



Occupation Report

Welding

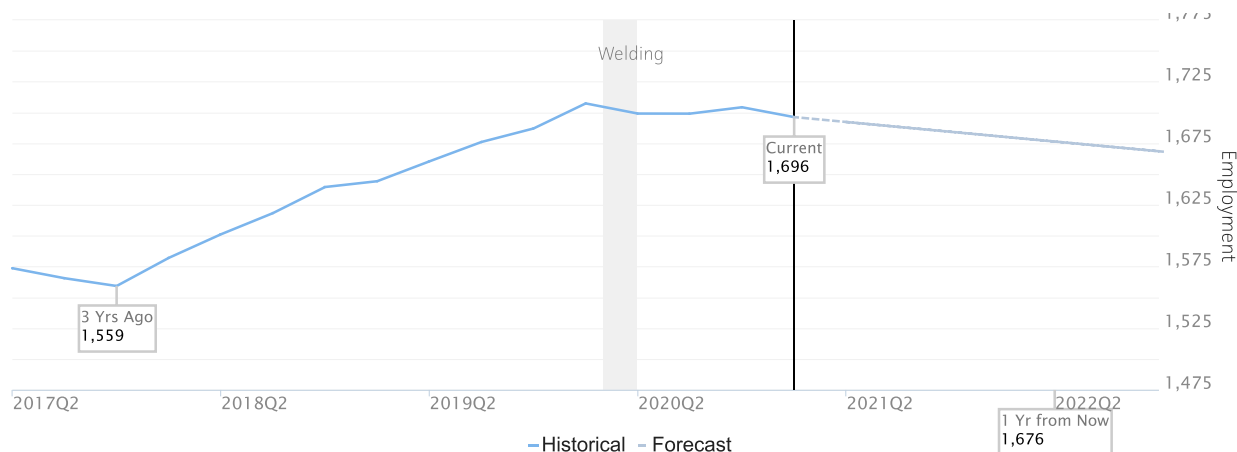
Florence, SC MSA



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Occupation Snapshot

6-Digit Occupation	Empl	Avg Mean Wages	LQ	3-Year Empl Change	Annual Demand	Forecast Ann Growth
First-Line Supervisors of Production and Operating Workers	501	\$83,500	1.38	16	46	-0.8%
Inspectors, Testers, Sorters, Samplers, and Weighers	420	\$41,000	1.27	67	38	-2.5%
Welders, Cutters, Solderers, and Brazers	376	\$46,500	1.52	-17	40	-0.3%
Plumbers, Pipefitters, and Steamfitters	278	\$44,400	1.01	61	31	0.1%
Structural Metal Fabricators and Fitters	55	\$40,200	1.33	-9	4	-2.2%
Structural Iron and Steel Workers	23	\$45,500	0.54	-4	3	0.1%
Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	15	\$42,200	0.71	-2	1	-1.0%
Plating Machine Setters, Operators, and Tenders, Metal and Plastic	10	\$39,900	0.43	1	1	-1.3%
Boilermakers	7	\$61,100	0.84	-1	1	-0.2%
Commercial Divers	7	\$37,300	2.93	3	1	0.1%
Remaining Component Occupations	4	\$51,800	0.93	0	0	-1.9%
Welding	1,696	\$55,500	1.25	114	165	-1.0%



- 💡 “Annual Demand” is the projected need for new entrants into an occupation. New entrants are needed due to expected growth and to replace workers who left the occupation due to factors such as retirement or switching careers.
- 💡 “Forecast Ann Growth” is the expected change in jobs due to national, long-term trend projections (per the BLS) as well as local factors such as industry mix and population growth (as computed and modeled by Chmura).

Employment by Industry

Industry Title	% of Occ Empl	Empl	10-Year Separations	10-Year Empl Growth	10-Year Total Demand
Building Equipment Contractors	14.3%	243	271	5	276
Fruit and Vegetable Preserving and Specialty Food Manufacturing	9.7%	165	168	-32	136
Other Transportation Equipment Manufacturing	7.3%	124	126	-21	105
Converted Paper Product Manufacturing	6.8%	116	117	-18	99
Architectural and Structural Metals Manufacturing	6.2%	105	112	-3	109
Other General Purpose Machinery Manufacturing	5.7%	97	105	-4	100
Employment Services	3.9%	66	73	-8	65
Iron and Steel Mills and Ferroalloy Manufacturing	2.8%	47	48	-7	41
Other Fabricated Metal Product Manufacturing	2.8%	47	48	-7	42
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	2.5%	43	48	1	49
Electric Power Generation, Transmission and Distribution	2.1%	35	30	-13	16
Motor Vehicle Body and Trailer Manufacturing	2.1%	35	37	-2	35
Ship and Boat Building	1.9%	32	32	-6	26
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	1.7%	29	33	0	33
Pulp, Paper, and Paperboard Mills	1.7%	29	29	-4	25
Industrial Machinery Manufacturing	1.4%	23	25	-1	24
Other Heavy and Civil Engineering Construction	1.3%	22	24	0	24
Electrical Equipment Manufacturing	1.2%	20	21	-2	19
Sawmills and Wood Preservation	1.1%	19	19	-3	16
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	1.0%	17	20	1	21
All Others	22.6%	383	410	-29	382

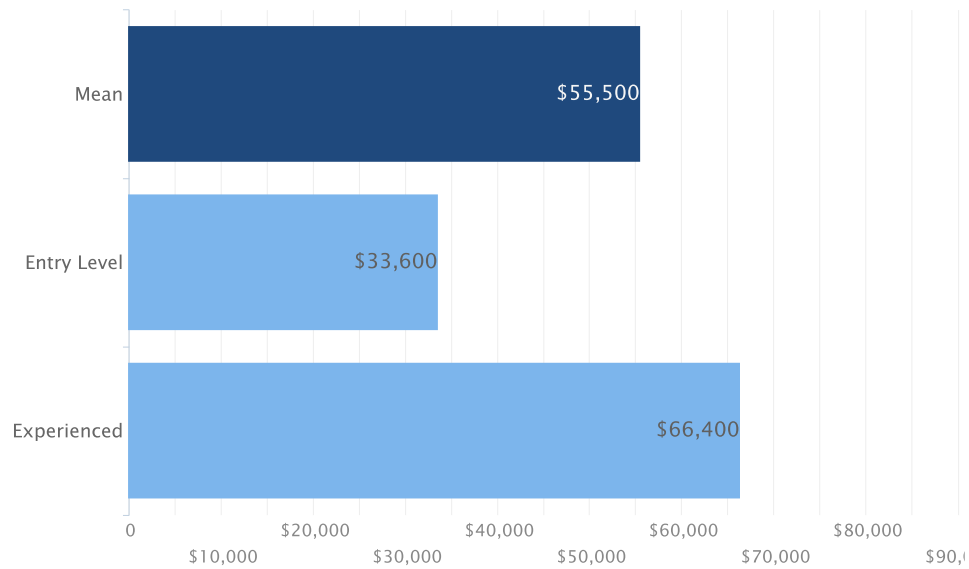


The industry distribution indicates the industries in which workers in the occupation(s) are primarily found.



“10-Year Empl Growth” may show industries with positive as well as negative growth; this would indicate that the occupation(s) being examined are expected to expand within some industries while contracting in others.

Wages

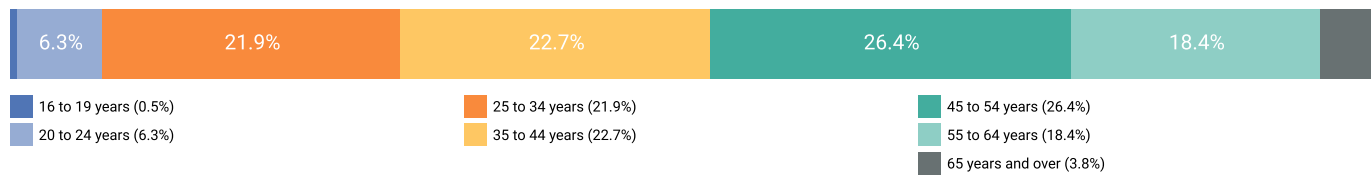


Occupation	Mean	Median	Entry Level	Experienced
Welding	\$55,500	\$51,000	\$33,600	\$66,400

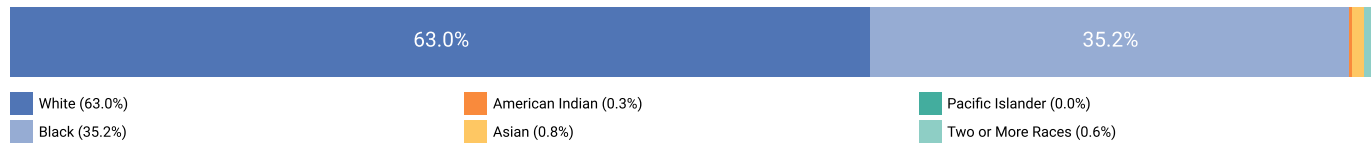
- Occupation wages here are based on data from the Bureau of Labor Statistics, OES program, and imputed by Chmura where necessary.
- When this report is run for an occupation group, the table above displays up to the top ten detailed occupations which have the highest average wages within the occupation group.

Occupation Demographics

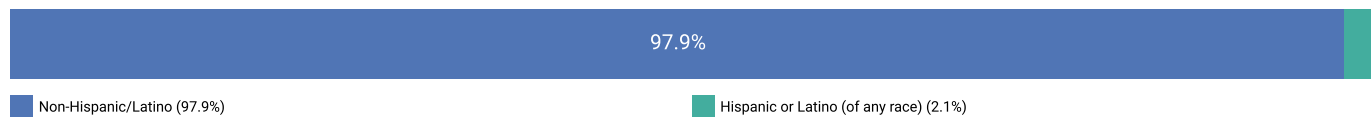
Age



Race



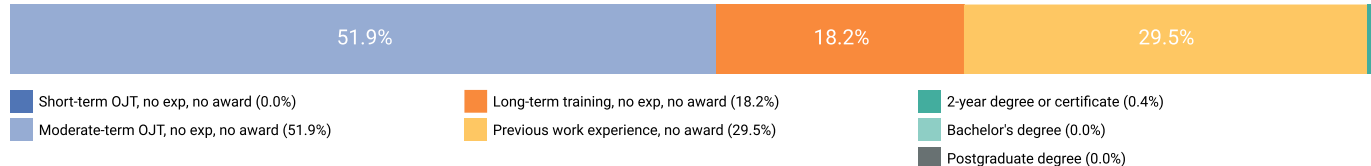
Ethnicity



Gender

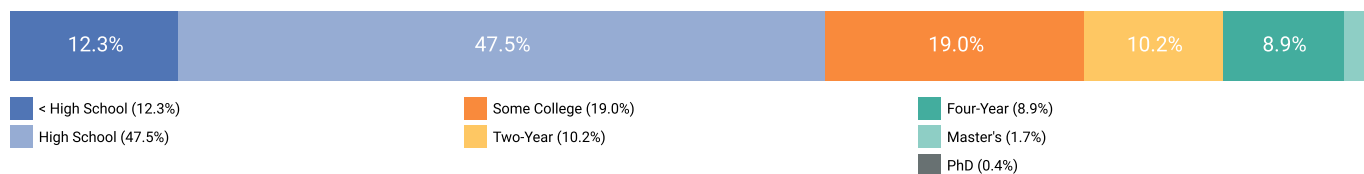


Education and Training Requirements



Education Profile

Educational Attainment



Occupation	Typical Entry-Level Education	Previous Work Experience	Typical On-the-Job Training
First-Line Supervisors of Production and Operating Workers	High school diploma or equivalent	Less than 5 years	None
Inspectors, Testers, Sorters, Samplers, and Weighers	High school diploma or equivalent	None	Moderate-term on-the-job training
Welders, Cutters, Solderers, and Brazers	High school diploma or equivalent	None	Moderate-term on-the-job training
Plumbers, Pipefitters, and Steamfitters	High school diploma or equivalent	None	Apprenticeship
Structural Metal Fabricators and Fitters	High school diploma or equivalent	None	Moderate-term on-the-job training
Structural Iron and Steel Workers	High school diploma or equivalent	None	Apprenticeship
Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	High school diploma or equivalent	None	Moderate-term on-the-job training
Plating Machine Setters, Operators, and Tenders, Metal and Plastic	High school diploma or equivalent	None	Moderate-term on-the-job training
Commercial Divers	Postsecondary non-degree award	None	Moderate-term on-the-job training
Boilermakers	High school diploma or equivalent	None	Apprenticeship

 The stacked bar chart here illustrates the estimated mix of educational attainment of the workers in this occupation(s) in aggregate.

 The table indicates typical education and training requirements rather than the mix of attainment of workers in such positions.

Postsecondary Programs Linked to Welding

Program	Awards
Florence-Darlington Technical College	
Machine Tool Technology/Machinist	60
Welding Technology/Welder	53

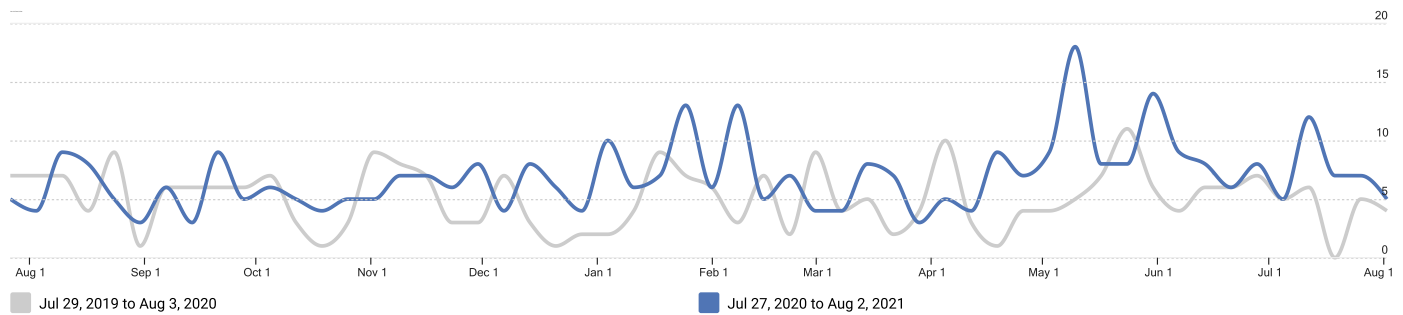


The number of graduates from postsecondary programs in the region identifies the pipeline of future workers as well as the training capacity to support industry demand.



Among postsecondary programs at schools located in the Florence, SC MSA, the sampling above identifies those most linked to Remote Jobs. For a complete list see JobsEQ®, <http://www.chmuraecon.com/jobseq>

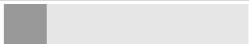
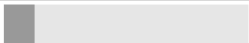
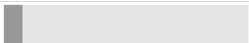
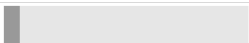
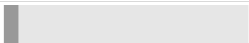
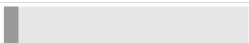
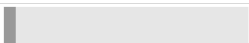
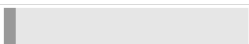
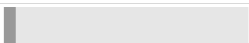
RTI (Job Postings)



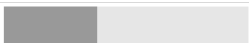
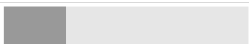
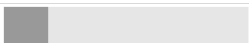
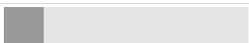
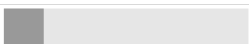
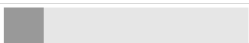
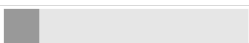
💡 Online job ads are a timely indicator of local demand. Occupation assignments shown below are made by Chmura based upon analysis of job titles and job descriptions. Top employers and listed job requirements are shown on the following pages.

Occupations		Total Ads	
SOC	Occupation		
51- 1011.00	First-Line Supervisors of Production and Operating Workers	306	
51- 4121.00	Welders, Cutters, Solderers, and Brazers	37	
51- 9061.00	Inspectors, Testers, Sorters, Samplers, and Weighers	35	
47- 2152.00	Plumbers, Pipefitters, and Steamfitters	13	
51- 4122.00	Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	7	
49- 9092.00	Commercial Divers	2	
47- 2221.00	Structural Iron and Steel Workers	1	

Locations

Location	Total Ads	
Florence, South Carolina	182	
Florence, SC 29501	32	
Timmonsville, South Carolina	23	
Darlington, South Carolina	14	
Darlington, SC 29532	12	
Florence, SC 29506	11	
Hartsville, South Carolina	11	
Florence, SC 29503	9	
Florence, South Carolina 29501	9	
Hartsville, SC 29550	9	

Employers

Employer Name	Total Ads	
Niagara Bottling	55	
Olsten	25	
BlueCross BlueShield of South Carolina	23	
Adecco: USA	21	
Clarios	14	
kelly	10	
Butler America	9	
PDS Tech Inc	9	
Stratosphere Quality	9	
Thermo Fisher Scientific	8	

Hard Skills

Skill Name	Total Ads	
Manufacturing	129	
Microsoft Office	64	
Microsoft Excel	63	
Welding	37	
Microsoft Outlook	36	
Metal Inert Gas Welding (MIG welding)	26	
Microsoft Word	26	
Ability to Lift 41-50 lbs.	21	
Lean Manufacturing	20	
Auditing	19	

Job Titles

Job Title	Total Ads	
Production Supervisor	20	
Quality Assurance Analyst - PGBA	11	
Welder	8	
Assembler - 2nd Shift	7	
Assembler 3	7	
MIG Welder	7	
Production Supervisor - 2nd Shift	7	
Production Tech	7	
Textile Production	7	
Quality Inspector	6	

Education Levels

Minimum Education Level	Total Ads	
High school diploma or equivalent	202	
Bachelor's degree	55	
Associate's degree	24	
Unspecified/other	120	

Programs

Program Name	Total Ads	
Engineering	19	
Business	15	
Chemistry	8	
Operations	7	
Electronic Technology	6	
Business Administration	5	
Microbiology	4	
Chemical Engineering	3	
Technical	3	
Accounting	2	

Top Skill and Certification Gaps

Top 10 Skill Gaps in Florence, SC MSA

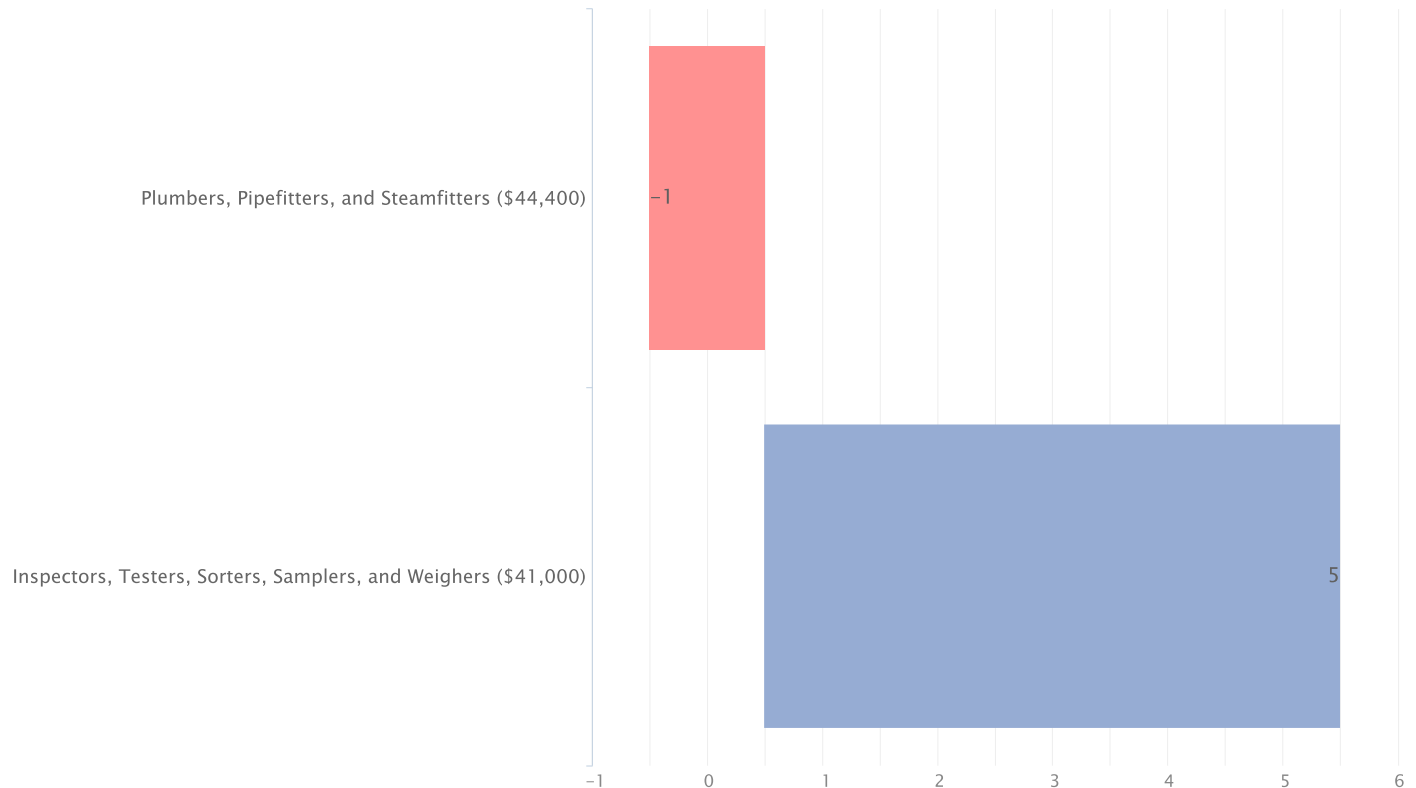
Name	Candidates	Openings	Gap
Soldering	1	14	-14
Manufacturing	18	30	-12
Welding	33	43	-10
5S	1	11	-10
Plumbing	14	20	-6
Microsoft Outlook	4	10	-6
Threaders	0	4	-4
Masonry	0	4	-4
Spanish	1	4	-3
Metal Inert Gas Welding (MIG welding)	23	26	-3

Top 10 Certification Gaps in Florence, SC MSA

Name	Candidates	Openings	Gap
Certified Welder	2	6	-3
Certified Quality Engineer (CQE)	0	3	-3
Certified Quality Auditor (CQA)	0	3	-3
Medical Gas Installer	0	2	-2
Certified Associate Welding Inspector (CAWI)	0	1	-1
Commercial Driver's License (CDL)	0	2	-1
OSHA 10	0	2	-1
American Welding Society Certification (AWS Certification)	0	1	-1
Certified Welding Inspector (CWI)	1	1	-1
API 510 Pressure Vessels Inspector Certification	1	0	1

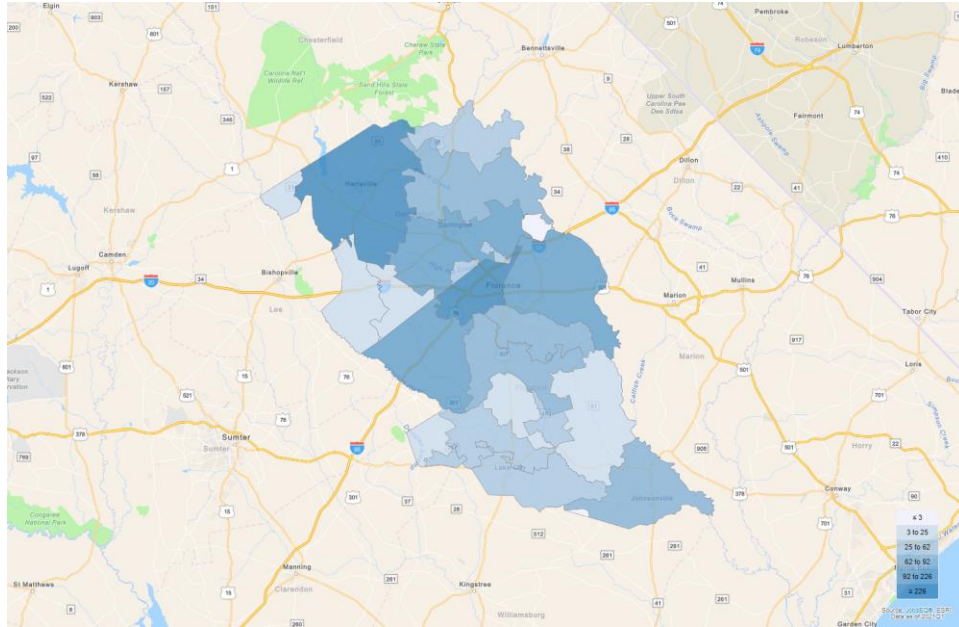
 Skill and certifications gaps can help inform employee development programs, as well as provide a comparison of the needs of regional employers to the supply.

Occupation Gaps



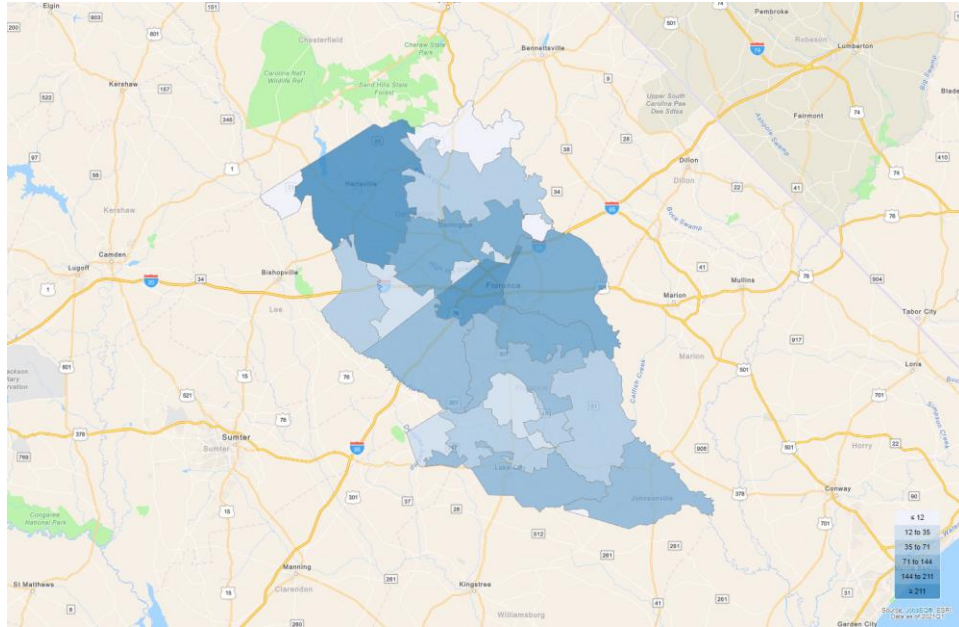
- 💡 The above are the potential average annual gaps over 10 years. Many variables go into this analysis, but at its core it is based on a forecast comparing occupation demand growth to the local population growth and the projected educational attainment of those residents. When an area, for example, has an occupation expected to grow quickly but the educational requirement for the occupation does not match well with the educational attainment of its residents, there is a high potential for an occupation shortfall in the region. Alternatively, slow-growing or contracting occupations often represent potential supply surpluses.
- 💡 The potential supply shortfall is an underlying force that the market needs to resolve one way or another, such as by employers recruiting from further distances for these occupations, wages going up to attract more candidates, and/or increased demand and wages enticing more local residents to get training for these occupations. While this an important analysis for determining local occupation needs, the occupation gap should be considered along with other regional data including growth and separation forecasts, unemployment rates, wage trends, and award and skill gap analyses.

Geographic Distribution



Top ZCTAs by Place of Work for Welding, 2021Q1

Region	Employment
ZCTA 29501 (Florence County, SC portion)	520
ZCTA 29550 (Darlington County, SC portion)	226
ZCTA 29506 (Florence County, SC portion)	188
ZCTA 29161 (Florence County, SC portion)	172
ZCTA 29532 (Darlington County, SC portion)	92
ZCTA 29541	87
ZCTA 29505	78
ZCTA 29555 (Florence County, SC portion)	68
ZCTA 29540	63
ZCTA 29501 (Darlington County, SC portion)	58

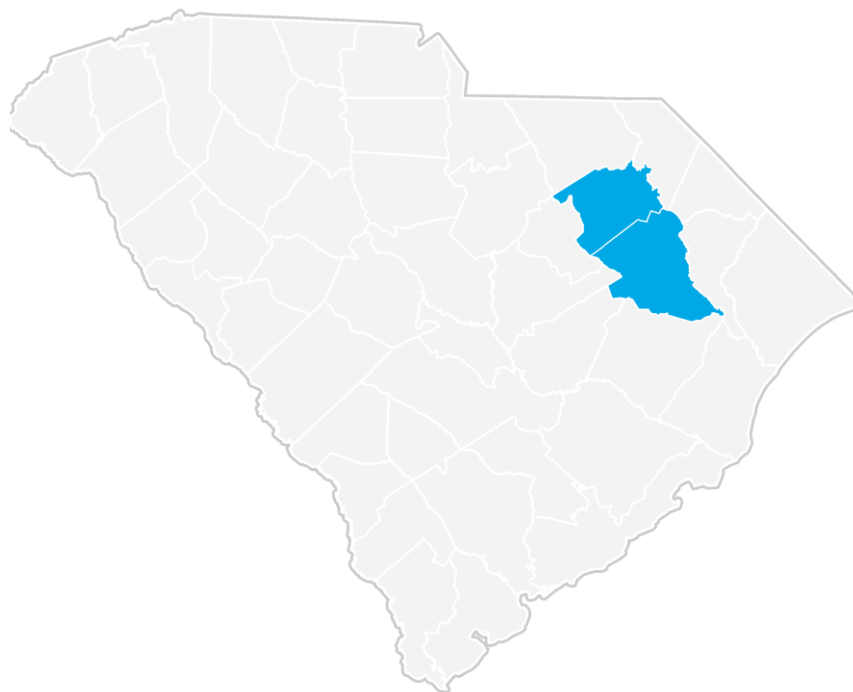


Top ZCTAs by Place of Residence for Welding, 2021Q1

Region	Employment
ZCTA 29550 (Darlington County, SC portion)	291
ZCTA 29501 (Florence County, SC portion)	211
ZCTA 29532 (Darlington County, SC portion)	200
ZCTA 29506 (Florence County, SC portion)	175
ZCTA 29505	144
ZCTA 29161 (Florence County, SC portion)	116
ZCTA 29541	91
ZCTA 29560 (Florence County, SC portion)	86
ZCTA 29555 (Florence County, SC portion)	71
ZCTA 29583	63

💡 “Place of work” employment is based upon the location of employers for these workers. “Place of residence” data refers to the home locations of the workforce, which is typically the preferred data set to use when calculating labor availability within a drive-time or radius of a potential worksite.

Florence, SC MSA Regional Map



Region Definition

Florence, SC MSA is defined as the following counties:

Darlington County, South Carolina

Florence County, South Carolina

Data Notes

- Occupation employment by default indicates employment by place of work. Occupation employment is as of 2021Q1 and is based on industry employment and local staffing patterns calculated by Chmura and utilizing BLS OES data. Employment forecasts are modeled by Chmura and are consistent with BLS national-level 10-year forecasts. Occupation wages (mean, median, and percentiles) are derived from BLS OES data and are as of 2020 and represent the average for all Covered Employment. Entry-level and experienced wages are derived from these source data, computed by Chmura.
- Industry employment is as of 2021Q1 and is based upon BLS QCEW data, imputed by Chmura where necessary, and supplemented by additional sources including Census ZBP data.
- Education and training requirements are from the BLS. Educational attainment mix and other occupation demographics data are modeled by Chmura for 2021Q1 using regional occupation employment from JobsEQ, ZCTA-level demographics data from the Census Bureau, and national occupation-demographics patterns from the BLS.
- Postsecondary awards are per the NCES and are for the 2018-2019 academic year. Any programs shown are linked with the occupation(s) being analyzed via the program-occupation crosswalk, which may not be comprehensive. Any programs shown reflect only data reported to the NCES; reporting is required of all Title IV schools. Training providers that do not report data to the NCES are not reflected.
- Job ads data are online job posts from the Real-Time Intelligence (RTI) data set, produced wholly by Chmura and gleaned from over 40,000 websites. Data reflect ads active during the last twelve month period ending 08/12/2021 and advertised for any Zip Code Tabulation Area in or intersecting with the region for which this report was produced. Historical ad volume is revised as additional data are made available and processed. Since many extraneous factors can affect short-term volume of online job postings, time-series data can be volatile and should be used with caution. All ad counts represent deduplicated figures.
- For skill and certification gaps, openings and candidates are based upon regional occupation demand (growth plus separations) and the percent of skill demand and supply. Skill demand mix data are per a one-year sample of RTI data; skill supply data are estimated using a five-year sample of resumes data; both data sets compiled as of January 2021. Data may be based, at least in part, on data from broader geographies; see the Skill Gaps analytic export for more details.
- Occupation gaps are modeled by Chmura, indicating long-term potential supply and demand mismatches in a region due, in part, to job demand and labor pool dynamics, including educational attainment and projected growth.
- Occupation employment by place of residence is as of 2021Q1 and modeled by Chmura based upon occupation employment by place of work and commuting patterns. Commuting patterns are derived from source data from the Census Bureau, occupation-specific commuting tendencies, and updated to reflect more recent population and employment estimates.
- Figures may not sum due to rounding.

FAQ

What is (LQ) location quotient?

Location quotient is a measurement of concentration in comparison to the nation. An LQ of 1.00 indicates a region has the same concentration of an industry (or occupation) as the nation. An LQ of 2.00 would mean the region has twice the expected employment compared to the nation and an LQ of 0.50 would mean the region has half the expected employment in comparison to the nation.

What is annual demand?

Annual demand is a of the sum of the annual projected growth demand and separation demand. Separation demand is the number of jobs required due to separations—labor force exits (including retirements) and turnover resulting from workers moving from one occupation into another. Note that separation demand does not include all turnover—it does not include when workers stay in the same occupation but switch employers. Growth demand is the increase or decrease of jobs expected due to expansion or contraction of the overall number of jobs.