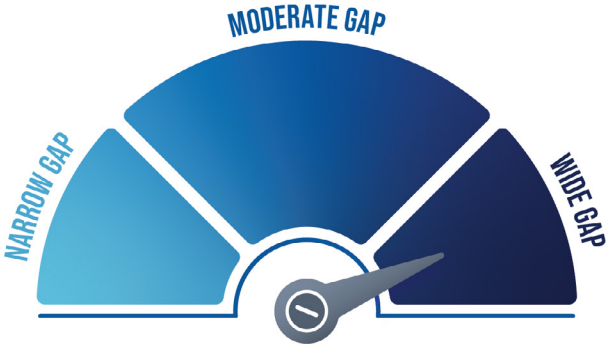
EXHIBIT 27: MANAGEMENT AND ENTREPRENEURSHIP CLUSTER [STATE SUPPLY BY OCCUPATION]

Rank	Demand		Supply	Supply Gap	Demand Supply Ratio	Occupation	SOC Code	Typical Entry-Level Education
1	1,870	- ÷	430	= 1,440	= 4.35	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	43-6014	High School Diploma
2	1,400	- ÷	120	= 1,280	= 11.67	First-Line Supervisors of Office and Administrative Support Workers	43-1011	High School Diploma
3	1,280	- ÷	230	= 1,050	= 5.57	Human Resources Specialists	13-1071	Bachelor's Degree
4	1,190	- ÷	170	= 1,020	= 7.00	Management Analysts	13-1111	Bachelor's Degree
5	1,540	- ÷	520	= 1,020	= 2.96	Business Operations Specialists, All Other	13-1199	Bachelor's Degree
6	430	- ÷	70	= 360	= 6.14	Training and Development Specialists	13-1151	Bachelor's Degree
7	390	- ÷	80	= 310	= 4.88	Public Relations Specialists	27-3031	Bachelor's Degree
8	430	- ÷	150	= 280	= 2.87	Managers, All Other	11-9199	Bachelor's Degree
9	310	- ÷	150	= 160	= 2.07	Operations Research Analysts	15-2031	Bachelor's Degree
10	300	- ÷	170	= 130	= 1.76	Executive Secretaries and Executive Administrative Assistants	43-6011	High School Diploma

We can aggregate these data to look at the supply gap by education level. These data are summarized in **Exhibit 28**.

EXHIBIT 28: MANAGEMENT AND ENTREPRENEURSHIP CLUSTER: SUPPLY GAP BY EDUCATION LEVEL





MARKETING AND SALES

The ***Marketing and Sales*** cluster focuses on promoting products, understanding consumer needs, engaging with communities, and driving sales. It integrates digital marketing, data analysis, brand promotion, customer relationship management, strategic communications, human-centered design, and retail strategies to build strong customer connections and support business growth.

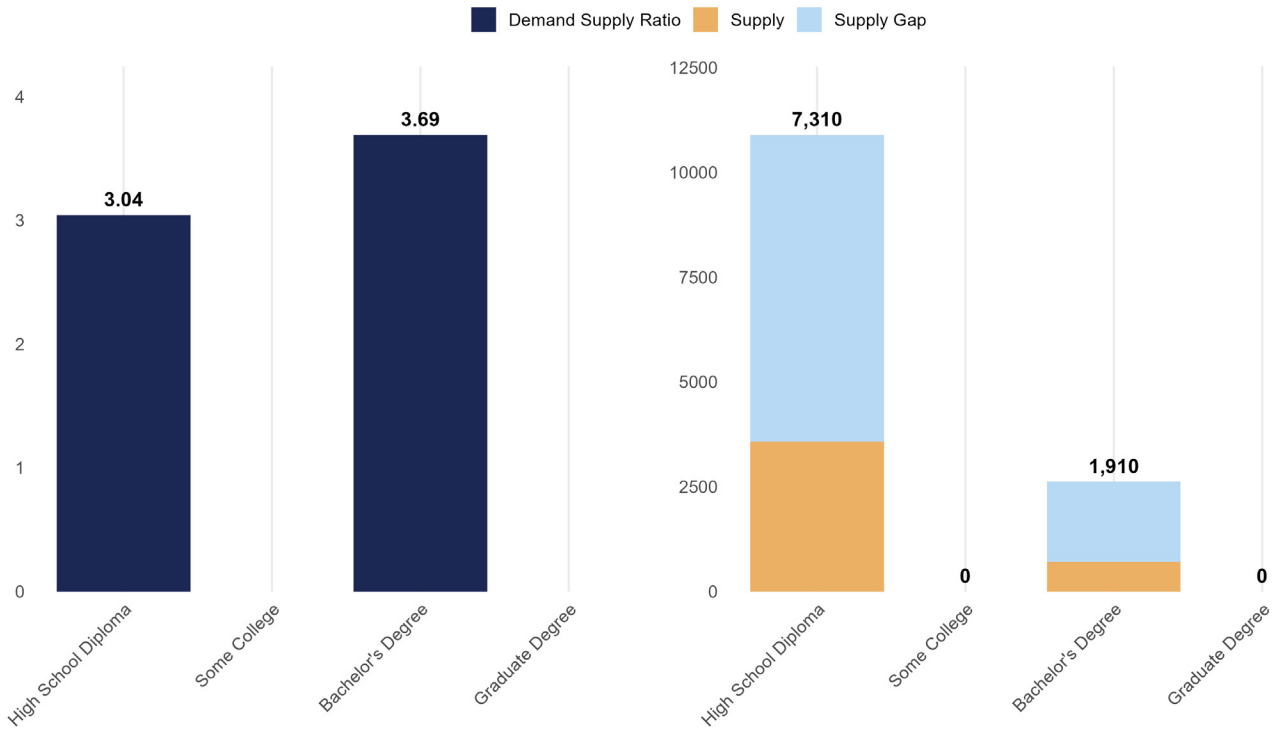
The ten occupations with the largest supply gaps in the Marketing and Sales cluster are shown in **Exhibit 29** below.

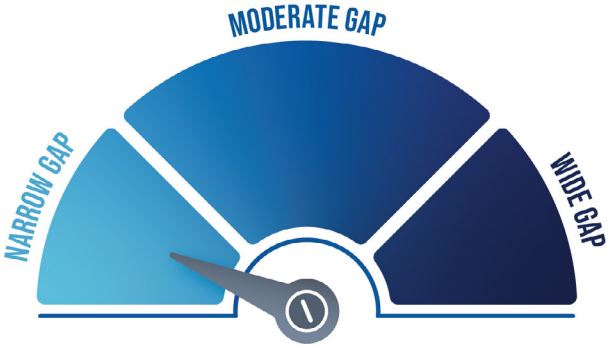
EXHIBIT 29: MARKETING AND SALES CLUSTER [STATE SUPPLY BY OCCUPATION]

Rank	Demand		Supply	Supply Gap	Demand Supply Ratio	Occupation	SOC Code	Typical Entry-Level Education
1	4,960	- ÷	320	= 4,640	= 15.50	First-Line Supervisors of Retail Sales Workers	41-1011	High School Diploma
2	2,140	- ÷	250	= 1,890	= 8.56	Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	41-3091	High School Diploma
3	2,920	- ÷	1,690	= 1,230	= 1.73	Customer Service Representatives	43-4051	High School Diploma
4	1,010	- ÷	210	= 800	= 4.81	Sales Managers	11-2022	Bachelor's Degree
5	790	- ÷	130	= 660	= 6.08	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	41-4011	Bachelor's Degree
6	660	- ÷	290	= 370	= 2.28	Market Research Analysts and Marketing Specialists	13-1161	Bachelor's Degree
7	360	- ÷	200	= 160	= 1.80	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	41-4012	High School Diploma
8	170	- ÷	30	= 140	= 5.67	First-Line Supervisors of Non-Retail Sales Workers	41-1012	High School Diploma
9	140	- ÷	30	= 110	= 4.67	Sales Engineers	41-9031	Bachelor's Degree
10	10	- ÷	10	= 0	= 1.00	Floral Designers	27-1023	High School Diploma

We can aggregate these data to look at the supply gap by education level. These data are summarized in **Exhibit 30**.

EXHIBIT 30: MARKETING AND SALES CLUSTER: SUPPLY GAP BY EDUCATION LEVEL





PUBLIC SERVICE AND SAFETY

The ***Public Service and Safety*** cluster encompasses roles in local, state, and federal government; legal and justice systems; security; and military operations, all aimed at promoting civic responsibility and ensuring the well-being, security, functionality, and resilience of communities, states, and countries.

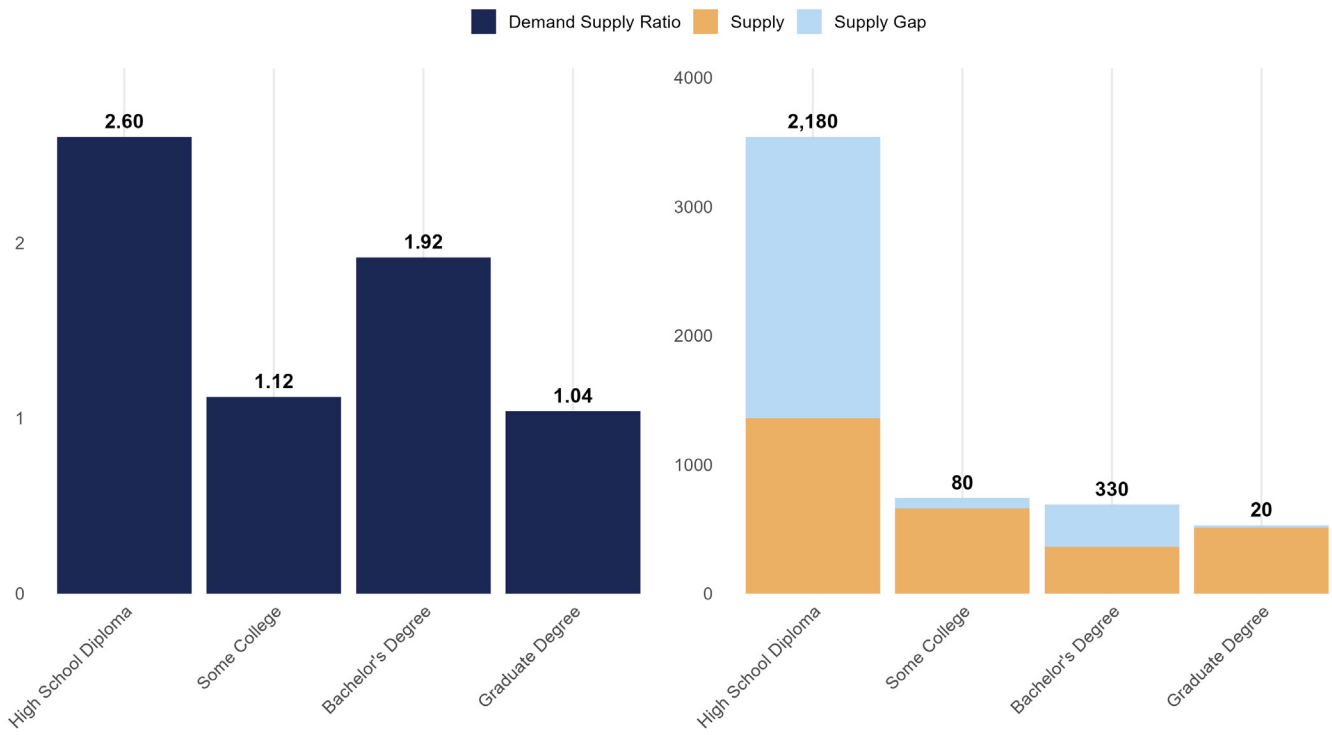
The ten occupations with the largest supply gaps in the Public Service and Safety cluster are shown in **Exhibit 31** below.

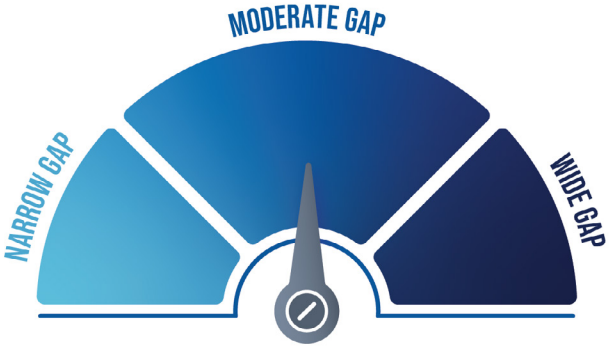
EXHIBIT 31: PUBLIC SERVICE AND SAFETY CLUSTER [STATE SUPPLY BY OCCUPATION]

Rank	Demand		Supply	Supply Gap	Demand Supply Ratio	Occupation	SOC Code	Typical Entry-Level Education
1	1,940	- ÷	290	= 1,650	= 6.69	Security Guards	33-9032	High School Diploma
2	270	- ÷	70	= 200	= 3.86	Compliance Officers	13-1041	Bachelor's Degree
3	460	- ÷	300	= 160	= 1.53	Lawyers	23-1011	Graduate Degree
4	180	- ÷	40	= 140	= 4.50	Dispatchers, Except Police, Fire, and Ambulance	43-5032	High School Diploma
5	130	- ÷	10	= 120	= 13.00	Environmental Science and Protection Technicians, Including Health	19-4042	Some College
6	410	- ÷	290	= 120	= 1.41	Paralegals and Legal Assistants	23-2011	Some College
7	140	- ÷	20	= 120	= 7.00	Detectives and Criminal Investigators	33-3021	High School Diploma
8	140	- ÷	40	= 100	= 3.50	Protective Service Workers, All Other	33-9099	High School Diploma
9	160	- ÷	80	= 80	= 2.00	Social and Community Service Managers	11-9151	Bachelor's Degree
10	70	- ÷	10	= 60	= 7.00	First-Line Supervisors of Protective Service Workers, All Other	33-1099	High School Diploma

We can aggregate these data to look at the supply gap by education level. These data are summarized in **Exhibit 32**.

EXHIBIT 32: PUBLIC SERVICE AND SAFETY CLUSTER: SUPPLY GAP BY EDUCATION LEVEL





SUPPLY CHAIN AND TRANSPORTATION

The ***Supply Chain and Transportation*** cluster encompasses the transfer, coordination, and management of goods from production to consumption, ensuring efficient movement across various modes of transportation including air, ground, and water, as well as maintenance of the respective transport modes.

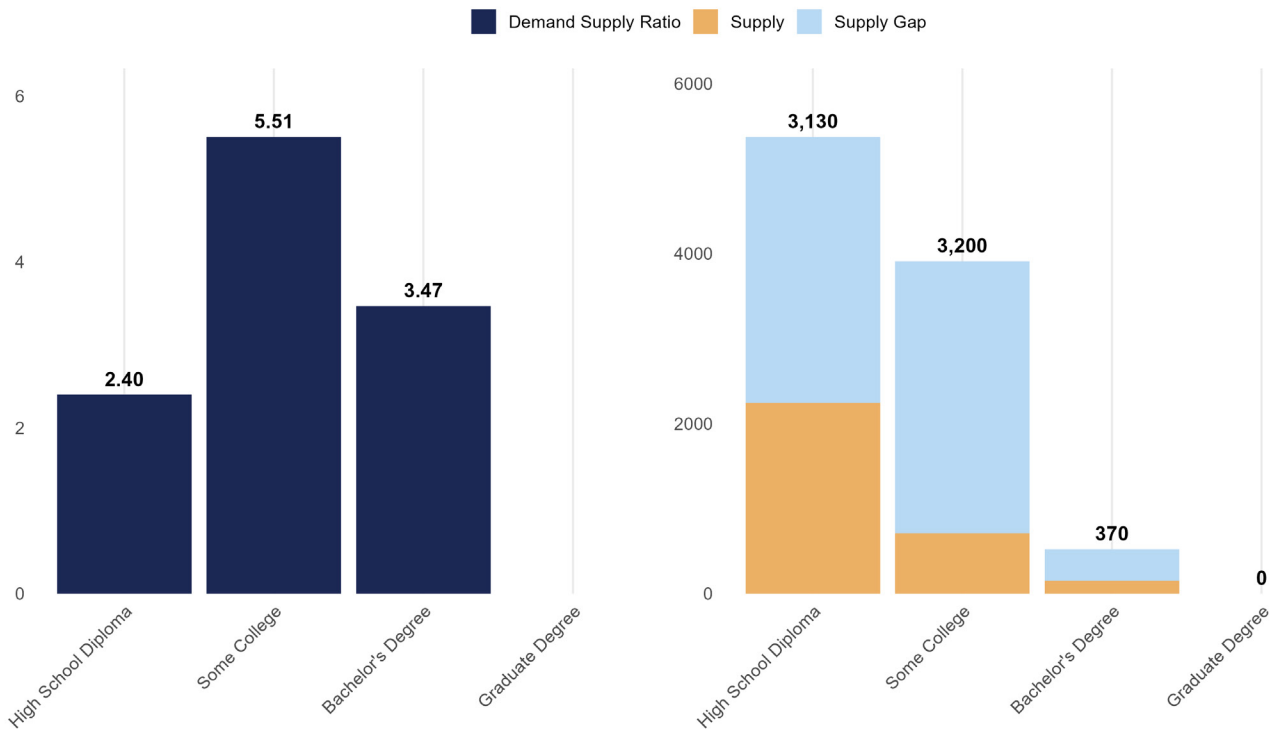
The ten occupations with the largest supply gaps in the Supply Chain and Transportation cluster are shown in **Exhibit 33** below.

EXHIBIT 33: SUPPLY CHAIN AND TRANSPORTATION CLUSTER [STATE SUPPLY BY OCCUPATION]

Rank	Demand		Supply	Supply Gap	Demand Supply Ratio	Occupation	SOC Code	Typical Entry-Level Education
1	2,600	-	180	= 2,420		Heavy and Tractor-Trailer Truck Drivers	53-3032	Some College
		÷			= 14.44			
2	1,250	-	260	= 990		Light Truck Drivers	53-3033	High School Diploma
		÷			= 4.81			
3	610	-	70	= 540		Bus and Truck Mechanics and Diesel Engine Specialists	49-3031	High School Diploma
		÷			= 8.71			
4	930	-	440	= 490		Automotive Service Technicians and Mechanics	49-3023	Some College
		÷			= 2.11			
5	710	-	260	= 450		Driver/Sales Workers	53-3031	High School Diploma
		÷			= 2.73			
6	460	-	100	= 360		Logisticians	13-1081	Bachelor's Degree
		÷			= 4.60			
7	400	-	90	= 310		Production, Planning, and Expediting Clerks	43-5061	High School Diploma
		÷			= 4.44			
8	270	-	40	= 230		First-Line Supervisors of Transportation and Material-Moving Workers, Except Aircraft Cargo Supervisors	53-1047	High School Diploma
		÷			= 6.75			
9	250	-	60	= 190		Automotive Body and Related Repairers	49-3021	High School Diploma
		÷			= 4.17			
10	200	-	30	= 170		Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	51-9124	High School Diploma
		÷			= 6.67			

We can aggregate these data to look at the supply gap by education level. These data are summarized in **Exhibit 34**.

EXHIBIT 34: SUPPLY CHAIN AND TRANSPORTATION CLUSTER: SUPPLY GAP BY EDUCATION LEVEL



CONCLUSION

In this report, we provided an overview of the magnitude of the supply gap in each career cluster by occupation and education. While this report is only one analytical perspective on the state's workforce, it may offer insights for students, career counselors, higher education administrators, and industry leaders.

Data-driven collaboration among policymakers, educators, employers, and other stakeholders to meet present and future demand will ensure the state's workforce remains responsive to evolving industry needs, advances in technology, and continued growth.

A technical appendix follows. If you have any questions about this report, please contact the Labor Market Information Division of the Department of Employment and Workforce at ***lmicustomerservice@dew.sc.gov***.

APPENDIX

DATA SOURCES AND METHODOLOGY

Supply

We estimate the supply of labor by drawing on data from the Department of Education (SCDE), the Department of Employment and Workforce (DEW), the Commission on Higher Education (CHE), the Education Oversight Committee (EOC), the American Community Survey 5-year Public Use Microdata Sample (ACS PUMS), and the federal Integrated Post-secondary Education Data System (IPEDS).

Using 2023 SCDE data on high school graduates matched to EOC data from the National Student Clearinghouse on post-secondary enrollments nationwide, we identify the subset of 2023 high school graduates who did not pursue any form of post-secondary education by the end of 2024. We merge this subset of high school graduates – about 36 percent of the total set of 2023 graduates – with DEW wage records from the period Q2 2024 through Q3 2025 to identify the occupations pursued by these graduates. To ensure validity, the set of available occupations to which the graduates could be matched was limited to valid 2018 Standard Occupational Classification (SOC) codes and those identified by the US Bureau of Labor Statistics (US BLS 2025) as not typically requiring post-secondary education for entry. We then deduplicate the matched data by graduate-occupation.

From these matched and deduplicated high school graduation and employment records, we draw the 2023 empirical probabilities of SOC-level occupation entry for SC high school graduates who do not pursue post-secondary education in the year following graduation as the number of graduates observed working in each SOC code divided by the total number of graduates. We apply these probabilities to the ***40 percent*** of the 2024 graduating class of 51,570 students likely to enter the labor market directly in the year following high school graduation. Finally, we adjust the estimated labor supply of high school graduates by a SOC-level migration adjustment factor[3], produced by identifying the proportion of workers in each SOC code who have migrated out of or into the state in the ACS PUMS 2019-2023 five-year estimates.

We follow a similar procedure to estimate the supply of post-secondary degree awarded labor in 2024. We begin with the set of 2023 post-secondary graduates made available by CHE, where we can observe the graduates' degree level and field of study based on a six-digit Classification of Institutional Programs (CIP) code. We retain only the highest level of degree obtained by an individual in 2023, breaking any ties randomly, and then match the set of 2023 graduates to DEW wage records covering the period Q2 2024 through Q3 2025 to identify the occupations pursued by these degree holders. Again, we limit the set of available occupations to which each degree holder could be matched to valid 2018 SOC codes. We then deduplicate the matched data by graduate-degree-occupation.

From these matched and deduplicated post-secondary graduation and employment records, we draw the 2023 empirical probabilities of CIP-to-SOC-level occupation entry[4] as the number of graduates with a given CIP degree observed working in each SOC divided by the total number of graduates with that CIP degree. We then apply these probabilities to the set of 2024 SC graduates in the IPEDS data, by CIP code and degree level, to estimate the supply of newly credentialed labor, by occupation, available in 2024. Finally, we adjust the estimated labor supply of post-secondary graduates by the SOC-level migration adjustment factor.

[3] *For each SOC code, S, we adjust the labor supply by the adjustment factor, $MigrAdj_S$, the difference between the survey estimated in and out migration from the state, as $MigrAdj_S = 1 + P(In\ Migration|S) - P(Out\ Migration|S)$ where P(In Migration|S) is the proportion of survey weighted ACS PUMS respondents within each SOC level occupation who migrated into the state and P(Out Migration|S) is the proportion of survey weighted ACS PUMS respondents within each SOC level occupation who migrated out of the state.*

[4] *The CIP-to-SOC probabilities were produced and applied at each degree level using only the first two digits of the CIP code – a more general level of degree study than the six-digit CIP code.*

Demand

We draw on four different sources of data to estimate the demand for labor by SOC code: 2024-2034 long term occupation projections by DEW with data on new job postings from the National Labor Exchange (NLx Research Hub 2025) and JobsEQ (Chmura 2025). We additionally use industry-level turnover rates from the US Census Bureau (2025b) to adjust job postings data.

Projections data offer a prediction of job openings by occupation over the decade 2024 to 2034 based on economic trends in the present and recent past. Data for South Carolina are produced by the Labor Market Information Division at DEW in cooperation with the U.S. Department of Labor (PMP 2025a). For this analysis we use the projected average annual openings, an estimate based on the expected increase or decrease in jobs in an occupation as well as the number of openings due to separations – namely, those leaving the labor force or changing occupation. This definition of average annual openings is fully aligned with our definition of annual new demand, so we can use the estimates directly without adjusting for turnover rates.

However, because these estimates are annualized projections of a decade's worth of job creation and job openings due to separations, they do not reflect annual variation in new job openings. For this reason, we augment these estimates with highly variable data from NLx and JobsEQ to get a more up to date picture of new annual demand.

Each of the job postings series has its own advantages and limitations, some of which are observable and some of which are not. For example, in comparing NLx and JobsEQ data, we can see that JobsEQ has a greater number of job postings overall and appears to have much higher coverage than NLx of job postings in education and health care fields, whereas NLx has much higher coverage than JobsEQ in computer technology fields. However, we are unable to discern whether the differences in the number of postings are due to better filtering of repeat and ghost postings or due to failure to scrape key job posting sites for a given occupational subfield.

It is also important to note that a job posting is not necessarily equivalent to a job opening. To ensure that job postings data reflect our definition of new annual demand, we remove the proportion of postings that are likely due to turnover within an occupation before combining these data series with the projections data. We do this by applying quarterly NAICS-level turnover rates, averaged across Q3 2023 through Q2 2024, from the US Census Bureau (2025b) to each job posting series.

Given the limitations of these three data series, we treat the data on job postings and job projections as three different windows that let us look, with some unknown level of distortion, at the same scene – the number of annual new job openings per SOC code. Under the assumption that where different data series agree, we have a meaningful insight into the number of new job openings, we apply latent factor analysis[5] to these data to produce an estimate of labor demand based on the common variation among the series. This estimate of demand is used as an input into the supply gap.

Supply Gap

To produce the supply gap, we append the high school and post-secondary graduate labor supply estimates and then sum the quantity of available labor within each occupation regardless of education. We merge labor supply onto labor demand by SOC code, then apply BLS criteria (US BLS 2025) on work experience to filter our data such that we are only analyzing data for entry level occupations, those with less than five years of experience required. We additionally use BLS data (US BLS 2025) on typical education level needed for occupation entry to sort each occupation into requiring high school or post-secondary degrees. Finally, the supply gap is produced by subtracting estimated labor supply from estimated labor demand within each occupation.

[5] *We assume each data series, X_{ji}, where j = NLx, JobsEQ, Projections, and i indexes each SOC code, is a noisy measure of the latent true labor demand, θ_i, of the form $X_{ji}=\lambda_j\theta_i+\epsilon_{ji}$. We estimate $\hat{\theta}_i$ as a function of the latent factor, F, of all three data series, $\hat{\theta}_i=b_0+b_1 F_i$ using maximum likelihood factor analysis.*

Note that both labor supply and labor demand are estimates, which means they are generated with an amount of uncertainty. So that the estimates are not communicated with spurious precision, we round supply and demand estimates to the nearest ten before computing the supply gap.

Supply Gap Meter

A supply gap meter is provided for each career cluster in the Supply Gap Overview and Report. The supply gap meter is based on a standardized comparison across clusters that is composed of the supply gap and the demand supply ratio metrics. To produce this standardized measure, we begin by calculating the z-score of each of the supply gap and the demand supply ratio for each career cluster. The z-score is calculated by subtracting the mean across all clusters within a metric from an individual cluster value and dividing that difference by the standard deviation. A z-score of one indicates a cluster value that is one standard deviation above the metric's mean; a z-score of negative one indicates a cluster value that is one standard deviation below the metric's mean. We then average the supply gap and demand/supply ratio z-scores within each career cluster. Finally, we assigned average z-scores above 0.5 to the wide meter rating, below -0.5 to the narrow rating, and those between 0.5 and -0.5 to the moderate rating.

APPENDIX EXHIBIT 2

New Annual Demand Education Categories	O*NET Data Source Categories
High School Diploma	› Less than a High School Diploma › High School Diploma — or the equivalent
Some College	› Post-secondary Certificate › Associate's Degree (sic)
Bachelor's Degree	› Bachelor's Degree › Post-Baccalaureate Certificate
Graduate Degree	› Master's Degree › Post-Master's Certificate › First Professional Degree › Doctoral Degree › Post-Doctoral Training

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