



Occupational Employment and Wages, 2017

A Detailed Analysis of New Jersey's Occupational Landscape

Published January 2019



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The New Jersey Department of Labor and Workforce Development, in conjunction with the U.S. Bureau of Labor Statistics (BLS), conducts the Occupational Employment Statistics (OES) Wage Survey on a semi-annual basis, mailing OES survey forms to a sample of business establishments throughout the state.

Employers receiving the survey are strongly encouraged to participate since the quality and the level of detail that can be provided from this survey depends on the cooperation received from the employer community. Wage data are published for specific areas and/or industries only if there are enough responses to ensure both the reliability of the data and the confidentiality of the respondents.

The wage data provided here are possible due to thousands of New Jersey employers who participated in the OES Wage Survey. The wage and employment data collected in the OES Wage Survey provide valuable input for wage comparisons and for identifying trends in emerging or declining occupations -- precisely the kind of information needed by employers. Wage comparisons between areas are useful for new companies in selecting a location or for established companies looking to relocate. In addition, people often consult these data when choosing or changing careers, entering the job market, or relocating to another area. Likewise, career counselors use this information when advising people on occupational choices.

Occupational wage data is estimated from data collected through six surveys over the past three years.

The OES Survey uses the Standard Occupational Classification (SOC) system, which was designed to be used by all Federal statistical agencies reporting occupational data. Current estimates utilize the 2018 SOC, in which there are approximately 867 detailed occupational classifications. For more information about the SOC system, see the SOC page of the BLS website at <http://www.bls.gov/soc/>.



*This current release of the OES survey estimates publishes area estimates using the Metropolitan Statistical Area (MSA) configurations based on the 2010 Census. **Many of New Jersey's ten sub-state MSA configurations are "cross-state" areas comprised of counties from two or more states. In those instances, the data presented here is representative of only the New Jersey portion of the MSA.** For example, the entire "Allentown-Bethlehem-Easton, PA-NJ MSA" is comprised of Warren County, NJ and three Pennsylvania counties. The data for the "Warren County Labor Area" that is available on the New Jersey Labor and Workforce Development's web site at http://lwd.dol.state.nj.us/labor/lpa/employ/oeswage/oeswage_index.html covers only the New Jersey portion of that MSA. For more information on Metropolitan Statistical Areas, visit the BLS website for MSA definitions at http://www.bls.gov/oes/current/msa_def.htm.*

The OES survey is conducted in all 50 states, the District of Columbia, Guam, Puerto Rico, and the Virgin Islands in conjunction with the BLS and the U.S. Employment and Training Administration (ETA). Prior to 1996, the OES survey collected employment data by occupation but not wage data. This addition has resulted in occupational wage data of greater quality and consistency than ever before available.

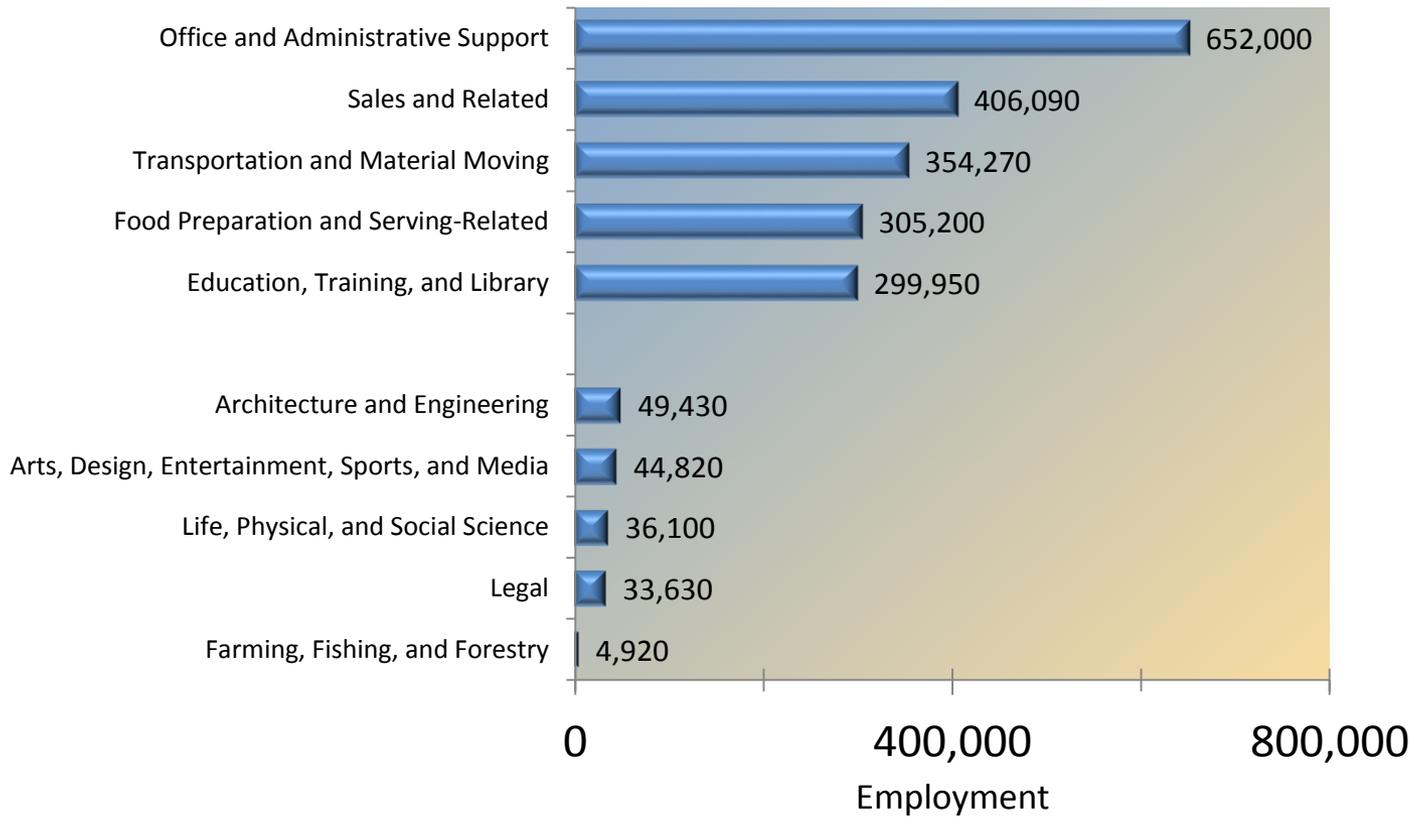
The stringent requirements of the OES survey, in terms of a statistically valid sample and methodology, combined with consistent survey forms and definitions, has resulted in quality wage data for hundreds of occupations that are truly comparable across all states and metropolitan areas. This is in direct contrast to previously available occupational wage data which existed for only a limited number of occupations and originated from a variety of different surveys, each collected over differing time periods using different questionnaires, methodologies, occupational titles and definitions.



The top five occupational groups account for more than half of all employment while the bottom five groups accounts for less than five percent

Overview

Employment for largest and smallest occupational groups, New Jersey 2017



Office and administrative support occupations continued to be the largest occupational group in New Jersey in 2017, accounting for a little more than 16 percent of all employment. Four of the top ten largest detailed occupations are classified in this group.

Among the top five occupational groups, only education, training and library occupations earned an average salary greater than the statewide average of \$56,980.

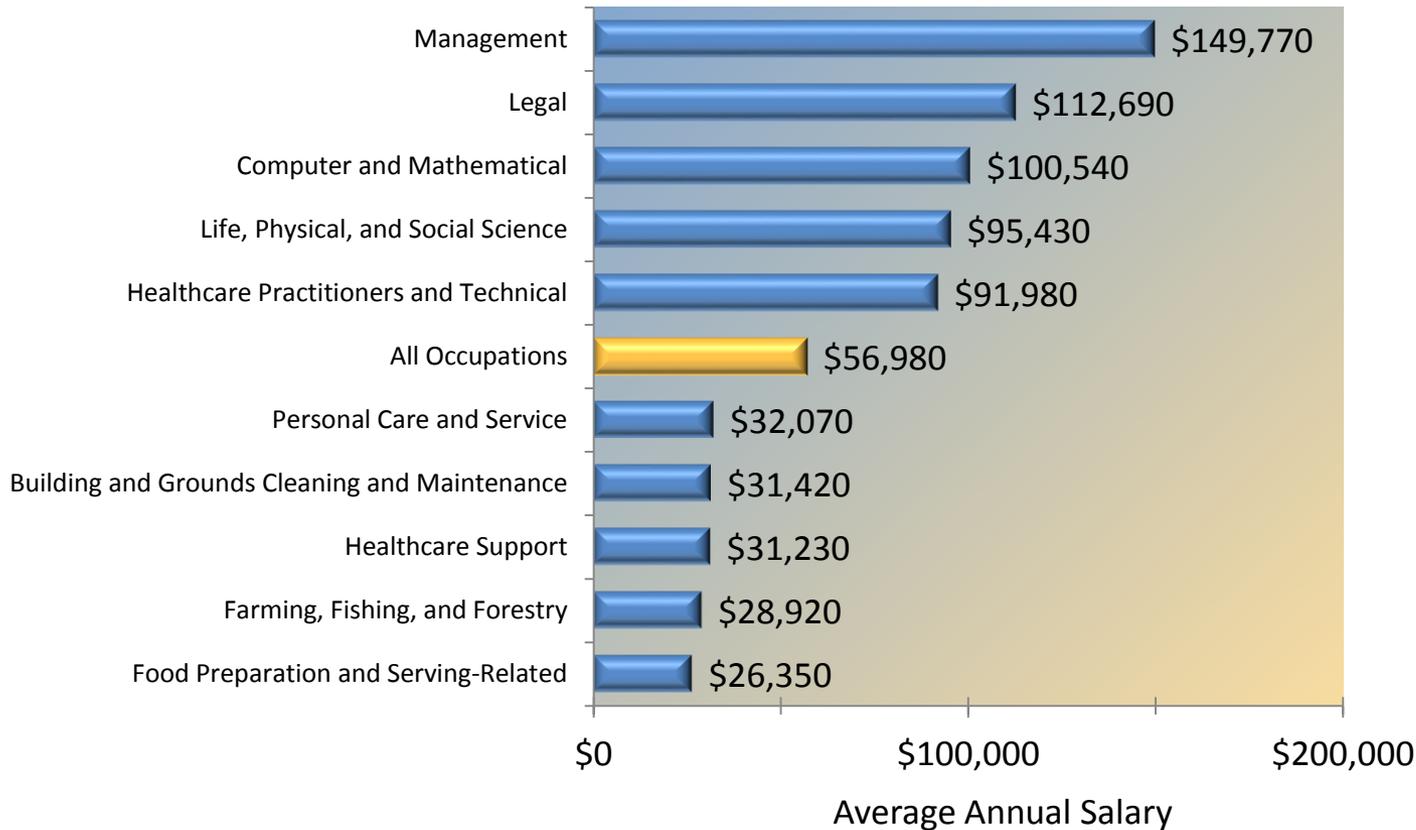
The smallest five occupational groups comprised less than 5 percent of all employment in New Jersey. However, all but farming, fishing and forestry occupations earned an above average annual salary.



The management, legal, and computer and mathematical occupational groups each earn average annual salaries into the six figures

Overview

Mean annual salary for highest and lowest paid major occupational groups, New Jersey 2017



Management occupations earn nearly triple the statewide average salary and nearly six times more than the lowest paying occupational group, food preparation and serving related occupations.

Computer and mathematical; life, physical, and social science as well as architecture and engineering occupations, classified as STEM occupations, each earn average salaries well above the statewide average.

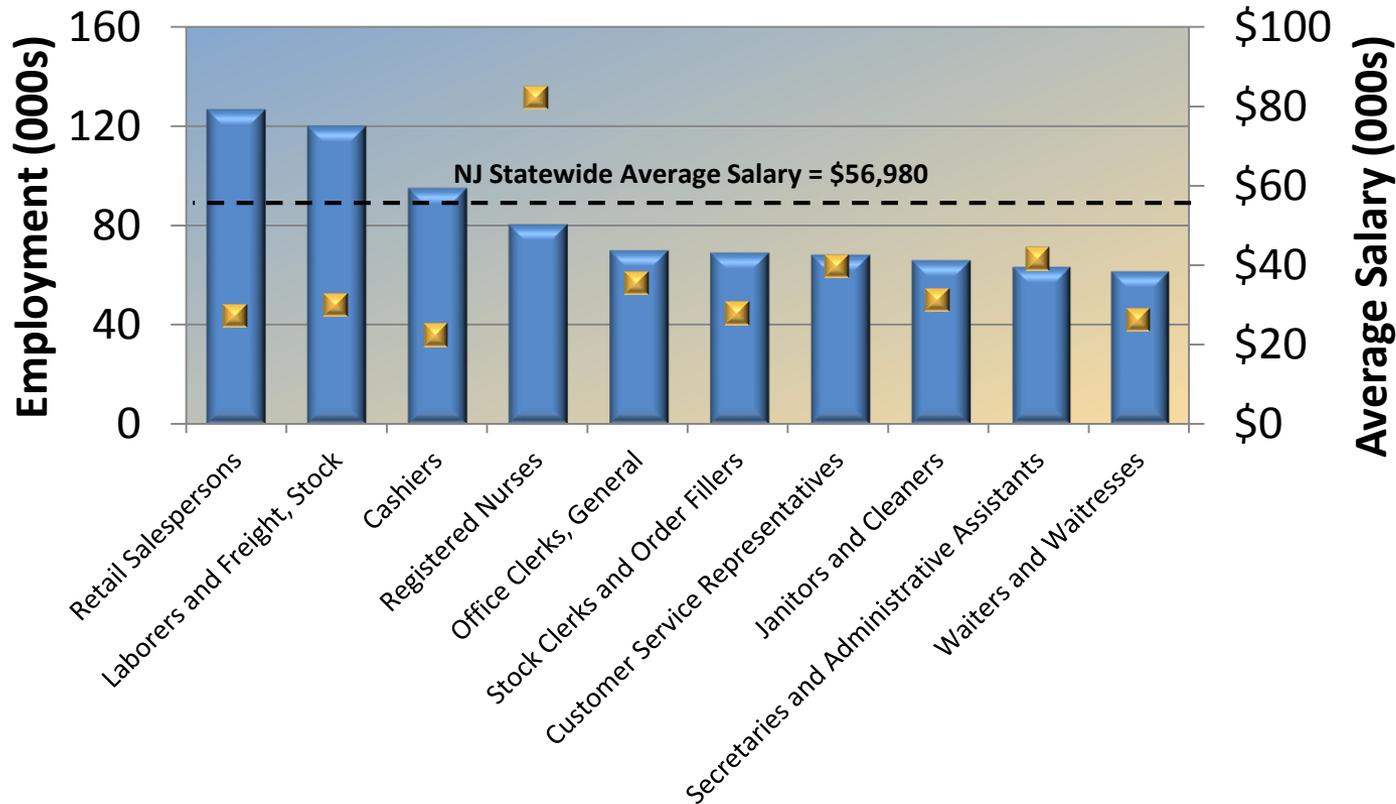
Four of the five lowest paying occupational groups are classified as service occupations. Only farming, fishing and forestry occupations fall outside this group.



Registered nurse is the only occupation among the top ten in terms of employment that earned an annual salary higher than the statewide average

Overview

Employment and average salary for ten largest occupations, New Jersey 2017



There are approximately 221,950 retail salespersons and cashiers combined employed in New Jersey. This represents nearly 6 percent of all employment in the state. Those employed in these occupations are often paid on an hourly basis, with averages of \$13.05 and \$10.69 per hour, respectively.

Most of the occupations on this list are classified as either service, sales or administrative support occupations.

The employment from these ten occupations combined accounts for more than 20 percent of all employment in the state.



Many of lowest paying occupations in New Jersey require very little education and experience for entry

Overview

Hourly Wage and Employment of Lowest Paying Occupations New Jersey, 2017

| Occupation | Hourly Wage | Employment |
|---|-------------|------------|
| Counter Attendants, Cafeteria, Food Concession, and Coffee Shop | \$10.22 | 31,890 |
| Shampooers | \$10.44 | 2,070 |
| Automotive and Watercraft Service Attendants | \$10.57 | 10,270 |
| Amusement and Recreation Attendants | \$10.58 | 8,310 |
| Cooks, Fast Food | \$10.62 | 11,150 |
| Cashiers | \$10.69 | 95,190 |
| Combined Food Preparation and Serving Workers, Including Fast Food | \$10.75 | 48,910 |
| Dishwashers | \$10.79 | 10,040 |
| Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers | \$10.83 | 4,880 |
| Baggage Porters and Bellhops | \$10.85 | 490 |

Four of the ten lowest paying occupations in New Jersey in 2017 were in the food services occupational group. It is notable that like many service occupations, gratuities can be a significant portion of the worker's income. While the OES survey attempts to account for this, it is understood that actual worker pay may be higher than the hourly wages reported.

Automotive and watercraft service attendants (e.g. gas station attendants) are a relatively common occupation in New Jersey and Oregon. New Jersey is the last state where customers cannot pump their own gasoline, while Oregon has opened their doors to limited self-service stations in select areas. There are 10,270 employed in New Jersey.



On the contrary, the highest paying occupations almost always require very advanced degrees and extensive experience

Overview

Annual Salary and Employment of Highest Paying Occupations New Jersey, 2017

The list of the highest paying occupations in New Jersey is largely comprised of physicians and other advanced medical professionals. Most of these healthcare practitioner occupations requires not only a doctoral degree, but also extensive post-graduation experience.

Three occupations on this list that is not related to healthcare is petroleum engineers, marketing managers, and computer and information systems managers. While the managerial occupations only require a Bachelor's degree, a minimum of 5 years or more experience is often required.

| Occupation | Annual Salary | Employment |
|---|---------------|------------|
| Orthodontists | \$263,880 | 190 |
| Psychiatrists | \$252,470 | 1,030 |
| Anesthesiologists | \$243,810 | 410 |
| Internists, General | \$220,490 | 1,310 |
| Family and General Practitioners | \$216,890 | 1,750 |
| Physicians and Surgeons* | \$207,340 | 15,960 |
| Petroleum Engineers | \$187,370 | 190 |
| Pediatricians, General | \$180,040 | 1,500 |
| Marketing Managers | \$177,070 | 10,960 |
| Computer and Information Systems Managers | \$175,830 | 13,900 |

* Includes Physicians and Surgeons, All Other (SOC 29-1069)



Many of the highest paying occupations outside of management and healthcare are classified as legal and STEM occupations

Overview

Employment and average annual salary of select high paying occupations excluding healthcare and management, New Jersey 2017

| Occupation | Annual Salary | Employment |
|---|---------------|------------|
| Petroleum Engineers | \$187,370 | 190 |
| Judges, Magistrate Judges, and Magistrates | \$150,260 | 1,020 |
| Medical Scientists, Except Epidemiologists | \$145,340 | 2,560 |
| Lawyers | \$140,340 | 20,730 |
| Computer Network Architects | \$128,380 | 5,260 |
| Personal Financial Advisors | \$127,220 | 6,090 |
| First-Line Supervisors of Police and Detectives | \$126,450 | 5,200 |
| Computer and Information Research Scientists | \$125,240 | 1,280 |
| Information Security Analysts | \$120,020 | 3,210 |
| Postsecondary Economics Teachers | \$117,440 | 310 |

The two legal occupations on this list require a postsecondary and professional degree while judges also require extensive experience.

Six of the remaining eight occupations require a minimum of a bachelor's degree for entry. Computer and information research scientists require a minimum of a doctoral or professional degree. Five of which are considered to be STEM occupations.

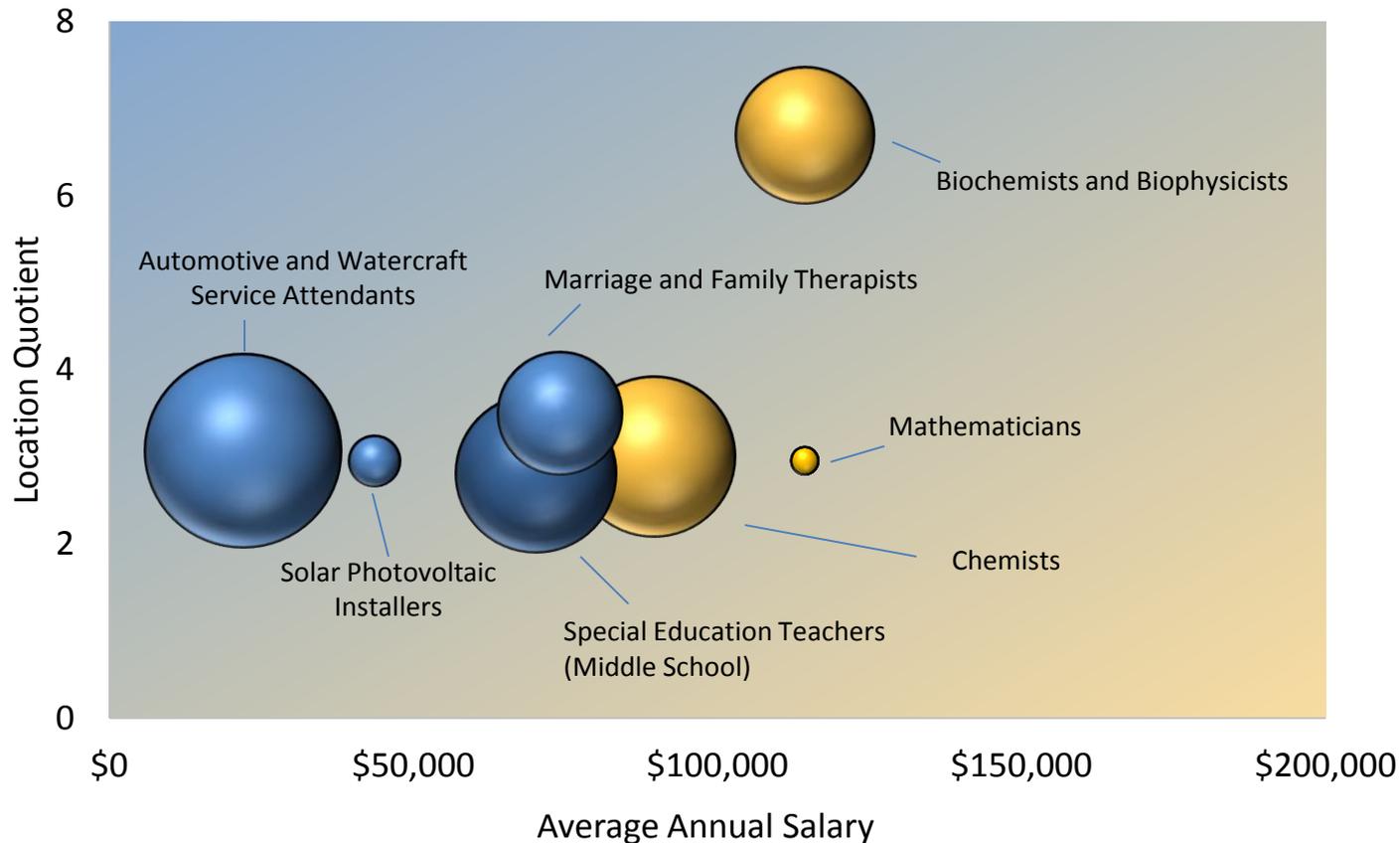
Science
Technology
Engineering
Math



These occupations have a strong presence in New Jersey relative to other states in 2017

Overview

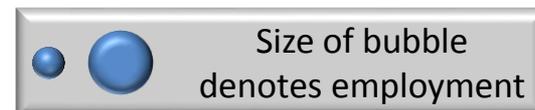
Location Quotient, Average Salary, and Employment of Selected Occupations, New Jersey 2017



Simply, a location quotient significantly higher than 1.0 indicates that an occupation has a strong presence in a given area as compared to that same occupation's presence at the national level.

Most of the occupations illustrated on this chart earn a salary above the statewide average of \$56,980.

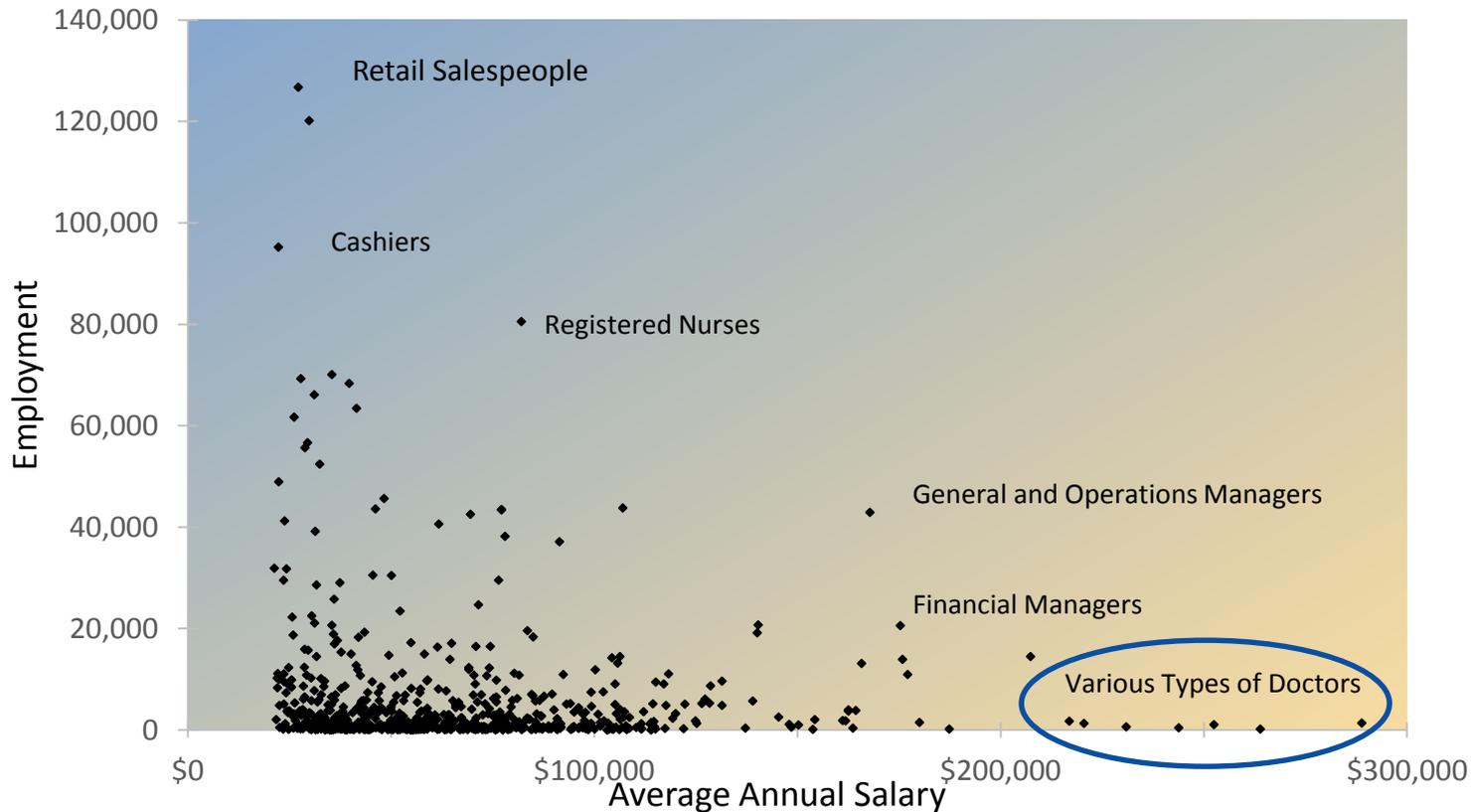
Three of these occupations (highlighted in gold) are STEM occupations and are commonly found working in New Jersey's robust chemical manufacturing industry, which includes one of the leading pharmaceutical industries in the country.



The plots on this chart represent the employment and average annual salary for each of the 744 detailed occupations found in New Jersey

Overview

Employment and Average Annual Salary by Detailed Occupation, New Jersey 2017

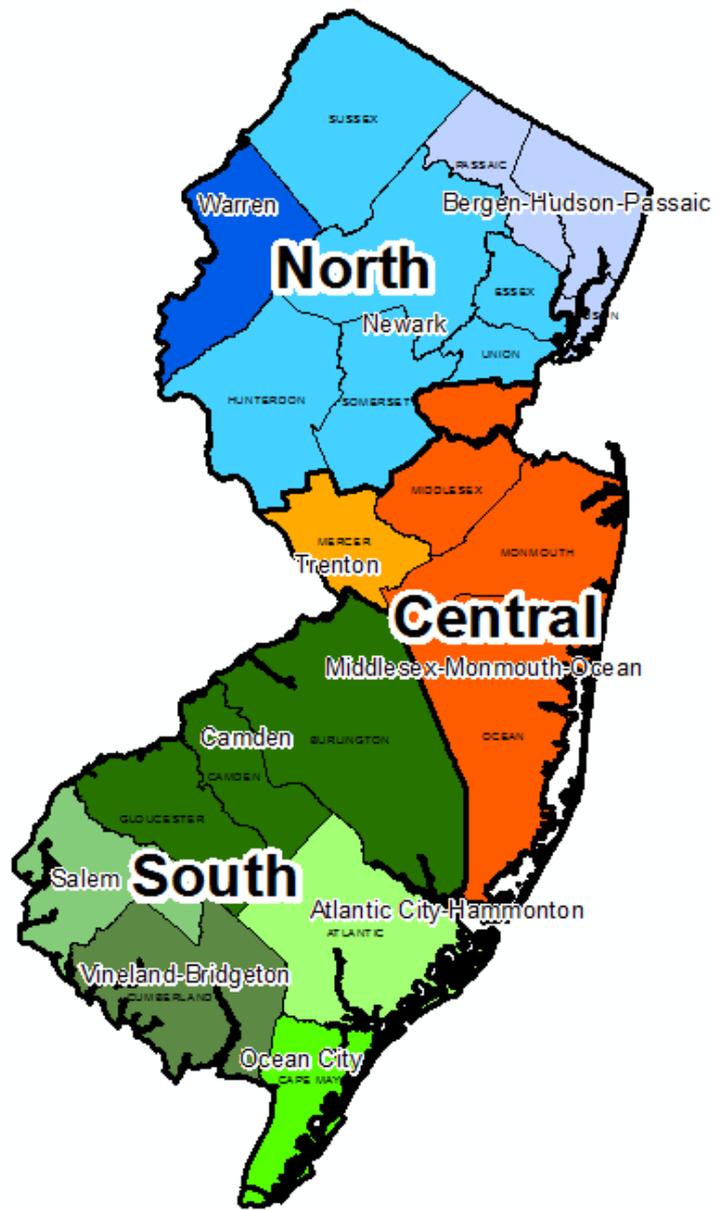


There are 43 occupations in New Jersey with employment of at least 20,000 in 2017. Combined, they account for over 1.9 million in employment, or near 50 percent of all jobs in the state.

There are 98 occupations with an average annual salary exceeding \$100,000. Combined, they account for 448,690 in employment, or over 11 percent of all employment.

There are four occupations with employment of at least 20,000 and average earnings exceeding \$100,000; general and operations managers, financial managers, lawyers, and application software developers.





REGIONAL FOCUS



The occupational composition and compensation are often quite unique among New Jersey's three regions, reflecting the very different economies within the state

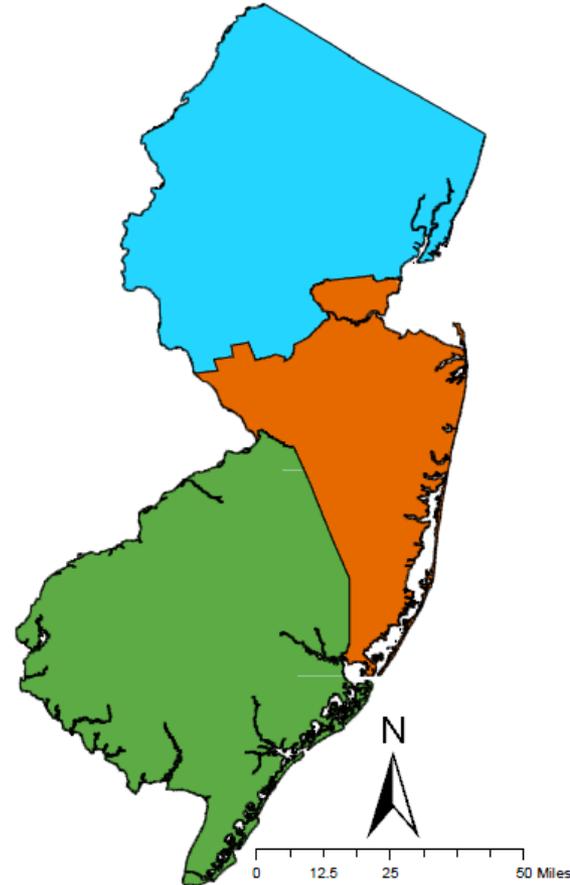


Employment and Average Salary by Region All Occupations in New Jersey, 2017

Northern Region
2,081,360 Employed
\$58,420 Average Salary

Central Region
1,096,150 Employed
\$55,150 Average Salary

Southern Region
770,590 Employed
\$49,620 Average Salary



More than half (51.9 percent) of all employment in New Jersey is found in the ten counties that make up the northern region of the state. While slightly smaller in terms of land area than the southern region, it is far more densely populated. There are 749 workers per square mile in the north versus only 257 workers per square mile in the south.

On average, the annual salary earned among all occupations is higher in the northern and central regions than in the south.



* Weighted regional salaries

There are more than one million employed in occupations that require at least a bachelor's degree in New Jersey



Employment and Average Salary by Region
Occupations Requiring At Least a Bachelor's Degree
in New Jersey, 2017

Northern Region

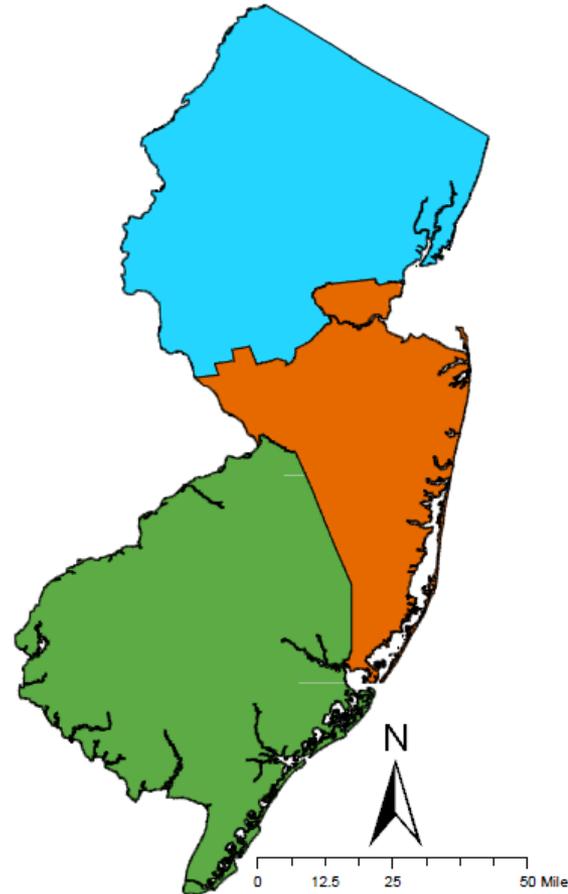
568,270 Employed
\$104,600 Average Salary

Central Region

302,290 Employed
\$98,950 Average Salary

Southern Region

161,860 Employed
\$91,550 Average Salary



The average annual salary of these occupations in New Jersey exceed \$98,000, nearly double the statewide average.

Approximately 84 percent of this employment is found in the northern and central regions where industries like chemical manufacturing, corporate headquarters, and finance are more commonly located.

The average annual salary of these workers is also much higher in the northern and central regions



* Weighted regional salaries

Occupations that require a high school diploma or less generally earn average salaries far below the statewide average of \$56,980



Employment and Average Salary by Region
Occupations Requiring High School Diploma or Less
in New Jersey, 2017

Northern Region

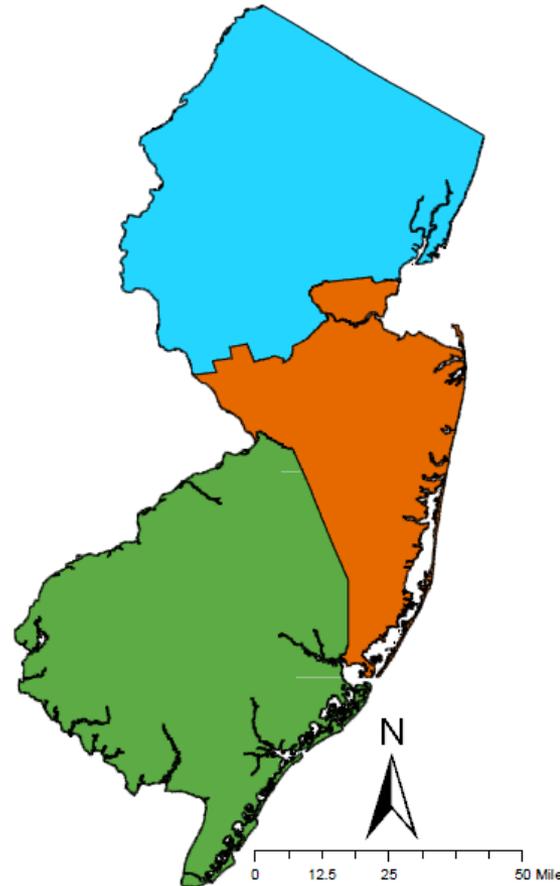
1,230,290 Employed
\$40,010 Average Salary

Central Region

634,840 Employed
\$38,530 Average Salary

Southern Region

457,820 Employed
\$36,990 Average Salary



These types of occupations are found in all parts of the state and there is far less difference in compensation from region to region.

While these occupations can be found in nearly every industry, they are most commonly found among hospitality, food service, and retail trade employers.

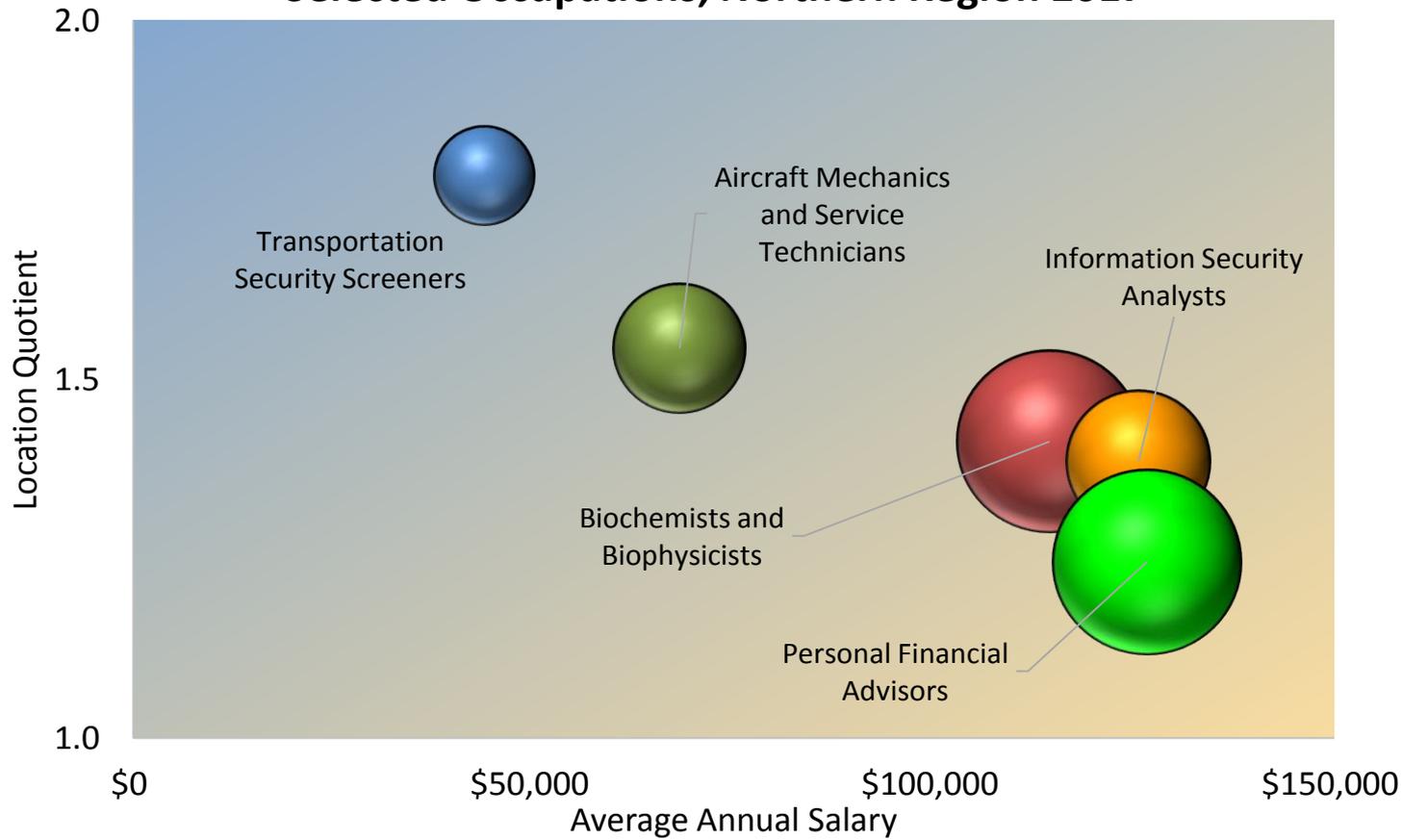


* Weighted regional salaries

The occupations below are most likely to be employed in the northern region of New Jersey

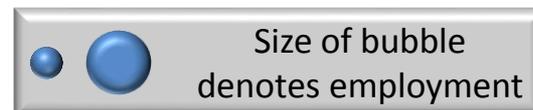


Location Quotient, Average Salary, and Employment of Selected Occupations, Northern Region 2017



Largely due to its close proximity to New York City, the industry composition of the northern region includes a robust financial sector. Occupations like personal financial advisors and information security analysts provide employment opportunities with salaries in excess of \$100,000.

Newark Liberty International Airport is the largest airport in the state. Transportation security screeners and aircraft mechanics are essential to its operation and more likely to be employed in the north than any other region.



The list below highlights some of the highest paying occupations in the northern region



Average annual salary and employment of select high paying occupations, Northern New Jersey 2017

| Occupation | Annual Salary* | Employment |
|--|----------------|------------|
| Personal Financial Advisors | \$126,620 | 3,940 |
| Systems Software Developers | \$119,890 | 5,360 |
| Pharmacists | \$114,590 | 5,460 |
| Financial Analysts | \$111,840 | 6,150 |
| Computer Systems Analysts | \$100,020 | 7,450 |
| Postsecondary Nursing Instructors | \$93,390 | 1,190 |
| Mechanical Engineers | \$90,850 | 2,950 |
| Secondary Special Education Teachers | \$76,050 | 3,190 |
| Electricians | \$74,780 | 8,150 |
| Aircraft Mechanics and Service Technicians | \$68,240 | 1,940 |

Many of the highest paying occupations are directly linked to the large financial sector. Personal financial advisors and financial analysts each earned an average annual salary exceeding \$100,000 in 2017.

Logisticians and aircraft mechanics are commonly employed in the transportation, logistics, and distribution sector. Newark Liberty International Airport and its neighboring seaports manage the transportation of billions of dollars worth of goods every year.

*Weighted Salary



Data shows that the occupations below earn higher salaries in the north than in any other region



Average annual salary, regional salary premium, and employment of select occupations, Northern New Jersey 2017

| Occupation | Annual Salary* | Salary* Difference | Employment | Education |
|--|----------------|--------------------|------------|-----------------------------------|
| Securities, Commodities, and Financial Services Sales Agents | \$114,410 | + \$20,830 | 9,240 | Bachelor's degree |
| Medical Scientists | \$151,620 | + \$17,590 | 1,610 | Doctoral or professional degree |
| Compensation, Benefits, and Job Analysis Specialists | \$89,710 | + \$17,570 | 1,020 | Bachelor's degree |
| Financial Analysts | \$111,840 | + \$16,550 | 6,150 | Bachelor's degree |
| Web Developers | \$83,840 | + \$16,090 | 1,540 | Associate's degree |
| Information Security Analysts | \$125,550 | + \$15,440 | 2,310 | Bachelor's degree |
| Reservation and Transportation Ticket Agents and Travel Clerks | \$49,040 | + \$11,870 | 2,830 | High school diploma or equivalent |
| Insurance Underwriters | \$102,650 | + \$11,480 | 1,840 | Bachelor's degree |
| Market Research Analysts and Marketing Specialists | \$89,930 | + \$10,960 | 11,710 | Bachelor's degree |
| Accountants and Auditors | \$96,300 | + \$10,370 | 20,910 | Bachelor's degree |

Most of the occupations on this list require at least a Bachelor's degree.

Securities, commodities and financial services sales agents earn greater than \$20,000 more in the northern region than their counterparts in the central or southern regions.

Computer, science and financial industries in the northern region mostly earn far more than in other parts of the state.

*Weighted Salaries

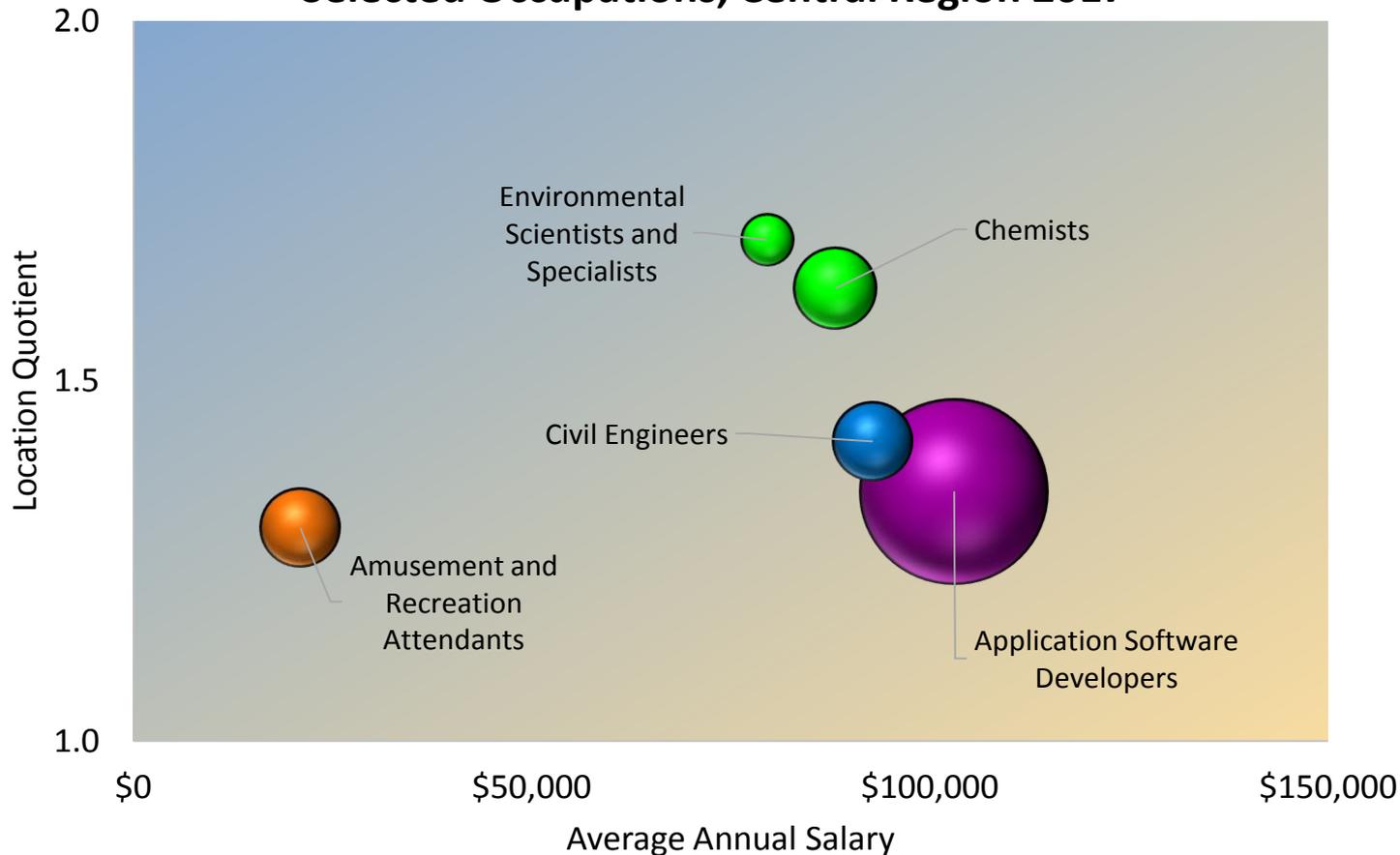


These occupations are most likely to be employed in the central region than other parts of New Jersey



Central

Location Quotient, Average Salary, and Employment of Selected Occupations, Central Region 2017



The central region offers a very diverse industrial composition ranging from pharmaceutical manufacturing and information technology to state government in the Capitol of Trenton and leisure and hospitality along the region's coastline of barrier islands.

This four county region is the smallest by land area of the three, but still employed over 1,000,000 people in 2017.

The region's 3,160 chemists earned an average salary of \$88,140 in 2017.



Many of the highest paying occupations in the central region are classified as computer occupations



Average annual salary and employment of select high paying occupations, Central New Jersey 2017

| Occupation | Annual Salary* | Employment |
|---|----------------|------------|
| Computer Network Architects | \$134,480 | 1,660 |
| Personal Financial Advisors | \$124,270 | 1,550 |
| Nurse Practitioners | \$115,600 | 1,630 |
| Pharmacists | \$113,180 | 2,170 |
| Systems Software Developers | \$112,820 | 2,410 |
| Electrical Engineers | \$111,580 | 1,110 |
| Technical and Scientific Products Sales Representatives | \$103,340 | 1,200 |
| Management Analysts | \$103,170 | 5,350 |
| Applications Software Developers | \$103,060 | 15,990 |
| Computer Systems Analysts | \$102,860 | 4,510 |

There are wide ranging opportunities in the central region to earn a salary far above the statewide average of \$56,980.

There are over 15,000 applications developers employed in the central region who earn an average salary over \$103,000.

Right behind the six figure salaries, there are over 4,000 combined civil and industrial engineers employed in these four counties who both earn average salaries of over \$92,000 each.

*Weighted Salary



These ten occupations earn a significantly higher salary in the central region of the state than the other two regions



Average annual salary, regional salary premium, and employment of select occupations, Central New Jersey 2017

| Occupation | Annual Salary* | Salary* Difference | Employment | Education |
|-----------------------------|----------------|--------------------|------------|----------------------------------|
| Dentists | \$200,970 | + \$17,250 | 510 | Doctoral or professional degree |
| Electronics Engineers | \$110,380 | + \$15,220 | 890 | Bachelor's degree |
| Mechanical Engineers | \$102,730 | + \$11,880 | 2,400 | Bachelor's degree |
| Electrical Engineers | \$111,580 | + \$7,780 | 840 | Bachelor's degree |
| Computer Network Architects | \$134,480 | + \$6,900 | 810 | Bachelor's degree |
| Technical Writers | \$89,030 | + \$6,730 | 1,520 | Bachelor's degree |
| Short Order Cooks | \$30,830 | + \$6,280 | 4,310 | No formal educational credential |
| Industrial Engineers | \$94,040 | + \$4,920 | 1,100 | Bachelor's degree |
| Graphic Designers | \$60,090 | + \$4,610 | 15,350 | Bachelor's degree |
| Editors | \$78,880 | + \$4,070 | 1,380 | Bachelor's degree |

Data shows that mechanical and electronics engineers both have a salary more than \$10,000 greater annually in the central region and grossing over \$100,000.

Graphic designers require a Bachelor's degree and earn an average annual salary exceeding \$60,000. Their employment is significant and it is the top region in the state for salary.

Nearly 70 percent of occupations that are found in central New Jersey require relatively lower educational requirements (Associate's Degree or less), yet earn significantly more than in other areas of the state.

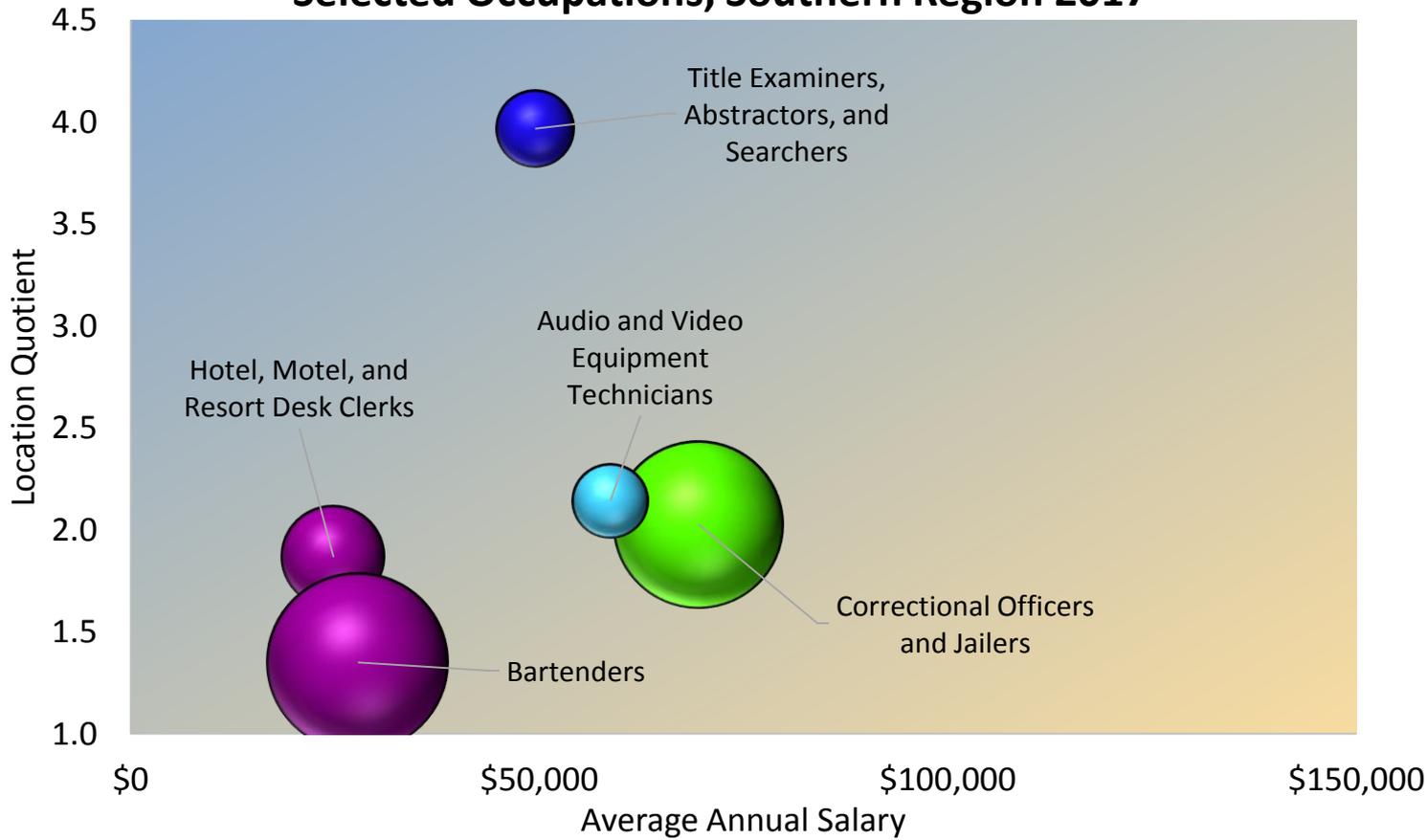
*Weighted Salaries



These five occupations are far more likely to be employed in southern New Jersey than in other areas of the state



Location Quotient, Average Salary, and Employment of Selected Occupations, Southern Region 2017



The southern region features many different types of local economies within the larger area, ranging from the tourist areas of the Jersey Shore and Atlantic City to the more urban areas in the west near Philadelphia.

The occupations depicted by the purple bubbles are commonly found in the vibrant leisure and hospitality sector along the coastline. Atlantic City and its casino industry are an important contributor to the New Jersey economy.

There is a large electronics manufacturing presence in the Camden Labor Area, across the Delaware River from Philadelphia.



These are some of the highest paying occupations in the southern region



Average annual salary and employment of select high paying occupations, Southern New Jersey 2017

| Occupation | Annual Salary* | Employment |
|---|----------------|------------|
| Pharmacists | \$117,320 | 1,560 |
| Systems Software Developers | \$113,190 | 1,210 |
| Civil Engineers | \$95,000 | 1,020 |
| Applications Software Developers | \$91,210 | 3,810 |
| Loan Officers | \$84,080 | 2,000 |
| Accountants and Auditors | \$82,840 | 5,270 |
| Network and Computer Systems Administrators | \$82,590 | 1,230 |
| Registered Nurses | \$77,250 | 17,120 |
| Wholesale Sales Representatives | \$76,730 | 6,700 |
| Plumbers, Pipefitters, and Steamfitters | \$73,680 | 2,240 |

Pharmacists is an occupation with a significant level of employment in the lower seven counties and earned an average salary greater than \$100,000.

STEM occupations still have an average salary over \$90,000 in southern New Jersey.

There are more than 17,000 registered nurses employed in the southern region who earned an average salary of \$77,250 in 2017.

*Weighted Salary



These are a few occupations that earned a higher average salary in the southern region than in the other two regions



Average annual salary, regional salary premium, and employment of select occupations, Southern New Jersey 2017

| Occupation | Annual Salary* | Salary* Difference | Employment | Education |
|--|----------------|--------------------|------------|-----------------------------------|
| Structural Iron and Steel Workers | \$87,850 | + \$10,700 | 420 | High school diploma or equivalent |
| Extruding, Forming, Pressing, and Compacting Machine Operators | \$41,080 | + \$7,160 | 760 | High school diploma or equivalent |
| Audio and Video Equipment Technicians | \$58,710 | + \$5,310 | 740 | Postsecondary non-degree award |
| Coating, Painting, and Spraying Machine Operators | \$43,440 | + \$3,570 | 410 | High school diploma or equivalent |
| Bus Drivers, Transit and Intercity | \$50,050 | + \$3,250 | 850 | High school diploma or equivalent |
| Pharmacists | \$117,320 | + \$2,730 | 1,560 | Doctoral or professional degree |
| Shipping, Receiving, and Traffic Clerks | \$37,720 | + \$2,240 | 2,970 | High school diploma or equivalent |
| Industrial Truck and Tractor Operators | \$38,710 | + \$2,230 | 3,110 | No formal educational credential |
| Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop | \$24,990 | + \$1,730 | 2,470 | No formal educational credential |
| Packers and Packagers, Hand | \$25,330 | + \$1,220 | 7,230 | No formal educational credential |

While the minimum educational requirement of these occupations varies greatly, it is notable that more than half require no more than a high school education and may instead utilize career and technical education (CTE) or on-the-job training.

Many of these occupations earned an average salary greater than the overall average for the southern region (\$50,560).

Some of the industries represented by these occupations include transportation, health care, and construction.

*Weighted Salaries



Construction



**Leisure, Hospitality
& Retail**



Healthcare



**Advanced
Manufacturing**



**Transportation, Logistics
& Distribution**



**Biopharmaceuticals &
Life Sciences**



Financial Services



**Science, Technology,
Engineering & Math**



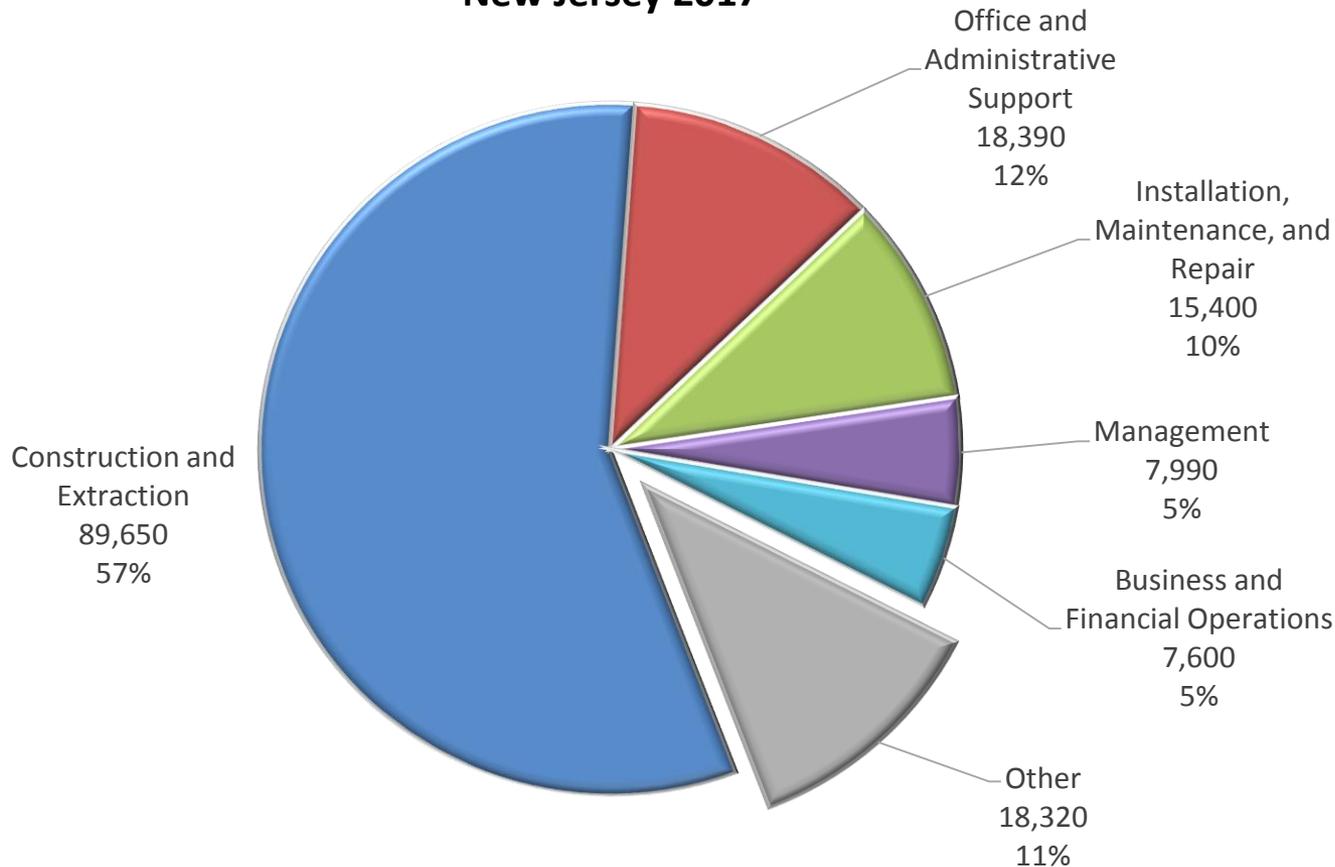
INDUSTRY FOCUS



More than half of the 157,350 people employed in the construction industry are classified among construction and extraction occupations

Construction

**Profile of Construction Sector by Major Occupational Group
New Jersey 2017**



More than 33,000 people in this industry are involved in administrative support, management and business and financial operations.

More than 15,000 people work in occupations that are classified as installation, maintenance and repair occupations. This group includes the many different types of mechanics in the industry.

The majority of the “other” employment are classified as sales and transportation and material moving occupations.



The top ten tradespeople in the construction industry typically earn an average annual salary near or above the statewide average

Construction

Employment and Average Salary of the Top Ten Occupations Found in the Construction Sector, New Jersey 2017

| Occupation | Employment | Annual Salary |
|---|------------|---------------|
| Construction Laborers | 18,720 | \$52,830 |
| Carpenters | 14,050 | \$61,740 |
| Electricians | 13,830 | \$70,980 |
| Plumbers, Pipefitters, and Steamfitters | 7,410 | \$71,510 |
| Supervisors of Construction Workers | 5,350 | \$78,830 |
| Construction Equipment Operators | 3,430 | \$77,460 |
| Painters, Construction and Maintenance | 3,360 | \$45,440 |
| Cement Masons and Concrete Finishers | 2,890 | \$60,810 |
| Brickmasons and Blockmasons | 1,650 | \$66,180 |
| Roofers | 1,520 | \$56,450 |

These ten occupations combined account for roughly 52 percent of the entire construction workforce, and over 92 percent of all those occupations classified in the construction and extraction group.

Many of the skilled occupations, like carpenters and electricians, may require at least some vocational education coupled with a registered apprenticeship.

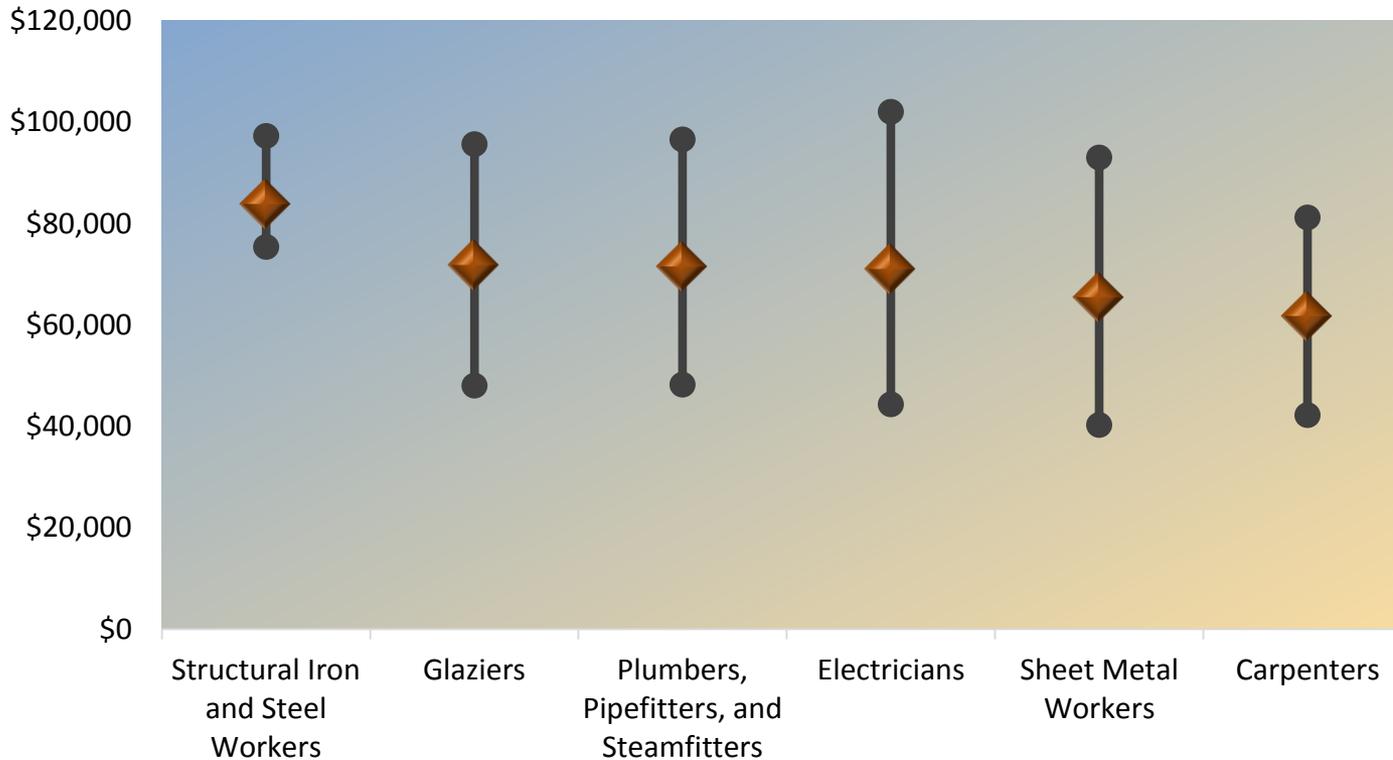
All of these occupations incorporate a working knowledge of basic math and measurement, among other requisite skills.



The salary ranges of the middle 50 percent of these tradespeople often have very wide ranges based on level of experience

Construction

**25th-75th Percentile and Average Annual Salaries of Common Trade Occupations in the Construction Sector
New Jersey 2017**



The lower bound denotes the 25th percentile annual salary, which is often used to estimate the salary level of an entry level worker.

The upper bound denotes the 75th percentile annual salary, which is often used to estimate the salary level of an experienced worker.

While many of these occupations may start at a salary level below the statewide average, there is a great opportunity for growth as a worker gains more experience.

● 75th Percentile
◆ Average Salary
● 25th Percentile

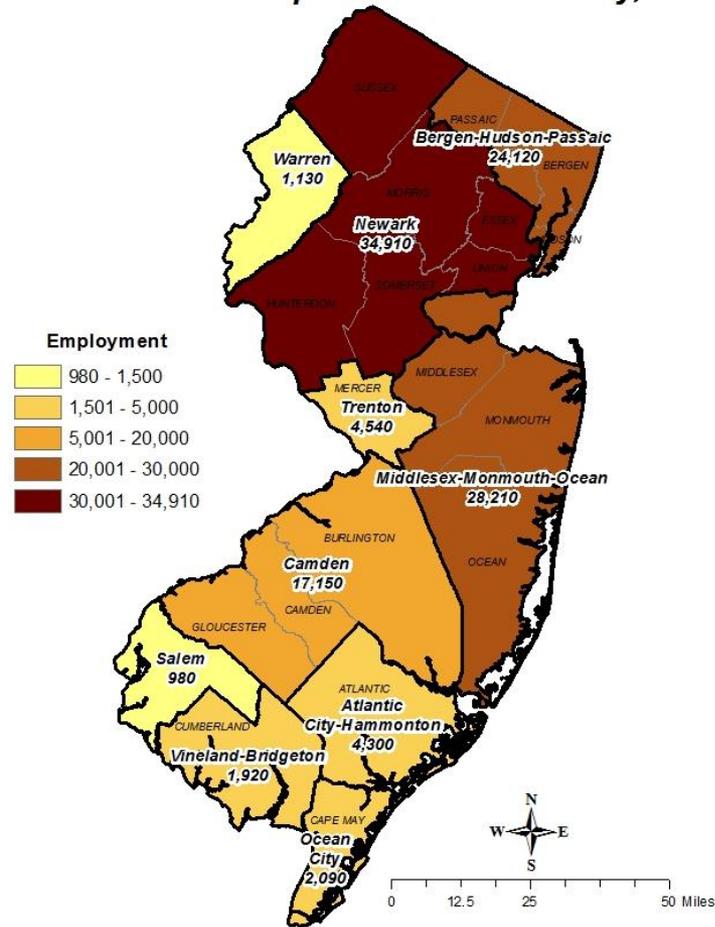


The construction sector tends to be more mobile, but the highest concentrations of employment tend to be found in the most populous Labor Areas

Construction

| Labor Area | EMPLOYMENT |
|---------------------------|------------|
| Newark | 34,910 |
| Middlesex-Monmouth-Ocean | 28,210 |
| Bergen-Hudson-Passaic | 24,120 |
| Camden | 17,150 |
| Trenton | 4,540 |
| Atlantic City / Hammonton | 4,300 |
| Ocean City | 2,090 |
| Vineland / Bridgeton | 1,920 |
| Warren | 1,130 |
| Salem | 980 |

Employment by Labor Area
Construction Occupations in New Jersey, 2017



In total, there are roughly 120,000 people employed in occupations classified as construction across all industries. These occupations include many types of skilled tradesmen such as carpenters and electricians, their helpers, highway maintenance workers, and all construction supervisors.

More than half of all of these workers are employed in the Middlesex-Monmouth-Ocean and Newark Labor Areas.

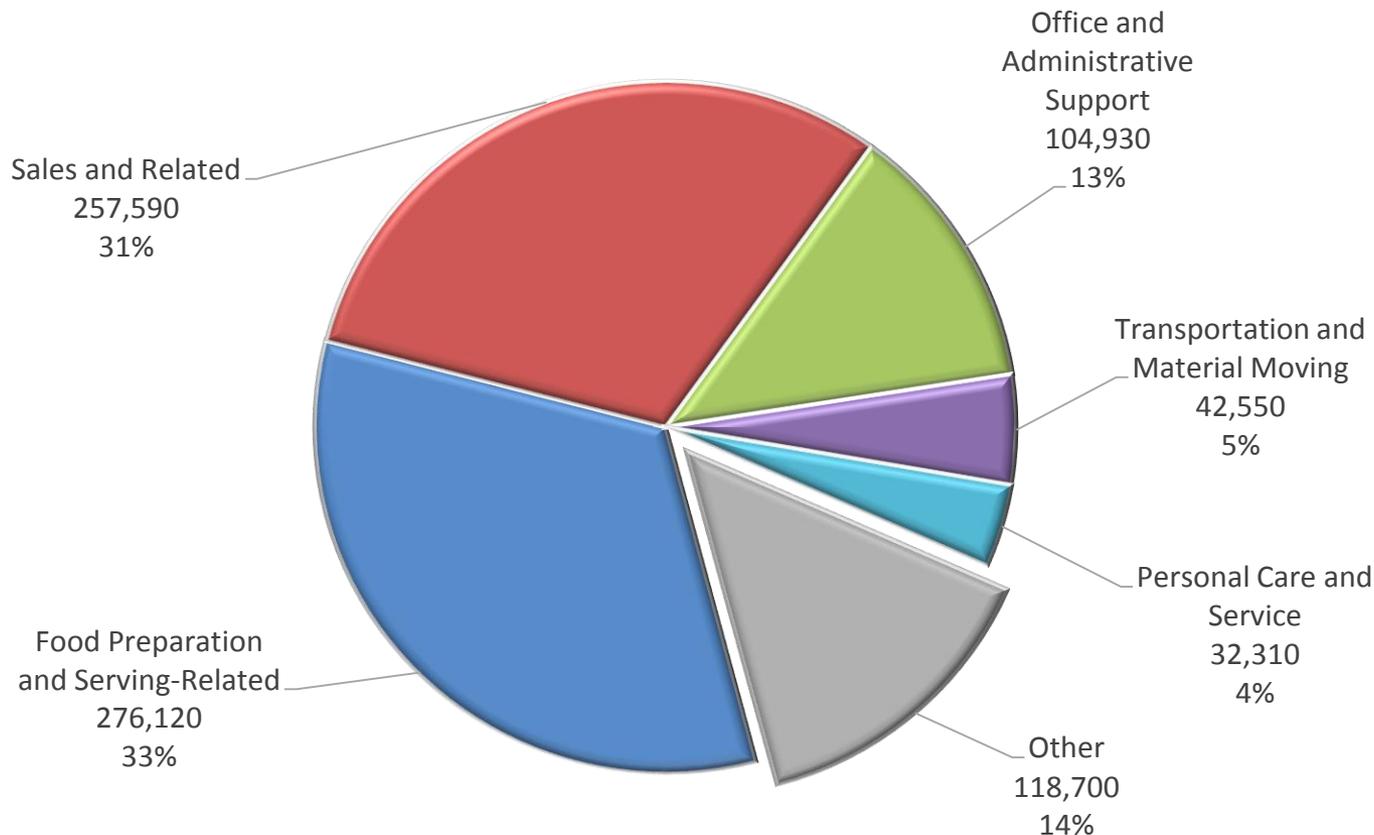
The Warren and Salem Labor Areas, which are primarily rural, have the lowest numbers of construction workers.



The leisure, hospitality and retail (LHR) sector is the largest industry in New Jersey in terms of employment

Leisure, Hospitality & Retail

**Profile of LHR Sector by Major Occupational Group
New Jersey 2017**



Nearly two-thirds of all employment in the LHR sector are classified as either sales or food preparation and serving occupations.

Office and administrative support, transportation and material moving, and personal care services (where many of the gaming occupations unique to the casino industry are classified) collectively account for nearly 179,800 jobs.

Less than one percent of all employment in the LHR sector is classified as a STEM occupation.



These top ten occupations account for nearly 60 percent of all employment in the LHR sector

Leisure, Hospitality & Retail

Employment and Average Salary of the Top Ten Occupations Found in the Leisure, Hospitality and Retail Sector, New Jersey 2017

| Occupation | Employment | Average Salary | Minimum Education |
|---|------------|----------------|-----------------------------------|
| Retail Salespersons | 121,790 | \$28,370 | No formal educational credential |
| Cashiers | 89,650 | \$22,350 | No formal educational credential |
| Waiters and Waitresses | 60,710 | \$25,040 | No formal educational credential |
| Stock Clerks and Order Fillers | 52,150 | \$29,490 | No formal educational credential |
| Combined Food Preparation and Serving Workers | 43,650 | \$22,970 | No formal educational credential |
| Counter Attendants, Cafeteria, Food Concession, and Coffee Shop | 29,760 | \$21,440 | No formal educational credential |
| First-Line Supervisors of Retail Sales Workers | 28,020 | \$47,320 | High school diploma or equivalent |
| Food Preparation Workers | 27,200 | \$23,240 | No formal educational credential |
| Cooks, Restaurant | 20,970 | \$32,160 | No formal educational credential |
| Supervisors of Food Preparation and Serving Workers | 17,130 | \$43,180 | High school diploma or equivalent |

Retail salespersons and cashiers are two of the largest occupations in terms of employment in the entire state. More than 95 percent of workers combined are employed by companies classified in the LHR sector.

The average salary for all occupations in this sector is \$33,870. Most of these top ten occupations in terms of employment fall below that threshold.

Many of the occupations in LHR can be obtained with minimal levels of education. These jobs may often be part-time, and paid on an hourly basis.

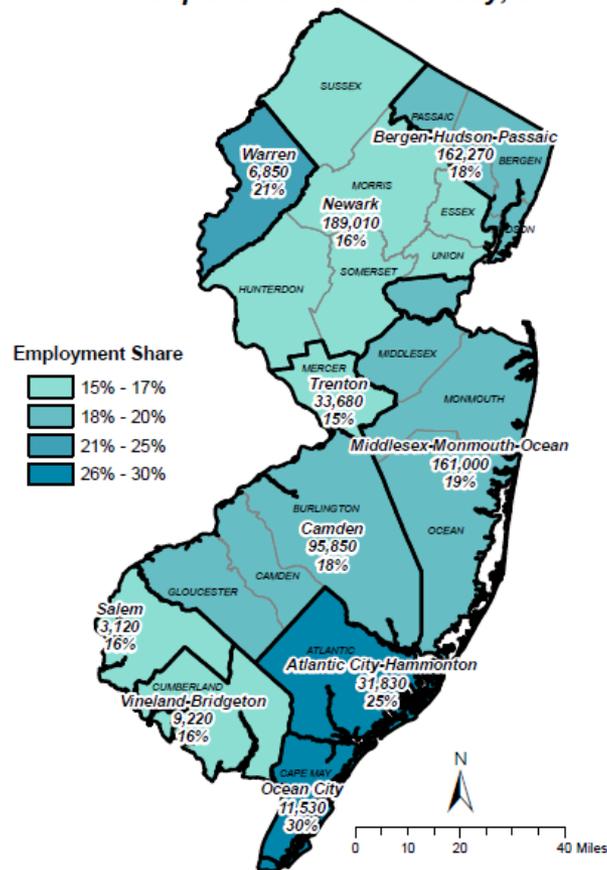


The employment share of food service and sales occupations is far greater in the counties along New Jersey's coastline

Leisure, Hospitality & Retail

| Labor Area | % of Total | Employment |
|---------------------------|------------|------------|
| Ocean City | 30% | 11,530 |
| Atlantic City - Hammonton | 25% | 31,830 |
| Warren | 21% | 6,850 |
| Middlesex-Monmouth-Ocean | 19% | 161,000 |
| Bergen-Hudson-Passaic | 18% | 162,270 |
| Camden | 18% | 95,850 |
| Newark | 16% | 189,010 |
| Salem | 16% | 3,120 |
| Vineland - Bridgeton | 16% | 9,220 |
| Trenton | 15% | 33,680 |

*Employment Share by Labor Area
Food Service and Sales
Occupations in New Jersey, 2017*



In the Ocean City and Atlantic City-Hammonton Labor Area, more than one-quarter of all employment is classified in these two occupational groups most closely linked to the leisure, hospitality and retail sector.

The statewide average for this measure is 19.4%. The Trenton, Salem, and Vineland-Bridgeton Labor Areas fall farthest below this average.

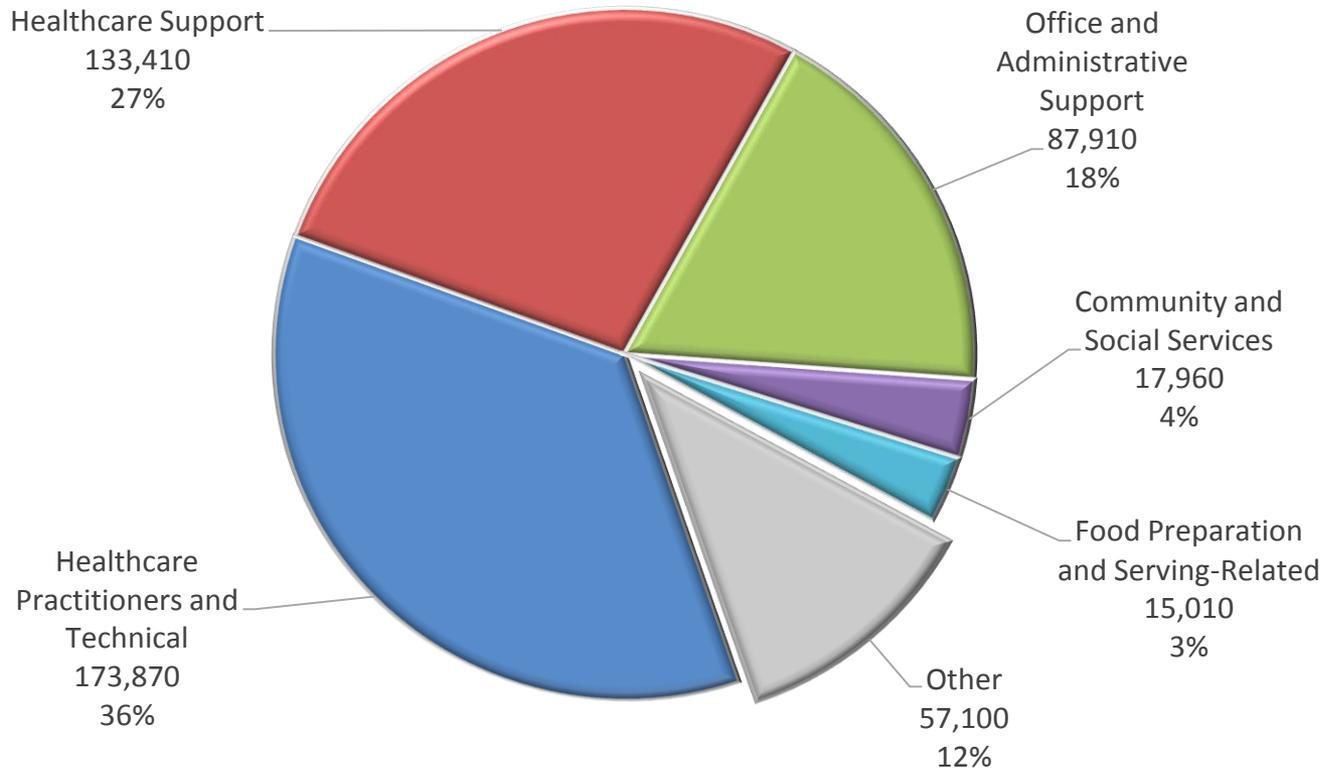
Despite this, greater than 72 percent of these occupations are found in the three largest Labor Areas; Newark, Middlesex-Monmouth-Ocean, and Bergen-Hudson-Passaic.



Nearly two-thirds of all employment in the healthcare sector are directly involved with patient care

Healthcare

Profile of Healthcare Sector by Major Occupational Group New Jersey 2017



Healthcare practitioners and technical workers primarily include doctors, nurses and specialized technicians. Most require a minimum of an associate's degree. Healthcare support workers include the assistants and aides, and typically require significantly less education.

Administrative support occupations are the third largest group and most often handle the behind the scenes clerical support that is essential for proper upkeep of medical records, billing, and accounting.



More than half of all healthcare employment is found in these top ten occupations

Healthcare

Most Commonly Found Occupations Found in the Healthcare Industry New Jersey, 2017

| Occupation | Employment | Average Salary | Education |
|---|------------|----------------|-----------------------------------|
| Registered Nurses | 66,850 | \$78,720 | Bachelor's degree |
| Nursing Assistants | 48,260 | \$30,910 | Postsecondary non-degree award |
| Home Health Aides | 34,040 | \$26,610 | No formal educational credential |
| Receptionists and Information Clerks | 33,380 | \$31,610 | High school diploma or equivalent |
| Medical Assistants | 18,010 | \$35,330 | Postsecondary non-degree award |
| Licensed Practical and Licensed Vocational Nurses | 13,680 | \$55,250 | Postsecondary non-degree award |
| Physicians and Surgeons* | 13,500 | \$220,640 | Doctoral or professional degree |
| Medical Secretaries | 11,300 | \$39,520 | High school diploma or equivalent |
| Dental Assistants | 10,520 | \$46,000 | Postsecondary non-degree award |
| Medical and Health Services Managers | 9,570 | \$114,240 | Bachelor's degree |

There is a wide range of job responsibilities found among this list of most commonly found occupations, ranging from patient care to administrative support. The required level of education for entry also ranges widely from no formal educational credential up through a Doctoral degree.

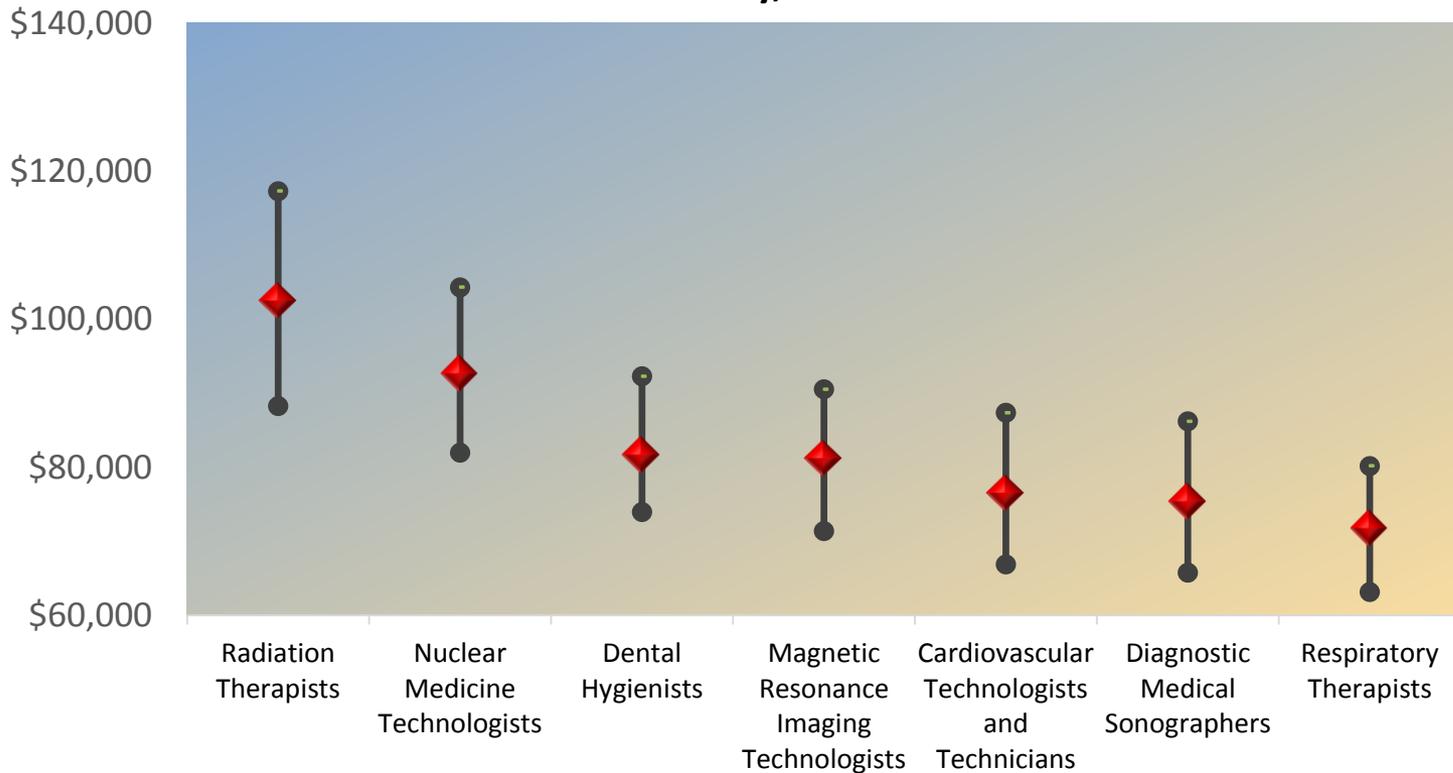
Three of these occupations earn an average annual salary greater than the statewide average of \$56,980.

*Includes Surgeons 29-1067 (Weighted Salary)



There are many occupations in the health care industry that earn an above average wage, but require no more than an associate's degree

**25th-75th Percentile and Mean Salary for Occupations that Commonly Require an Associate's Degree or Less
New Jersey, 2017**



Using the 25th percentile estimate as a measure for entry level salary and the 75th percentile as an approximation for experienced level salary, data shows that these occupations that only require an Associate's degree for entry can offer a relatively high level of earnings for minimal education.

The average salary of each of these occupations exceeds the statewide average of \$56,980.



● 75th Percentile
◆ Average Salary
● 25th Percentile

There are employment opportunities for registered nurses in a broad array of industry settings

Healthcare

Employment and Average Salary for Registered Nurses by Industry New Jersey, 2017

| Industry | Employment | Average Salary |
|---|------------|----------------|
| Total, All Industries | 80,560 | \$82,010 |
| General Medical and Surgical Hospitals | 41,910 | \$87,130 |
| Nursing Care Facilities | 5,640 | \$73,870 |
| Home Health Care Services | 5,000 | \$76,600 |
| Outpatient Care Centers | 4,830 | \$80,260 |
| Offices of Physicians | 3,890 | \$68,880 |
| Elementary and Secondary Schools | 3,700 | \$70,910 |
| Employment Services | 3,130 | \$79,620 |
| Specialty Hospitals | 1,880 | \$79,430 |
| Community Care Facilities for the Elderly | 1,270 | \$74,000 |
| Psychiatric and Substance Abuse Hospitals | 1,260 | \$78,690 |

General medical and surgical hospitals are the most common setting for registered nurses, accounting for more than half of all employment among industries. The average salary here is also the highest, averaging more than \$5,000 more per year than the other nine industries on this list combined.

There are nearly 3,700 registered nurses working in elementary and secondary schools in New Jersey. They earn an average salary approaching \$71,000.

More than 90 percent of New Jersey's registered nurses are found among these ten industries.

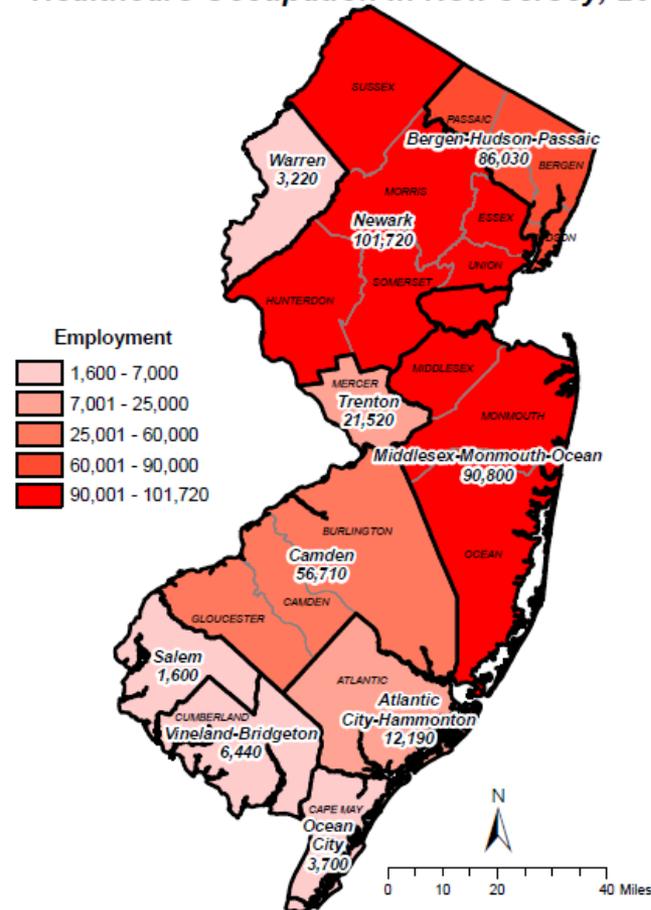


The geographic distribution of healthcare employment is largely based on population and need

Healthcare

| Labor Area | Employment |
|---------------------------|------------|
| Newark | 101,720 |
| Middlesex-Monmouth-Ocean | 90,800 |
| Bergen-Hudson-Passaic | 86,030 |
| Camden | 56,710 |
| Trenton | 21,520 |
| Atlantic City - Hammonton | 12,190 |
| Vineland - Bridgeton | 6,440 |
| Ocean City | 3,700 |
| Warren | 3,220 |
| Salem | 1,600 |

*Employment by Labor Area
Healthcare Occupation in New Jersey, 2017*



More than half of all healthcare practitioners and technical workers and healthcare support occupations are found in the Newark or Middlesex-Monmouth-Ocean Labor Areas.

There is a high concentration of healthcare employment found in the Camden Labor Area in Southern New Jersey, largely attributable to the Cooper University Healthcare system and Virtua Health system, which are clustered around Camden County.

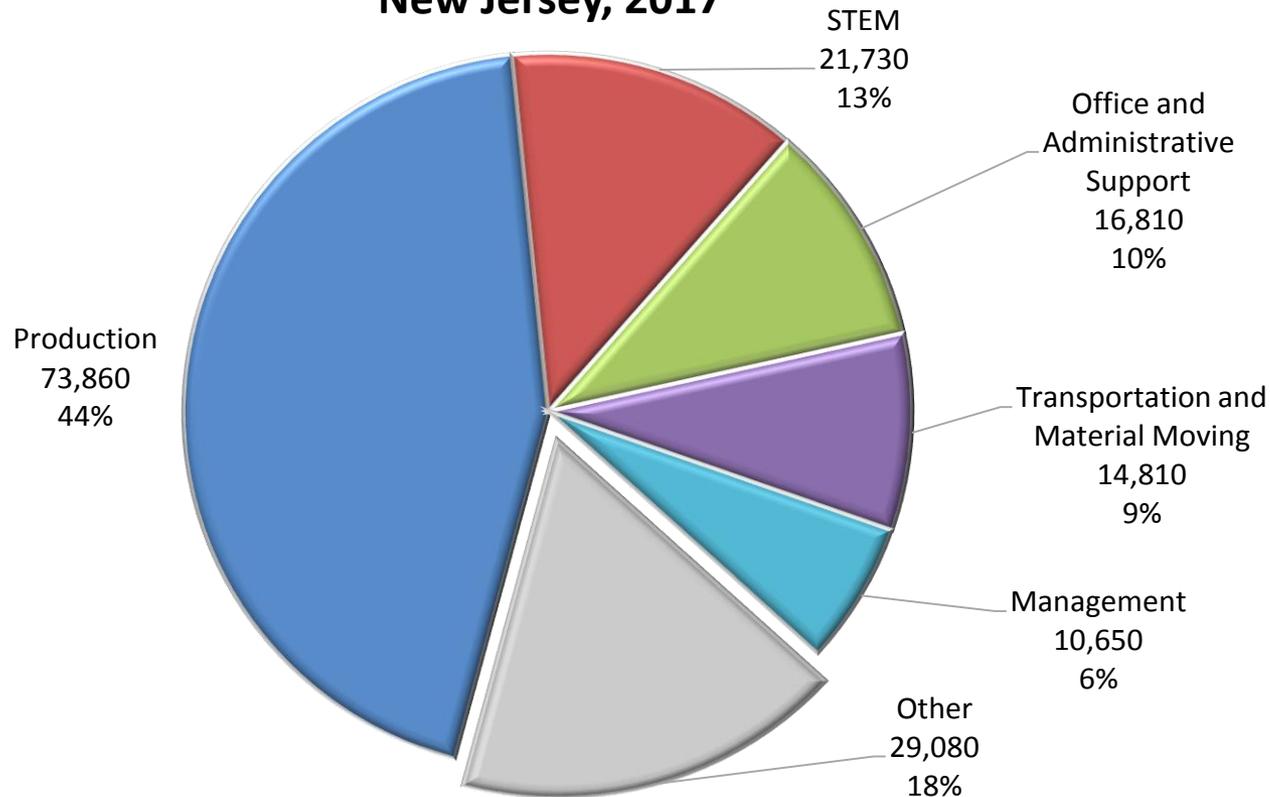
The Trenton-Ewing Labor Area, in Central New Jersey, is home to several large hospitals and many ambulatory care facilities that support them. 38



Nearly half of all workers in the advanced manufacturing industry are classified as production workers

Advanced Manufacturing

Profile of Advanced Manufacturing Sector by Major Occupational Group New Jersey, 2017



Some of the types of occupations categorized as production workers include highly skilled workers such as machinists, welders, and computer-numerically controlled (CNC) programmers as well as less skilled positions like assemblers and machine operators.

Roughly 13 percent of employment in this sector is classified as STEM occupations, responsible for much of the research and development to create and improve products.

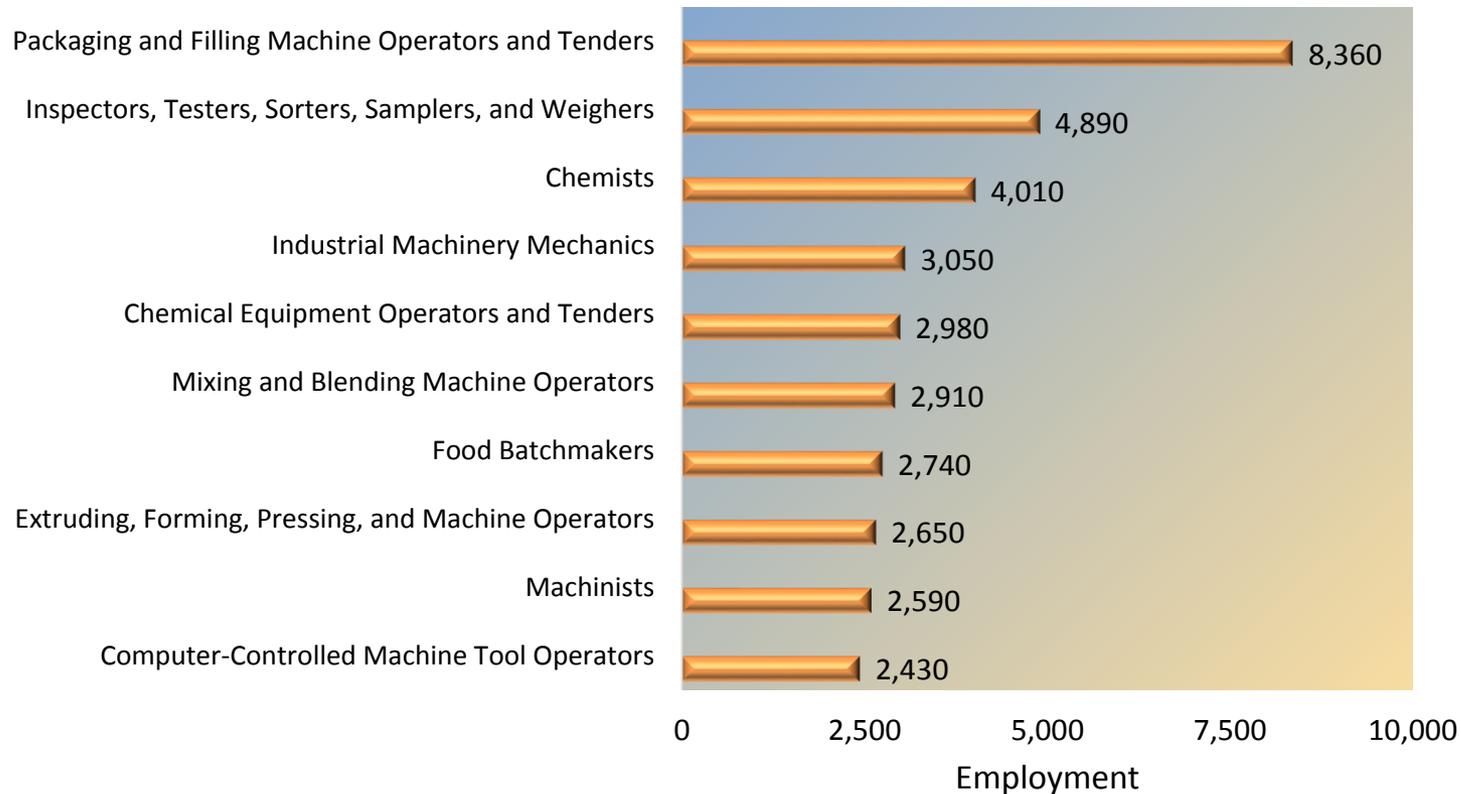
Management and office and administrative support occupations account for roughly 16 percent of employment.



The five primary components of advanced manufacturing include food, chemical, fabricated metal, machinery, and electronic product manufacturing

Advanced Manufacturing

Top Ten Occupations Found in the Advanced Manufacturing Sector New Jersey, 2017



These ten most commonly found occupations comprise about 22 percent of all advanced manufacturing employment.

While most of these occupations require no more than a high school diploma, they each require a certain level of training for proper operation. Entry level pay may be relatively low, but advancement through appropriate credentialing is common.

Machinists and computer-controlled machine tool operators, in particular, require a great level of skill, and continuous learning is essential for success.



STEM occupations are essential to industries that are heavily involved in research and development

Advanced Manufacturing

Top Detailed Industries in the Advanced Manufacturing Sector Employing STEM Occupations New Jersey, 2017

| Industry | Employment | Average Salary |
|--|------------|----------------|
| Pharmaceutical and Medicine | 7,010 | \$95,630 |
| Navigational, Measuring, Electromedical, and Control Instruments | 4,460 | \$106,120 |
| Chemical | 1,550 | \$86,640 |
| Semiconductor and Other Electronic Component | 1,460 | \$81,370 |
| Medical Equipment and Supplies | 1,260 | \$80,500 |
| Machinery | 830 | \$82,340 |
| Fabricated Metal Product Manufacturing | 430 | \$81,960 |
| Communications Equipment | 430 | \$90,650 |
| Electrical Equipment | 410 | \$78,420 |
| Nonmetallic Mineral Product | 330 | \$77,340 |

A large portion of the STEM workers employed by companies in the pharmaceutical and medicine manufacturing industry (NAICS 3254) are chemists or other types of scientists.

Many of the STEM occupations found in the navigational, measuring, electromedical and control instruments industry (NAICS 3345) are classified as engineering and computer occupations.

Workers in STEM occupations in industries represented on this list all earn an average salary significantly higher than the statewide average of \$56,980.

*Weighted Salary

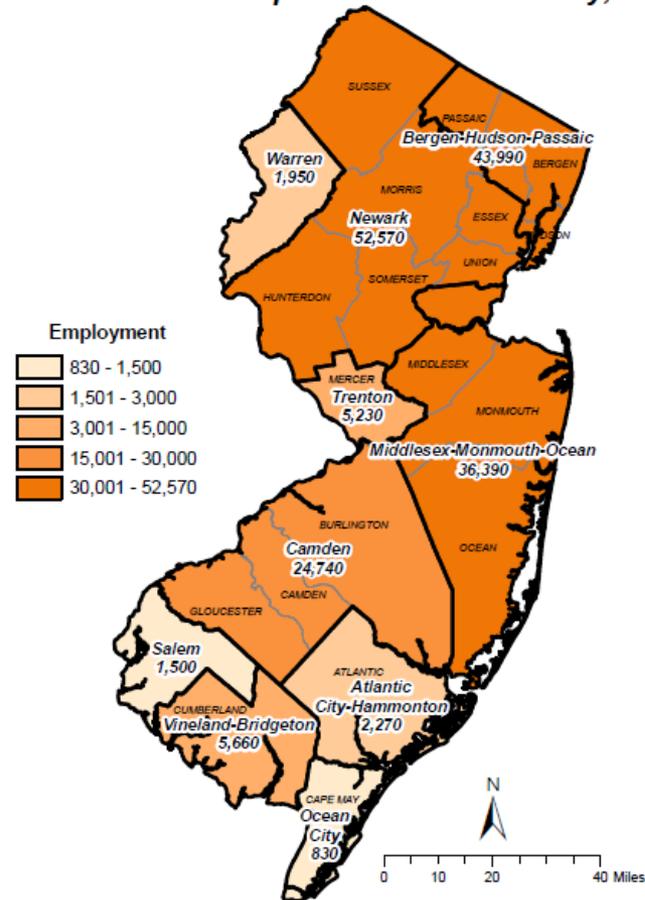


Production occupations, which can vary greatly depending on what is being produced, are found in every Labor Area in New Jersey

Advanced Manufacturing

| Labor Area | Employment |
|---------------------------|------------|
| Newark | 52,570 |
| Bergen-Hudson-Passaic | 43,990 |
| Middlesex-Monmouth-Ocean | 36,390 |
| Camden | 24,740 |
| Vineland - Bridgeton | 5,660 |
| Trenton | 5,230 |
| Atlantic City - Hammonton | 2,270 |
| Warren | 1,950 |
| Salem | 1,500 |
| Ocean City | 830 |

*Employment by Labor Area
Production Occupations in New Jersey, 2017*



Over three-quarters of all production workers in New Jersey are employed in just three Labor Areas; Newark, Bergen-Hudson-Passaic, and Middlesex-Monmouth-Ocean. Combined, these Labor Areas encompass twelve of New Jersey's twenty-one counties.

The Camden Labor Area, located across the Delaware River from Philadelphia, also employs a large number of production workers.

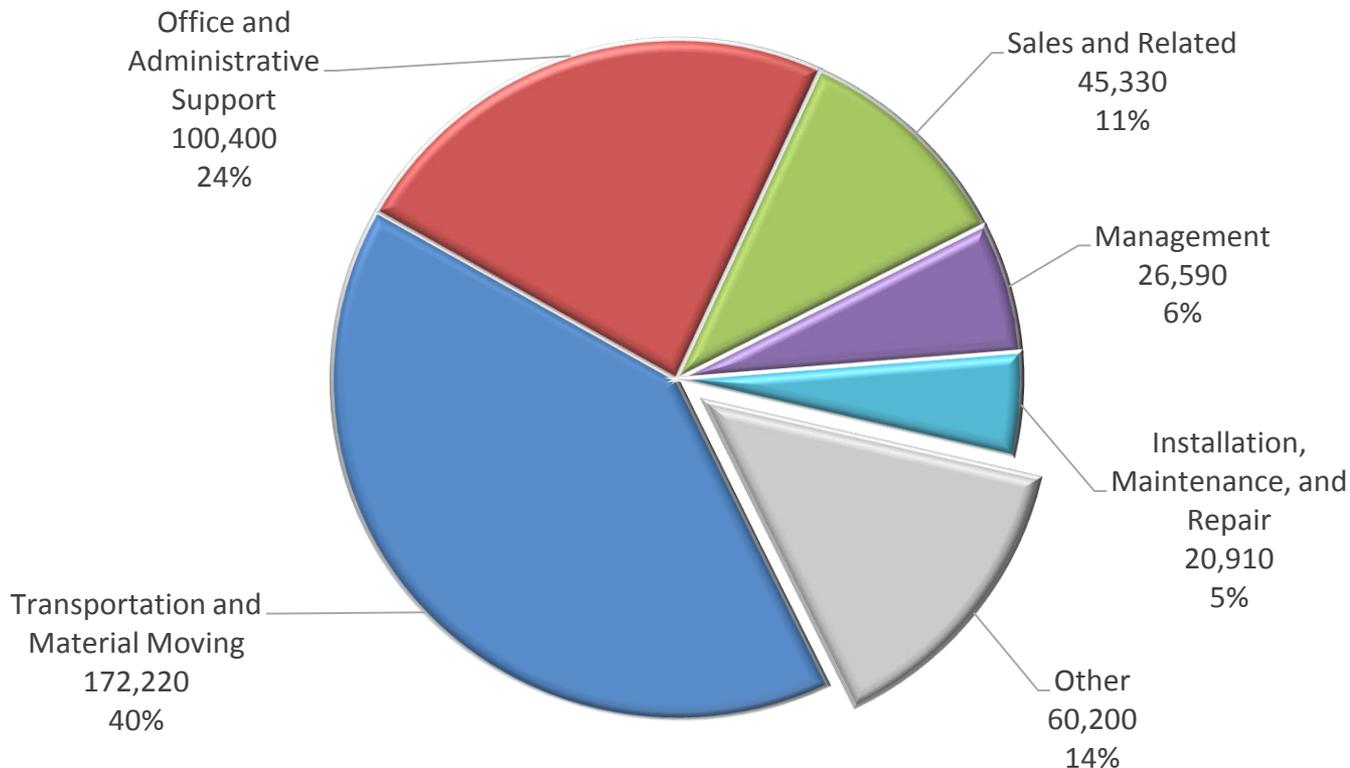
The remaining six Labor Areas account for just nearly 10 percent of the state's production workers.



Transportation, Logistics and Distribution (TLD) includes employers that are classified as wholesale trade, transportation, or warehousing

Transportation, Logistics & Distribution

Profile of TLD Sector by Major Occupational Group New Jersey, 2017



The TLD sector is one of the largest industry sectors in New Jersey, and with employment of over 400,000 accounts for more than ten percent of all jobs in the state.

Transportation and material moving occupations account for more than one-third of all TLD employment.

Nearly 50 percent of all sector employment is classified in four of the largest groups, which handle the management, sales, administrative and other business related functions.



Many of the top occupations in TLD have relatively low educational requirements

Transportation, Logistics & Distribution

Most Commonly Found Occupations in the TLD Sector New Jersey, 2017

| Occupation | Employment | Average Salary | Education |
|---|------------|----------------|-----------------------------------|
| Laborers and Freight and Stock | 58,590 | \$32,160 | No formal educational credential |
| Heavy and Tractor-Trailer Truck Drivers | 32,250 | \$47,600 | Postsecondary non-degree award |
| Wholesale Sales Representatives, Non-technical Products | 27,860 | \$80,550 | High school diploma or equivalent |
| Customer Service Representatives | 13,660 | \$41,940 | High school diploma or equivalent |
| Light Truck or Delivery Services Drivers | 13,060 | \$42,440 | High school diploma or equivalent |
| Industrial Truck and Tractor Operators | 10,570 | \$37,530 | No formal educational credential |
| Postal Service Mail Carriers | 10,520 | \$50,880 | High school diploma or equivalent |
| Shipping, Receiving, and Traffic Clerks | 10,130 | \$36,560 | High school diploma or equivalent |
| Bus Drivers, School or Special Client | 9,650 | \$34,190 | High school diploma or equivalent |
| General and Operations Managers | 9,410 | \$159,300 | Bachelor's degree |

These ten occupations combined account for more than 45 percent of all employment in the TLD sector.

Wholesale sales representatives of non-technical products are the only occupation (outside management) among the top ten in employment in TLD that earn an average salary (\$80,550) higher than the statewide average of \$56,980.

Most of the drivers and operators within TLD require some form of a commercial driver's license (CDL) or some other credential in order to be qualified to work.



Each of these occupations has a significant presence in TLD and earns a salary far more than the statewide average

Transportation, Logistics & Distribution

Selected Highly Paid Occupations in the TLD Industry Sector New Jersey 2017

| Occupation | Average Salary | Employment | Education |
|--|----------------|------------|-----------------------------------|
| Transportation, Storage, and Distribution Managers | \$114,240 | 3,230 | High school diploma or equivalent |
| Wholesale Sales Representatives | \$109,880 | 3,580 | Bachelor's degree |
| Network and Computer Systems Administrators | \$88,740 | 810 | Bachelor's degree |
| Marketing Research Analysts and Specialists | \$82,420 | 2,580 | Bachelor's degree |
| Logisticians | \$77,600 | 2610 | Bachelor's degree |
| Compliance Officers | \$76,940 | 940 | Bachelor's degree |
| Locomotive Engineers | \$68,600 | 820 | High school diploma or equivalent |
| Aircraft Mechanics and Service Technicians | \$67,280 | 1,830 | Postsecondary non-degree award |
| Computer User Support Specialists | \$64,870 | 1240 | Some college, no degree |
| Mobile Heavy Equipment Mechanics | \$59,570 | 940 | High school diploma or equivalent |

Generally, the occupations within the TLD sector that earn the highest average salaries require at least a Bachelor's degree.

Many of these higher paying occupations are classified with either computer or business and financial occupational groups.

Commercial pilots, aircraft mechanics, and locomotive engineers have lower levels of educational requirement, yet still offer opportunities for higher earnings in the TLD sector.

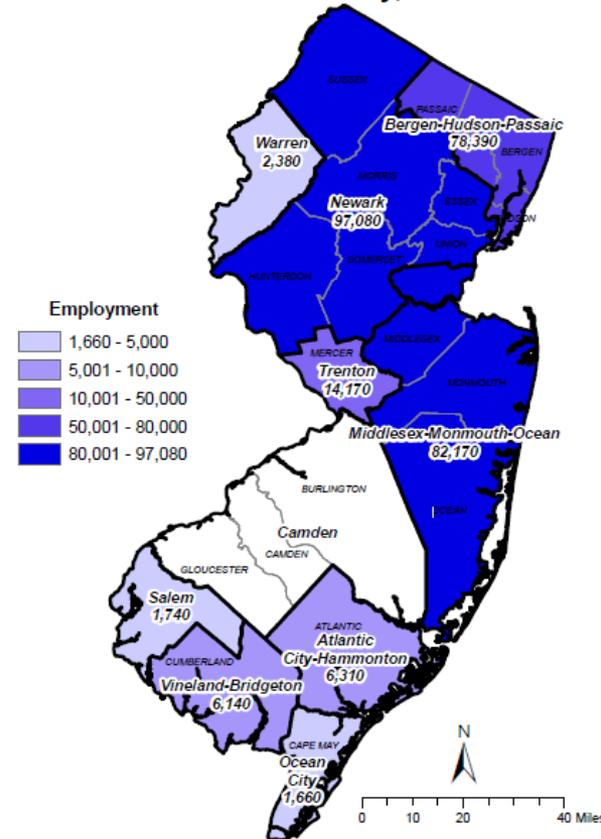


New Jersey has a distinct geography and transportation infrastructure which links several major U.S. cities locally and access to the world through its international airports and seaports

Transportation, Logistics & Distribution

| Labor Area | Employment |
|---------------------------|------------|
| Newark | 97,080 |
| Middlesex-Monmouth-Ocean | 82,170 |
| Bergen-Hudson-Passaic | 78,390 |
| Trenton | 14,170 |
| Atlantic City - Hammonton | 6,310 |
| Vineland - Bridgeton | 6,140 |
| Warren | 2,380 |
| Salem | 1,740 |
| Ocean City | 1,660 |
| Camden | N/A |

*Employment by Labor Area
Transportation and Material Moving Occupations
in New Jersey, 2017*



The Newark Labor Area is home to over 30 percent of all TLD employment in the state. Beyond general warehousing and other forms of TLD, this area boasts the largest international airport in the state, Newark Liberty International, as well as several seaports. This network of land, air, and sea makes New Jersey a unique place in the movement of goods both locally and globally.

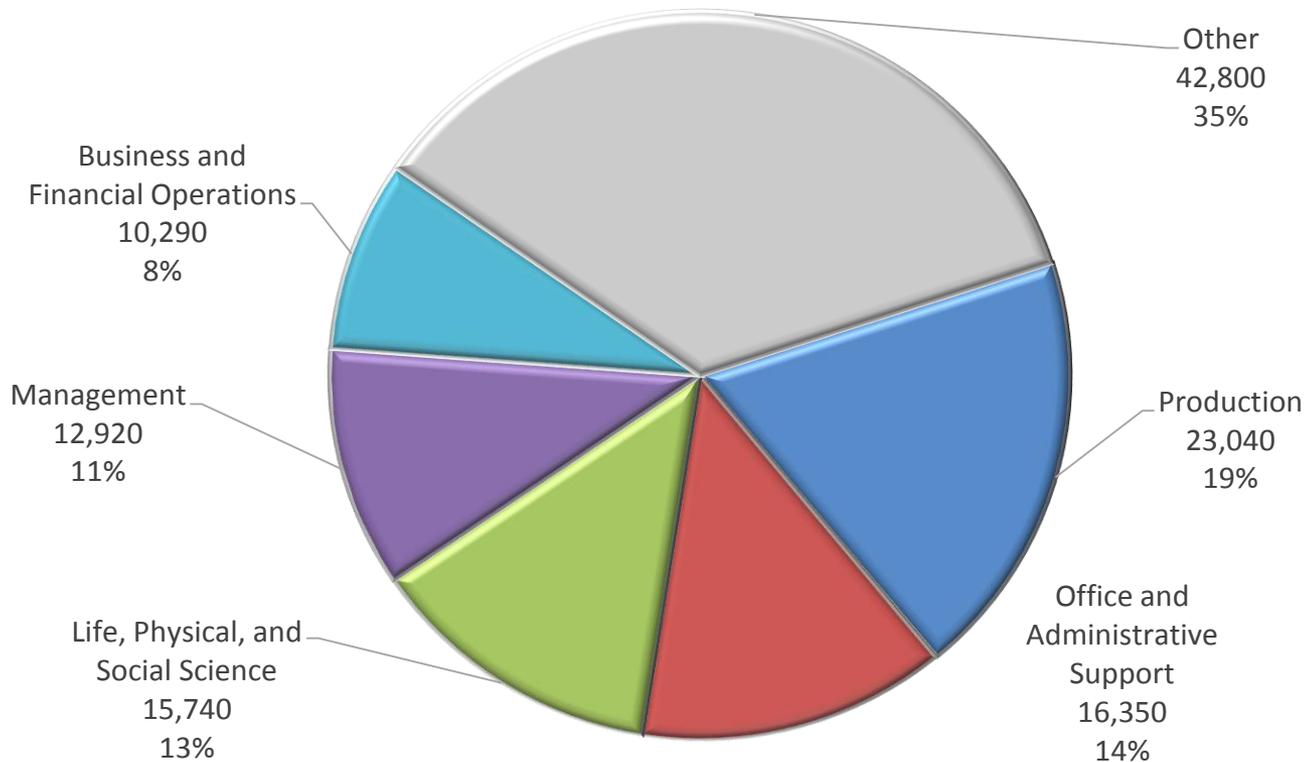
The Camden Labor Area in the south is host to many of New Jersey's trucking and warehousing companies. It is also home to the Port of Camden and the Gloucester Marine Terminal.



There are roughly 121,140 employed in the biopharmaceutical and life sciences sector in New Jersey

Biopharmaceuticals & Life Sciences

Profile of Biopharmaceuticals and Life Sciences Sector by Major Occupational Group New Jersey, 2017



Nearly one-fifth of all workers in this industry are classified within the production occupational group.

The second largest occupational group (life, physical, and social science) includes many of the higher earning scientists, chemists, and technicians responsible for much of the research and development performed in this sector.

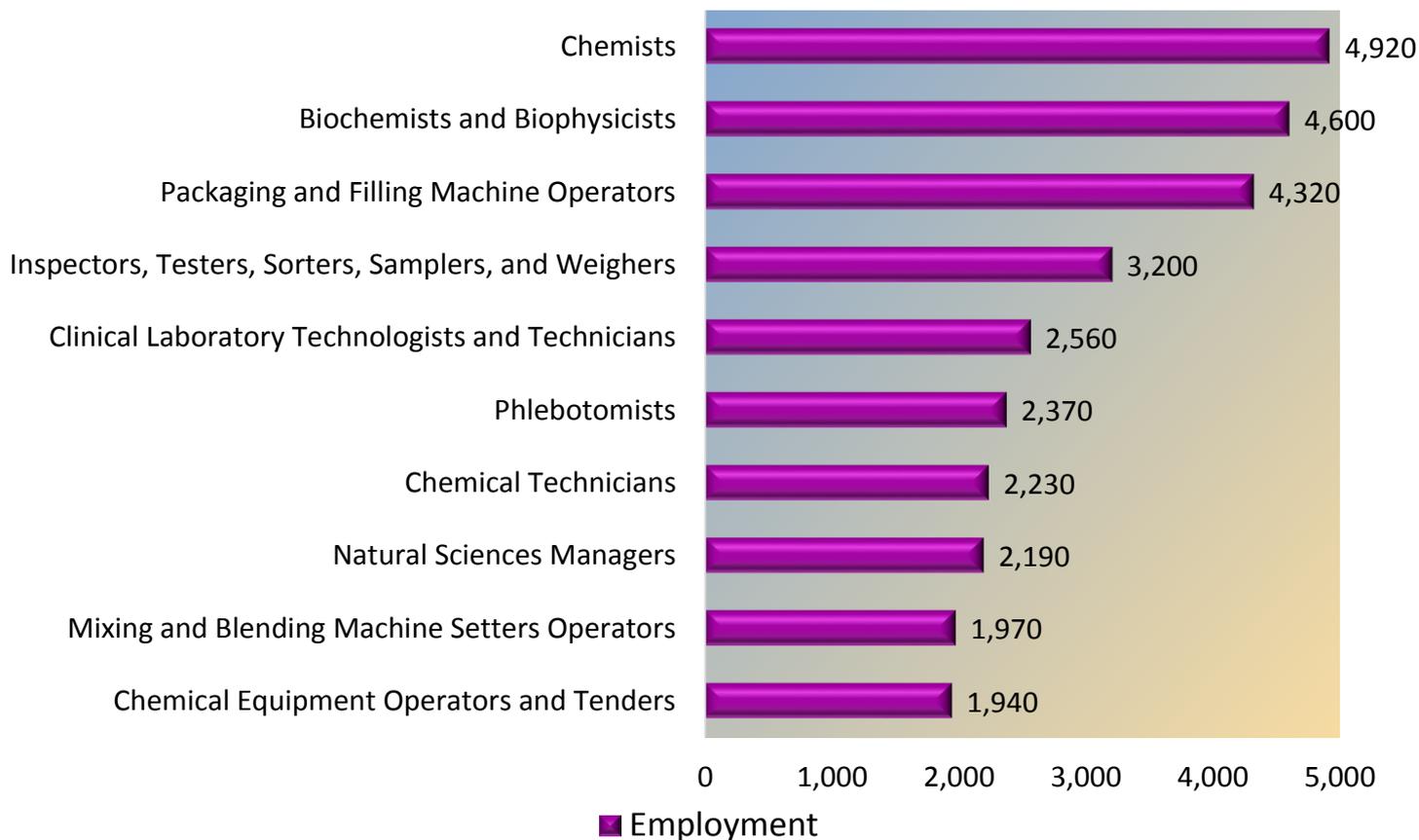
The “other” occupations are largely comprised of STEM and sales occupations who aid in the development and sales of the products created in this sector.



Unlike most other sectors in this report, these top ten occupations account for slightly over 25 percent of all employment in this sector

Biopharmaceuticals & Life Sciences

Top Ten Occupations Found in the Biopharmaceutical and Life Sciences Sector in New Jersey, 2017



The occupations on this list have a wide range of educational requirements. There are some machine operators and other production workers that require only a high school diploma as well as chemists and biochemists and biophysicists that require more advanced degrees.

Natural sciences managers are the highest paying occupation on this list, earning an average of over \$ 189,470 .

Packaging and filling machine operators, on the other hand, earned an average salary of only \$28,800.



Most of the highest paid occupations in the biopharmaceutical and life sciences sector are classified as STEM occupations

Select Highest Paying Non-Management Occupations Found in the Biopharmaceutical and Life Sciences Sector in New Jersey, 2017

| Occupation | Average Salary | Employment | Education |
|-----------------------------------|----------------|------------|---------------------------------|
| Medical Scientists | \$129,020 | 1,440 | Doctoral or professional degree |
| Pharmacists | \$122,390 | 590 | Doctoral or professional degree |
| Biochemists and Biophysicists | \$121,460 | 4,600 | Doctoral or professional degree |
| Electrical Engineers | \$115,860 | 580 | Bachelor's degree |
| Applications Software Developers | \$111,720 | 1,150 | Bachelor's degree |
| Wholesale Sales Representatives | \$100,950 | 200 | Bachelor's degree |
| Computer Systems Analysts | \$99,030 | 1,030 | Bachelor's degree |
| Industrial Engineers | \$98,770 | 1,320 | Bachelor's degree |
| Accountants and Auditors | \$95,220 | 1,270 | Bachelor's degree |
| Food Scientists and Technologists | \$92,250 | 370 | Bachelor's degree |

Pharmacists, accountants and wholesale sales representatives are the only non-STEM occupations on this list. Each still requires significant schooling, and earned an average salary exceeding \$104,000.

Medical scientists earn more in New Jersey than in any other state. At \$129,020, they earn more than twice the statewide average.

Chemists in New Jersey are also very well compensated, earning more in New Jersey than in all but six other states.



New Jersey employs a large concentration of high level occupations vital to the biopharmaceutical industry

Biopharmaceuticals & Life Sciences

Employment and Average Salary by State in 2017

Biochemists & Biophysicists

| State | Employment | Average Salary |
|---------------|------------|----------------|
| New Jersey | 5,150 | \$121,460 |
| California | 4,480 | \$105,460 |
| Massachusetts | 4,100 | \$111,350 |
| Texas | 1,440 | \$100,250 |
| Pennsylvania | 1,330 | \$90,880 |
| New York | 1,260 | \$89,070 |
| Maryland | 1,230 | \$87,490 |
| Minnesota | 970 | \$80,160 |
| Illinois | 910 | \$101,450 |
| Florida | 580 | \$97,730 |

Chemists

| State | Employment | Average Salary |
|----------------|------------|----------------|
| California | 10,550 | \$88,920 |
| New Jersey | 7,110 | \$84,530 |
| Texas | 5,600 | \$79,450 |
| Pennsylvania | 5,280 | \$74,680 |
| North Carolina | 4,080 | \$77,180 |
| Ohio | 3,990 | \$73,650 |
| New York | 3,780 | \$85,730 |
| Maryland | 3,300 | \$112,120 |
| Michigan | 2,950 | \$76,000 |
| Illinois | 2,900 | \$76,620 |

New Jersey is home to nearly 20 percent of the nation's biochemists and biophysicists, ranking first among states. Those working in this occupation earn an average salary of \$114,440, also most in the nation.

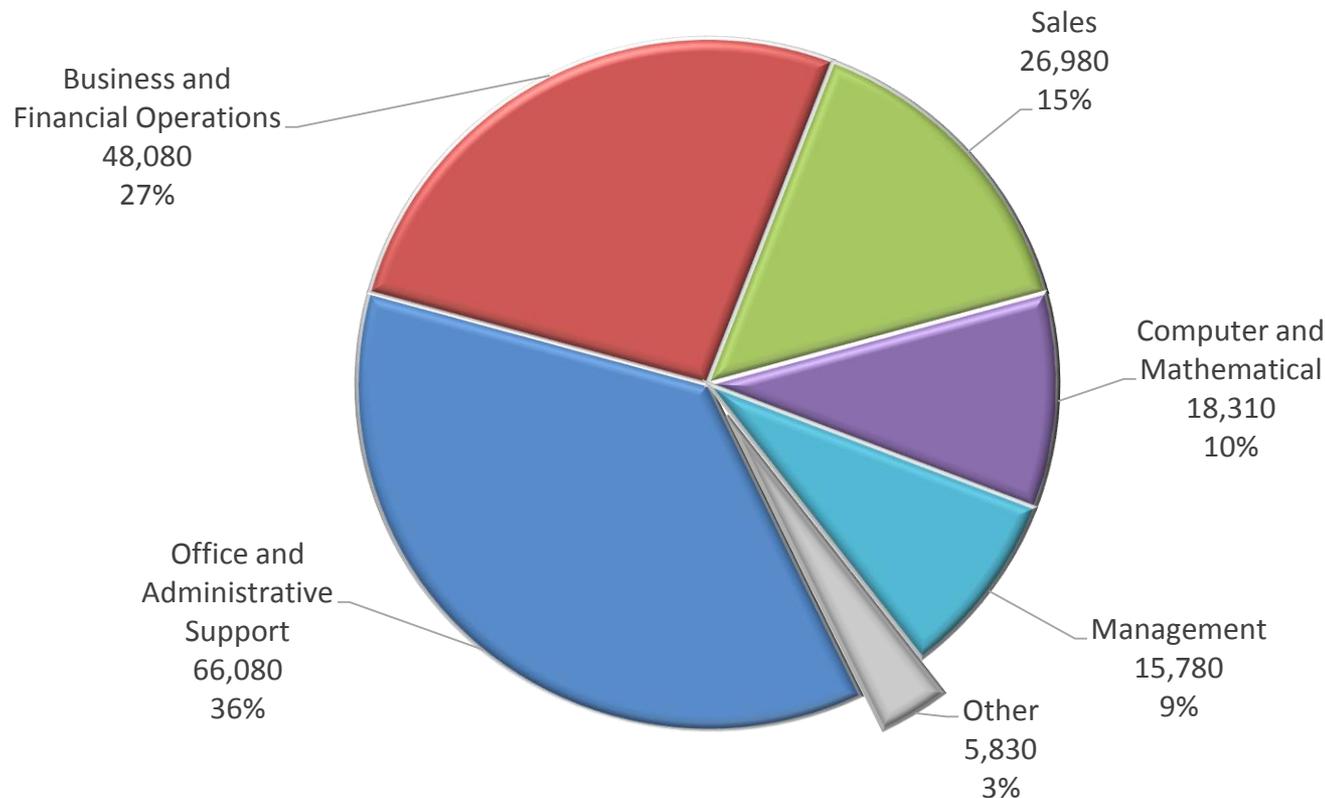
New Jersey ranks second in the total number of chemists employed, behind only California. Combined, these two states account for more than twenty percent of all chemists in the nation. New Jersey also pays its chemists 3.2 percent more than the nation average of \$81,870.



Nearly all employment in the financial services sector in New Jersey can be classified into just five groups

Financial Services

Profile of Financial Services Sector by Major Occupational Group New Jersey 2017



Office and administrative support occupations, including tellers and other types of financial clerks, is the largest occupational group accounting for near 37 percent of financial services employment.

Sales occupations make up a relatively larger portion of all financial services employment due to the securities and commodities exchanges that are mostly found in the northern counties nearest New York City.

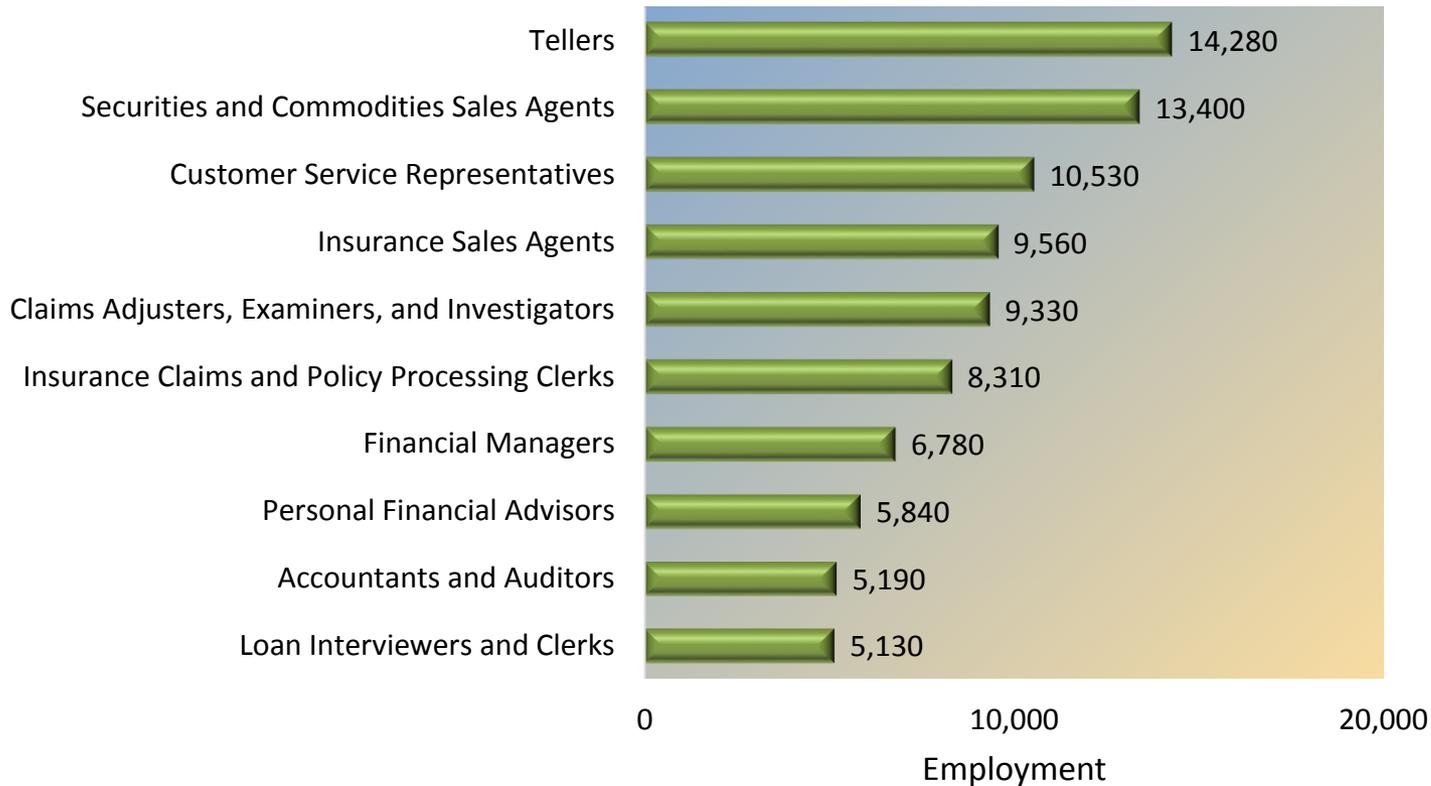
The remaining three occupational groups that make up about 45 percent of employment in the financial services sector typically require at least a bachelor's degree and tend to earn much higher average wages.



The three primary components of the financial industry, commercial banking, securities and commodities exchanges, and insurance carriers, are well represented on this list

Financial Services

Top Ten Largest Occupations Found in the Financial Sector New Jersey, 2017



The largest two occupations in terms of employment, tellers and securities and commodities sales agents, are often the most common points of entry into the financial sector.

The remaining eight occupations cover a wide scope of job responsibilities, from management and administrative support to sales and accounting and auditing.



Each of these higher paying occupations requires at least a Bachelor's degree for entry

Financial Services

Top Ten Non-Management Occupations Found in the Financial Sector New Jersey, 2017

| Occupation | Average Salary | Employment | Education |
|---|----------------|------------|-------------------|
| Systems Software Developers | \$135,150 | 970 | Bachelor's degree |
| Applications Software Developers | \$130,660 | 5,060 | Bachelor's degree |
| Information Security Analysts | \$129,650 | 1,140 | Bachelor's degree |
| Personal Financial Advisors | \$126,480 | 5,840 | Bachelor's degree |
| Computer Systems Analysts | \$122,420 | 2,710 | Bachelor's degree |
| Financial Analysts | \$114,260 | 4,400 | Bachelor's degree |
| Securities and Commodities Sales Agents | \$106,470 | 13,400 | Bachelor's degree |
| Insurance Underwriters | \$97,600 | 3,030 | Bachelor's degree |
| Financial Examiners | \$97,400 | 1,190 | Bachelor's degree |
| Accountants and Auditors | \$94,380 | 5,190 | Bachelor's degree |

A large portion, 23 percent, of all employment in the financial services sector is represented by the high paying jobs on this list.

Systems software developers, application developers, and information security analysts are booming occupations in the financial services sector as more of these functions are performed digitally or online. Each of these jobs earns an average salary exceeding \$100,000.

Traditional financial occupations like personal financial advisors and insurance underwriters are still prevalent within the sector.



Among the Metropolitan Statistical Areas (MSAs) employing a large number of securities and commodities sales agents, two of the most prominent include counties in New Jersey

Financial Services

Top MSAs in the United States employing Securities and Commodities Sales Agents New Jersey, 2017

| Metropolitan Statistical Area | Employment | Location Quotient | Average Salary |
|--|---------------|-------------------|------------------|
| <i>New York-Newark-Jersey City, NY-NJ-PA</i> | <i>67,110</i> | <i>2.64</i> | <i>\$159,720</i> |
| Los Angeles-Long Beach-Anaheim, CA | 20,530 | 1.24 | \$82,550 |
| Chicago-Naperville-Elgin, IL-IN-WI | 17,980 | 1.43 | \$87,800 |
| Dallas-Fort Worth-Arlington, TX | 15,090 | 1.58 | \$93,230 |
| Houston-The Woodlands-Sugar Land, TX | 11,810 | 1.48 | \$82,880 |
| Boston-Cambridge-Nashua, MA-NH | 11,190 | 1.5 | \$115,390 |
| Miami-Fort Lauderdale-West Palm Beach, FL | 11,160 | 1.59 | \$88,860 |
| <i>Philadelphia-Camden-Wilmington, PA-NJ-DE-MD</i> | <i>9,550</i> | <i>1.24</i> | <i>\$91,390</i> |
| San Francisco-Oakland-Hayward, CA | 8,870 | 1.37 | \$87,260 |
| Denver-Aurora-Lakewood, CO | 8,480 | 2.15 | \$77,520 |

New York City is the financial capital of the world, hosting the largest stock exchange on the planet. Its close proximity to many of New Jersey's northern counties are a direct benefit to the state. Its MSA employs more than three times the number of securities and commodities sales agents of any other MSA in the country. The average salary for this occupation is also much higher than in any other MSA.

The MSA surrounding Philadelphia also makes the top ten list of areas employing this occupation. Combined, nearly one-quarter of all securities and commodities sales agents in the country are employed in the two MSAs surrounding New York City and Philadelphia.

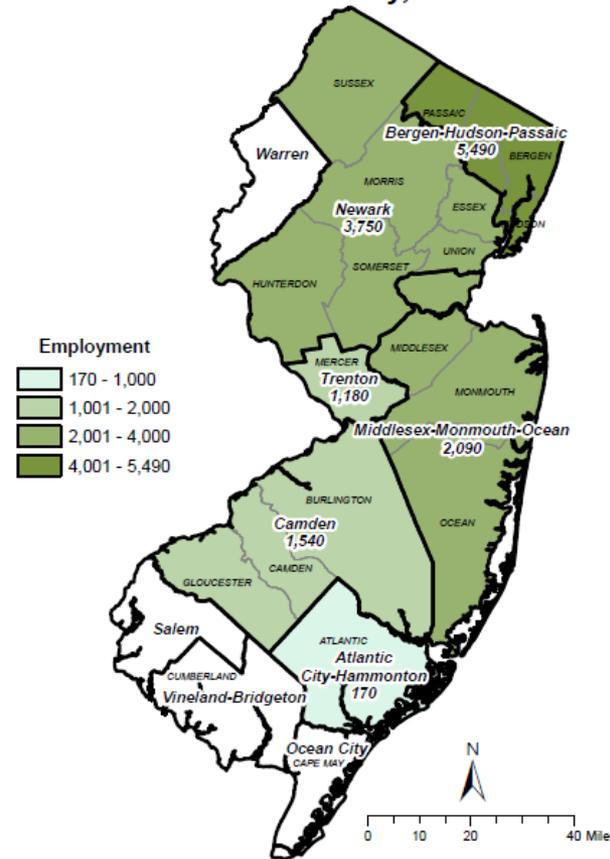


Securities and commodities sales agents are typically employed in Labor Areas near either the New York or Philadelphia stock exchanges

Financial Services

| Labor Area | Employment |
|---------------------------|------------|
| Bergen-Hudson-Passaic | 5,490 |
| Newark | 3,750 |
| Middlesex-Monmouth-Ocean | 2,090 |
| Camden | 1,540 |
| Trenton | 1,180 |
| Atlantic City - Hammonton | 170 |
| Vineland - Bridgeton | N/A |
| Warren | N/A |
| Salem | N/A |
| Ocean City | N/A |

**Employment by Labor Area
Securities and Commodities Sales Agents
in New Jersey, 2017**



Near 40 percent of all securities and commodities sales agents in New Jersey are employed in the Bergen-Hudson-Passaic Labor Area.

There are another nearly 5,840 security and commodities sales agents who are employed in the Newark and Middlesex-Monmouth-Ocean Labor Areas. These three areas combined account for near 80 percent of all employment in the state.



New Jersey ranks first among all states in STEM occupational* employment per square mile, and its 189,070 workers ranks fourteenth in total STEM employment

Science, Technology, Engineering & Math

| State | All STEM Employment | Rank |
|----------------|---------------------|------|
| California | 922,290 | 1 |
| Texas | 587,170 | 2 |
| New York | 371,430 | 3 |
| Florida | 301,370 | 4 |
| Virginia | 276,670 | 5 |
| Illinois | 262,280 | 6 |
| Pennsylvania | 258,720 | 7 |
| Michigan | 250,990 | 8 |
| Ohio | 243,350 | 9 |
| Washington | 232,390 | 10 |
| Massachusetts | 217,890 | 11 |
| Georgia | 202,480 | 12 |
| North Carolina | 193,440 | 13 |
| New Jersey | 189,070 | 14 |
| Maryland | 184,830 | 15 |

| State | STEM Square Mile | Rank |
|----------------|------------------|------|
| New Jersey | 21.7 | 1 |
| Massachusetts | 20.6 | 2 |
| Connecticut | 15.2 | 3 |
| Maryland | 14.9 | 4 |
| Rhode Island | 14.6 | 5 |
| Delaware | 9.6 | 6 |
| New York | 6.8 | 7 |
| Virginia | 6.5 | 8 |
| California | 5.6 | 9 |
| Pennsylvania | 5.6 | 10 |
| Ohio | 5.4 | 11 |
| Florida | 4.6 | 12 |
| Illinois | 4.5 | 13 |
| North Carolina | 3.6 | 14 |
| New Hampshire | 3.5 | 15 |

California, Texas and New York, the three most populous states in the United States, account for more than 26 percent of all STEM jobs in the nation.

New Jersey has the most density of STEM employment of all states, with over 21 STEM workers per square mile.

Four of the top fifteen states in total STEM employment are found in the Northeast Region of the U.S., however, only Vermont (#30) and Maine (#40) qualify as northeastern states that fall outside the top fifteen in STEM employment per square mile.

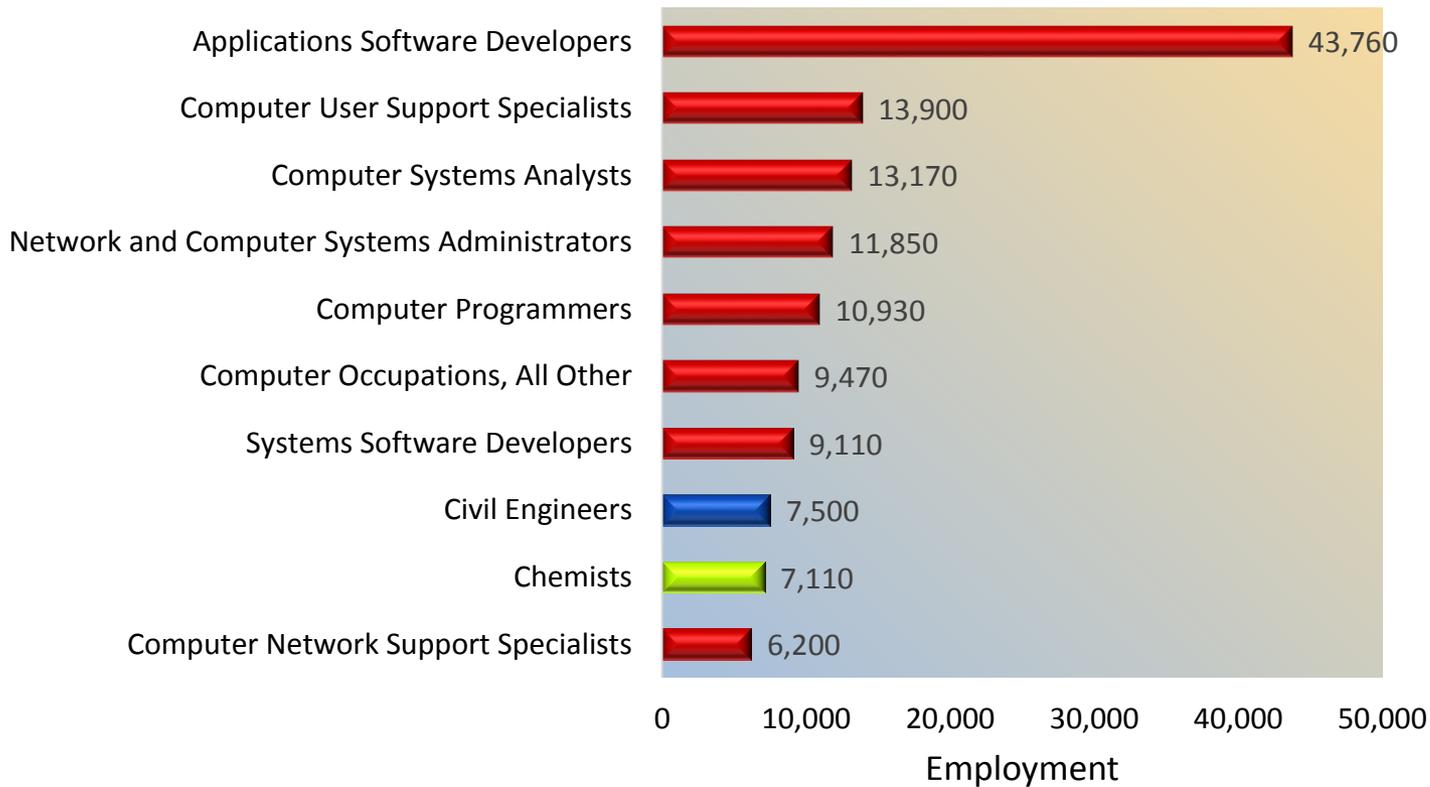


*STEM occupations are found across all industries

The ten occupations on this list account for more than 59 percent of all STEM employment in New Jersey

Science, Technology, Engineering & Math

Top Ten STEM Occupations Found in All Industries New Jersey, 2017



Computer and math occupations are the largest of the three groups that make up total STEM employment, accounting for roughly 62 percent of STEM jobs. Eight of the top ten occupations on this list are classified in this group.

Architecture and engineering occupations employed more than 49,400 in 2017. Civil and mechanical engineers are its two largest occupations.

Life, physical and social sciences occupations employ the fewest of the three groups. Chemists are the only occupation among the top ten STEM jobs.

- Computer & math
- Architecture & engineering
- Life, physical & social sciences



STEM occupations, as a group, earn an average salary of \$95,820, which is over 68 percent more than the statewide average

Science, Technology, Engineering & Math

Highest Paying STEM Occupations New Jersey, 2017

Each of the top ten highest paying STEM occupations earns an average salary exceeding six figures, and requires a minimum education of at least a Bachelor's degree.

Computer and math occupations are again prominent on this list, accounting for six of the top ten spots.

Three of the highest paying STEM occupations requires a Doctoral degree, while all others require either a Bachelor's or Master's degree.

| Occupation | Average Salary | Employment | Minimum Education |
|--|----------------|------------|---------------------------------|
| Medical Scientists | \$145,340 | 2,560 | Doctoral or professional degree |
| Computer Network Architects | \$128,380 | 5,260 | Bachelor's degree |
| Computer and Information Research Scientists | \$125,240 | 1,280 | Doctoral or professional degree |
| Information Security Analysts | \$120,020 | 3,210 | Bachelor's degree |
| Systems Software Developers | \$117,080 | 9,110 | Bachelor's degree |
| Actuaries | \$114,780 | 640 | Bachelor's degree |
| Aerospace Engineers | \$114,680 | 1,670 | Bachelor's degree |
| Biochemists and Biophysicists | \$114,440 | 5,150 | Doctoral or professional degree |
| Statisticians | \$114,020 | 1,050 | Master's degree |
| Chemical Engineers | \$111,540 | 1,270 | Bachelor's degree |



The industries listed below employ a large number or share of STEM workers

Science, Technology, Engineering & Math

| Industry | STEM Employment |
|---|-----------------|
| Computer Systems Design and Related Services | 42,870 |
| Architectural, Engineering, and Related Services | 20,040 |
| Management of Companies and Enterprises | 13,650 |
| Scientific Research and Development Services | 13,500 |
| Telecommunications | 8,520 |
| Credit Intermediation and Related Activities (5221 and 5223 only) | 8,350 |
| Employment Services | 7,270 |
| Pharmaceutical and Medicine Manufacturing | 7,010 |
| Management, Scientific, and Technical Consulting Services | 6,630 |
| Data Processing, Hosting, and Related Services | 4,640 |

| Industry | STEM Share | Total Employment | STEM Employment |
|--|------------|------------------|-----------------|
| Computer Systems Design and Related Services | 61.0% | 70,250 | 42,870 |
| Software Publishers | 55.8% | 6,380 | 3,560 |
| Architectural, Engineering, and Related Services | 52.1% | 38,500 | 20,040 |
| Scientific Research and Development Services | 48.4% | 27,880 | 13,500 |
| Data Processing, Hosting, and Related Services | 47.6% | 9,740 | 4,640 |
| Navigational, Measuring, Electromedical, and Control Instruments Manufacturing | 36.7% | 12,140 | 4,460 |
| Telecommunications | 32.1% | 26,520 | 8,520 |
| Pharmaceutical and Medicine Manufacturing | 30.4% | 23,080 | 7,010 |
| Electrical Equipment Manufacturing | 23.7% | 1,730 | 410 |
| Computer and Peripheral Equipment Manufacturing | 20.4% | 490 | 100 |

Many of the industries with the largest numbers or shares of STEM employment are classified in the manufacturing, information, or professional and business services sectors.

Computer systems design services ranks as the highest industry in New Jersey for STEM employment, accounting for more than one in every five STEM jobs. Nearly two-thirds of all employment in this industry is classified as a STEM occupation.

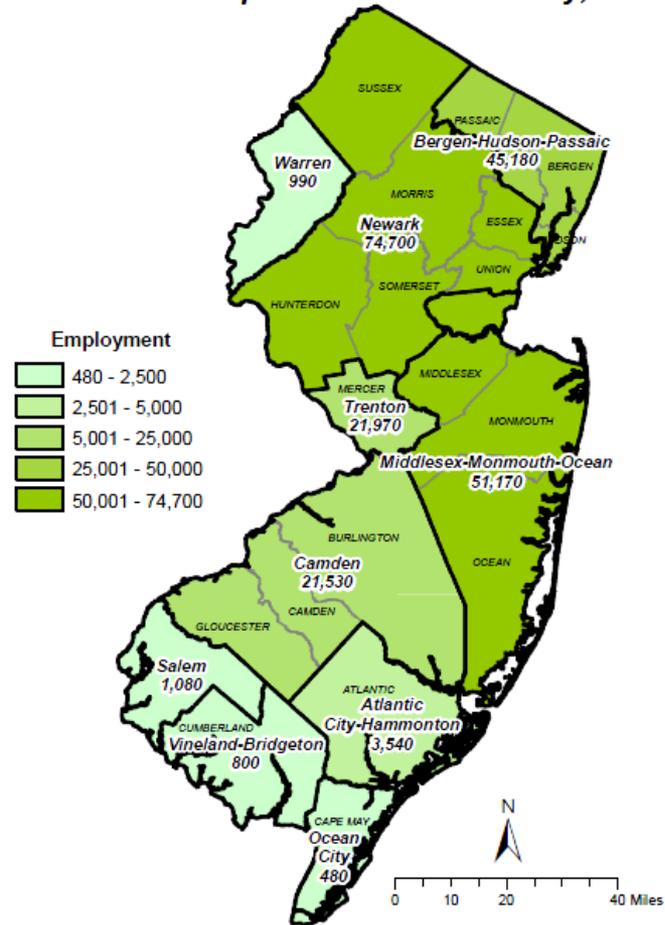


There are STEM workers employed in all parts of the state, but with concentrations in a few Labor Areas

Science, Technology, Engineering & Math

| Labor Area | Employment |
|---------------------------|------------|
| Newark | 74,700 |
| Middlesex-Monmouth-Ocean | 51,170 |
| Bergen-Hudson-Passaic | 45,180 |
| Trenton | 21,970 |
| Camden | 21,530 |
| Atlantic City - Hammonton | 3,540 |
| Salem | 1,080 |
| Warren | 990 |
| Vineland - Bridgeton | 800 |
| Ocean City | 480 |

**Employment by Labor Area
STEM Occupations in New Jersey, 2017**



The Newark Labor Area employs greater than 74,000 STEM workers, by far the most in any other New Jersey Labor Area.

The Middlesex-Monmouth-Ocean Labor Area in the central part of the state employs more than 51,000 STEM workers.

The Bergen-Hudson-Passaic Labor Area in the north employs more than 45,000 STEM workers. Combined, these three areas account for three of every four STEM jobs.

However, there are also substantial employment opportunities in the more remote parts of the state, like the Ocean City and Warren Labor Areas.



AUTOMATION OF OCCUPATIONS



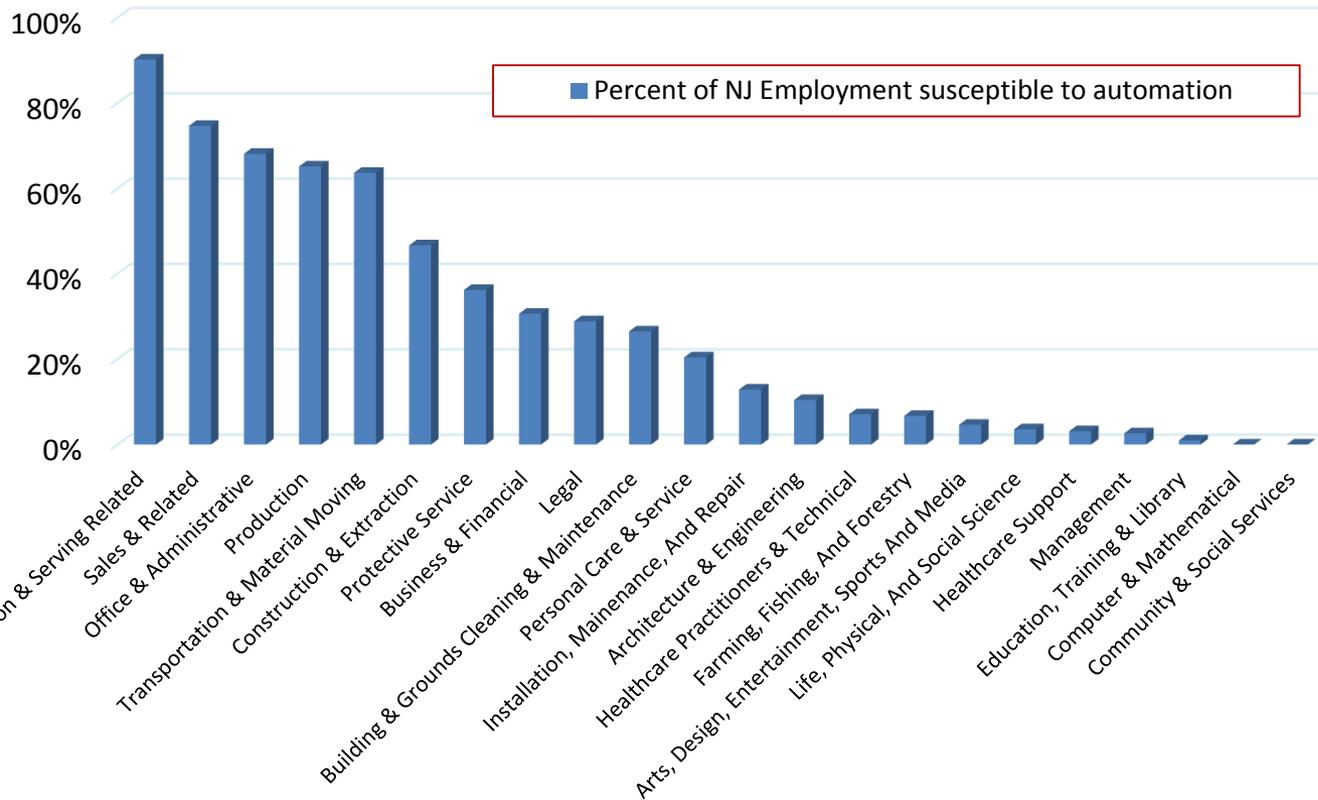
This section was developed based on research by Carl Benedikt Frey and Michael A. Osborne and their report titled “The Future of Employment: How Susceptible are Jobs to Computerisation?”. In this report, they implement a methodology that estimates the probable effects of automation on the 867 occupations in the United States labor market. This section applies their research to New Jersey’s occupations and employment for informational purposes only. *It is not a projection or predictor of New Jersey’s employment.*



More than forty percent of New Jersey's employment is highly likely to become automated in the future

Automation of Occupations

Most Likely ← → **Least Likely**



MAJOR OCCUPATIONAL GROUPS

Over 1.6 million jobs are highly likely to become automated in the State of New Jersey (probability of 75% or more).

Nearly 92 percent of Food Preparation and Serving Related employment are likely to become automated.

There are four occupational groups in New Jersey in which more than 65 percent of the employment is susceptible to computer automation: Food Preparation and Serving Related (90.2%), Sales and Related (74.7%), Office and Administrative (68.1%) and Production (65.1%).



Frey, C.B. and Osborne, M.A. (2013, September 17). The Future of Employment: How Susceptible are Jobs to Computerisation?

These ten occupations are the most likely to be changed due to new technology

Automation of Occupations

| Occupation | Probability Percentage | Average Salary | NJ Employment | Minimum Education |
|---|------------------------|----------------|---------------|-----------------------------------|
| Insurance Underwriters | 99% | \$97,210 | 3,230 | Bachelor's degree |
| Tax Preparers | 99% | \$55,600 | 980 | High school diploma or equivalent |
| Watch Repairers | 99% | \$55,140 | 230 | High school diploma or equivalent |
| Cargo and Freight Agents | 99% | \$51,990 | 3,310 | High school diploma or equivalent |
| Title Examiners, Abstractors, and Searchers | 99% | \$49,560 | 1,960 | High school diploma or equivalent |
| New Accounts Clerks | 99% | \$41,750 | 500 | High school diploma or equivalent |
| Data Entry Keyers | 99% | \$38,680 | 8,690 | High school diploma or equivalent |
| Library Technicians | 99% | \$37,840 | 2,520 | Postsecondary non-degree award |
| Sewers, Hand | 99% | \$28,870 | 260 | No formal educational credential |
| Telemarketers | 99% | \$27,540 | 3,770 | No formal educational credential |

Eight out of the ten susceptible occupations did not require more than a high school diploma.

Nine of these occupations fall below the statewide average salary of \$56,980.

Many of the functions of these positions involve tasks of predictability. There is also a higher probability of automation when the occupation has less human interaction.

Three Office and Administrative Support occupations account for 12,500 positions in New Jersey.

*Minimum NJ Employment of 200.



Frey, C.B. and Osborne, M.A. (2013, September 17). The Future of Employment: How Susceptible are Jobs to Computerisation?

Some occupations with above average salaries are still susceptible to automation

Automation of Occupations

| Occupation | Average Salary | NJ Employment | Probability Percentage | Minimum Education |
|--|----------------|---------------|------------------------|-----------------------------------|
| Compensation and Benefits Managers | \$161,150 | 400 | 96% | Bachelor's degree |
| Real Estate Brokers | \$108,480 | 470 | 97% | High school diploma or equivalent |
| Accountants and Auditors | \$91,410 | 37,110 | 94% | Bachelor's degree |
| Loan Officers | \$84,650 | 6,750 | 98% | Bachelor's degree |
| Credit Analysts | \$83,850 | 2,390 | 98% | Bachelor's degree |
| Budget Analysts | \$83,170 | 2,190 | 94% | Bachelor's degree |
| Tax Examiners and Collectors, and Revenue Agents | \$77,190 | 1,460 | 93% | Bachelor's degree |
| Crane and Tower Operators | \$74,270 | 710 | 90% | High school diploma or equivalent |
| Claims Adjusters, Examiners, and Investigators | \$73,600 | 10,720 | 98% | High school diploma or equivalent |
| Paralegals and Legal Assistants | \$61,620 | 8,060 | 94% | Associate's degree |

*Minimum NJ Employment of 200. Greater than or equal to 90 percent probability.

Six Business and Financial Operations occupations have over a 90 percent chance of computerized automation totaling more than 60,600 of statewide employment.

Insurance Underwriters are one of the most likely occupations to be automated due to the occupation's predictable and repetitive behavior.

As the costs of technology and artificial intelligence continue to drop, there will be a rise of automation in future years.



Frey, C.B. and Osborne, M.A. (2013, September 17). The Future of Employment: How Susceptible are Jobs to Computerisation?

Occupations involving personal interactions are least likely to become automated

Automation of Occupations

| Occupation | Probability Percentage | NJ Employment | Average Salary | Minimum Education |
|---|------------------------|---------------|----------------|-----------------------------------|
| Recreational Therapists | 0.28% | 430 | \$57,240 | Bachelor's degree |
| Emergency Management Directors | 0.30% | 300 | \$96,530 | Bachelor's degree |
| Supervisors of Mechanics, Installers, and Repairers | 0.30% | 12,250 | \$74,120 | High school diploma or equivalent |
| Mental Health and Substance Abuse | 0.31% | 1,560 | \$75,970 | Bachelor's degree |
| Audiologists | 0.33% | 330 | \$91,290 | Doctoral or professional degree |
| Occupational Therapists | 0.35% | 5,240 | \$94,060 | Master's degree |
| Healthcare Social Workers | 0.35% | 3,050 | \$64,140 | Master's degree |
| Supervisors of Fire Fighting and Prevention | 0.36% | 1,520 | \$114,170 | Postsecondary non-degree award |
| Lodging Managers | 0.39% | 470 | \$82,830 | High school diploma or equivalent |
| Dietitians and Nutritionists | 0.39% | 1,880 | \$67,940 | Bachelor's degree |

The least likely occupations to be affected by technology are those that require critical thinking and creativity, as well as direct human contact.

Positions that are non-repetitive and unpredictable are the least likely to be automated.

Four occupations on this list are classified in the Healthcare Practitioners and Technical occupations.

Two are in the Community and Social Services occupational category and are both categorized as social workers.

*Minimum NJ Employment of 200.



Frey, C.B. and Osborne, M.A. (2013, September 17). The Future of Employment: How Susceptible are Jobs to Computerisation?

Acknowledgements

This report was prepared by Michelle Kolpak and Jason Timian, Labor Market Analysts
New Jersey Department of Labor and Workforce Development, Office of Research and
Information, Division of Workforce Research and Analytics

Special thanks to the Economic and Demographic Research OES Data Collection Team:

James Dougherty, OES Supervisor

Joseph Wills, Labor Market Analyst

Anthony Vaccaro, Labor Market Analyst

Antoinette Blackiston, Labor Market Analyst

Robert Reilly, Labor Market Analyst

Natiya Hood, Labor Market Analyst

Juanita Moses, Research Technician

Ira Ricks, Technician

The goal of the OES survey is to collect occupational employment and wage information from employers of different geographies, industries and company sizes

With the cooperation of employers who are surveyed, wage and employment estimates are published for over [800 occupations](#).

Data for New Jersey is [published](#) statewide and also by Labor Area, which are comprised of one or more counties. Estimates are also published by major industry group (2-digit NAICS), and may be available at even finer levels of NAICS detail.

All estimates are comparable to the nation, all 50 states, Puerto Rico, Guam, and the U.S. Virgin Islands. Estimates for areas outside of New Jersey can be accessed via state websites and also through the [Bureau of Labor Statistics](#).

More information on the OES survey can be accessed in the [technical notes](#) section on the Web.



There are eight industry clusters featured in this report that have been identified as having particular importance to New Jersey's workforce and economic success

Some industry clusters are made up of only one NAICS industry:

- The **construction** sector is wholly comprised of the construction industry (NAICS 23).
- The **finance** sector is wholly comprised of the finance industry (NAICS 52).

Some clusters are made up of only a few NAICS industries:

- The **transportation, logistics, and distribution (TLD)** sector is comprised of wholesale trade (NAICS 42) and transportation and warehousing (NAICS 48-49).
- The **health care** sector is comprised of ambulatory care facilities (NAICS 621), hospitals (NAICS 622), and nursing and residential care facilities (NAICS 623).
- The **leisure, hospitality, and retail** sector is comprised of retail trade (NAICS 44-45), arts, entertainment and recreation (NAICS 71), and accommodation and food services (NAICS 72).

Some clusters are made up of several detailed NAICS industries:

- The **advanced manufacturing** and **biopharmaceutical and life sciences** cluster compositions are illustrated on the next page.

The **science, technology, engineering, and math (STEM)** cluster is categorized based on occupation rather than industry classification. This cluster includes three major occupational (SOC) groups that can be found across all industries; computer and math (SOC 15-0000), architecture and engineering (SOC 17-0000), and life, physical, and social science (SOC 19-0000) occupations.



Industrial composition of advanced manufacturing and biopharmaceuticals and life sciences sectors

Advanced Manufacturing

| NAICS | Industry |
|-------|---|
| 311 | Food Manufacturing |
| 325 | Chemical Manufacturing |
| 332 | Fabricated Metal Product Manufacturing |
| 333 | Machinery Manufacturing |
| 334 | Computer And Electronic Product Manufacturing |
| 3241 | Petroleum And Coal Products Manufacturing |
| 3272 | Glass And Glass Product Manufacturing |
| 3353 | Electrical Equipment Manufacturing |
| 3363 | Motor Vehicle Parts Manufacturing |
| 3364 | Aerospace Product And Parts Manufacturing |
| 3366 | Ship And Boat Building |
| 3391 | Medical Equipment And Supplies Manufacturing |

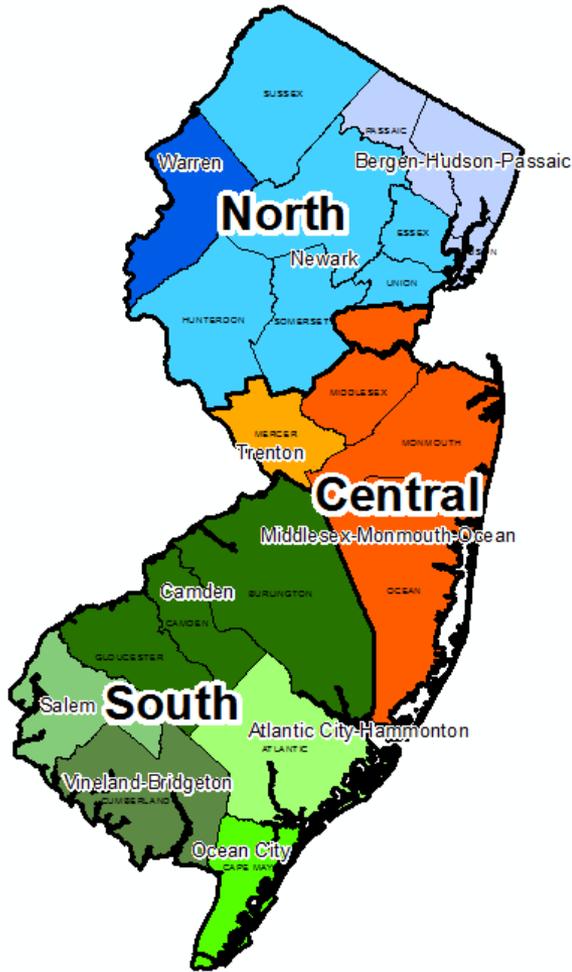
Biopharmaceuticals and Life Sciences

| NAICS | Industry |
|-------|--|
| 3254 | Pharmaceutical & Medicine Manufacturing |
| 3256 | Soap, Cleaning Compounds, & Toilet Prep Manufacturing |
| 3345 | Navigational, Measuring, Electromedical & Control Instrument Manufacturing |
| 3391 | Medical Equipment & Supplies Manufacturing |
| 4242 | Drugs & Druggists Sundries Wholesalers |
| 5417 | Scientific Research & Development Services |
| 6215 | Medical & Diagnostic Labs |



New Jersey contains 21 counties that are combined to create 10 distinct Labor Areas, and is commonly referred to having 3 regions; northern, central and southern

Appendix C



| Region | Labor Areas | Counties |
|----------|--------------------------|---|
| Northern | Bergen-Hudson-Passaic | Bergen, Hudson, Passaic |
| | Newark | Essex, Union, Morris, Sussex, Hunterdon, Somerset |
| | Warren | Warren |
| Central | Middlesex-Monmouth-Ocean | Middlesex, Monmouth, Ocean |
| | Trenton | Mercer |
| Southern | Camden | Burlington, Camden, Gloucester |
| | Atlantic City-Hammonton | Atlantic |
| | Salem | Salem |
| | Vineland-Bridgeton | Cumberland |
| | Ocean City | Cape May |

There are two metropolitan statistical areas (MSAs) that include parts of New Jersey.

The New York-Northern New Jersey-Long Island, NY-NJ-PA MSA includes the Bergen-Hudson-Passaic, Newark-Union, and Edison Labor Areas.

The Philadelphia-Camden-Wilmington, PA-NJ-DE-MD MSA includes the Camden, Trenton-Ewing, Vineland-Millville-Bridgeton, and Salem Labor Areas.



This workforce product was funded by a grant awarded by the U.S. Department of Labor's Employment and Training Administration. The product was created by the recipient and does not necessarily reflect the official position of the U.S. Department of Labor. The Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership. This product is copyrighted by the institution that created it. Internal use by an organization and/or personal use by an individual for non-commercial purposes is permissible. All other uses require the prior authorization of the copyright owner.