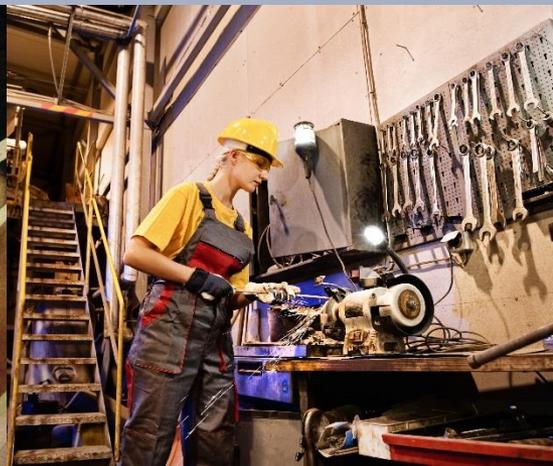




Occupational Employment and Wages, 2016

A Detailed Analysis of New Jersey's Occupational Landscape

Published January 2018



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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 2010 SOC, in which there are approximately 820 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.

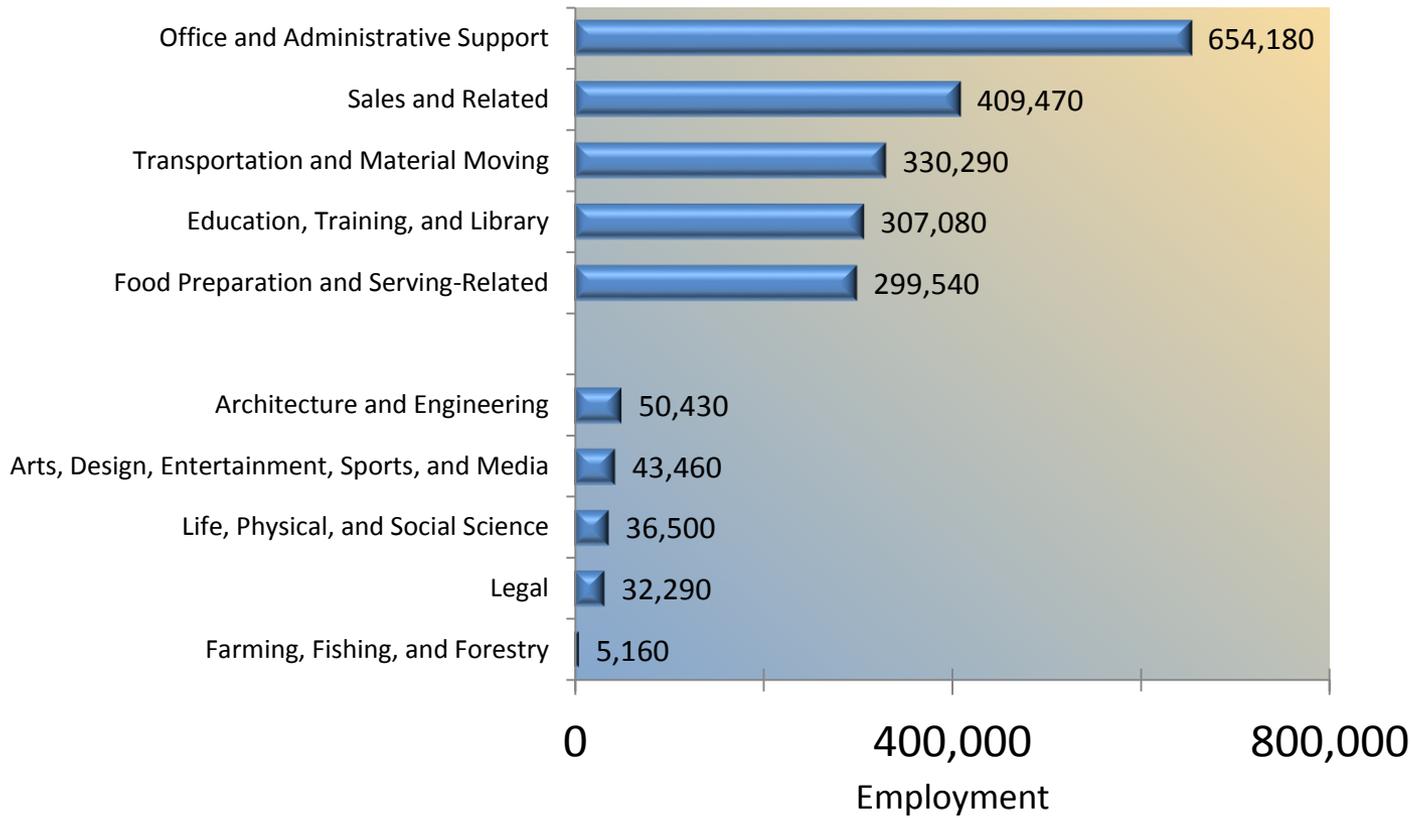
The stringent requirements of the OES survey, in terms of a statistically valid sample and methodology, combined with consistent survey forms and definitions, has resulted in quality wage data for hundreds of occupations that are truly comparable across all states and metropolitan areas. This is in direct 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 2016



Office and administrative support occupations continued to be the largest occupational group in New Jersey in 2016, accounting for nearly 17 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 \$56,040.

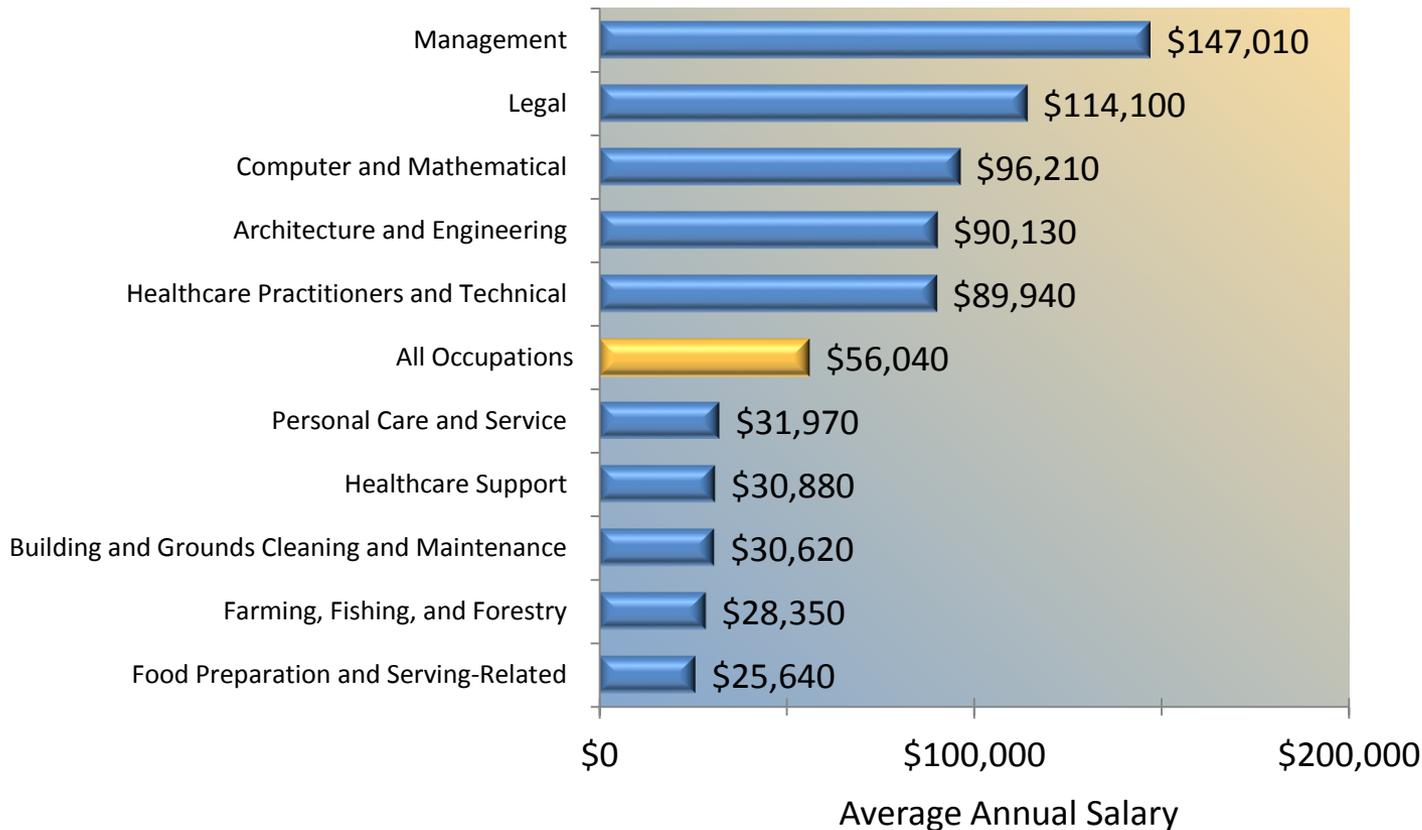
The smallest five occupational groups comprised less than 5 percent of all employment in New Jersey. However, all but farming, fishing and forestry occupations earned an above average annual salary.



The management and legal occupational groups each earn average annual salaries well over six figures

Overview

Mean annual salary for highest and lowest paid major occupational groups, New Jersey 2016



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 and architecture and engineering occupations, both classified as STEM occupations, each earn average salaries well above the statewide average.

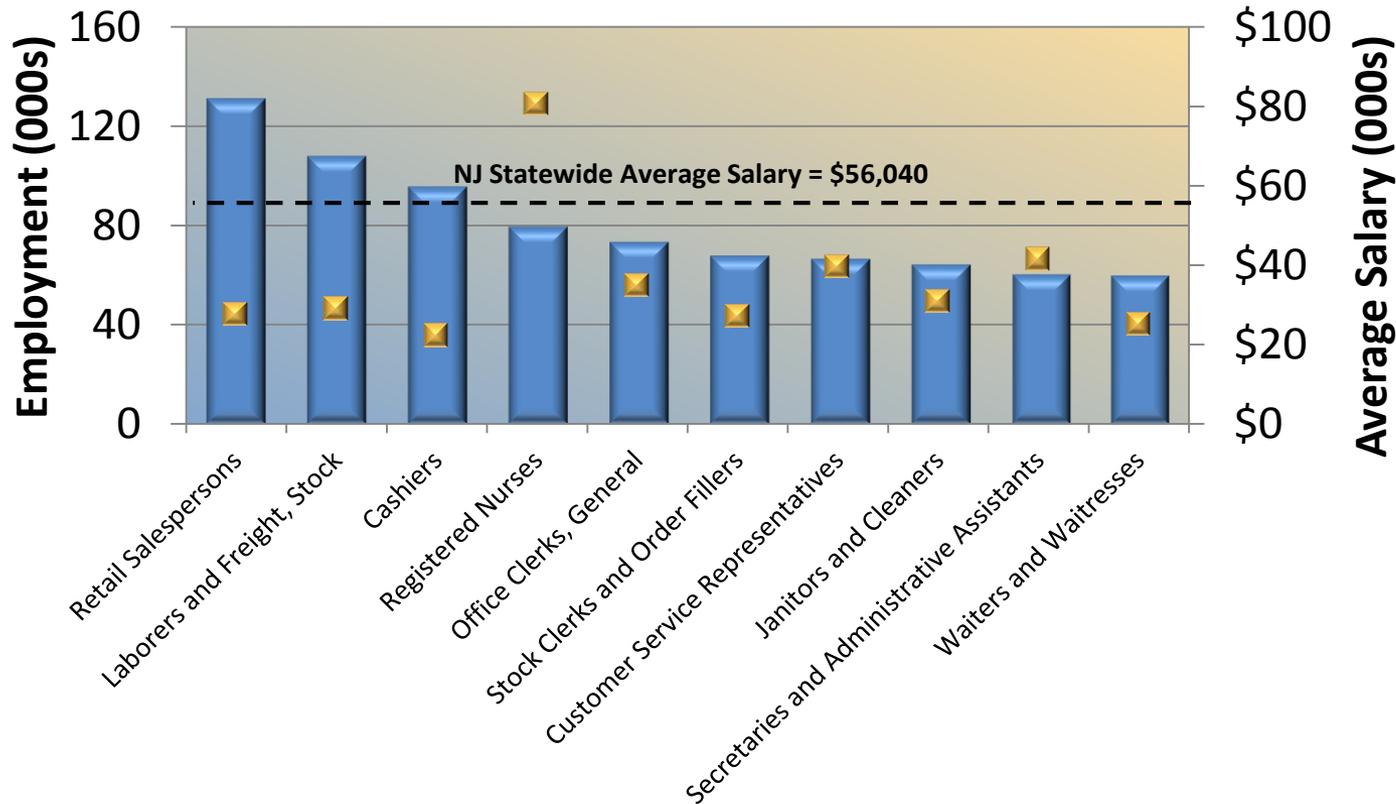
Four of the five lowest paying occupational groups are classified as service occupations. Only farming, fishing and forestry occupations fall outside this group.



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 2016



There are approximately 226,300 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 \$13.27 and \$10.70 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.



■ Average Salary

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, 2016

Occupation	Hourly Wage	Employment
Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	\$9.87	30,370
Automotive and Watercraft Service Attendants	\$10.11	9,210
Shampooers	\$10.17	2,380
Amusement and Recreation Attendants	\$10.22	7,640
Dishwashers	\$10.28	10,450
Cooks, Fast Food	\$10.57	9,300
Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers	\$10.59	4,560
Combined Food Preparation and Serving Workers, Including Fast Food	\$10.59	52,720
Cashiers	\$10.70	95,550
Dining Room and Cafeteria Attendants and Bartender Helpers	\$10.72	10,710

Five of the ten lowest paying occupations in New Jersey in 2016 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 over 9,000 of them 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, 2016

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.

The only occupation on this list that is not related to healthcare is a natural science manager. While only a Bachelor's degree is required, a minimum of 5 years or more experience is often required.

Occupation	Annual Salary	Employment
Anesthesiologists	\$268,550	790
Orthodontists	\$258,930	190
Psychiatrists	\$225,950	760
Internists, General	\$220,620	1,550
Obstetricians and Gynecologists	\$219,480	560
Physicians and Surgeons*	\$204,580	15,240
Natural Sciences Managers	\$188,380	4,590
Nurse Anesthetists	\$184,770	340
Family and General Practitioners	\$183,410	2,130
Pediatricians, General	\$171,990	1,540

* 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 2016

Occupation	Annual Salary	Employment
Judges, Magistrate Judges, and Magistrates	\$163,160	970
Lawyers	\$144,190	19,870
Personal Financial Advisors	\$131,460	6,800
Mathematicians	\$130,470	70
Statisticians	\$129,320	700
Medical Scientists	\$128,620	4,150
Supervisors of Police and Detectives	\$128,010	3,200
Computer and Information Research Scientists	\$125,890	1,530
Computer Network Architects	\$120,150	6,550
Postsecondary Economics Teachers	\$117,980	330

The two occupations on this list associated with each require a postsecondary professional degree plus extensive experience.

The remaining eight occupations require a minimum of a bachelor's degree for entry, except for supervisors of police and detectives. Six of which are considered to be STEM occupations.

Supervisors of police and detectives and postsecondary economics teachers (classified with education), fall outside each of these classifications among high earning occupations in New Jersey.

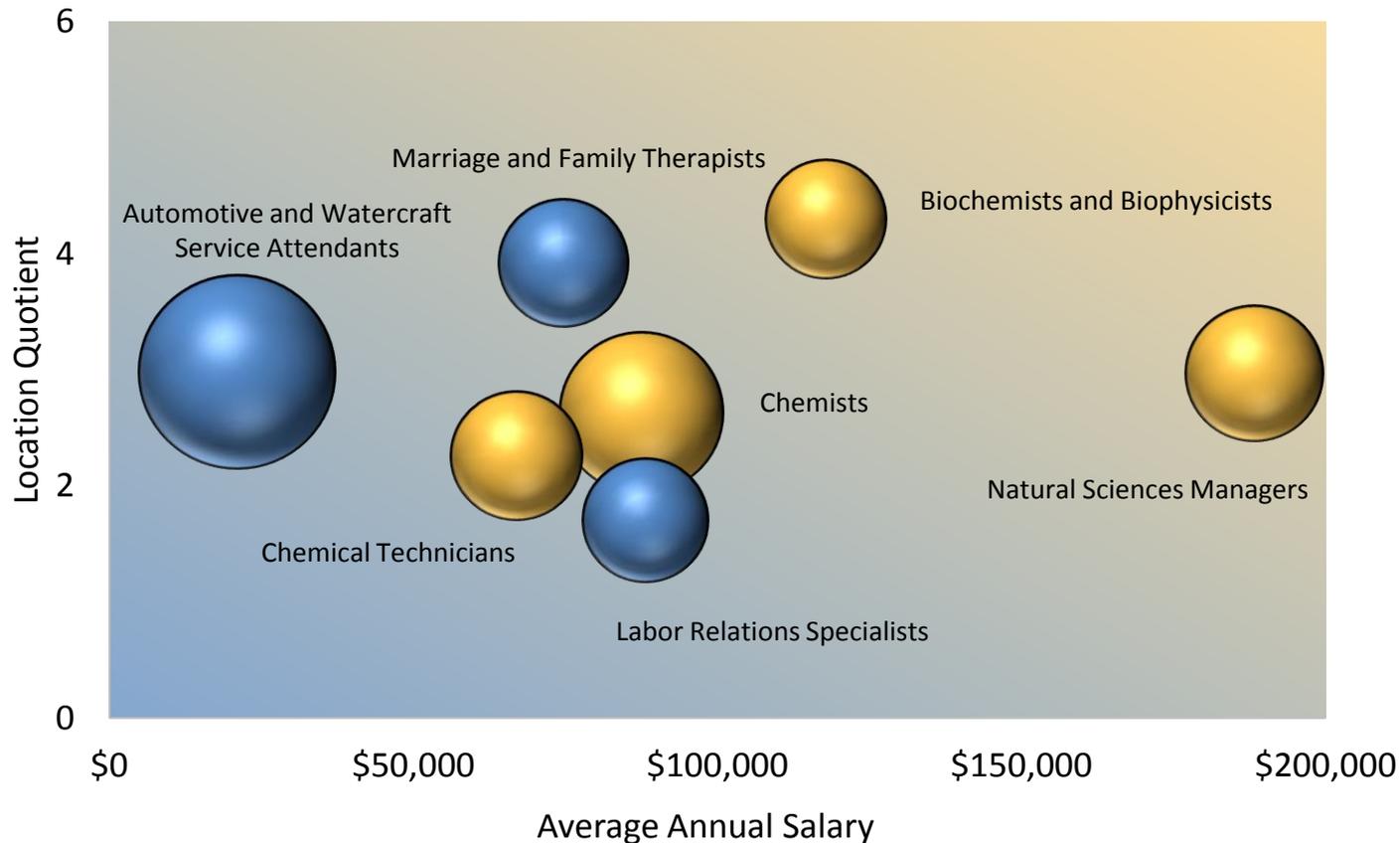
Science
Technology
Engineering
Math



These occupations have a strong presence in New Jersey relative to other states in 2016

Overview

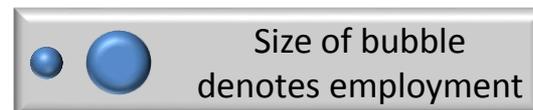
Location Quotient, Average Salary, and Employment of Selected Occupations, New Jersey 2016



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 \$56,040.

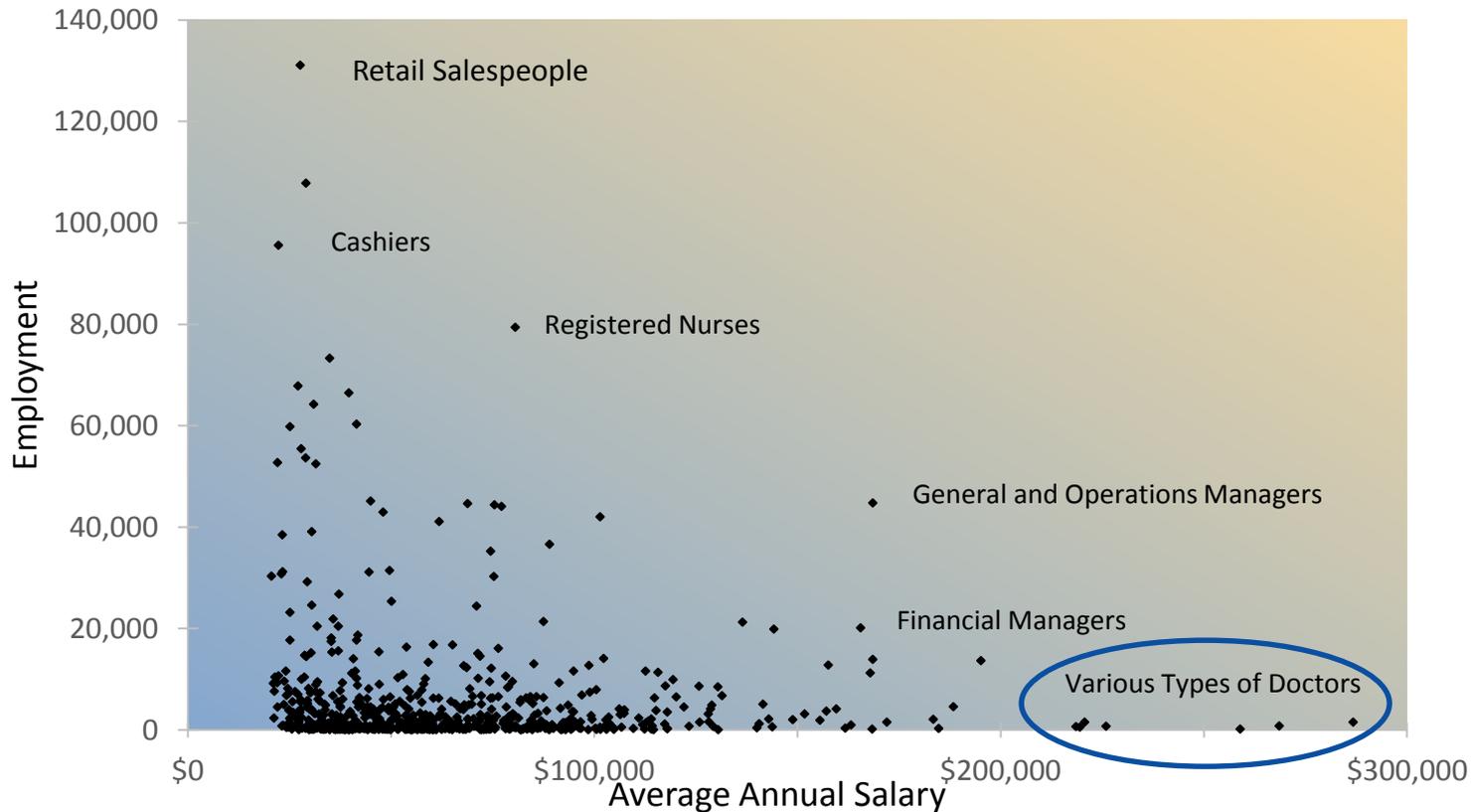
Four of these occupations (highlighted in gold) are STEM occupations and are commonly found working in New Jersey's robust chemical manufacturing industry, which includes one of the leading pharmaceutical industries in the country.



The plots on this chart represent the employment and average annual salary for each of the 820 detailed occupations found in New Jersey

Overview

Employment and Average Annual Salary by Detailed Occupation, New Jersey 2016

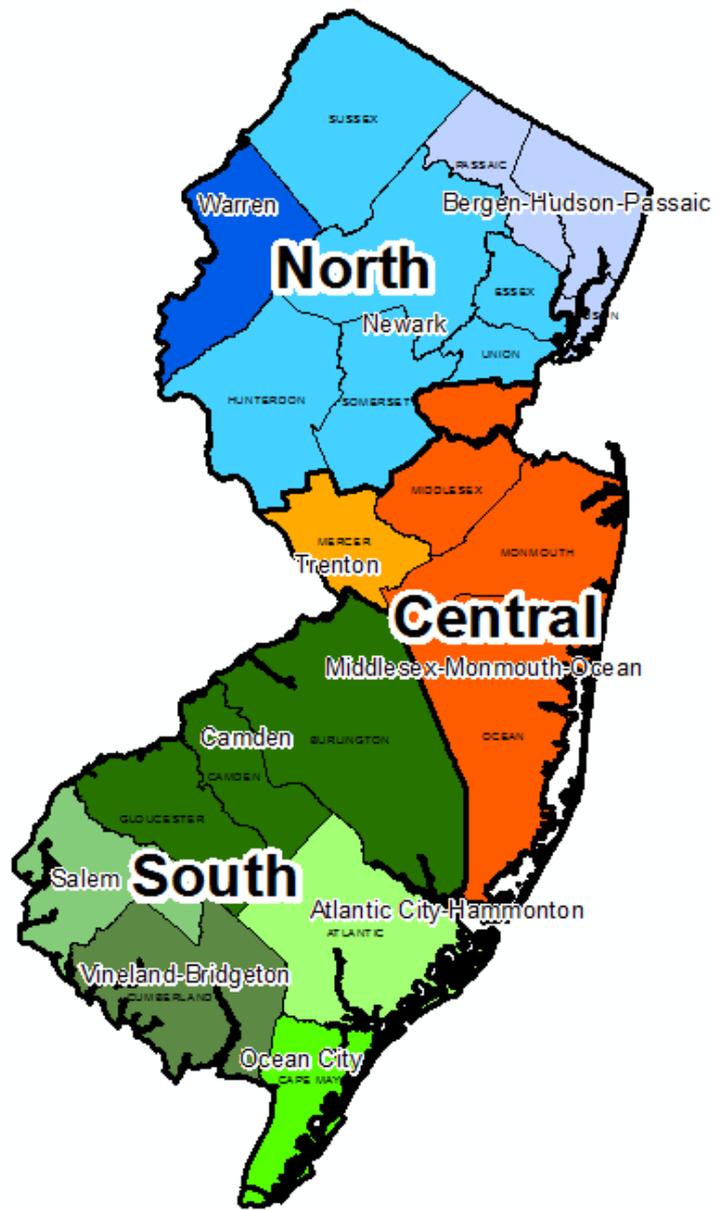


There are 44 occupations in New Jersey with employment of at least 20,000 in 2016. Combined, they account for over 1.9 million in employment, or slightly over 50 percent of all jobs in the state.

There are 89 occupations with an average annual salary exceeding \$100,000. Combined, they account for 410,360 in employment, or over 10 percent of all employment.

There are three occupations with employment of at least 20,000 and average earnings exceeding \$100,000; general and operations managers, financial managers, 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, 2016

Northern Region

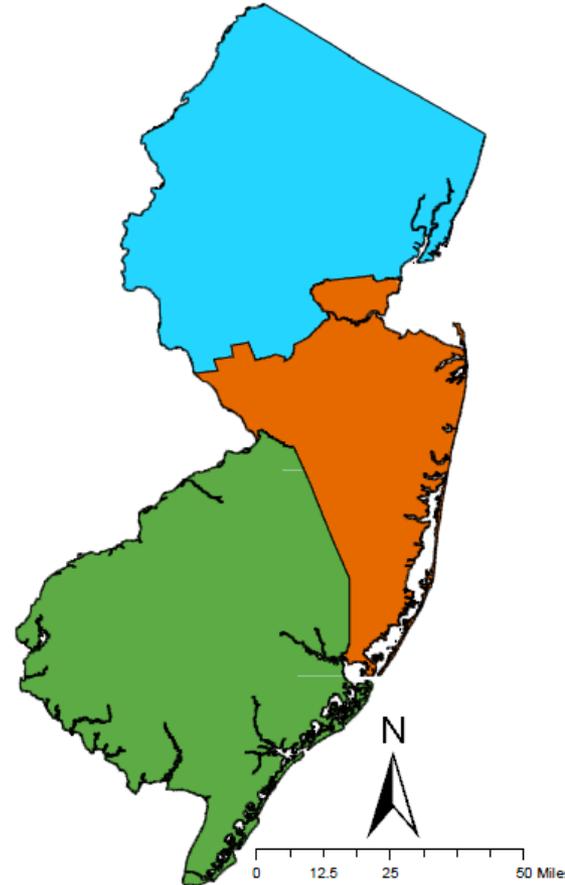
2,064,790 Employed
\$58,260 Average Salary

Central Region

1,076,220 Employed
\$56,180 Average Salary

Southern Region

761,090 Employed
\$49,590 Average Salary



More than half (52.2 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.



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, 2016

Northern Region

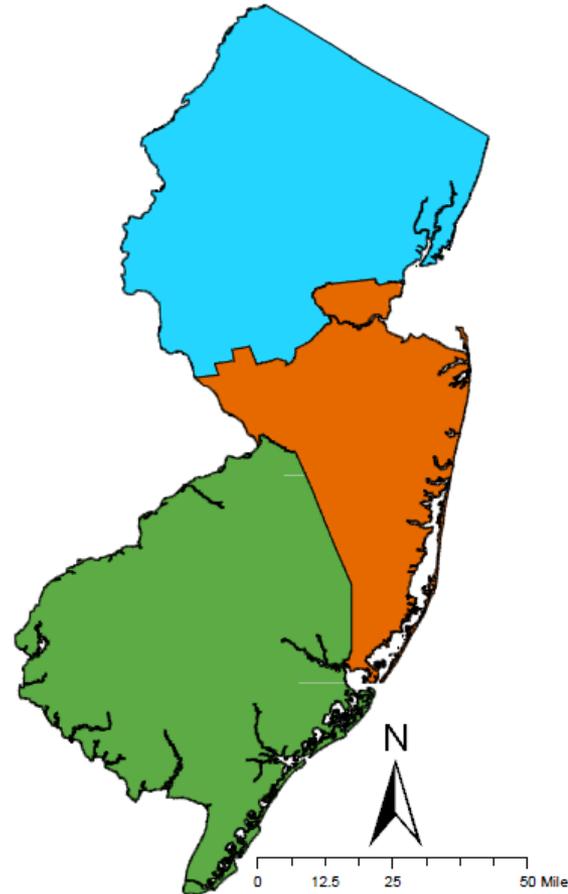
554,430 Employed
\$102,380 Average Salary

Central Region

293,950 Employed
\$94,340 Average Salary

Southern Region

152,850 Employed
\$86,240 Average Salary



The average annual salary of these occupations in New Jersey exceed \$94,000, nearly double the statewide average.

Approximately 85 percent of this employment is found in the northern and central regions where industries like chemical manufacturing, corporate headquarters, and finance are more often located.

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



Occupations that require a high school diploma or less generally earn average salaries far below the statewide average of \$56,040.



Employment and Average Salary by Region
Occupations Requiring High School Diploma or Less
in New Jersey, 2016

Northern Region

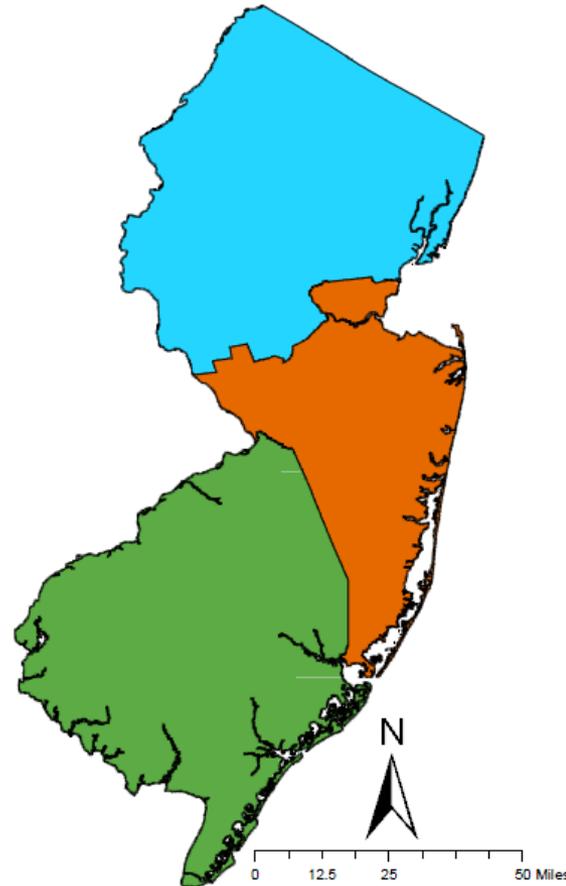
1,238,210 Employed
\$39,250 Average Salary

Central Region

616,730 Employed
\$37,130 Average Salary

Southern Region

470,560 Employed
\$35,170 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.

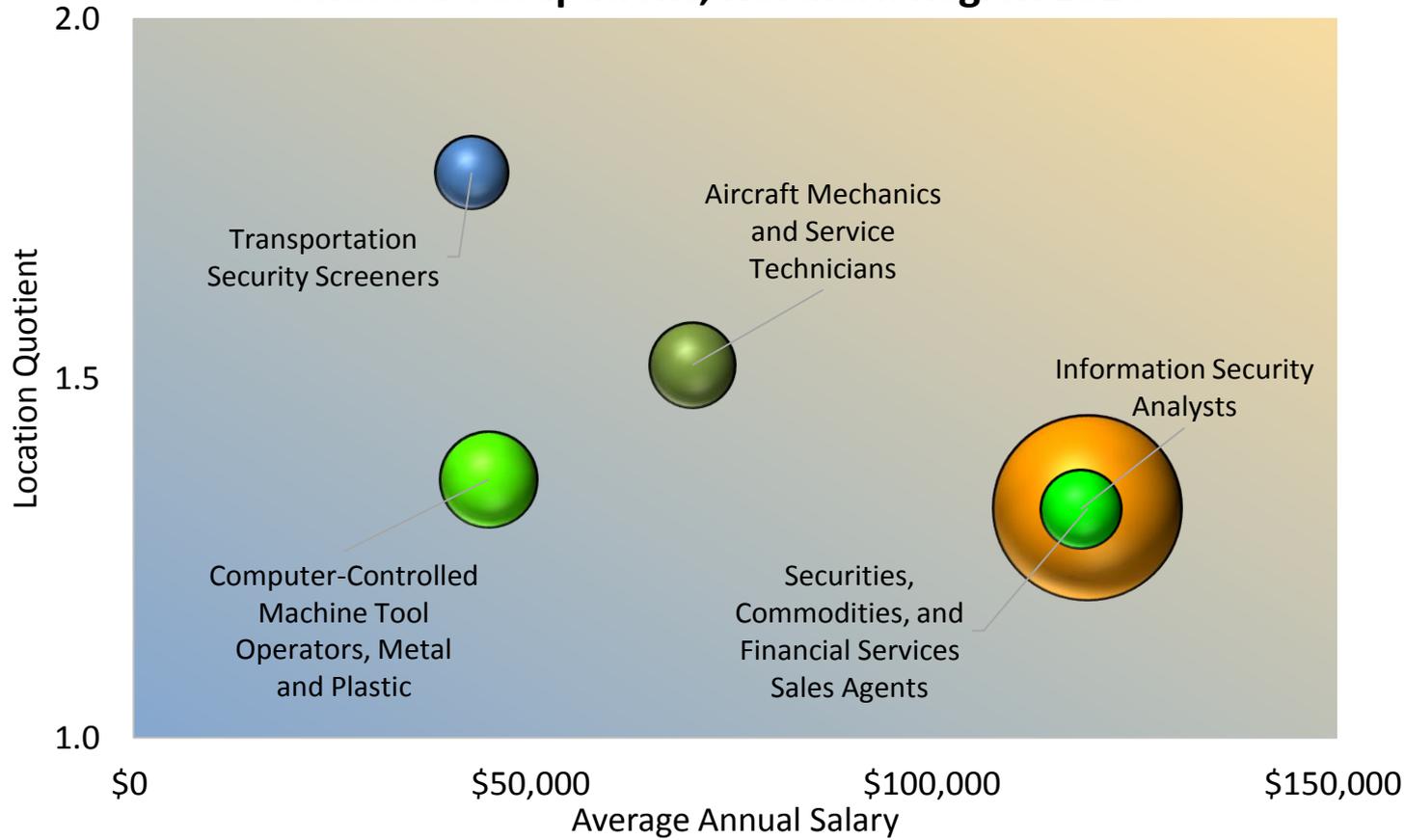
While these occupations can be found in nearly every industry, they are most commonly found among hospitality, food service, and retail trade employers.



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 2016



Largely due to its close proximity to New York City, the industry composition of the northern region includes a robust financial sector. Occupations like securities and commodities sales agents 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 2016

Occupation	Annual Salary*	Employment
Personal Financial Advisors	\$135,030	4,300
Biochemists and Biophysicists	\$119,530	2,180
Securities and Commodities Sales Agents	\$118,890	7,990
Information Security Analysts	\$118,080	1,500
Financial Analysts	\$107,200	5,210
Computer Systems Analysts	\$102,790	7,700
Postsecondary Nursing Instructors	\$94,600	1,200
Accountants and Auditors	\$91,400	21,580
Logisticians	\$84,200	2,940
Aircraft Mechanics and Service Technicians	\$69,650	1,720

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 2016.

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 2016

Occupation	Annual Salary*	Salary* Difference	Employment	Education
Chemical Technicians	\$81,220	+ \$30,820	2,360	Associate's degree
Biochemists and Biophysicists	\$119,530	+ \$26,970	2,180	Doctoral or professional degree
Systems Software Developers	\$127,160	+ \$22,890	5,940	Bachelor's degree
Medical Scientists	\$131,960	+ \$19,660	3,360	Doctoral or professional degree
Financial Analysts	\$107,200	+ \$19,430	5,210	Bachelor's degree
Securities, Commodities, and Financial Services Sales Agents	\$118,890	+ \$17,950	7,990	Bachelor's degree
Environmental Scientists and Specialists	\$97,280	+ \$17,890	1,190	Bachelor's degree
Lawyers	\$154,070	+ \$17,800	11,510	Doctoral or professional degree
Web Developers	\$75,130	+ \$13,280	1,500	Associate's degree
Insurance Underwriters	\$101,450	+ \$11,660	1,790	Bachelor's degree

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

Systems software developers, chemical technicians and biochemists and biophysicists both earn greater than \$20,000 more in the northern region than their counterparts in the central or southern regions.

Both the science and financial industry in the northern region mostly earn far more than in other parts of the state.

*Weighted Salaries

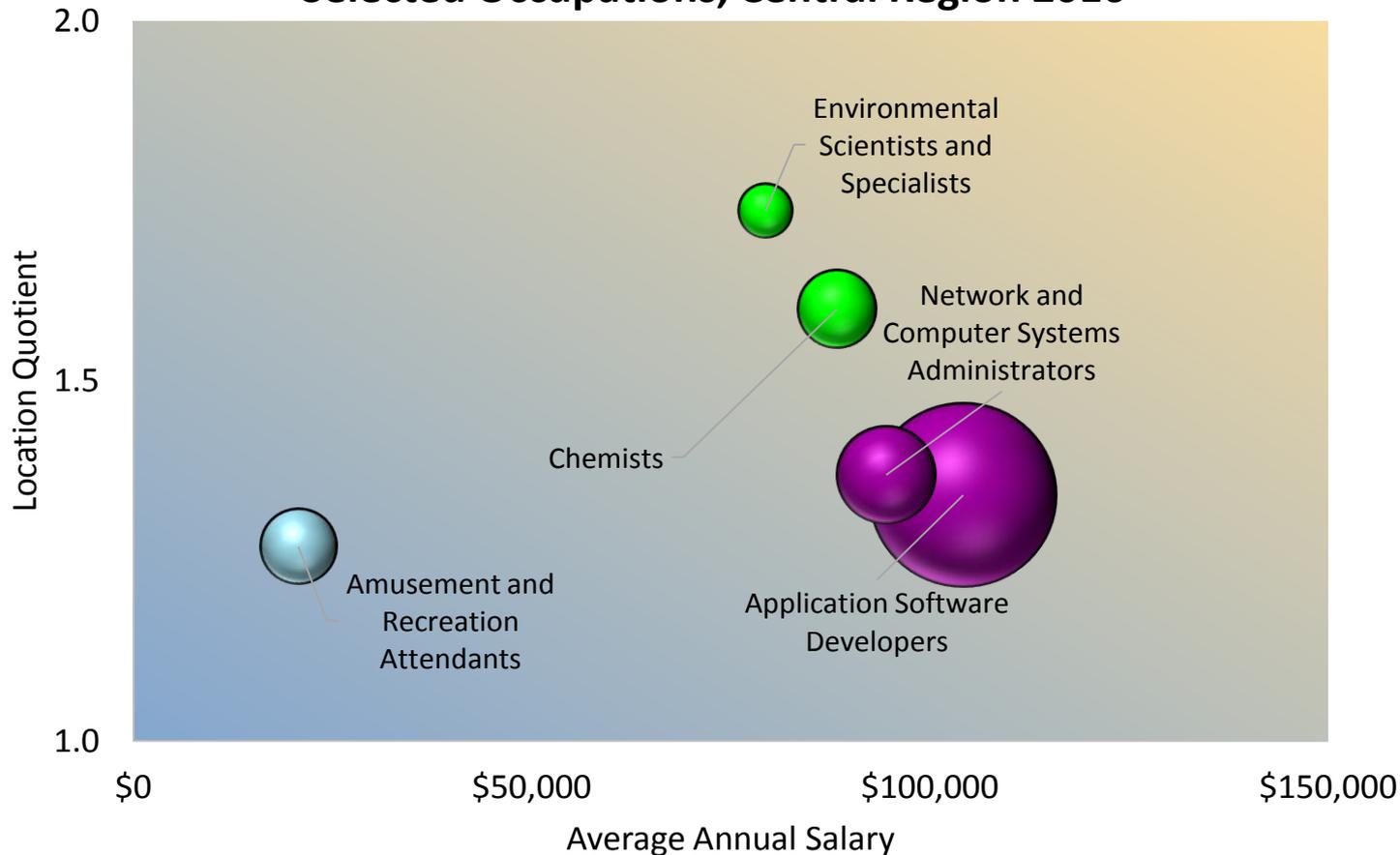


These occupations are most likely to be employed in the central region than other parts of New Jersey



Central

Location Quotient, Average Salary, and Employment of Selected Occupations, Central Region 2016



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 2016.

The region's 2,790 chemists earned an average salary of \$88,350 in 2016.



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 2016

Occupation	Annual Salary*	Employment
Nurse Practitioners	\$112,290	1,210
Application Software Developers	\$104,210	15,350
Computer Systems Analysts	\$100,230	4,500
Management Analysts	\$100,160	4,730
Physical Therapists	\$98,090	2,160
Network and Computer Systems Administrators	\$94,520	4,330
Civil Engineers	\$91,250	2,780
Chemists	\$88,350	2,790
Dental Hygienists	\$80,210	2,180
Logisticians	\$79,840	1,990

There are wide ranging opportunities in the central region to earn a salary far above the statewide average of \$56,040.

There are over 15,000 applications developers employed in the central region who earn an average salary of nearly \$104,000.

There are nearly 4,000 combined civil and industrial engineers employed in these four counties who both earn average salaries of over \$91,000 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 2016

Occupation	Annual Salary*	Salary* Difference	Employment	Education
Sales Engineers	\$116,850	+ \$17,590	510	Bachelor's degree
Electronics Engineers	\$111,250	+ \$11,380	890	Bachelor's degree
Plumbers, Pipefitters, and Steamfitters	\$77,660	+ \$9,000	2,400	High school diploma or equivalent
Refuse and Recyclable Material Collectors	\$46,000	+ \$8,670	840	No formal educational credential
Architectural and Civil Drafters	\$59,000	+ \$6,930	810	Associate's degree
Graphic Designers	\$63,090	+ \$6,490	1,520	Bachelor's degree
Social and Human Service Assistants	\$39,970	+ \$3,780	4,310	High school diploma or equivalent
Short Order Cooks	\$27,570	+ \$3,640	1,100	No formal educational credential
Application Software Developers	\$104,210	+ \$3,450	15,350	Bachelor's degree
Occupational Therapists	\$94,230	+ \$3,280	1,380	Master's degree

Data shows that sales and electronics engineers both earn more than \$10,000 annually in the central region and grossing over \$100,000.

Application software developers require a Bachelor's degree and average over \$100,000 in annual salary. Their employment is significant and it is the top region in the state for salary.

Multiple sectors that are strong in central New Jersey require relatively lower educational requirements, yet earn significantly more than in other areas of the state.

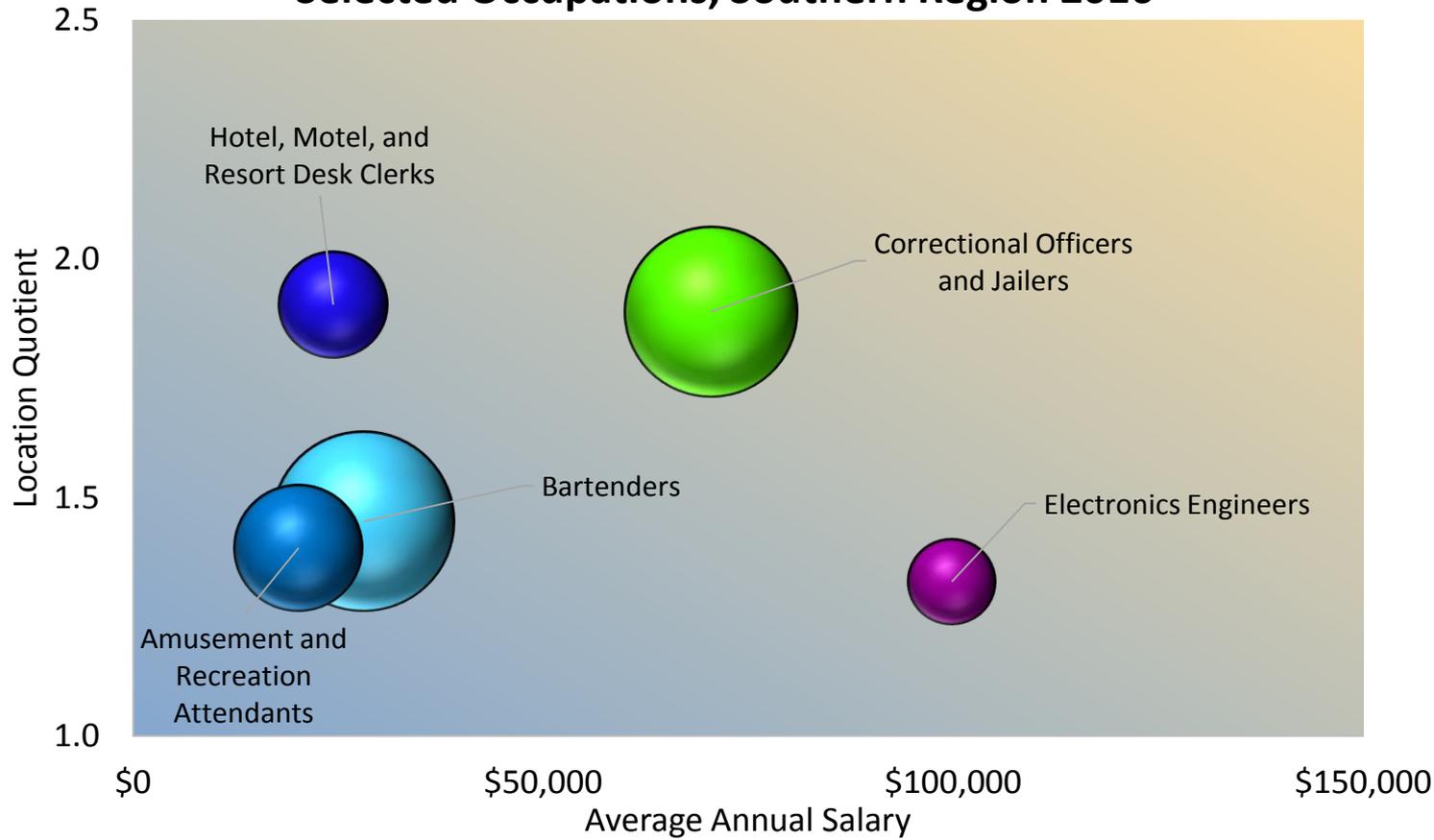
*Weighted Salaries



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 2016



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 blue 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 2016

Occupation	Annual Salary*	Employment
Pharmacists	\$116,560	1,730
Electronics Engineers	\$99,870	960
Clinical, Counseling, and School Psychologists	\$92,280	750
Civil Engineers	\$90,600	1,230
Loan Officers	\$80,040	1,560
Registered Nurses	\$77,430	18,240
Supervisors of Construction Trades and Extraction Work	\$72,860	1,860
Correctional Officers and Jailers	\$70,490	3,700
Educational, Guidance, School, and Vocational Counselors	\$70,270	1,460
Cost Estimators	\$69,620	1,260

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

Electronics engineers and civil engineers have an average salary over \$90,000 in south New Jersey.

There are more than 18,000 registered nurses employed in the southern region who earned an average salary of \$77,430 in 2016.

*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 2016

Occupation	Annual Salary*	Salary* Difference	Employment	Education
Electrical Engineers	\$117,450	+ \$6,790	650	Bachelor's degree
Molders, Shapers, and Casters	\$42,570	+ \$4,580	190	High school diploma or equivalent
Audio and Video Equipment Technicians	\$58,180	+ \$4,110	580	Postsecondary nondegree award
Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	\$41,650	+ \$3,060	450	High school diploma or equivalent
Medical and Clinical Laboratory Technicians	\$53,080	+ \$2,790	440	Associate's degree
Industrial Truck and Tractor Operators	\$38,010	+ \$2,740	2,550	No formal educational credential
Automotive Body and Related Repairers	\$51,860	+ \$2,550	710	High school diploma or equivalent
Laborers and Freight, Stock, and Material Movers	\$31,430	+ \$2,450	17,350	No formal educational credential
Legal Secretaries	\$49,240	+ \$1,710	1,300	High school diploma or equivalent
Production, Planning, and Expediting Clerks	\$51,830	+ \$1,280	1,150	High school diploma or equivalent

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.

Most of these occupations earned an average salary greater than the overall average for the southern region (\$49,590).

Some of the industries represented by these occupations include automotive repair, 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**



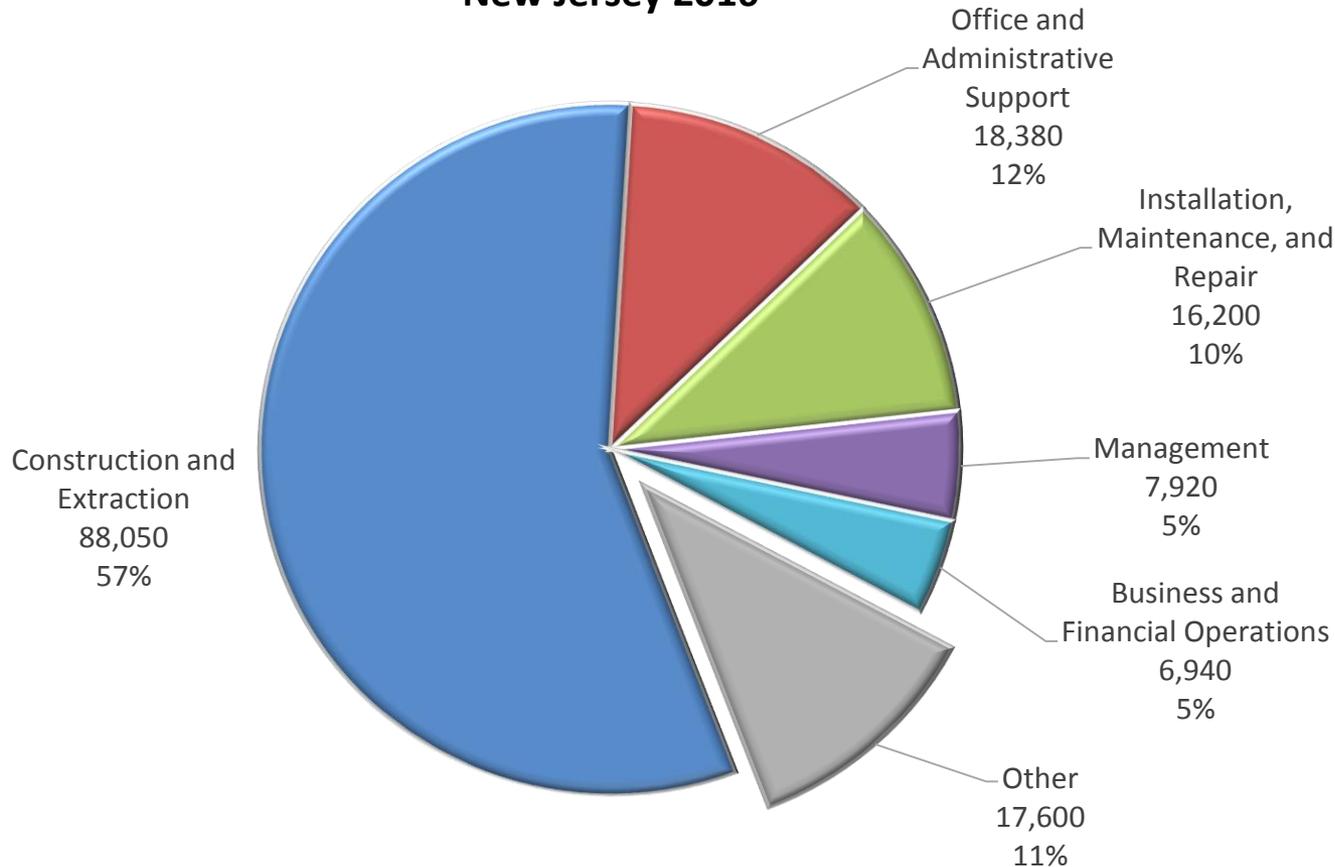
INDUSTRY FOCUS



More than half of the 155,090 people employed in the construction industry are classified among construction and extraction occupations

Construction

**Profile of Construction Sector by Major Occupational Group
New Jersey 2016**



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

Another 16,000 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 2016

These ten occupations combined account for roughly 46 percent of the entire construction workforce, and over 80 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.

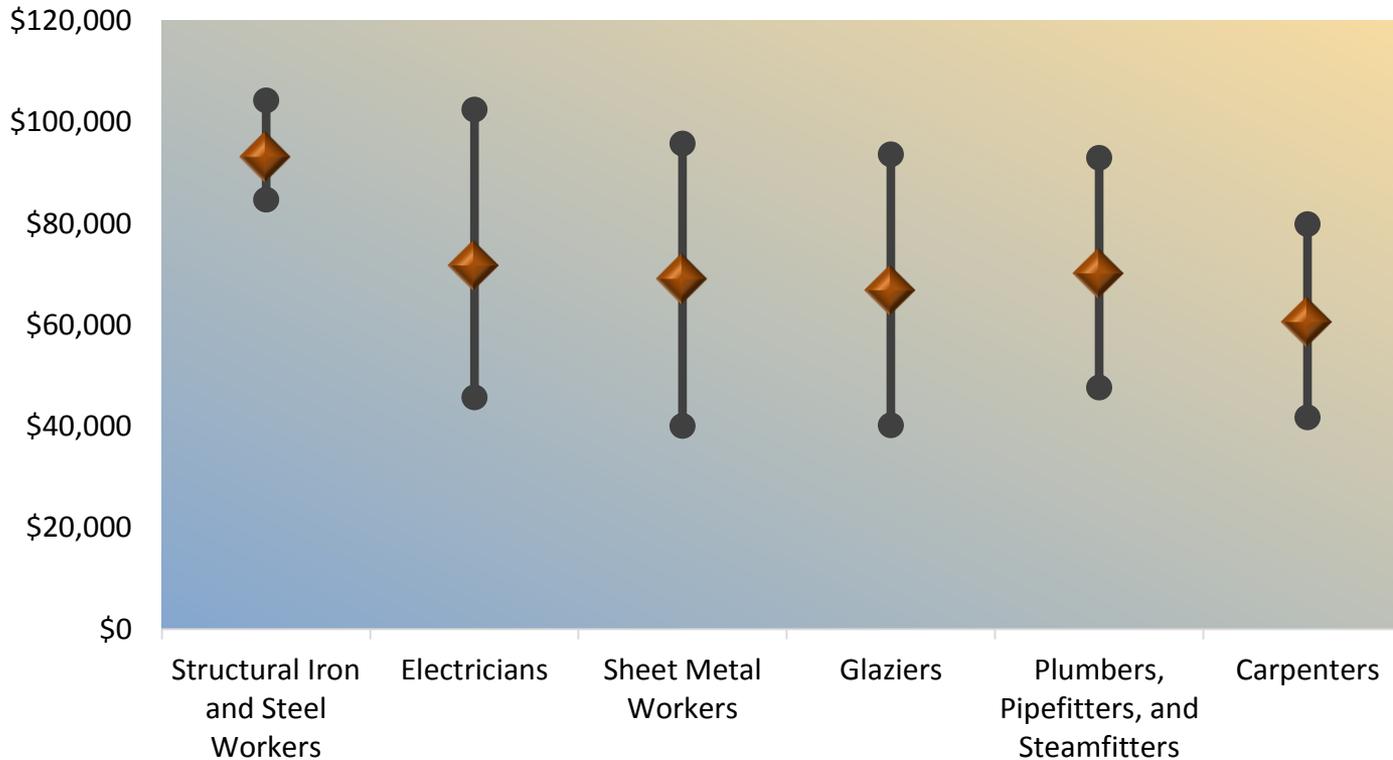
Occupation	Employment	Annual Salary
Construction Laborers	18,810	\$50,500
Carpenters	14,750	\$60,510
Electricians	12,510	\$71,720
Plumbers, Pipefitters, and Steamfitters	6,560	\$70,050
Supervisors of Construction Workers	5,760	\$79,040
Painters, Construction and Maintenance	3,250	\$43,370
Construction Equipment Operators	3,000	\$76,860
Cement Masons and Concrete Finishers	2,730	\$57,950
Sheet Metal Workers	1,770	\$69,020
Roofers	1,680	\$59,510



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 2016**



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.



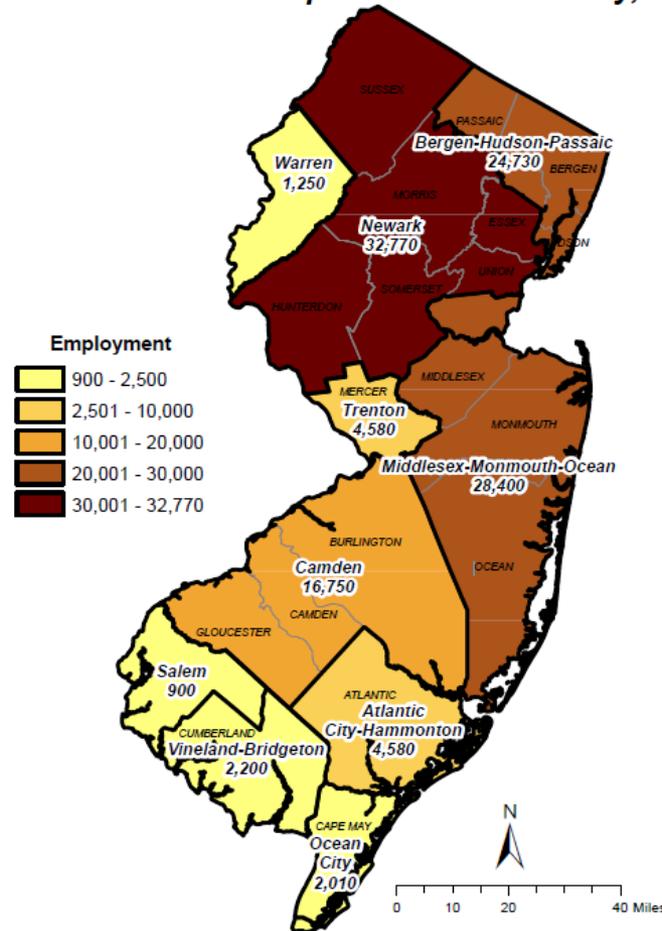
● 75th Percentile
◆ Average Salary
● 25th Percentile

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	32,770
Middlesex-Monmouth-Ocean	28,400
Bergen-Hudson-Passaic	24,730
Camden	16,750
Atlantic City-Hammonton	4,580
Trenton	4,580
Vineland-Bridgeton	2,200
Ocean City	2,010
Warren	1,250
Salem	900

**Employment by Labor Area
Construction Occupation in New Jersey, 2016**



In total, there are roughly 118,000 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.

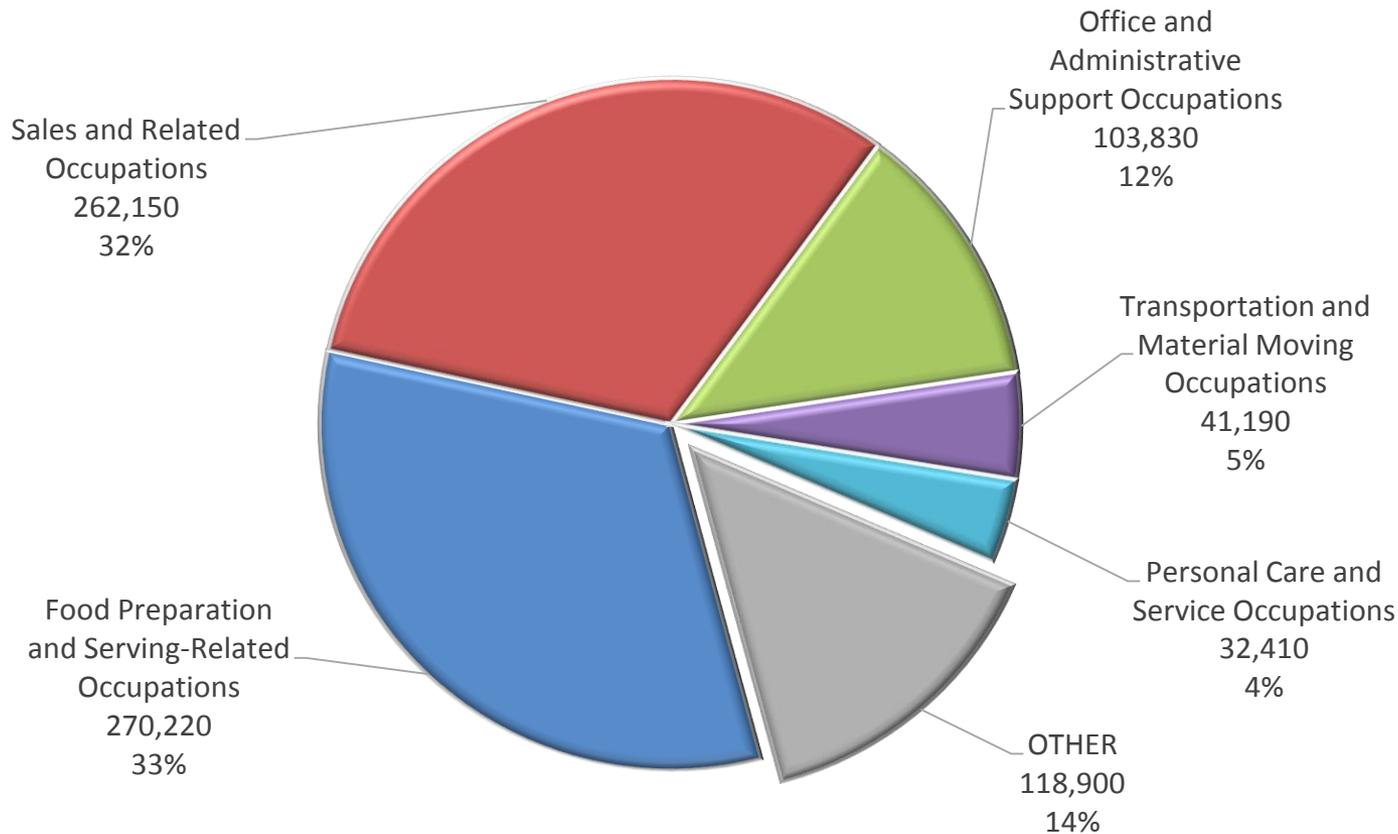
The Warren and Salem labor areas, which are primarily rural, have the lowest numbers of construction workers.



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 2016



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 177,000 jobs.

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



These top ten occupations account for near 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 2016

Occupation	Employment	Average Salary	Minimum Education
Retail Salespersons	125,740	\$27,470	No formal educational credential
Cashiers	90,140	\$21,950	No formal educational credential
Waiters and Waitresses	59,180	\$25,110	No formal educational credential
Stock Clerks and Order Fillers	50,780	\$25,120	No formal educational credential
Combined Food Preparation and Serving Workers	47,160	\$21,120	No formal educational credential
First-Line Supervisors of Retail Sales Workers	29,090	\$49,410	High school diploma or equivalent
Food Preparation Workers	28,540	\$22,880	No formal educational credential
Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	28,290	\$20,480	No formal educational credential
Cooks, Restaurant	20,330	\$31,790	No formal educational credential
Supervisors of Food Preparation and Serving Workers	16,690	\$41,230	High school diploma or equivalent

Retail salespersons and cashiers are the two 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 \$26,600. 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.

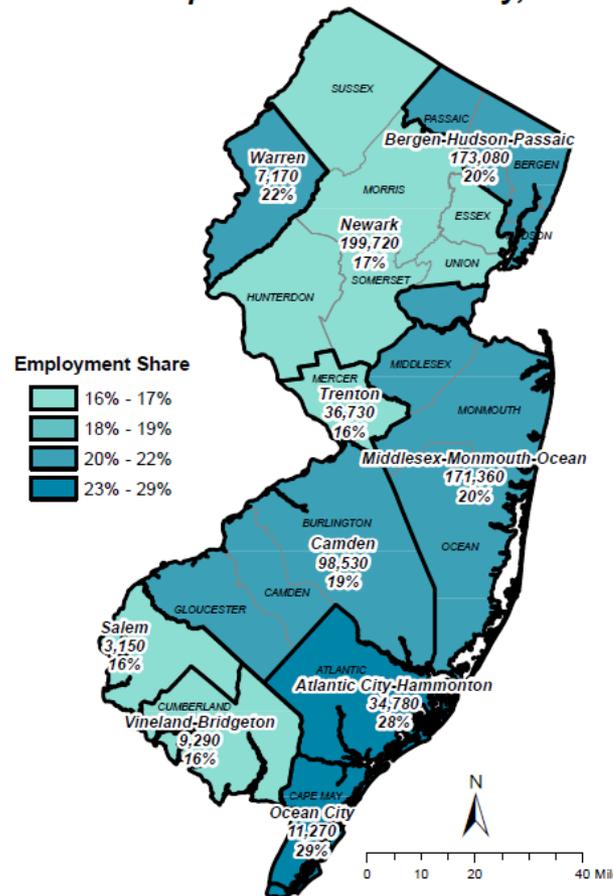


The employment share of food service and sales occupations is far greater in the counties along New Jersey's coastline

Leisure, Hospitality & Retail

Labor Area	% of Total	Employment
Ocean City	29%	11,270
Atlantic City - Hammonton	28%	34,780
Warren	22%	7,170
Middlesex-Monmouth-Ocean	20%	171,360
Bergen-Hudson-Passic	20%	173,080
Camden	19%	98,530
Newark	17%	199,720
Trenton	16%	36,730
Salem	16%	3,150
Vineland - Bridgeton	16%	9,290

*Employment Share by Labor Area
Food Service and Sales
Occupations in New Jersey, 2016*



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%. The Trenton, Salem, and Vineland-Bridgeton labor areas fall farthest below this average.

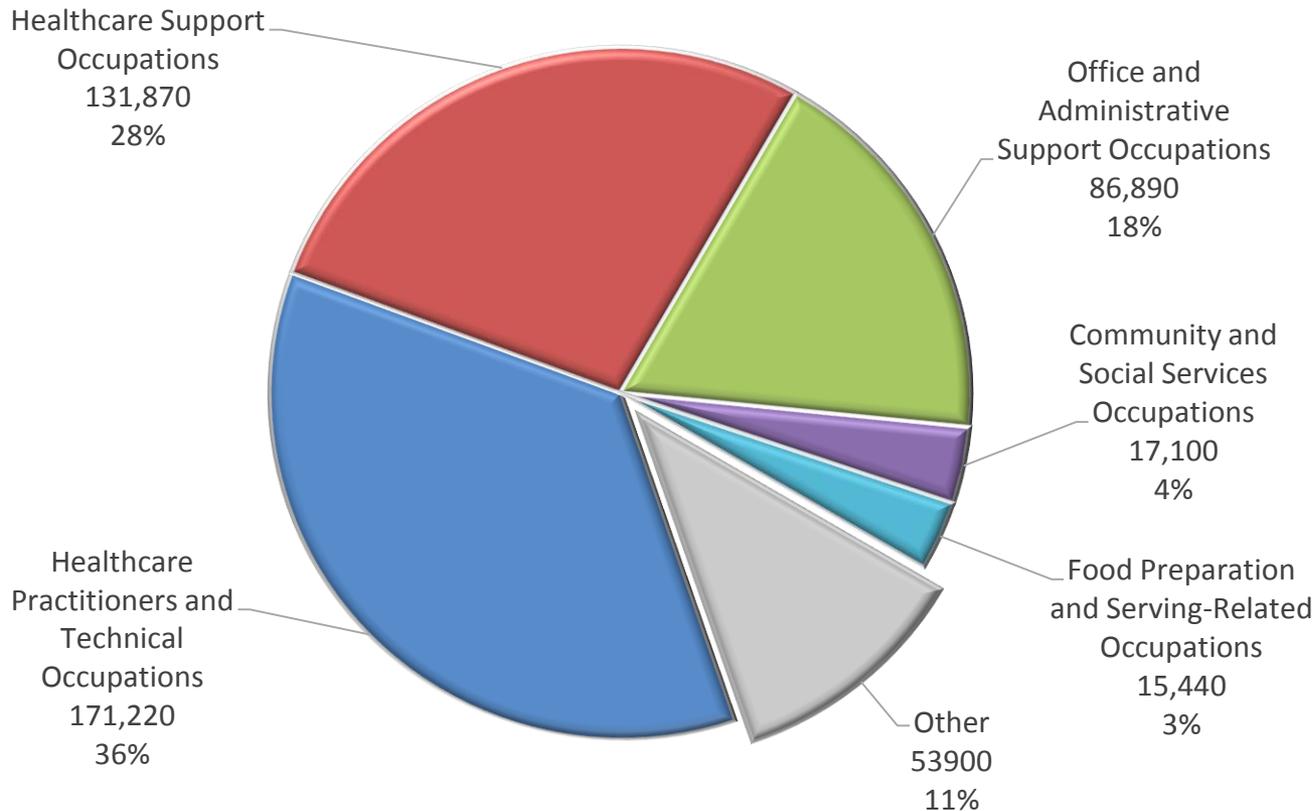
Despite this, greater than 72 percent of these occupations are found in the three largest labor areas; Newark, Middlesex-Monmouth-Ocean, and Bergen-Hudson-Passaic.



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 2016



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, 2016

Occupation	Employment	Average Salary	Education
Registered Nurses	67,630	\$81,230	Bachelor's degree
Nursing Assistants	47,600	\$28,980	Postsecondary nondegree award
Home Health Aides	34,220	\$23,230	No formal educational credential
Receptionists and Information Clerks	33,220	\$32,600	High school diploma or equivalent
Medical Assistants	17,200	\$35,250	Postsecondary nondegree award
Licensed Practical and Licensed Vocational Nurses	13,530	\$53,890	Postsecondary nondegree award
Physicians and Surgeons*	13,360	\$205,910	Bachelor's degree
Medical Secretaries	11,300	\$41,220	High school diploma or equivalent
Dental Assistants	10,060	\$41,440	Postsecondary nondegree award
Medical and Health Services Managers	8,740	\$117,710	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.

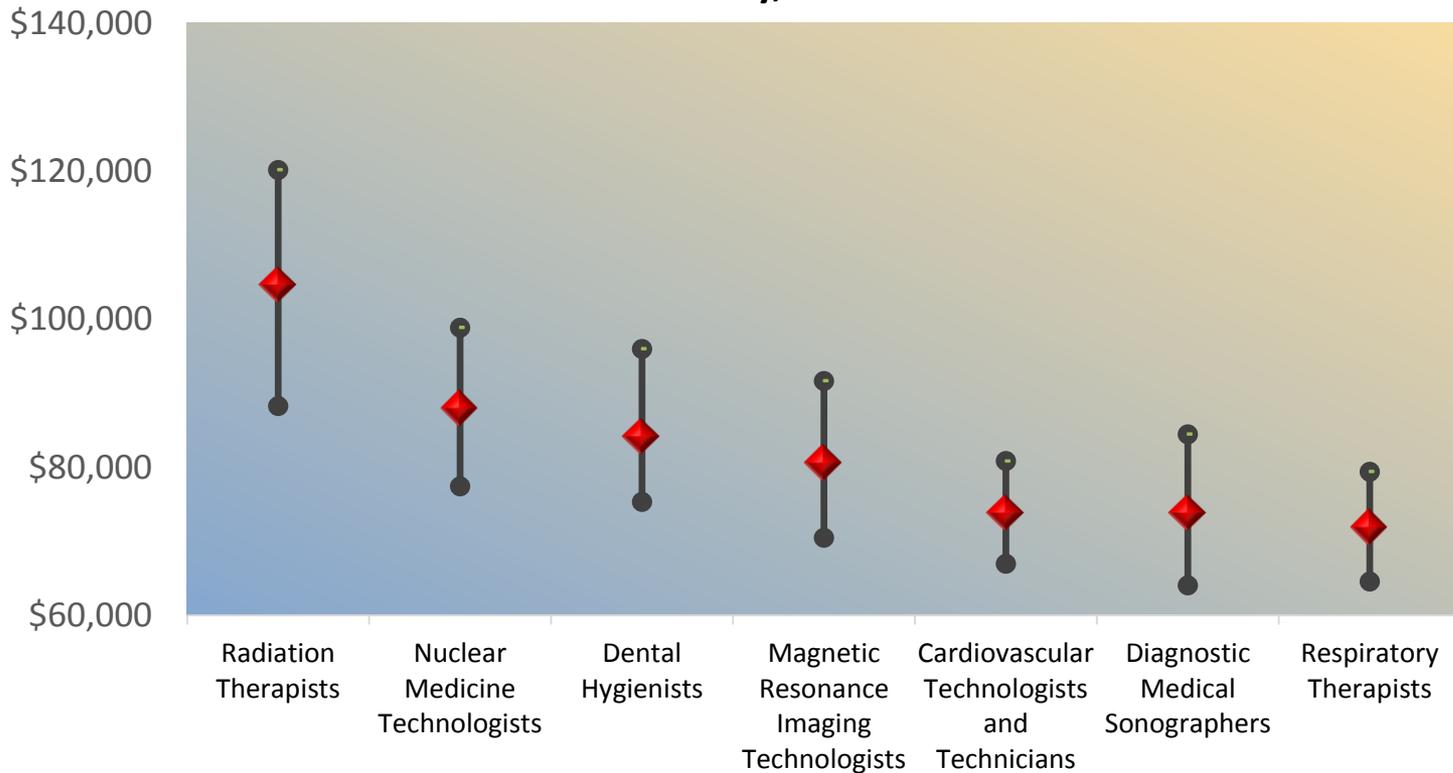
Three of these occupations earn an average annual salary greater than the statewide average of \$56,040.

*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, 2016**



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 \$56,040.



● 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, 2016

Industry	Employment	Average Salary
Total, All industries	79,400	\$80,580
General Medical and Surgical Hospitals	41,850	\$85,730
Nursing Care Facilities	5,770	\$71,260
Home Health Care Services	5,360	\$74,220
Outpatient Care Centers	4,660	\$79,280
Offices of Physicians	4,390	\$67,660
Elementary and Secondary Schools	3,660	\$70,810
Employment Services	2,320	\$76,620
Specialty Hospitals	1,930	\$79,980
Psychiatric and Substance Abuse Hospitals	1,290	\$76,710
Community Care Facilities for the Elderly	1,240	\$73,500

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 \$6,000 more per year than the other nine industries on this list combined.

There are nearly 3,660 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.

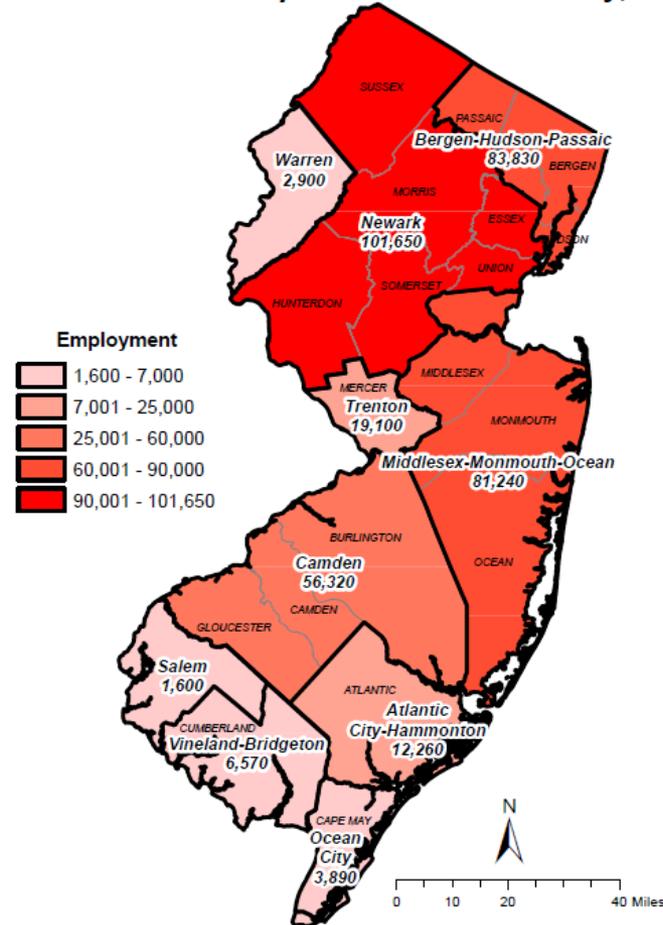


The geographic distribution of healthcare employment is largely based on population and need

Healthcare

Labor Area	Employment
Newark	101,650
Bergen-Hudson-Passaic	83,830
Middlesex-Monmouth-Ocean	81,240
Camden	56,320
Trenton	19,100
Atlantic City - Hammonton	12,260
Vineland - Bridgeton	6,570
Ocean City	3,890
Warren	2,900
Salem	1,600

**Employment by Labor Area
Healthcare Occupations in New Jersey, 2016**



Nearly 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.

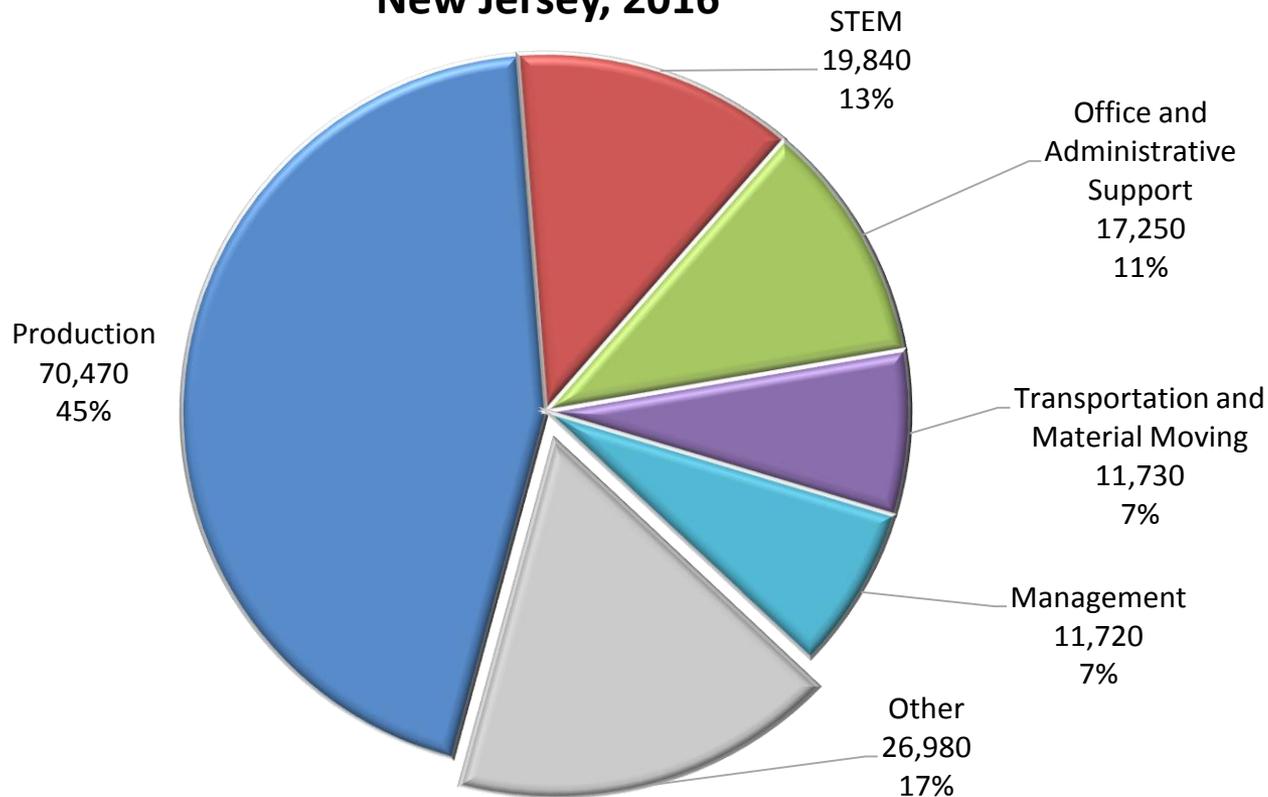
The Trenton-Ewing Labor Area, in Central New Jersey, is home to several large hospitals and many ambulatory care facilities that support them.



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, 2016



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.

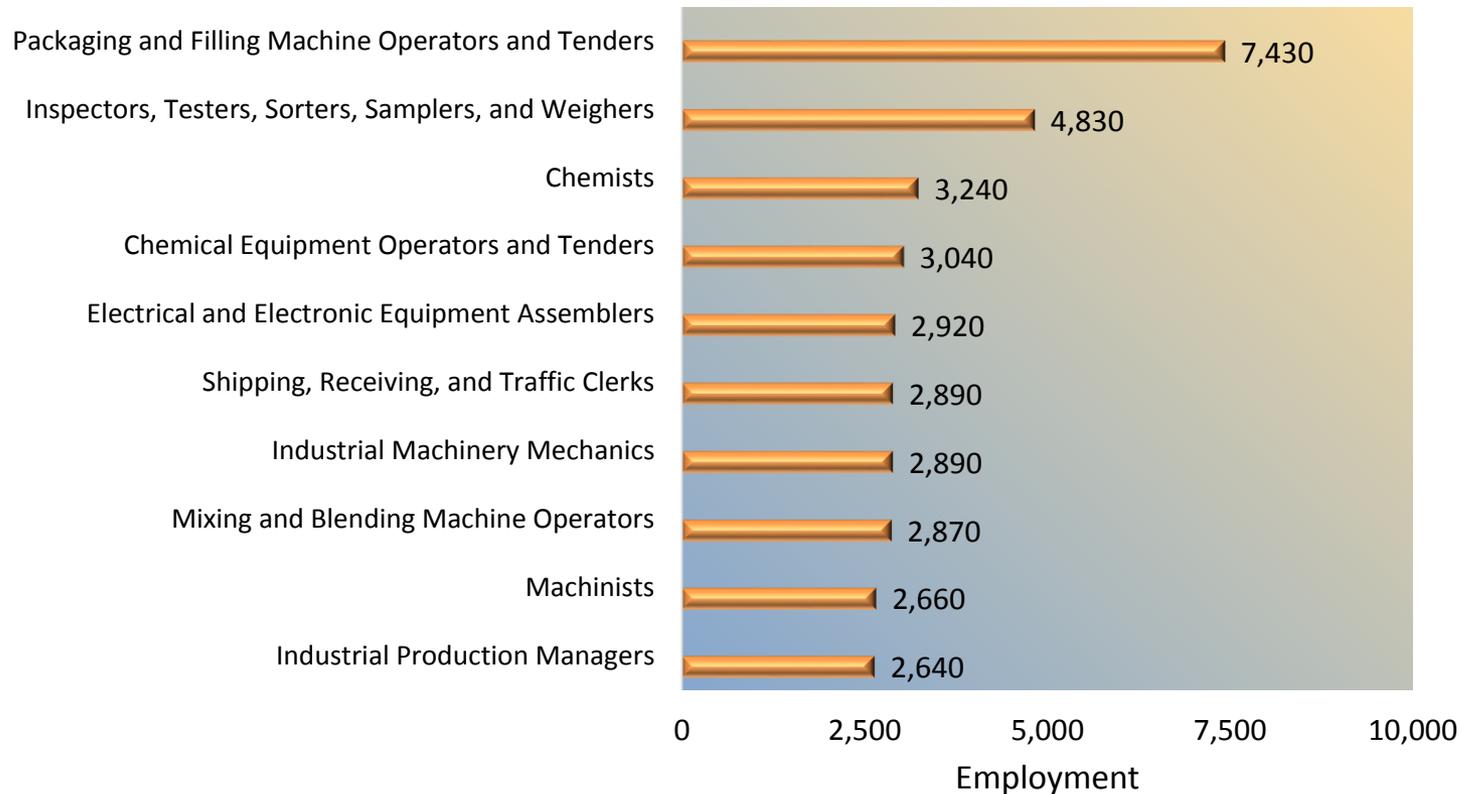
Management and office and administrative support occupations account for roughly 18 percent of employment.



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, 2016



These ten most commonly found occupations comprise about 23 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, 2016

Industry	Employment	Average Salary
Pharmaceutical and Medicine	5,510	\$94,550
Navigational, Measuring, Electromedical, and Control Instruments	4,640	\$101,390
Semiconductor and Other Electronic Component	1,400	\$81,650
Basic Chemical	1,260	\$80,750
Medical Equipment and Supplies	1,120	\$82,450
Soap, Cleaning Compound, and Toiletry Preparation	730	\$83,020
Communications Equipment	720	\$99,870
Industrial Machinery	290	\$73,080
Petroleum and Coal Products	280	\$101,480
Electrical Equipment	240	\$78,580

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 \$56,040.

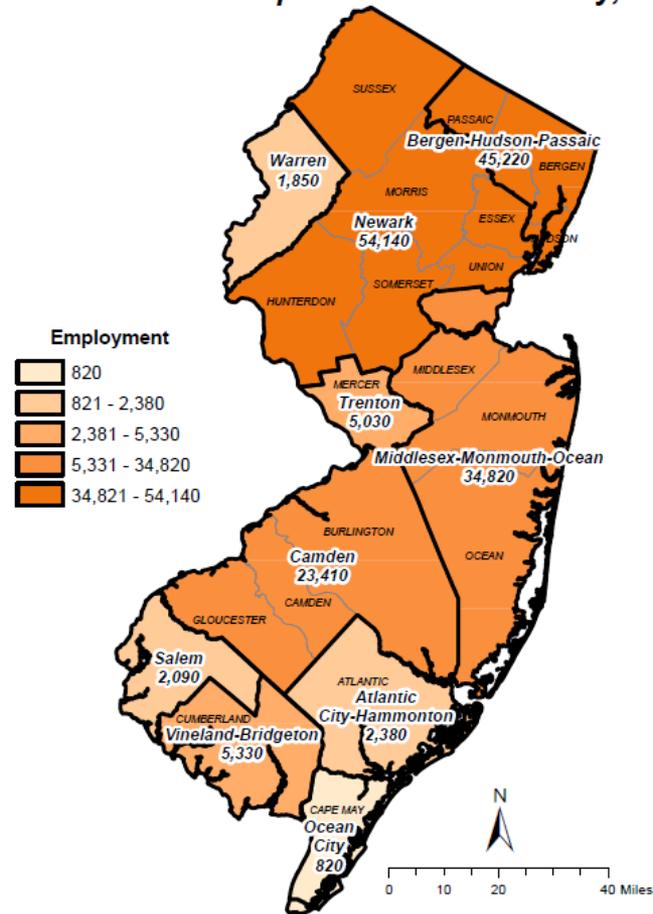


Production occupations, which can vary greatly depending on what is being produced, are found in every labor area in New Jersey

Advanced Manufacturing

Labor Area	Employment
Newark	54,140
Bergen-Hudson-Passaic	45,220
Middlesex-Monmouth-Ocean	34,820
Camden	23,410
Vineland - Bridgeton	5,330
Trenton	5,030
Atlantic City - Hammonton	2,380
Salem	2,090
Warren	1,850
Ocean City	820

*Employment by Labor Area
Production Occupations in New Jersey, 2016*



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.

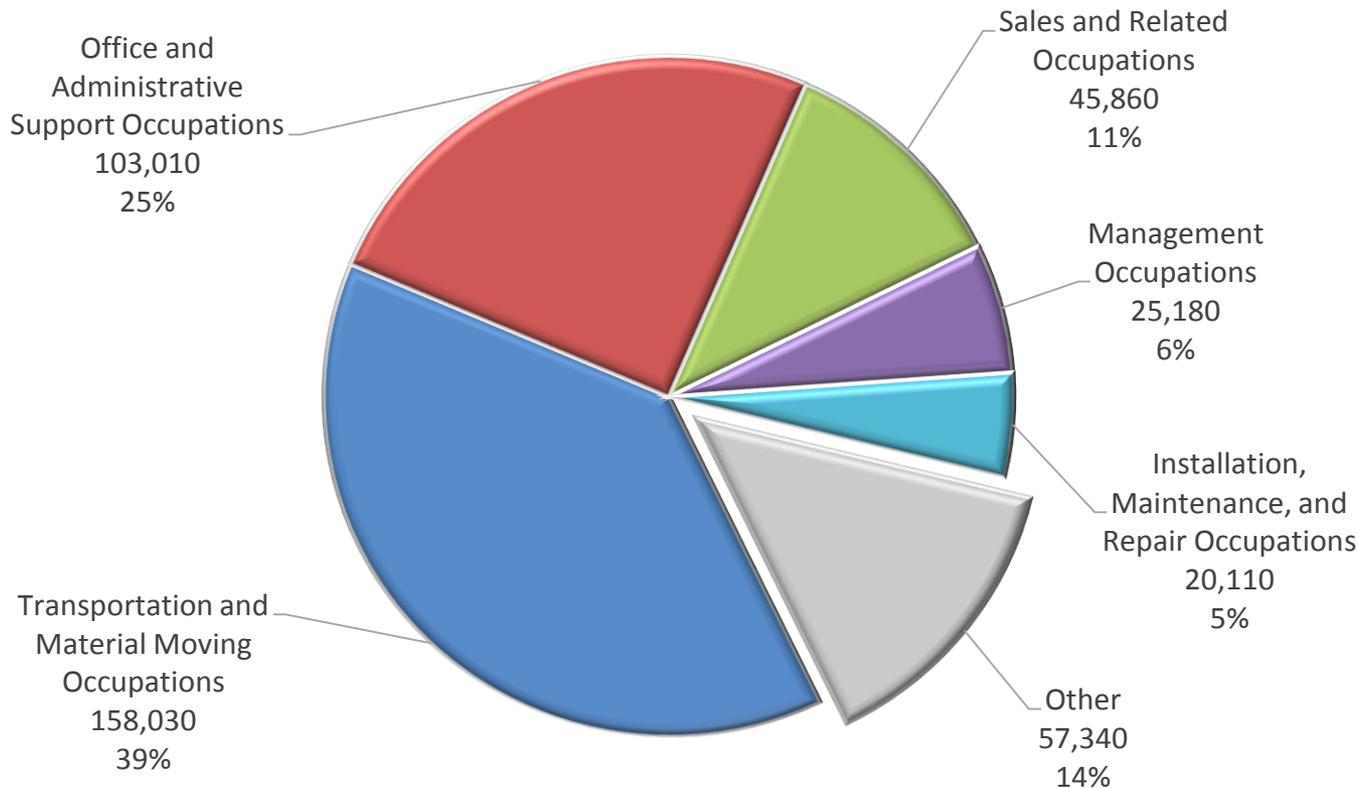
The remaining six labor areas account for just nearly 10 percent of the state's production workers.



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, 2016**



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, 2016

Occupation	Employment	Average Salary	Education
Laborers and Freight and Stock	52,060	\$31,710	No formal educational credential
Truck Drivers, Heavy and Tractor-Trailer	29,740	\$47,610	Postsecondary nondegree award
Wholesale Sales Representatives, non-Technical Products	29,470	\$75,810	High school diploma or equivalent
Customer Service Representatives	13,930	\$42,910	High school diploma or equivalent
Truck Drivers, Light or Delivery Service	11,490	\$44,800	High school diploma or equivalent
School Bus Drivers	10,710	\$34,710	High school diploma or equivalent
Stock Clerks and Order Fillers	10,280	\$32,220	No formal educational credential
Shipping, Receiving, and Traffic Clerks	9,970	\$37,420	High school diploma or equivalent
Industrial Truck and Tractor Operators	9,110	\$36,370	No formal educational credential
General and Operations Managers	8,600	\$173,550	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 among the top ten in employment in TLD that earn an average salary (\$75,810) higher than the statewide average of \$56,040.

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 2016

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.

Occupation	Average Salary	Employment	Education
Wholesale Sales Representatives, Technical Products	\$122,790	3,980	Bachelor's degree
Transportation, Storage, and Distribution Managers	\$114,820	2,710	High school diploma or equivalent
Commercial Pilots	\$102,000	360	High school diploma or equivalent
Application Developers	\$96,310	1,870	Bachelor's degree
Network and Computer Systems Administrators	\$86,290	750	Bachelor's degree
Logisticians	\$75,620	1,860	Bachelor's degree
Market Research Analysts and Marketing Specialists	\$73,730	1,940	Bachelor's degree
Aircraft Mechanics and Service Technicians	\$69,980	1,630	Postsecondary nondegree award
Locomotive Engineers	\$69,430	730	High school diploma or equivalent
Wholesale and Retail Buyers	\$66,490	890	Bachelor's degree

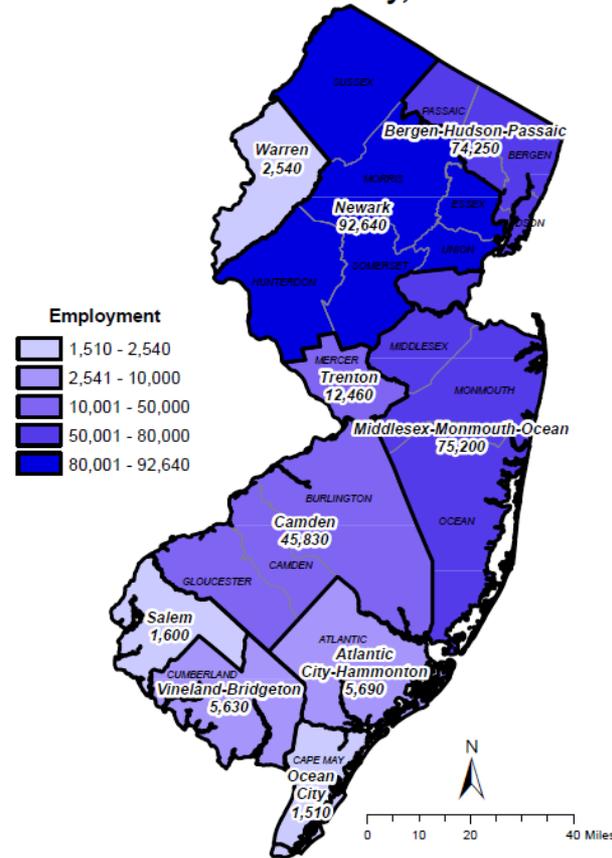


New Jersey has a distinct geography and transportation infrastructure which links several major U.S. cities locally and access to the world through its international airports and seaports

Transportation, Logistics & Distribution

Labor Area	Employment
Newark	92,640
Middlesex-Monmouth-Ocean	75,200
Bergen-Hudson-Passaic	74,250
Camden	45,830
Trenton	12,460
Atlantic City - Hammonton	5,690
Vineland - Bridgeton	5,630
Warren	2,540
Salem	1,600
Ocean City	1,510

*Employment by Labor Area
Transportation and Material Moving Occupations
in New Jersey, 2016*



The Newark Labor Area is home to nearly 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.

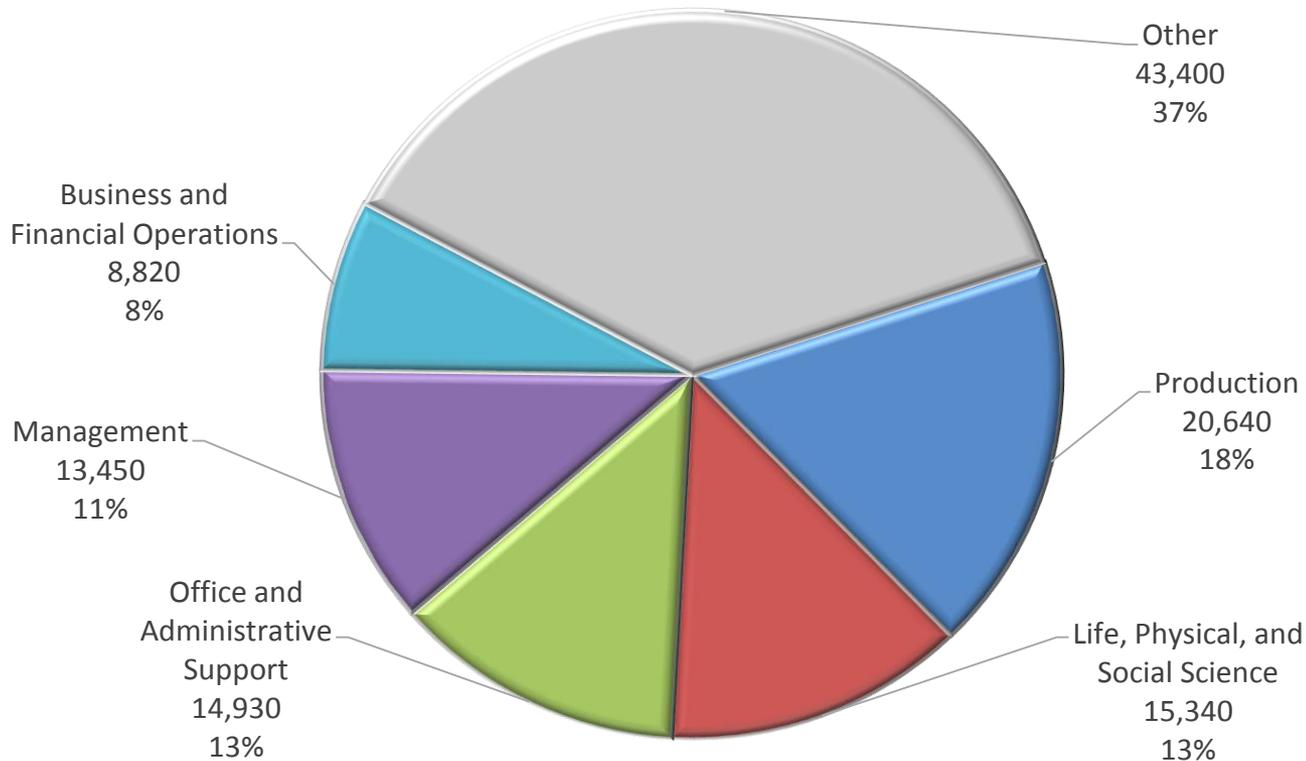
The Camden Labor Area in the south is host to many of New Jersey's trucking and warehousing companies. It is also home to the Port of Camden and the Gloucester Marine Terminal.



There are roughly 116,580 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, 2016



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.

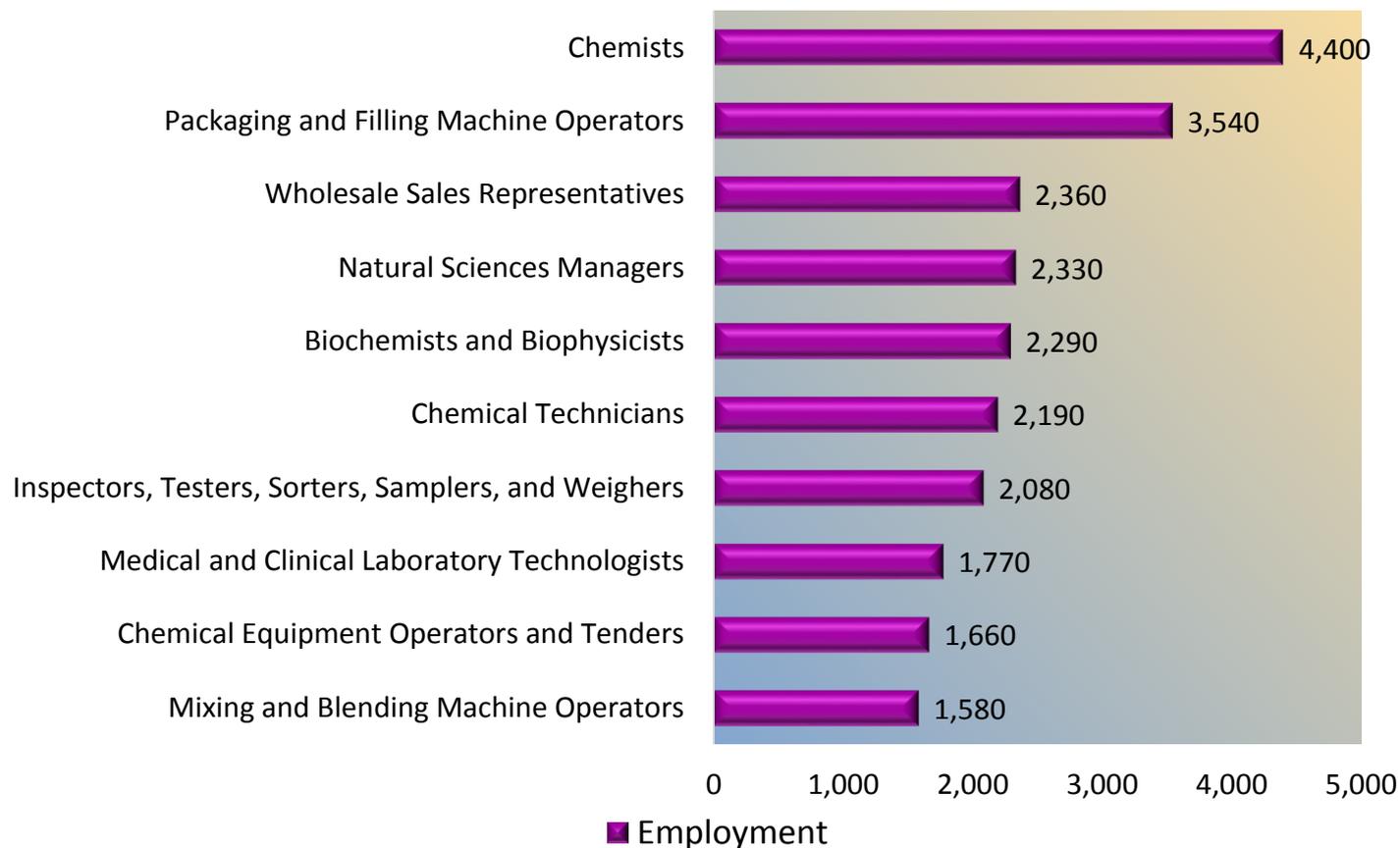
The “other” occupations are largely comprised of STEM and sales occupations who aid in the development and sales of the products created in this sector.



Unlike most other sectors in this report, these top ten occupations account for slightly over 20 percent of all employment in this sector

Biopharmaceuticals & Life Sciences

Top Ten Occupations Found in the Biopharmaceutical and Life Sciences Sector in New Jersey, 2016



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 \$ 188,000 .

Packaging and filling machine operators, on the other hand, earned an average salary of only \$29,070.



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, 2016

Occupation	Average Salary	Employment	Education
Medical Scientists	\$128,620	200	Doctoral or professional degree
Biochemists and Biophysicists	\$117,930	2,290	Doctoral or professional degree
Pharmacists	\$117,440	610	Doctoral or professional degree
Wholesale Sales Representatives	\$114,840	220	Bachelor's degree
Electrical Engineers	\$106,110	730	Bachelor's degree
Chemical Engineers	\$103,720	420	Bachelor's degree
Application Software Developers	\$101,450	370	Bachelor's degree
Industrial Engineers	\$94,630	1,120	Bachelor's degree
Chemists	\$87,490	4,400	Bachelor's degree
Microbiologists	\$80,370	260	Bachelor's degree

Pharmacists and wholesale sales representatives are the only non-STEM occupations on this list. Each still requires significant schooling, and earned an average salary exceeding \$116,750.

Despite relatively low levels of employment opportunity medical scientists earn more in New Jersey than in any other state. At \$128,620, they earn more than two times the statewide average.

Chemists in New Jersey are also very well compensated, earning more here 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 2016

Biochemists & Biophysicists

State	Employment	Average Salary
California	4,960	\$107,760
New Jersey	3,540	\$117,930
Maryland	1,640	\$84,940
New York	1,530	\$83,760
Pennsylvania	1,270	\$85,530
Illinois	1,260	\$99,650
Texas	1,160	\$92,880
Minnesota	1,020	\$73,070
Florida	860	\$87,430
North Carolina	810	\$89,020

Chemists

State	Employment	Average Salary
California	11,660	\$88,120
New Jersey	6,410	\$87,490
Texas	6,400	\$76,280
Pennsylvania	5,250	\$72,310
New York	4,170	\$83,530
Ohio	4,110	\$73,630
North Carolina	3,720	\$74,100
Illinois	3,380	\$81,500
Maryland	3,240	\$108,600
Michigan	2,920	\$81,770

New Jersey is home to more than 10 percent of the nation's biochemists and biophysicists, second only among states to California. Those working in this occupation earn an average salary of \$117,930, making the state at the top.

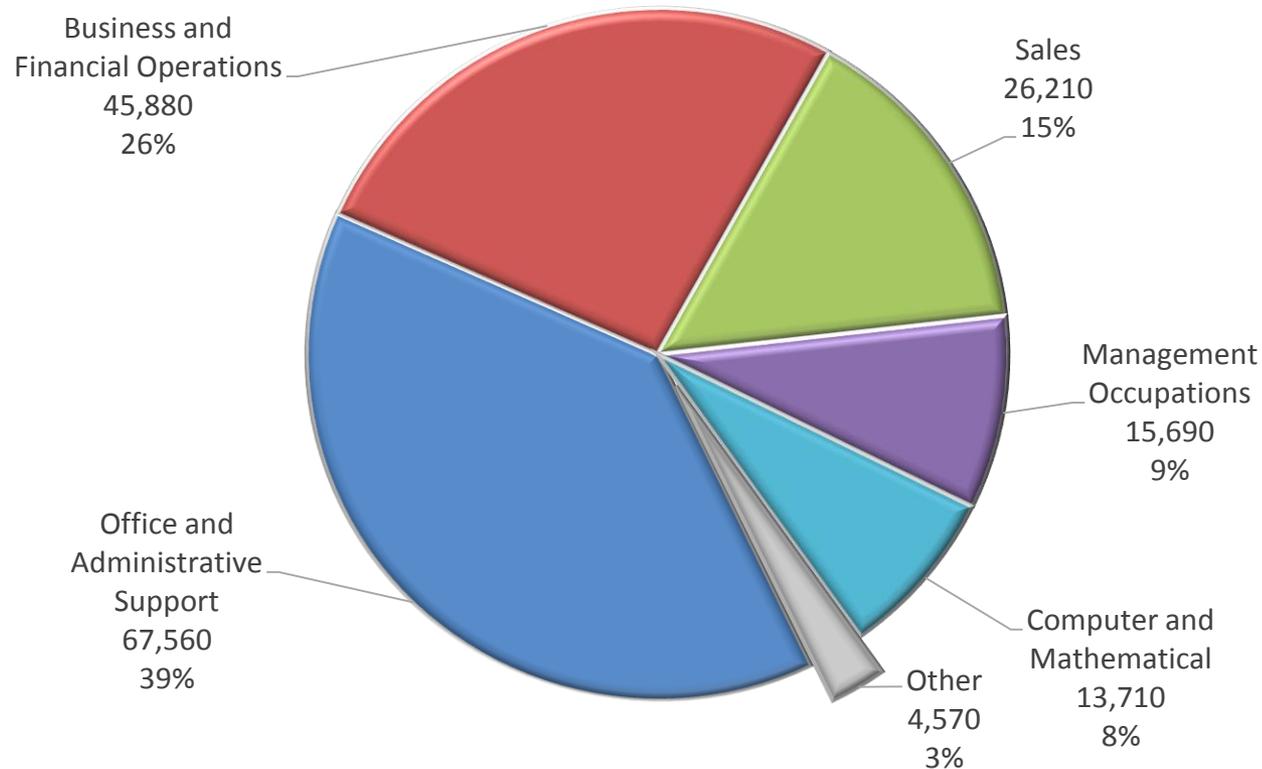
New Jersey ranks second in the total number of chemists employed, behind only California. Combined, these two states account for more than twenty percent of all chemists in the nation. New Jersey also pays its chemists 8.3 percent more than the nation average of \$80,820.



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 2016



Office and administrative support occupations, including tellers and other types of financial clerks, is the largest occupational group accounting for near 39 percent of financial employment.

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

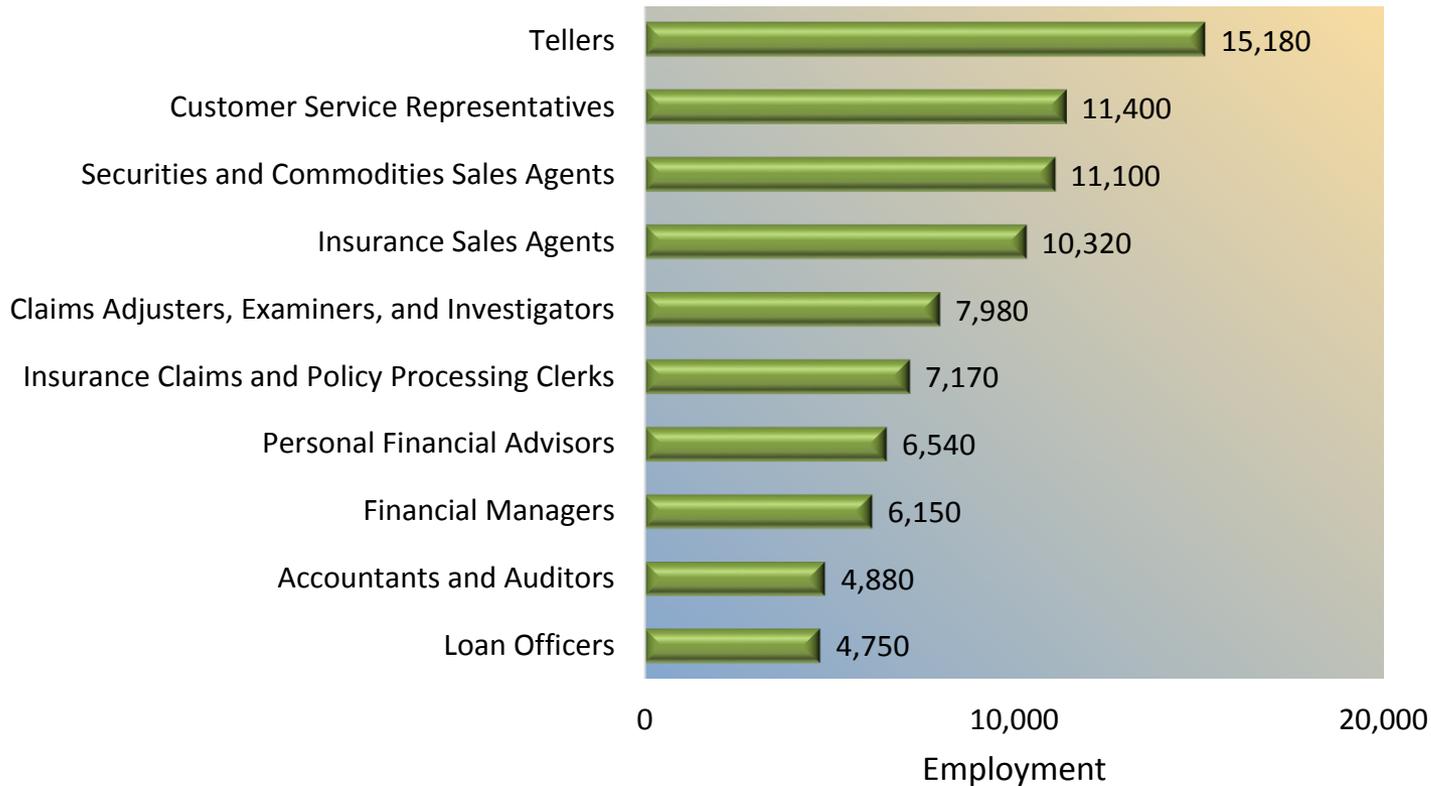
The remaining three occupational groups that make up about 43 percent of employment in the financial sector typically require at least a bachelor's degree and tend to earn much higher average wages.



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, 2016



The largest two occupations in terms of employment, tellers and customer service representatives, 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 auditors development.



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, 2016

Occupation	Average Salary	Employment	Education
Systems Software Developers	\$141,680	1,060	Bachelor's degree
Personal Financial Advisors	\$130,960	6,540	Bachelor's degree
Information Security Analysts	\$120,990	640	Bachelor's degree
Securities and Commodities Sales Agents	\$112,400	11,100	Bachelor's degree
Software Developers, Applications	\$111,470	3,690	Bachelor's degree
Actuaries	\$107,780	550	Bachelor's degree
Financial Analysts	\$107,390	3,920	Bachelor's degree
Computer Systems Analysts	\$107,260	2,580	Bachelor's degree
Insurance Underwriters	\$96,830	3,230	Bachelor's degree
Accountants and Auditors	\$92,100	4,880	Bachelor's degree

22 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, 2016**

Metropolitan Statistical Area	Employment	Location Quotient	Average Salary
<i>New York-Newark-Jersey City, NY-NJ-PA</i>	<i>61,810</i>	<i>2.7</i>	<i>\$161,720</i>
Los Angeles-Long Beach-Anaheim, CA	19,800	1.4	\$84,590
Chicago-Naperville-Elgin, IL-IN-WI	17,080	1.5	\$97,510
Dallas-Fort Worth-Arlington, TX	12,560	1.5	\$100,430
Boston-Cambridge-Nashua, MA-NH	10,220	1.5	\$129,730
Houston-The Woodlands-Sugar Land, TX	10,150	1.4	\$85,760
Miami-Fort Lauderdale-West Palm Beach, FL	9,900	1.6	\$92,090
San Francisco-Oakland-Hayward, CA	8,190	1.4	\$102,940
<i>Philadelphia-Camden-Wilmington, PA-NJ-DE-MD</i>	<i>8,060</i>	<i>1.2</i>	<i>\$97,210</i>
Denver-Aurora-Lakewood, CO	7,760	2.2	\$83,260

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.

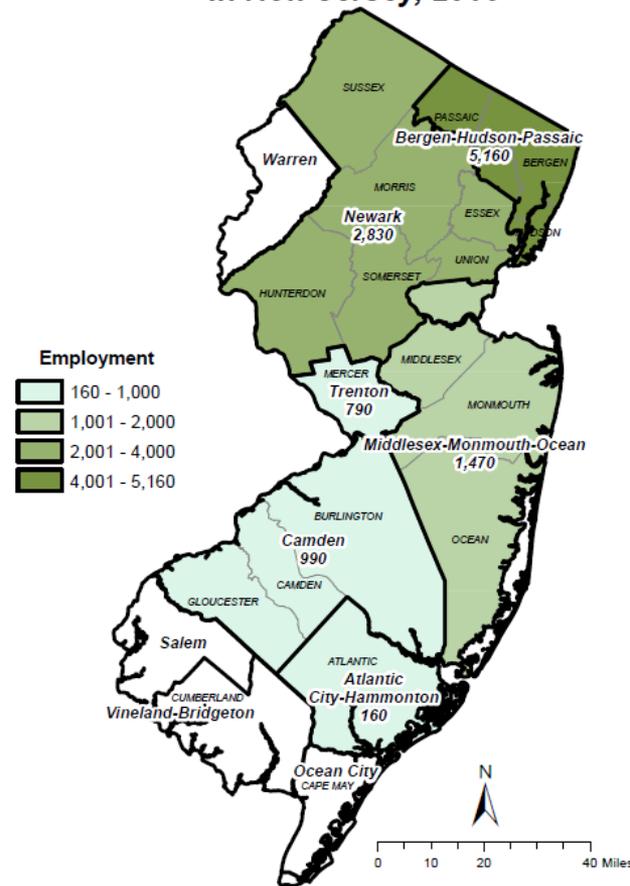


Securities and commodities sales agents are typically employed in labor areas near either the New York or Philadelphia stock exchanges

Financial Services

Labor Area	Employment
Bergen-Hudson-Passaic	5,160
Newark	2,830
Middlesex-Monmouth-Ocean	1,470
Camden	990
Trenton	790
Atlantic City - Hammonton	160
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, 2016**



Greater than 44 percent of all securities and commodities sales agents in New Jersey are employed in the Bergen-Hudson-Passaic labor area.

There are another nearly 4,300 security and commodities sales agents who are employed in the Newark and Middlesex-Monmouth-Ocean labor areas. These three areas combined account for over 81 percent of all employment in the state.



New Jersey ranks first among all states in STEM occupational* employment per square mile, and its 227,770 workers ranks twelfth in total STEM employment

Science, Technology, Engineering & Math

State	All STEM Employment	Rank
California	1,084,350	1
Texas	669,790	2
New York	425,620	3
Florida	332,530	4
Virginia	305,260	5
Illinois	302,690	6
Pennsylvania	301,080	7
Michigan	271,080	8
Ohio	269,970	9
Massachusetts	267,980	10
Washington	259,870	11
New Jersey	227,770	12
Maryland	223,840	13
Georgia	222,420	14
North Carolina	220,660	15

State	STEM Square Mile	Rank
New Jersey	26.1	1
Massachusetts	25.4	2
Maryland	18.0	3
Connecticut	17.1	4
Rhode Island	15.7	5
Delaware	10.7	6
New York	7.8	7
Virginia	7.1	8
California	6.6	9
Pennsylvania	6.5	10
Ohio	6.0	11
Illinois	5.2	12
Florida	5.1	13
North Carolina	4.1	14
New Hampshire	3.8	15

California, Texas and New York, the three most populous states in the United States, account for more than 28 percent of all STEM jobs in the nation.

New Jersey has the most density of STEM employment of all states, with over 26 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 (#29) and Maine (#40) qualify as northeastern states that fall outside the top fifteen in STEM employment per square mile.

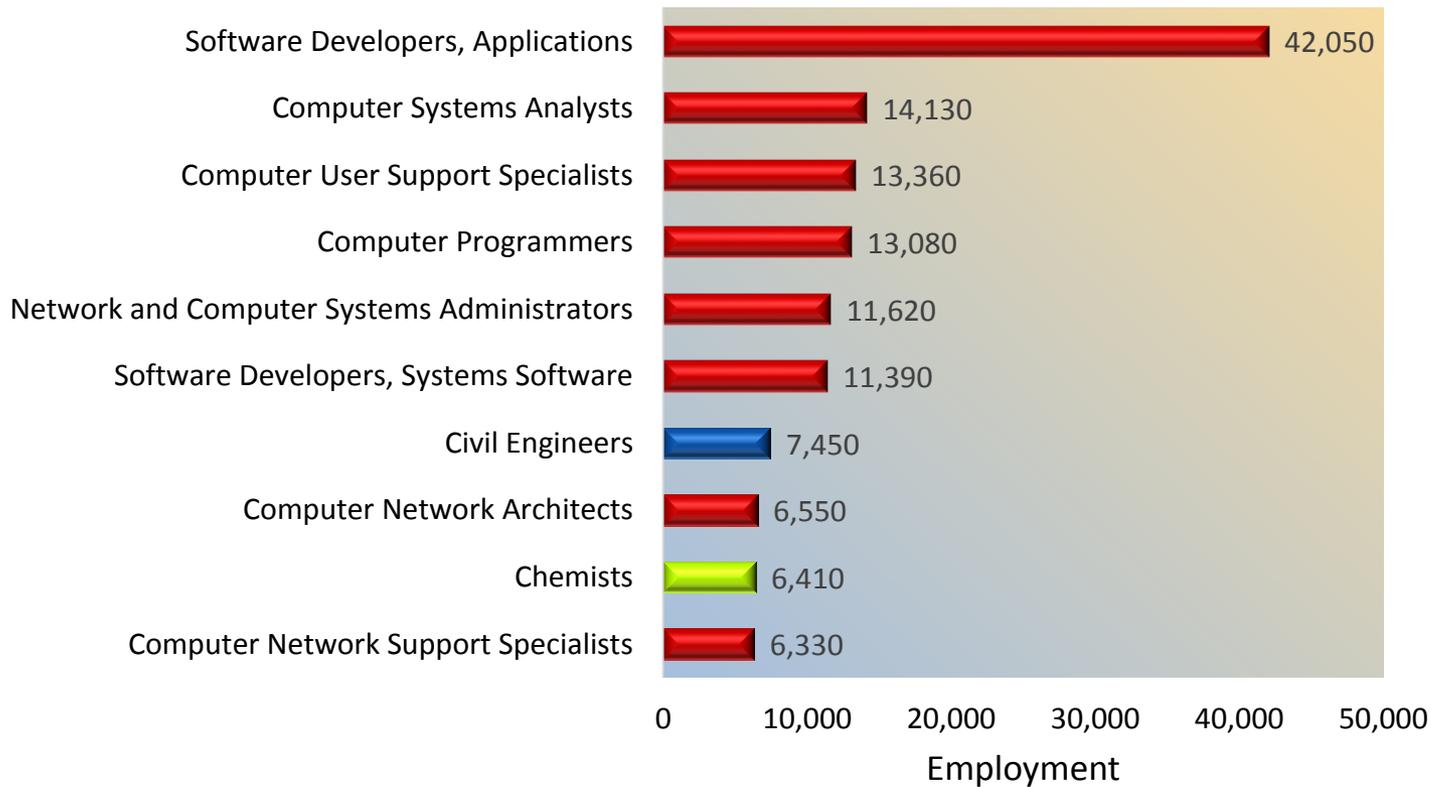


*STEM occupations are found across all industries

The ten occupations on this list account for more than 58 percent of all STEM employment in New Jersey

Science, Technology, Engineering & Math

Top Ten STEM Occupations Found in All Industries New Jersey, 2016



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 50,400 in 2016. 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 \$93,690, which is over 67 percent more than the statewide average

Science, Technology, Engineering & Math

Highest Paying STEM Occupations New Jersey, 2016

Occupation	Average Salary	Employment	Minimum Education
Computer and Information Research Scientists	\$125,890	1,530	Doctoral or professional degree
Computer Network Architects	\$120,150	6,550	Bachelor's degree
Biochemists and Biophysicists	\$117,930	3,540	Doctoral or professional degree
Systems Software Developers	\$115,650	11,390	Bachelor's degree
Actuaries	\$114,290	810	Bachelor's degree
Information Security Analysts	\$113,990	2,180	Bachelor's degree
Electronics Engineers	\$106,960	3,770	Bachelor's degree
Electrical Engineers	\$106,110	4,190	Bachelor's degree
Chemical Engineers	\$103,720	1,300	Bachelor's degree
Computer Systems Analysts	\$102,310	14,130	Bachelor's degree

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.

The highest pay in STEM occupations requires a Doctoral degree as well as the one occupation classified with life, physical, and social sciences (biochemists and biophysicists).



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	48,360
Architectural, Engineering, and Related Services	20,920
Scientific Research and Development Services	15,780
Management of Companies and Enterprises	14,030
Wired Telecommunications Carriers	8,570
Employment Services	8,570
Management, Scientific, and Technical Consulting Services	7,180
Pharmaceutical and Medicine Manufacturing	5,510
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	4,640
Securities and Commodity Contracts Intermediation and Brokerage	4,470

Industry	STEM Share	Total Employment	STEM Employment
Computer Systems Design and Related Services	64.2%	75,340	48,360
Software Publishers	59.4%	5,960	3,540
Architectural, Engineering, and Related Services	56.4%	37,120	20,920
Scientific Research and Development Services	51.4%	30,680	15,780
Data Processing, Hosting, and Related Services	39.4%	9,710	3,830
Wired Telecommunications Carriers	38.1%	22,520	8,570
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	37.2%	12,470	4,640
Communications Equipment Manufacturing	34.0%	2,120	720
Pharmaceutical and Medicine Manufacturing	24.7%	22,330	5,510
Basic Chemical Manufacturing	20.6%	6,120	1,260

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.

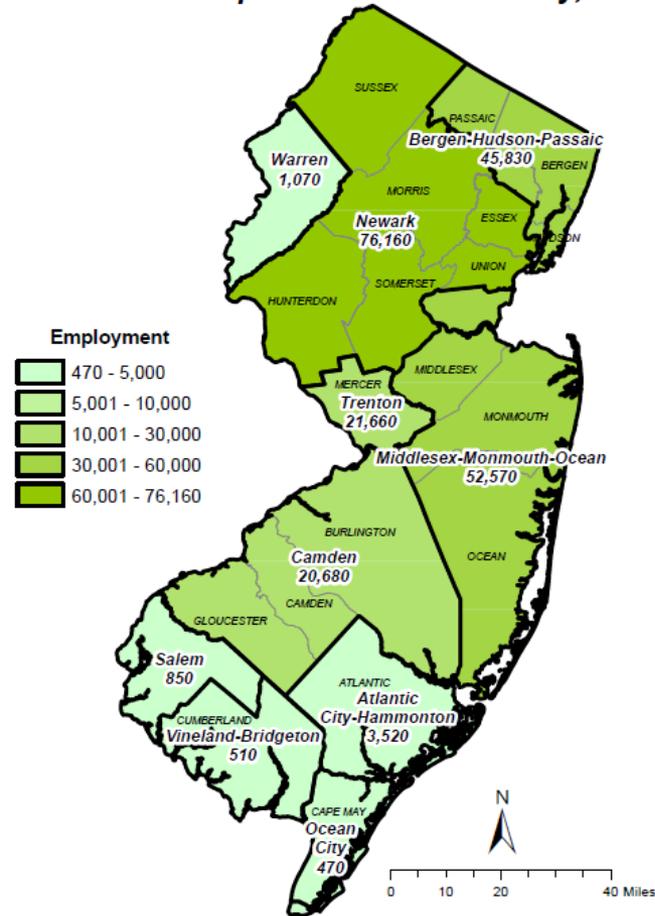
Computer systems design services ranks as the highest industry in New Jersey for STEM employment, accounting for more than one in every five STEM jobs. Nearly two-thirds of all employment in this industry is classified as a STEM occupation.



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

Labor Area	Employment
Newark	76,160
Middlesex-Monmouth-Ocean	52,570
Bergen-Hudson-Passaic	45,830
Trenton	21,660
Camden	20,680
Atlantic City - Hammonton	3,520
Warren	1,070
Salem	850
Vineland - Bridgeton	510
Ocean City	470

**Employment by Labor Area
STEM Occupations in New Jersey, 2016**



The Newark labor area employs greater than 76,100 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 52,000 STEM workers.

The Bergen-Hudson-Passaic labor area in the north employs nearly 46,000 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



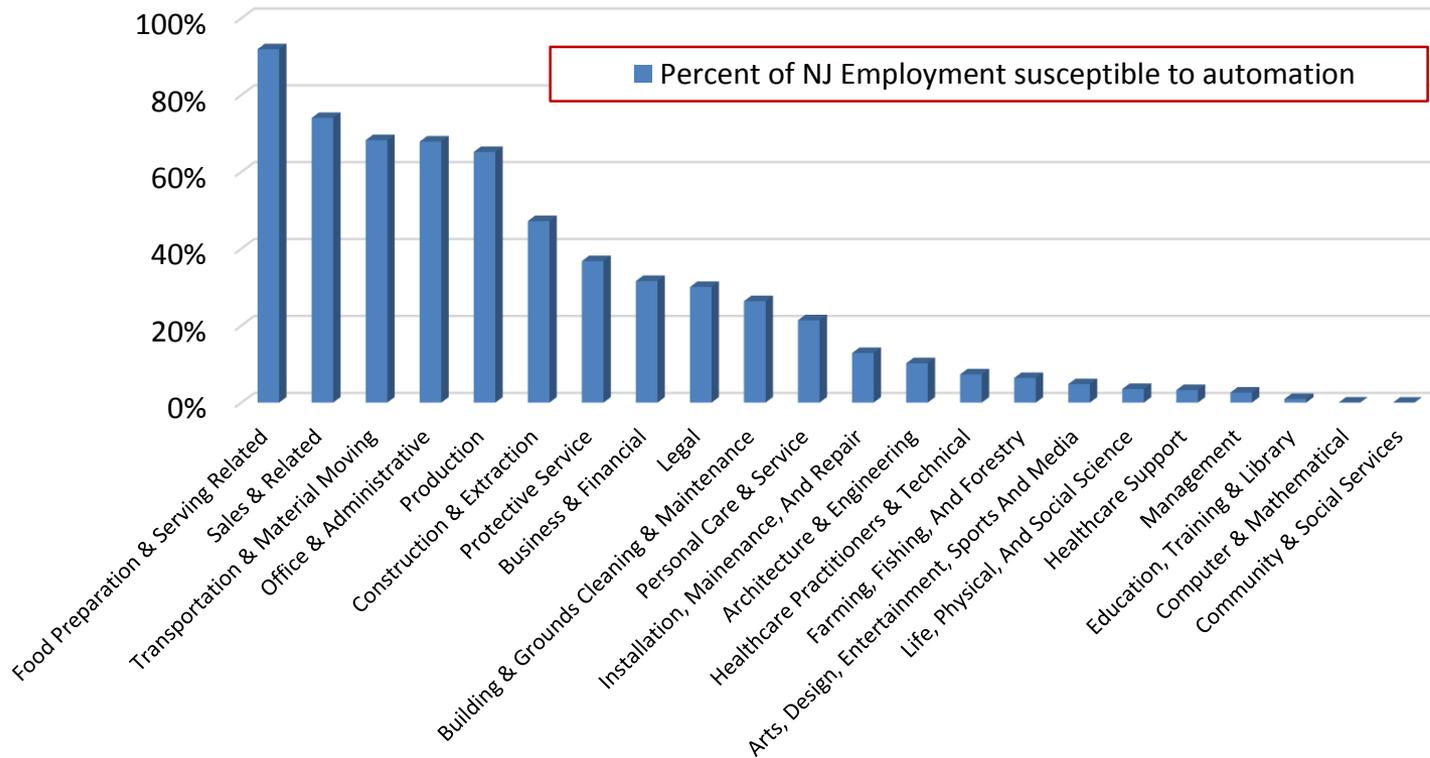
This section was developed based on research by Carl Benedikt Frey and Michael A. Osborne and their report titled “The Future of Employment: How Susceptible are Jobs to Computerisation?”. In this report, they implement a methodology that estimates the probable effects of automation on the 702 occupations 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 five occupational groups in New Jersey in which more than 65 percent of the employment is susceptible to computer automation: Food Preparation and Serving Related (91.9%), Sales and Related (74%), Transportation and Material Moving (68.3%), Office and Administrative (67.9%) and Production (65.2%).



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%	\$94,880	3,580	Bachelor's degree
Tax Preparers	99%	\$47,880	1,320	High school diploma or equivalent
Title Examiners, Abstractors, and Searchers	99%	\$46,520	1,830	High school diploma or equivalent
Cargo and Freight Agents	99%	\$44,580	3,330	High school diploma or equivalent
New Accounts Clerks	99%	\$43,870	660	High school diploma or equivalent
Library Technicians	99%	\$40,630	2,820	Postsecondary nondegree award
Data Entry Keyers	99%	\$38,020	9,340	High school diploma or equivalent
Photographic Process Workers and Processing Machine Operators	99%	\$32,560	810	High school diploma or equivalent
Hand Sewers	99%	\$31,180	260	No formal educational credential
Telemarketers	99%	\$29,260	4,540	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 \$56,040.

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 13,330 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	\$161,740	380	96%	Bachelor's degree
Insurance Underwriters	\$94,880	3,580	99%	Bachelor's degree
Real Estate Brokers	\$91,370	420	97%	High school diploma or equivalent
Accountants and Auditors	\$88,940	36,640	94%	Bachelor's degree
Reinforcing Iron and Rebar Workers	\$85,120	560	90%	High school diploma or equivalent
Loan Officers	\$84,240	6,570	98%	Bachelor's degree
Budget Analysts	\$81,340	2,380	94%	Bachelor's degree
Tax Examiners and Collectors, and Revenue Agents	\$78,700	1,450	93%	Bachelor's degree
Insurance Sales Agents	\$78,210	10,660	92%	High school diploma or equivalent
Claims Adjusters, Examiners, and Investigators	\$74,210	9,490	98%	High school diploma or equivalent

Six Business and Financial Operations occupations have over a 90 percent chance of computerized automation totaling more than 60,000 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.

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



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%	490	\$55,400	Bachelor's degree
Emergency Management Directors	0.30%	390	\$96,500	Bachelor's degree
Supervisors of Mechanics, Installers, and Repairers	0.30%	12,160	\$74,640	High school diploma or equivalent
Mental Health and Substance Abuse	0.31%	1,600	\$71,610	Bachelor's degree
Audiologists	0.33%	320	\$89,930	Doctoral or professional degree
Occupational Therapists	0.35%	4,270	\$91,660	Master's degree
Healthcare Social Workers	0.35%	3,190	\$62,110	Master's degree
Supervisors of Fire Fighting and Prevention	0.36%	1,190	\$117,300	Postsecondary nondegree award
Lodging Managers	0.39%	570	\$102,400	High school diploma or equivalent
Dietitians and Nutritionists	0.39%	1,790	\$66,540	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 safest occupations in the future.

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?

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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

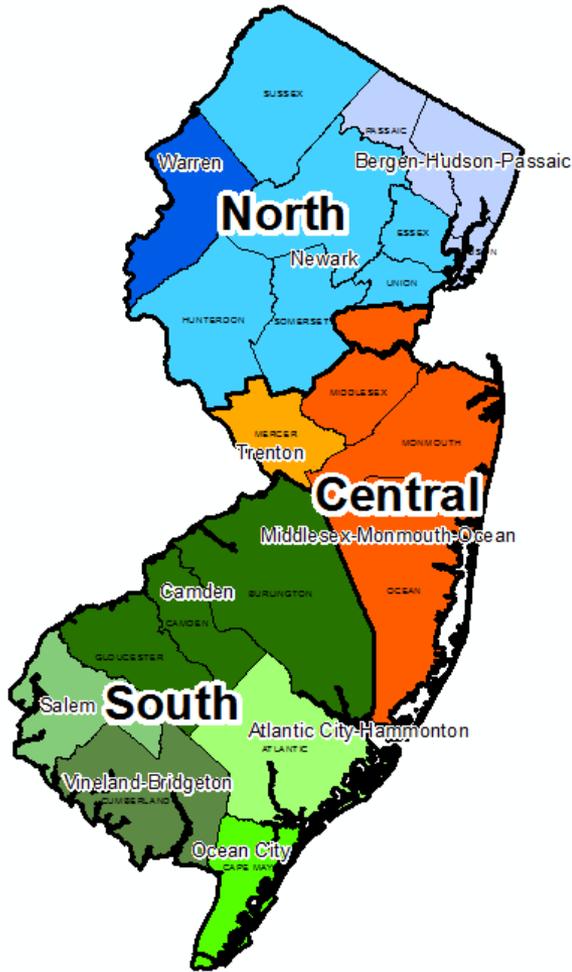
Biopharmaceuticals and Life Sciences

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.



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