



### Why Greenville, North Carolina?

- 6,000+ manufacturing jobs in Pitt County
- 65,000+ jobs in eastern North Carolina
- Highly concentrated manufacturing region
- Diverse manufacturing base
- Labor costs below national average
- Access to manufacturing workforce

### Advanced Manufacturing Targets:

- Chemicals & Plastics
- Machinery & Metals
- Wood & Paper Products
- Marine-Related

### Critical Occupations:

- Assemblers and fabricators
- Metal workers
- Plastic workers
- Plant and system operators
- Material movers
- Equipment mechanics
- Manufacturing sales reps

### Key Site Selection Considerations:

- Manufacturing labor availability
- Transportation networks
- Proximity to markets
- Existing industrial facilities or large shovel-ready sites
- High-capacity power/electric
- High-capacity water for certain industries



# Advanced Manufacturing

TARGETED INDUSTRY PROFILE

# Advanced Manufacturing

Advanced manufacturing refers to the rapid transfer of science and technology into manufacturing products and processes. It integrates technological processes into manufacturing to assist companies in their efforts to produce products more efficiently. Such products typically entail a high level of design, technological complexity, research and development, and innovation. Advanced manufacturing has increasingly become the norm across many manufacturing subsectors as technologies and processes continue to evolve and become more complex. Adaptability, flexibility, and customization in manufacturing have all but replaced traditional rigid processes in many business lines. As a result, a skilled manufacturing workforce has become critical to carrying out new and complex manufacturing methods.

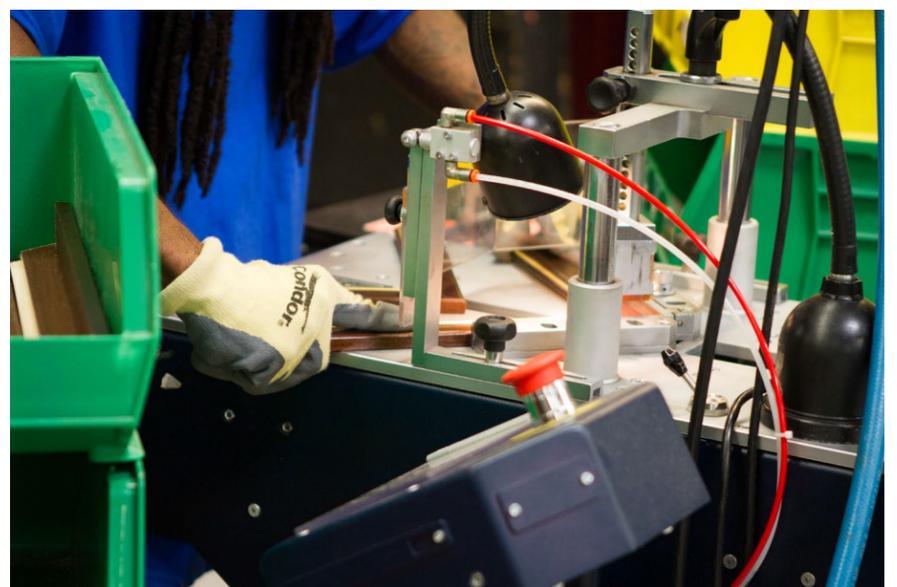
Eastern North Carolina (defined as the 20 counties<sup>1</sup> within a 60-mile radius of Pitt County) is a manufacturing region, home to broad range of manufacturing businesses. In aggregate, the sector represents nearly 27% of the region's Gross Regional Product, and 21% of Pitt County's GRP. This compares to about 13% of GRP coming from manufacturing for the United States as a whole.

## Labor Availability

The Greenville labor shed (workers living within a 45-minute commute time from Pitt County) is competitive nationally when it comes to wages for advanced manufacturing occupations. Across these occupations, the county has median earnings of about \$16 per hour, below the national median which is closer to \$18. The labor shed has over 32,000 resident workers in manufacturing occupations. The concentration of these workers as a share of the total workforce is more concentrated compared to the US as whole.<sup>2</sup> For most manufacturing related occupations, Pitt County has a concentration of workers at or above the national average, indicating the region is competitive when it comes to labor availability for advanced manufacturing industries.

Advanced Manufacturing - Occupation Labor Availability within 45-Minute Commute							
SOC	Description	2019 Resident Workers	2019 Jobs	2019 Net Commuters	2019 Location Quotient	Regional Median Hourly Earnings	National Median Hourly Earnings
41-4000	Sales Representatives, Wholesale and Manufacturing	1,612	1,345	(267)	0.61	\$24.44	\$30.32
43-5000	Material Recording, Scheduling, Dispatching, and Distributing Workers	2,546	2,596	50	0.94	\$17.81	\$19.25
49-1000	Supervisors of Installation, Maintenance, and Repair Workers	775	768	(7)	1.21	\$30.56	\$32.40
49-2000	Electrical and Electronic Equipment Mechanics, Installers, and Repairers	698	639	(59)	0.80	\$22.75	\$25.18
49-9000	Other Installation, Maintenance, and Repair Occupations	4,990	5,138	148	1.22	\$18.56	\$20.90
51-1000	Supervisors of Production Workers	1,152	1,233	81	1.54	\$29.05	\$29.35
51-2000	Assemblers and Fabricators	3,072	3,239	167	1.37	\$13.53	\$16.17
51-4000	Metal Workers and Plastic Workers	2,427	2,477	50	1.05	\$18.36	\$19.06
51-8000	Plant and System Operators	353	373	20	0.93	\$22.06	\$29.29
51-9000	Other Production Occupations	5,773	6,630	857	1.91	\$16.52	\$17.03
53-7000	Material Moving Workers	9,217	8,925	(292)	0.99	\$12.09	\$13.94
Total		32,613	33,363	748	1.15	\$16.11	\$17.83

Source: EMSI



1. The Eastern North Carolina region is defined to include the following 20 counties: Beaufort, Bertie, Chowan, Craven, Duplin, Edgecombe, Greene, Halifax, Hertford, Johnston, Jones, Lenoir, Martin, Nash, Northampton, Pamlico, Pitt, Washington, Wayne, and Wilson.

2. Employment concentration is measured in terms of location quotient. A region's location quotient (LQ) is calculated by comparing an industry's or an occupation's share of regional employment with its share of national employment. An LQ higher than 1 indicates a level of concentration higher than that of the US. An LQ lower than 1 indicates a level of concentration lower than that of the US.



## Chemicals & Plastics

The region is concentrated in several specialized chemical industries, including agricultural chemicals, plastics material and resins, synthetic rubber, and artificial and synthetic fibers and filaments. Many of these industries typically make products used as inputs for other manufacturing industries. Manufacturers making fabricated plastics products, plastic fixtures, and plastic packaging for both consumer and commercial products are also represented.

### Agricultural Chemicals<sup>3</sup>

Nationally, pesticide manufacturing industry revenue is expected to increase over the next five years as demand from crop production will likely increase during the same period. Historically, agricultural output and income levels have been the most important determinants of industry demand; however, new variables have emerged in recent years, to the detriment of pesticide manufacturers. These factors include the flow-on effects of biotechnology developments and the growing size of areas dedicated to genetically modified crops. Despite these potential threats to the industry, increases in the size of crop areas planted for biofuel purposes will likely enable the industry to sustain revenue growth.

Fertilizer industry revenue is also expected to increase. The prices of fertilizer are expected to rise in coming years, boosting revenue, though demand from crop production is estimated to stagnate in 2020. Exports and imports are also expected to rise, further aiding industry revenue. Manufacturers are expected to pursue growth opportunities by building or expanding facilities. Favorable energy costs over the past five years have stimulated the construction of new nitrogen fertilizer plants across the United States.

### Plastics Products

Plastic products manufacturing industries have experienced modest declines over the last five, as demand from some downstream markets has waned. Moving forward, demand for industry plastic products is projected to improve slightly as consumer spending climbs. This is expected to be counterbalanced, however, by slowing demand from the automobile sector and a pushback on plastic goods, keeping growth minimal. Operators rely heavily on several key industries to purchase their products, including automotive manufacturers and the construction-related market. Although the automotive sector's declines have weighed heavily on the industry over the past five years, the construction sector posted solid growth in line with growth in the housing market. This increase has been aided by historically low interest rates, which have encouraged big-ticket purchases, such as houses.

In addition to somewhat subdued downstream demand, overseas competition has constrained revenue growth during the five years to 2020. Import competition has gained momentum due to looser regulations and lower labor costs, relative to domestic manufacturers. Industry participants have combated rising imports by investing in research and development to provide innovative, high-value solutions for downstream customers, and they are expected to continue doing so in the next five years.

3. Industry outlook information for all industries sourced from IBISWorld US Industry reports.

### Chemicals & Plastics

- 3,500+ jobs and 125 companies in eastern North Carolina
- High employment concentration locally and regionally
- Strengths in agricultural chemicals and various plastics

### Companies in Pitt County

- Coastal Agrobusiness Inc
- Triest Ag Group
- DSM Dyneema
- Fuji Silysia Chemical
- Purilum, LLC
- UNX Inc
- Carolina Vinyl Products
- CMI Plastics

## Machinery & Metals

Machinery manufacturing is a strong focus area for Pitt County, particularly machinery for application in agriculture and construction, HVAC systems and refrigeration, engine equipment, and other industrial uses. Metals are a key input across machinery manufacturing subsectors, and both primary and fabricated metal manufacturing also have a presence in the region.

Although the machinery manufacturing industry's broad product range is sold to many markets, downstream demand is concentrated in the manufacturing and construction sectors. Overall, the industry has experienced contradictory forces from downstream demand over the last five years. Construction activity has been strong, whereas commodity prices have hindered manufacturers. Additionally, the appreciation of the US dollar during most of the period has reduced cost competitiveness abroad, and in turn, exports have declined.

Over the next five years, industry revenue is projected to exhibit steady growth. Renewed manufacturing demand and construction will likely drive demand, while trade to industrializing countries is anticipated to reverse the decline of exports. Furthermore, the US dollar is forecast to depreciate over the next five years, and any uncertainty in key export destinations is expected to recede.

## Wood & Paper Products

Historically a logging region, eastern North Carolina and Pitt County have a high concentration of logging and sawmill and paper mill activity, as well as wood and paper product manufacturing. Finished wood products produced in the region include manufactured homes and other prefabricated buildings, wood containers and pallets, millwork, plywood, furniture, and various paper products, such as paperboard and sanitary paper.

### Pulp & Paper Mills

In contrast to trends nationally, the eastern North Carolina region has seen job growth in paper and pulp mills over the last five years and has seemingly been a beneficiary of ongoing industry restructuring and plant consolidation. Primarily, pulp mills earn revenue from exports, and future export trends will likely be determined by conditions in foreign countries, regarding wood pulp consumption and production. As the global economy is expected to slow, it is expected that demand from downstream paper millers will decelerate, harming export revenue growth. However, since pulp production has fallen off precipitously in China, this could cause a spike in wood pulp exports and prices due to lower levels of supply in affected regions of the world. The industry will continue to contend with challenges, particularly as paper purchases by print publishing industries wane. Demand for paper products may not change significantly but increasing e-commerce may increase demand for packaging products. Industry decline will be offset slightly by growth in the personal care product segment, which includes incontinence products such as adult diapers. As baby boomers in the United States enter their senior years, demand for these products has grown.

### Wood Products

The wood product manufacturing industry produces a diverse range of wood products. The construction sector is the industry's largest source of demand, and as a result, operators have benefited from strong growth in housing starts over the last five years. Consumer spending has also increased during the period, boosting demand from households for other miscellaneous wood products. In addition, exports have surged due to European Union biofuel regulations, which have boosted demand for North American wood pellets, especially from the United Kingdom.

Although a large portion of the industry remains partially insulated from COVID-19 due to its designation as essential by federal mandates, other parts of the industry are expected to be constricted by lagging consumer spending amid heightened unemployment. Global supply chain disruption is expected to precipitate deceleration in international trade, in which industry exports are expected to marginally increase in 2020.

Despite the expected contraction in 2020, industry revenue growth is expected to remain positive over the next five years. However, industry demand is expected to slow, alongside decelerating growth in residential construction and demand from downstream markets, such as home furnishing stores.

Further, competition from rubber, steel, aluminum, and plastic substitutes is expected to intensify moving forward. Since this competition remains highest among household goods, the industry will likely continue to rely more heavily on its construction-related segments.

### Machinery & Metals

- 1,000+ jobs and 29 companies located in Pitt County
- 10,000+ jobs and 185+ companies throughout eastern North Carolina
- Diverse range of subsectors

### Companies in Pitt County

- Hyster-Yale
- The Roberts Company
- United Machine Works
- Corbett & Strickland
- Jack A. Farrior, Inc
- North State Steel
- Winterville Machine Works
- Mestek

### Wood & Paper Products

- 750 jobs in Pitt County
- 5,700+ jobs and 125 companies in eastern North Carolina
- Forestry and lumber region
- Range of wood and paper products

### Companies in Pitt County

- Weyerhaeuser Company
- Anderson Truss Company
- Hexacomb
- Package Craft
- Domtar



## Marine-Related Manufacturing

The eastern North Carolina region and Pitt County are highly concentrated in boatbuilding, the core industry of the marine-related manufacturing cluster. With over 1,500 jobs and 24 companies throughout the region and the headquarters of Grady-White Boats in Greenville, Pitt County is well positioned as a hub for additional marine-related industry. Additionally, the county is located at the doorstep of North Carolina's coast, offering water access to the Tar and Pamlico rivers, leading into the Pamlico Sound and the Atlantic Ocean. Boat manufacturing incorporates components from several of the region's other target sectors, including plastics, metals, and wood products, in addition to navigational equipment and electrical components.

The boatbuilding industry, which manufactures various watercraft intended mostly for personal use, has encountered mixed conditions over the previous five years. Industry products are considered highly discretionary purchases, so operators benefit from growing consumer confidence, disposable income and consumer spending levels. However, anticipated declines of those drivers in 2020 are expected to set the industry back significantly.

In many cases, vessels have become costlier to own and maintain over the past five years. In addition, instead of purchasing new vessels, owners have more frequently maintained the ones they currently own, while some new owners have bought used boats as a less expensive alternative. 2020 industry revenue decline is anticipated to be severe in 2020, with the COVID-19 anticipated to be largely responsible for factory disruptions and closures.

In subsequent years, demand is expected to return to levels experienced prior to the pandemic, as consumer spending rebounds alongside a return of consumer confidence. However, higher interest rates and gas prices may limit growth. Both trends serve to make purchasing and owning a boat more expensive. Although exports are projected to climb during the period, constrained economic growth overseas may cut into export markets. Lastly, long-term consumer preferences also pose a challenge to industry revenue growth, as fewer millennials are expected to show interest in boat ownership than previous generations.

### Marine Manufacturing

- 1,500+ jobs and 24 companies in eastern North Carolina
- Strength in boatbuilding
- Access to the Tar and Pamlico Rivers, Pamlico Sound, and Atlantic Ocean

### Companies in Pitt County

- Grady-White Boats
- World Cat/HC Composites, LLC
- Marine Systems Design

