



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.

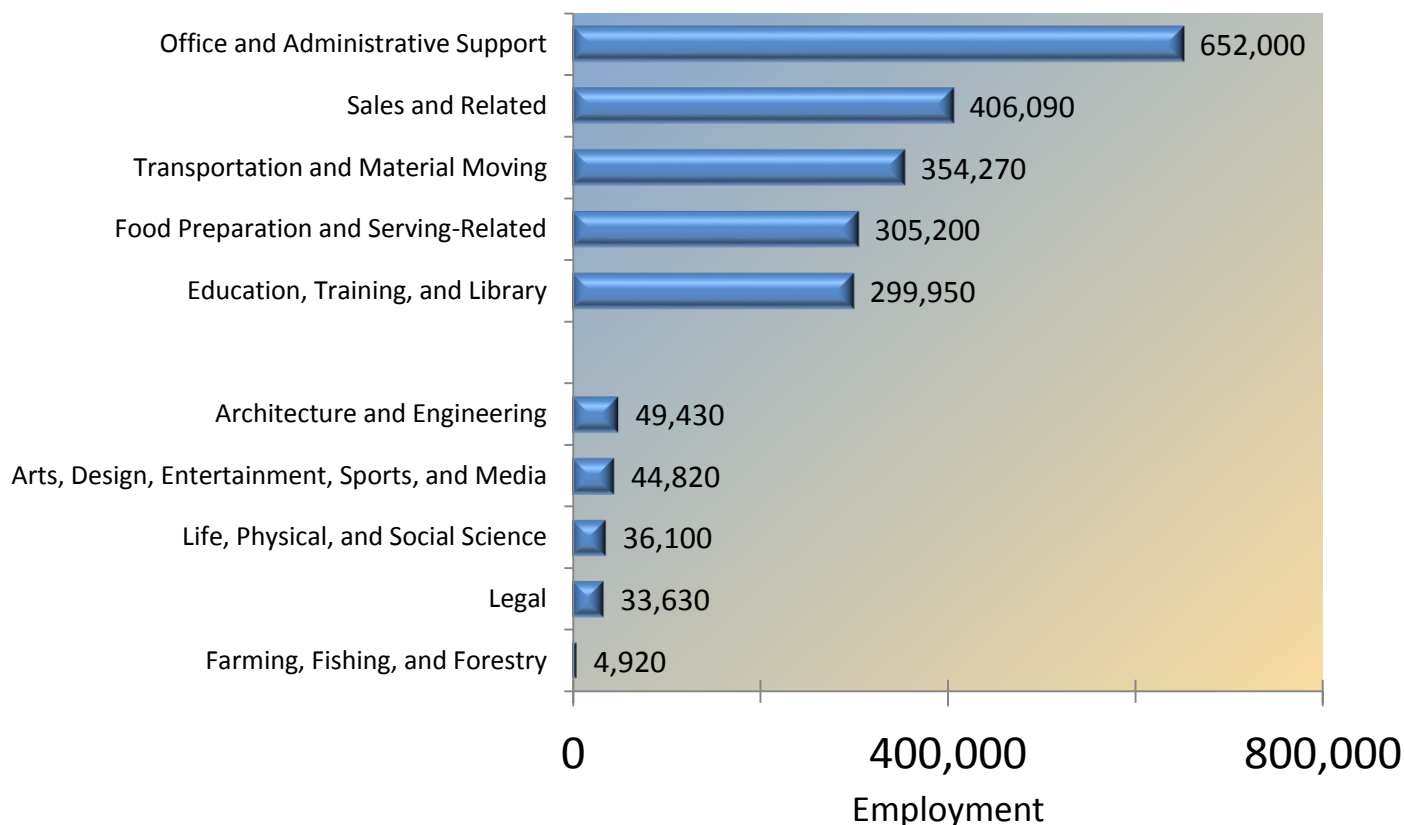
The stringent requirements of the OES survey, in terms of a statistically valid sample and methodology, combined with consistent survey forms and definitions, has resulted in quality wage data for hundreds of occupations that are truly comparable across all states and metropolitan areas. This is in direct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

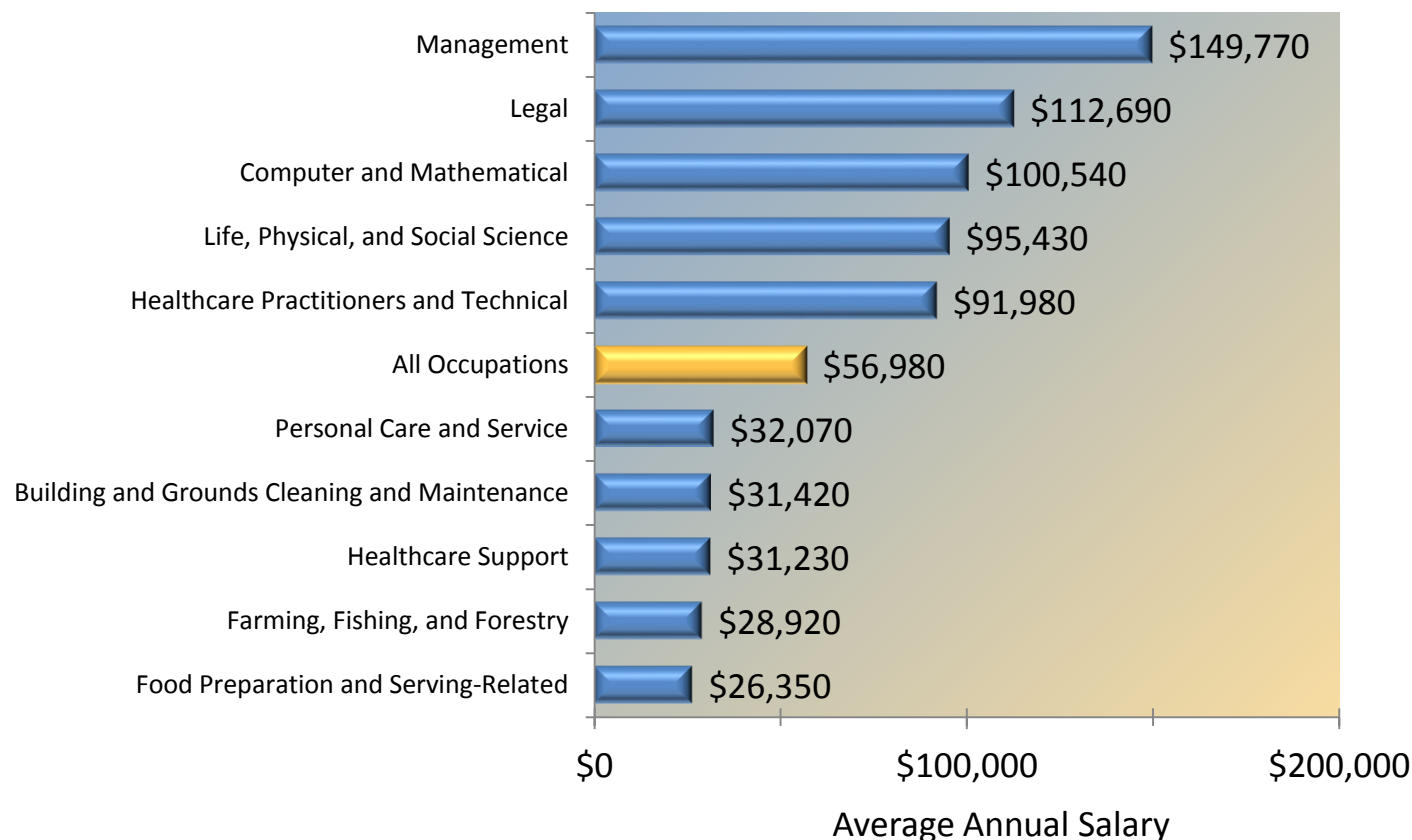
The smallest five occupational groups comprised less than 5 percent of all employment in New Jersey. However, all but farming, fishing and forestry occupations earned an above average annual salary.



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.

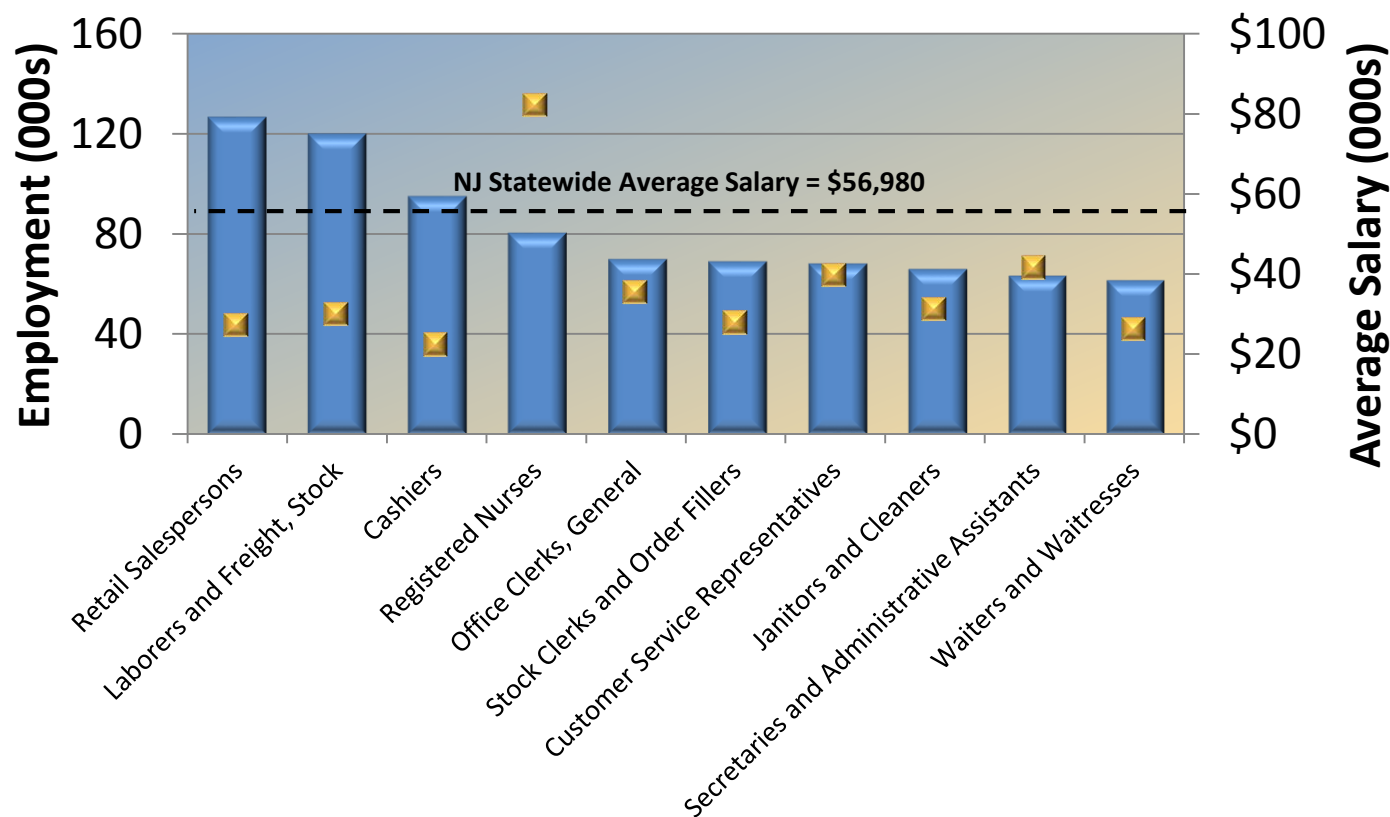
Four of the five lowest paying occupational groups are classified as service occupations. Only farming, fishing and forestry occupations fall outside this group.



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.



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, 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

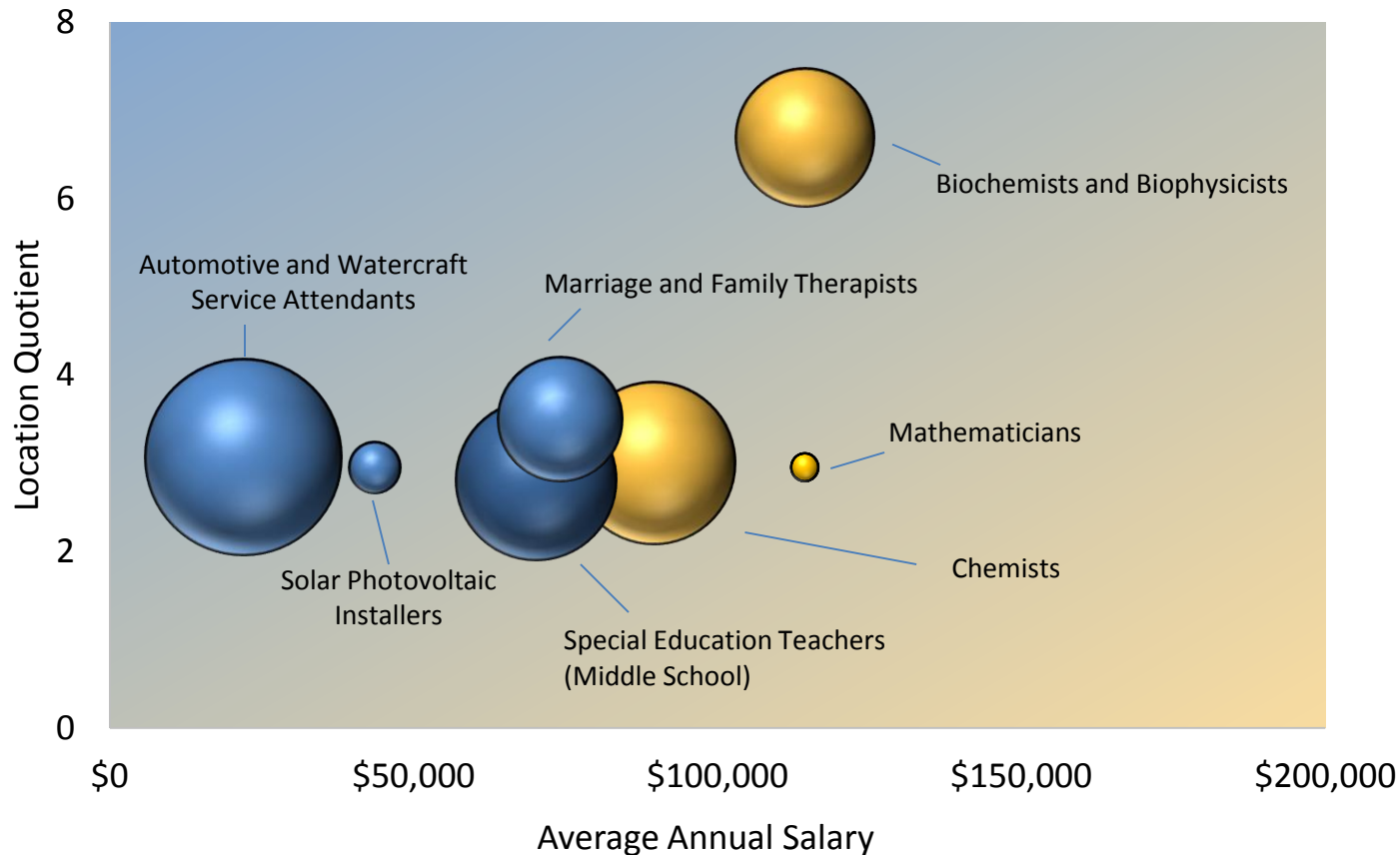
Math



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

Overview

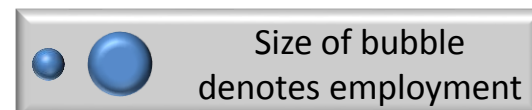
Location Quotient, Average Salary, and Employment of Selected Occupations, New Jersey 2017



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.

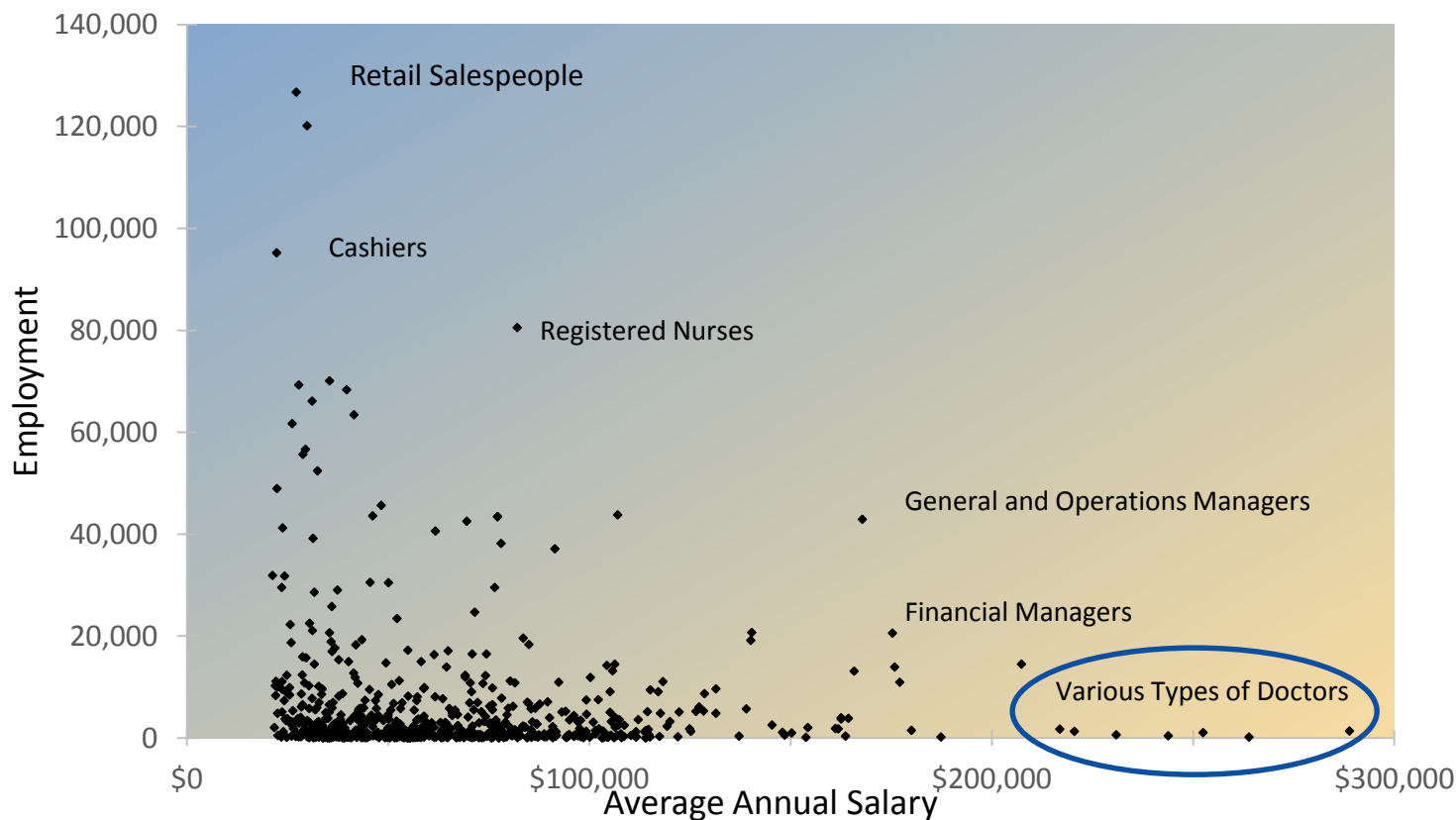
Three of these occupations (highlighted in gold) are STEM occupations and are commonly found working in New Jersey's robust chemical manufacturing industry, which includes one of the leading pharmaceutical industries in the country.



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

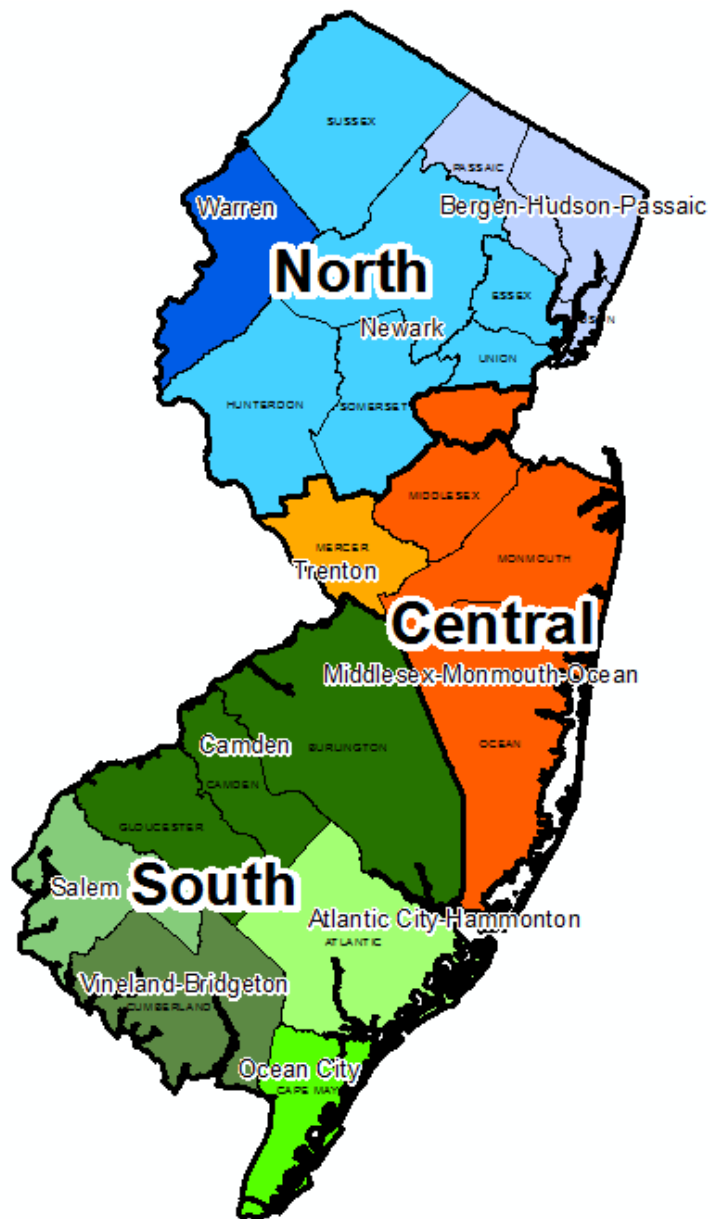


There are 43 occupations in New Jersey with employment of at least 20,000 in 2017. Combined, they account for over 1.9 million in employment, or near 50 percent of all jobs in the state.

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

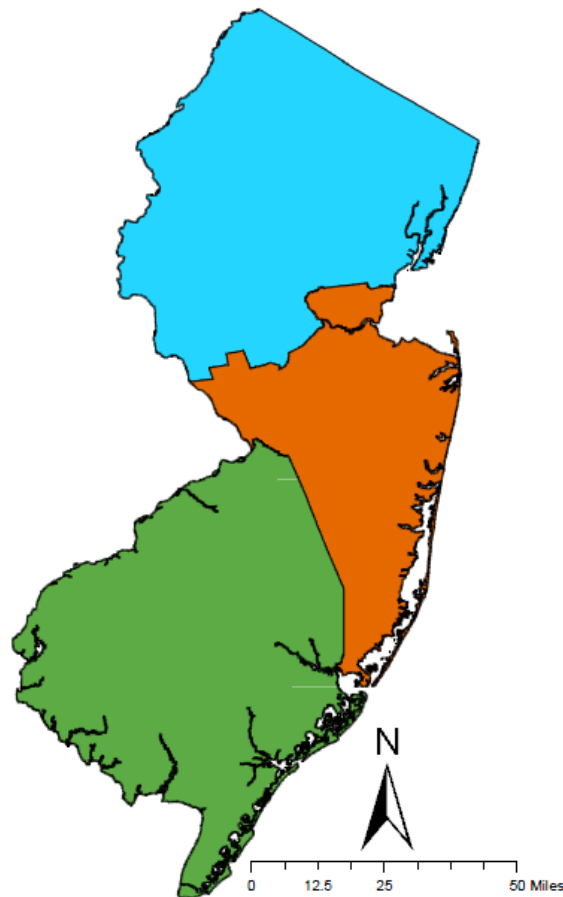
2,081,360 Employed
\$58,420 Average Salary

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

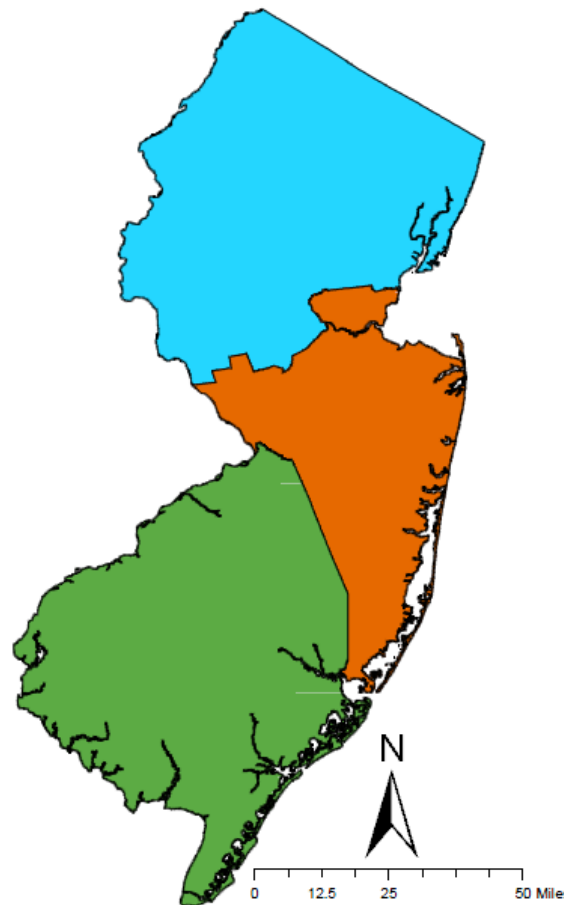
568,270 Employed
\$104,600 Average Salary

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

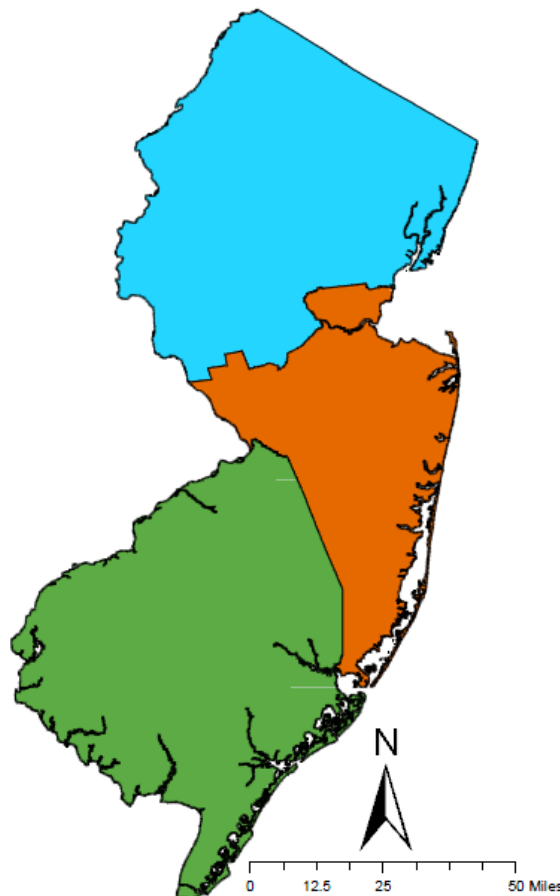
1,230,290 Employed
\$40,010 Average Salary

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.

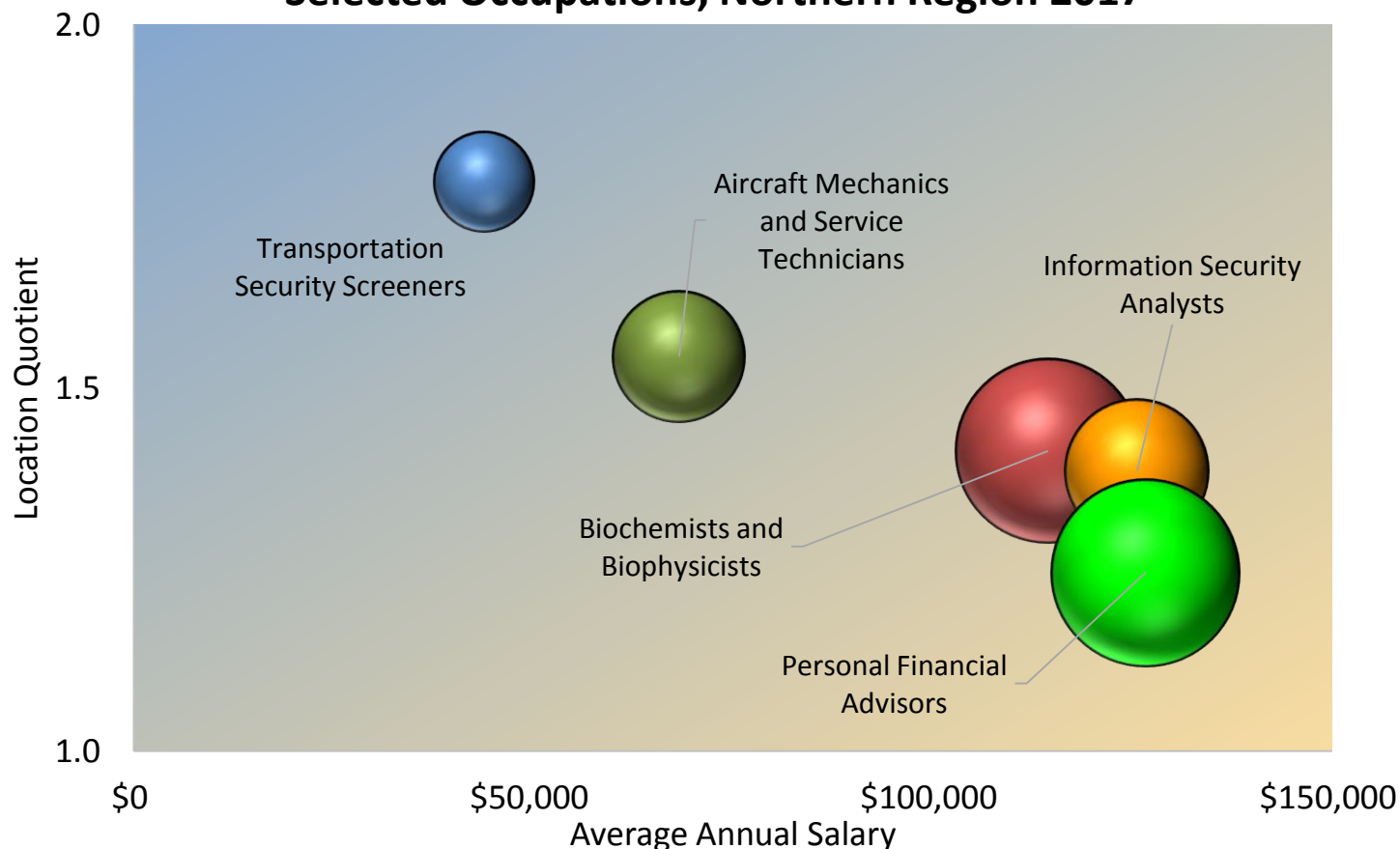


* Weighted regional salaries

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

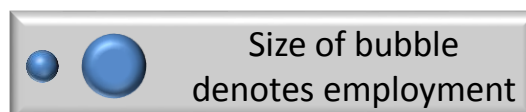


Location Quotient, Average Salary, and Employment of Selected Occupations, Northern Region 2017



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

*Weighted Salary

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.



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.

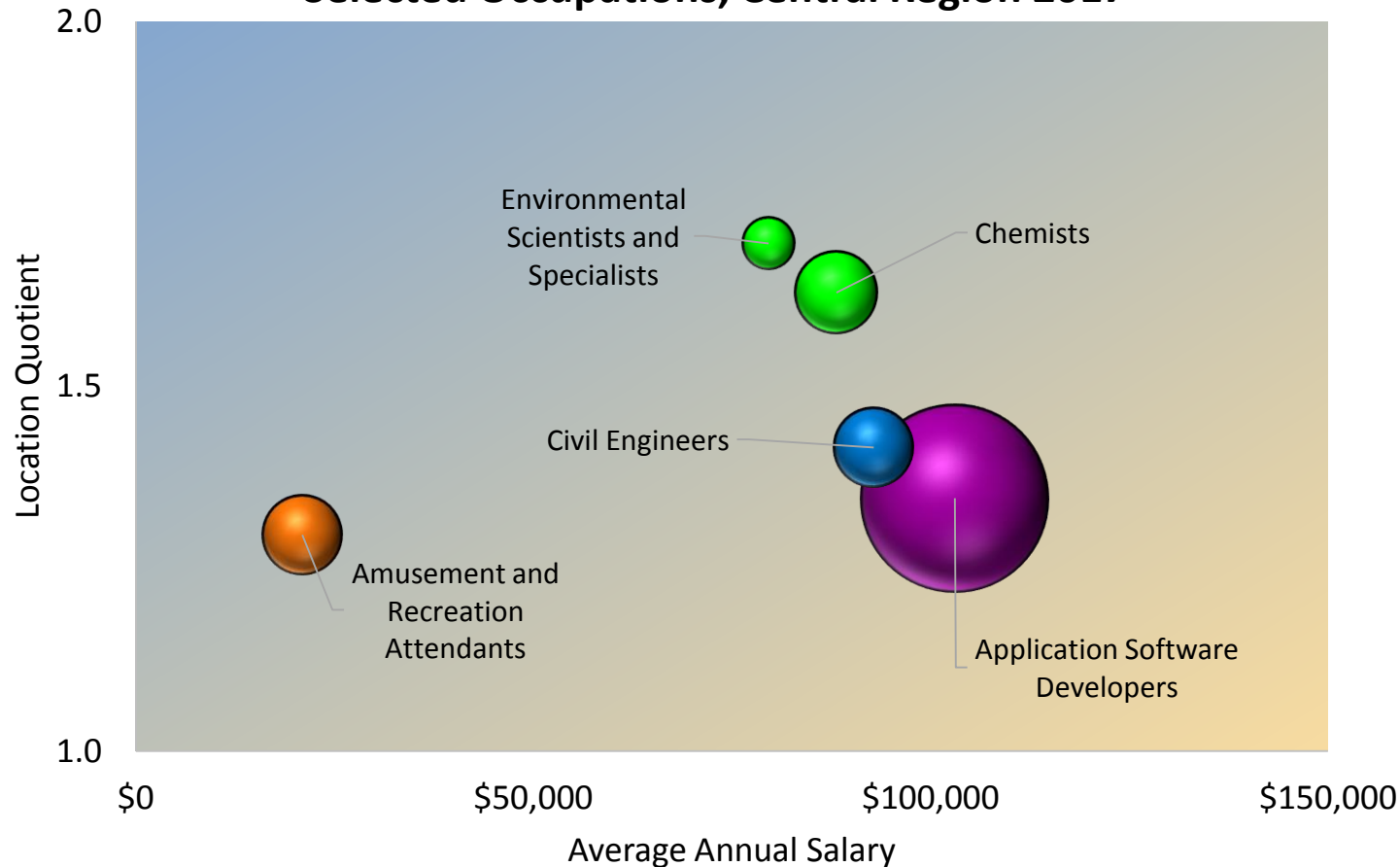
*Weighted Salaries



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



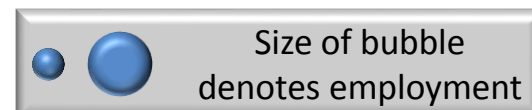
Location Quotient, Average Salary, and Employment of Selected Occupations, Central Region 2017



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.

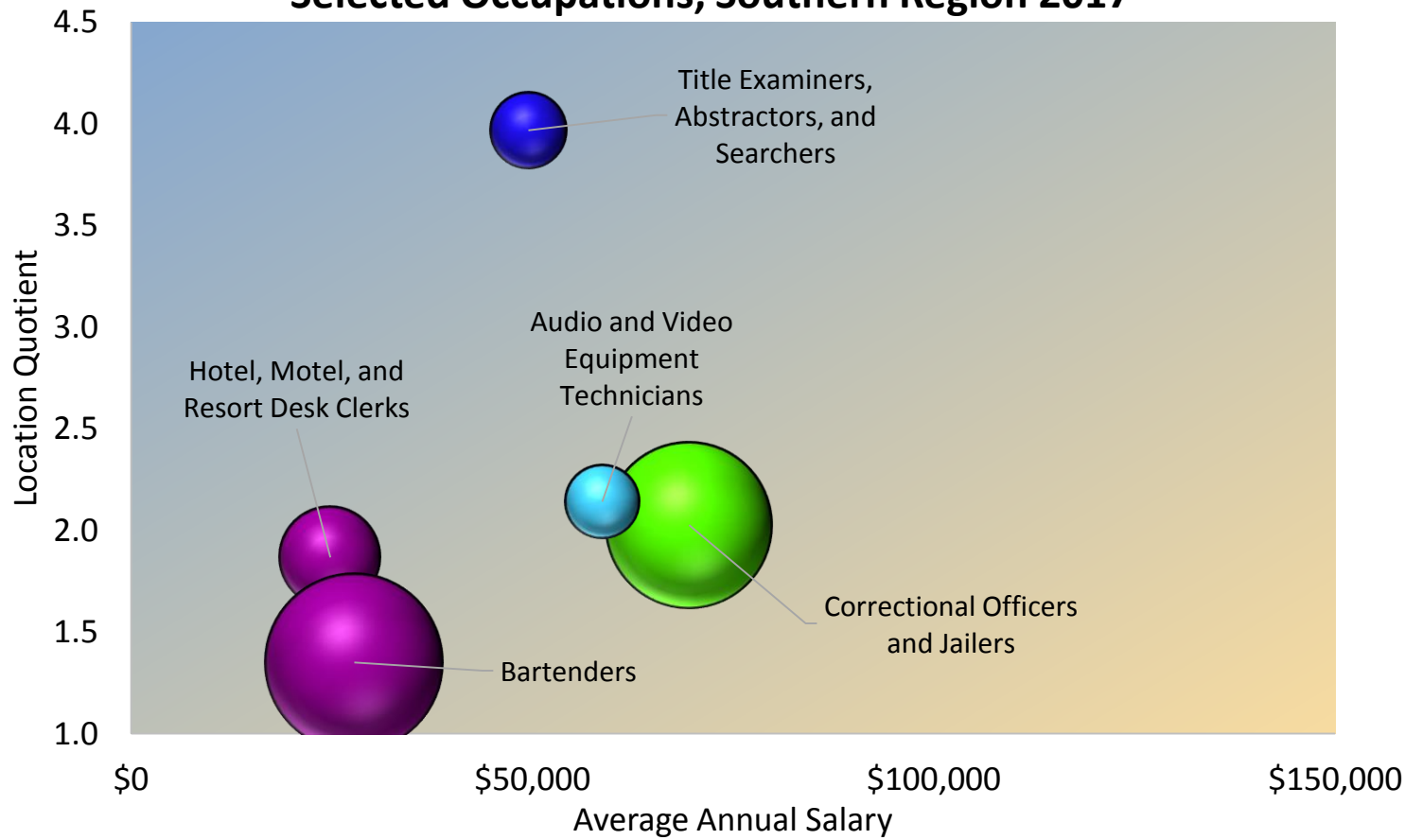
*Weighted Salaries



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



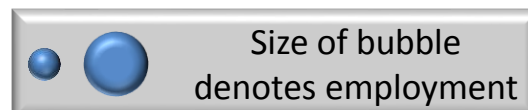
Location Quotient, Average Salary, and Employment of Selected Occupations, Southern Region 2017



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

*Weighted Salary

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.



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**



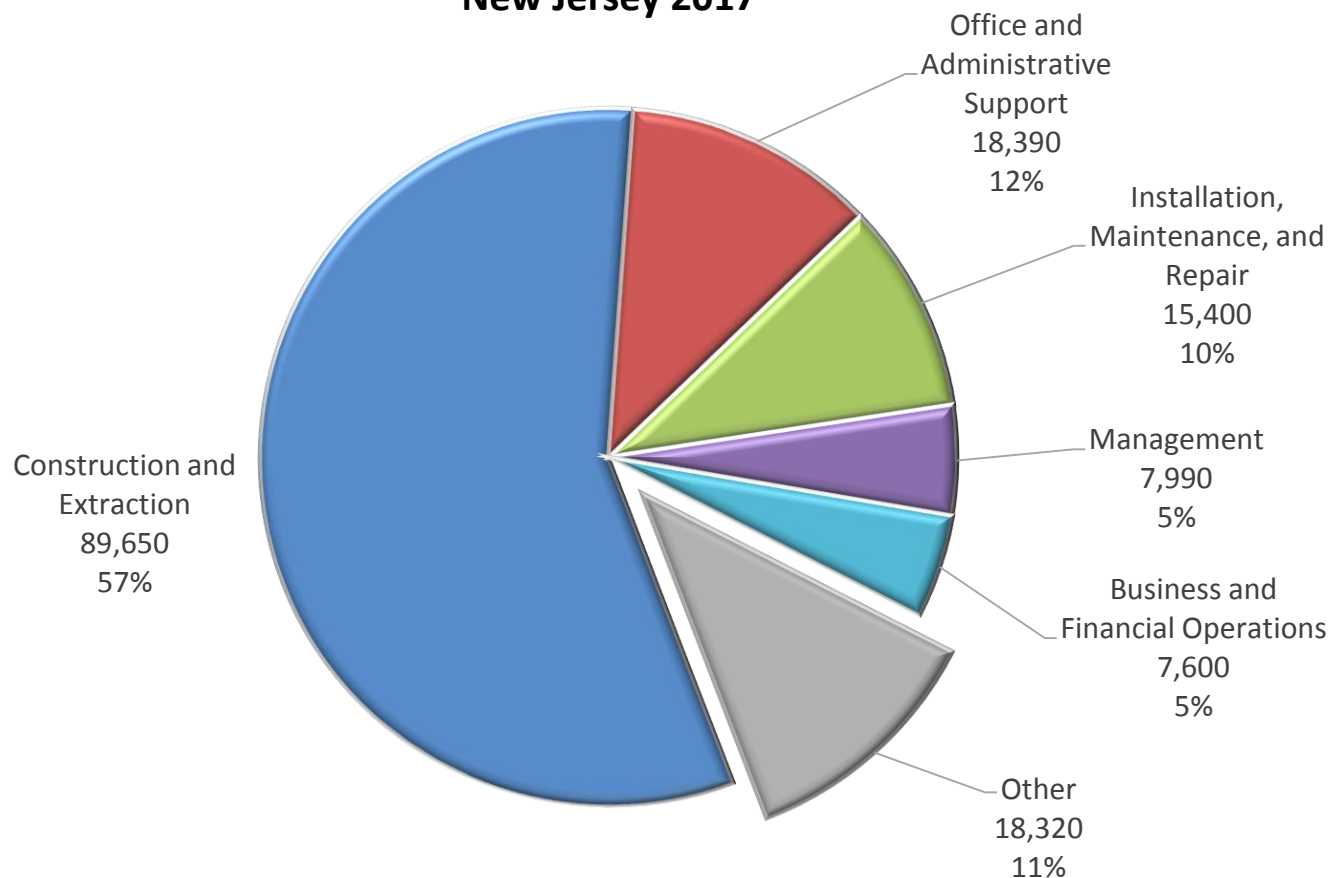
INDUSTRY FOCUS



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.

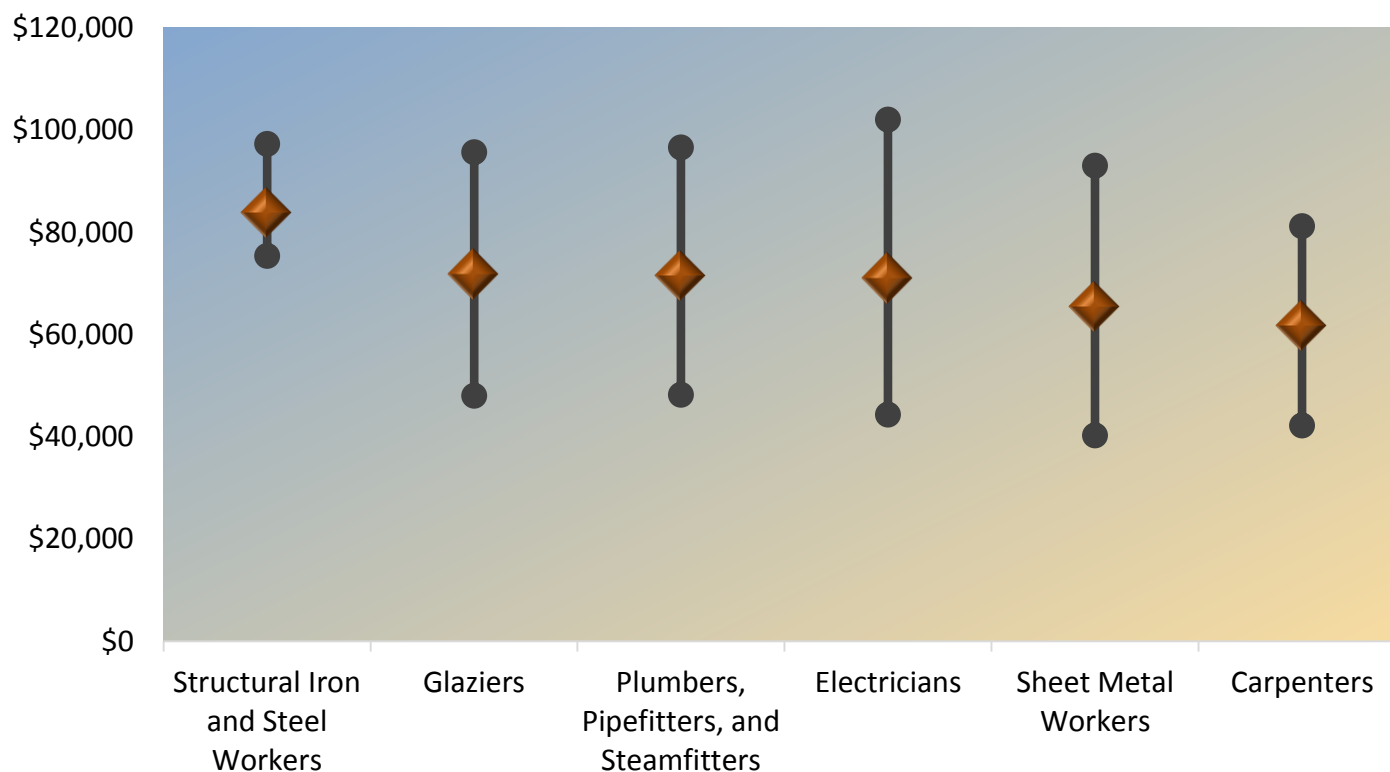
All of these occupations incorporate a working knowledge of basic math and measurement, among other requisite skills.



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.



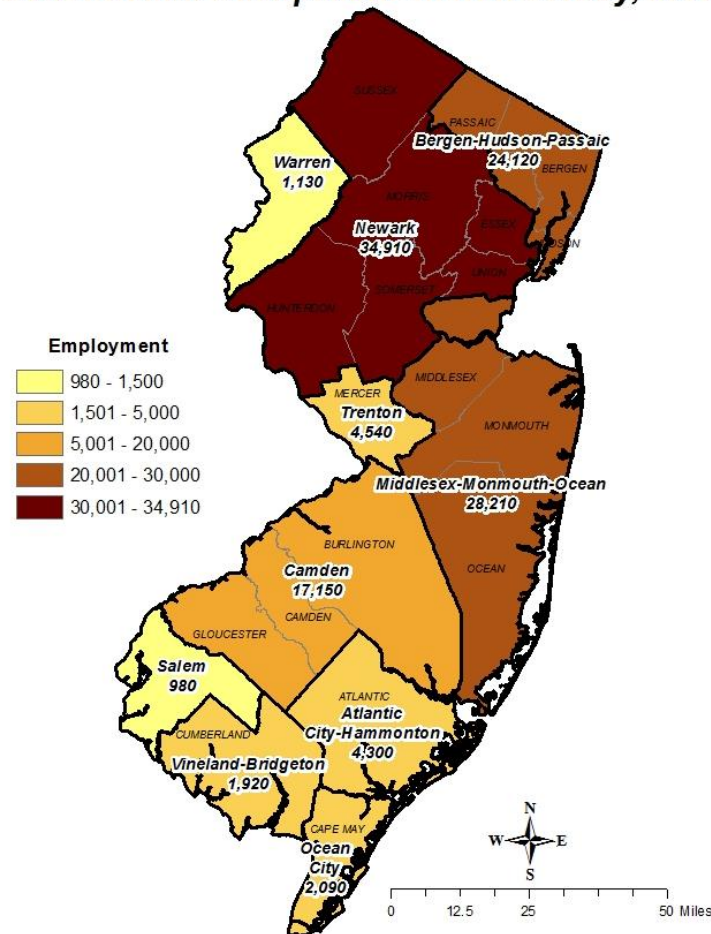
● 75th Percentile
◆ Average Salary
● 25th Percentile

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.

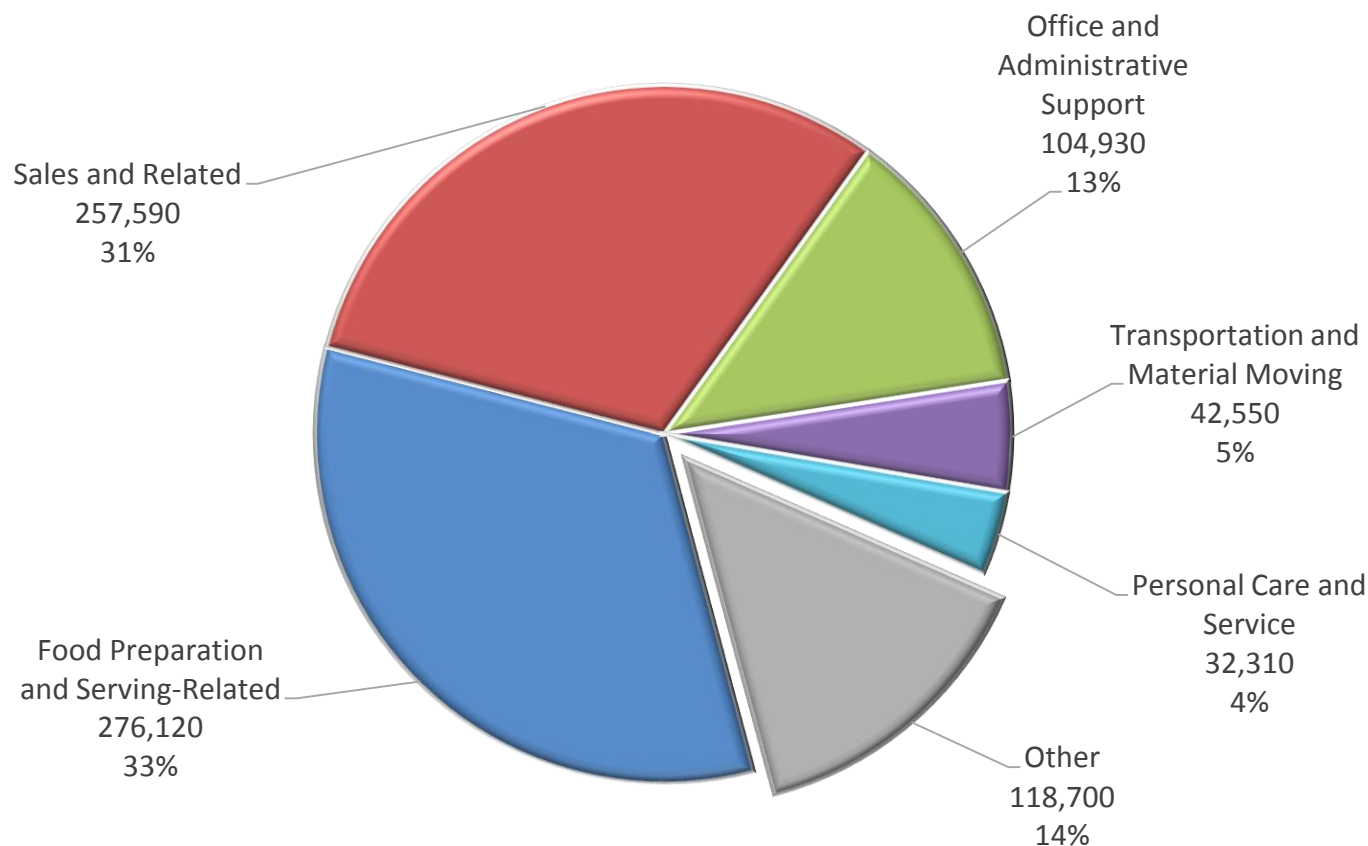
The Warren and Salem Labor Areas, which are primarily rural, have the lowest numbers of construction workers.



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.

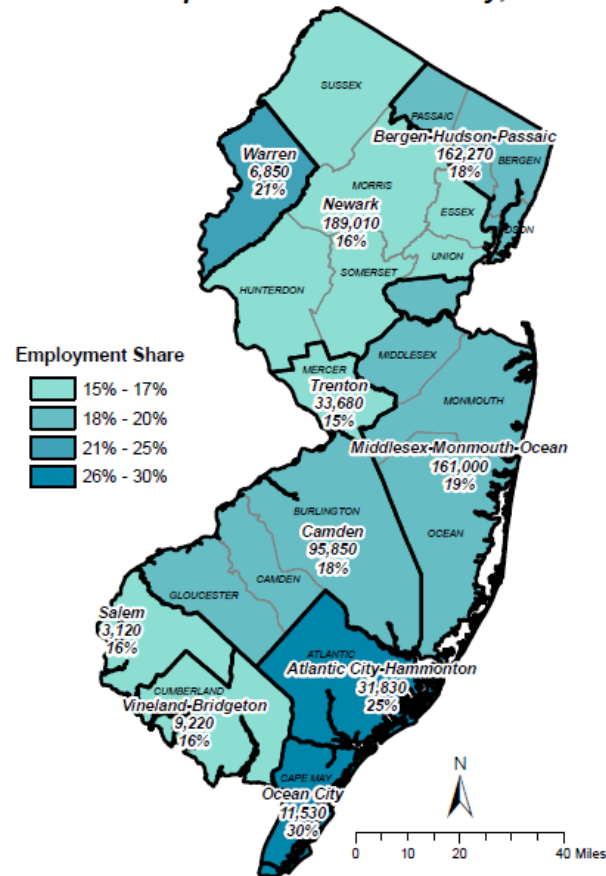


The employment share of food service and sales occupations is far greater in the counties along New Jersey's coastline

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.

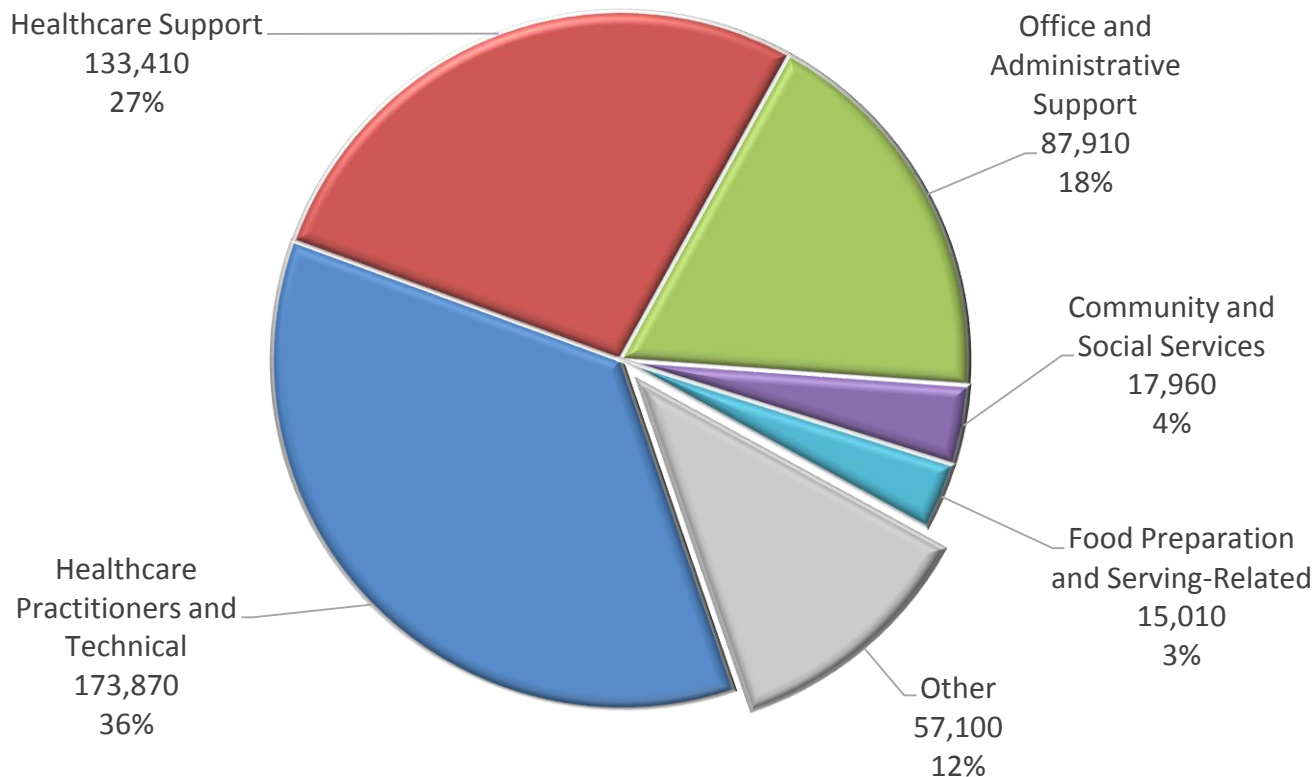
Despite this, greater than 72 percent of these occupations are found in the three largest Labor Areas; Newark, Middlesex-Monmouth-Ocean, and Bergen-Hudson-Passaic.



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.

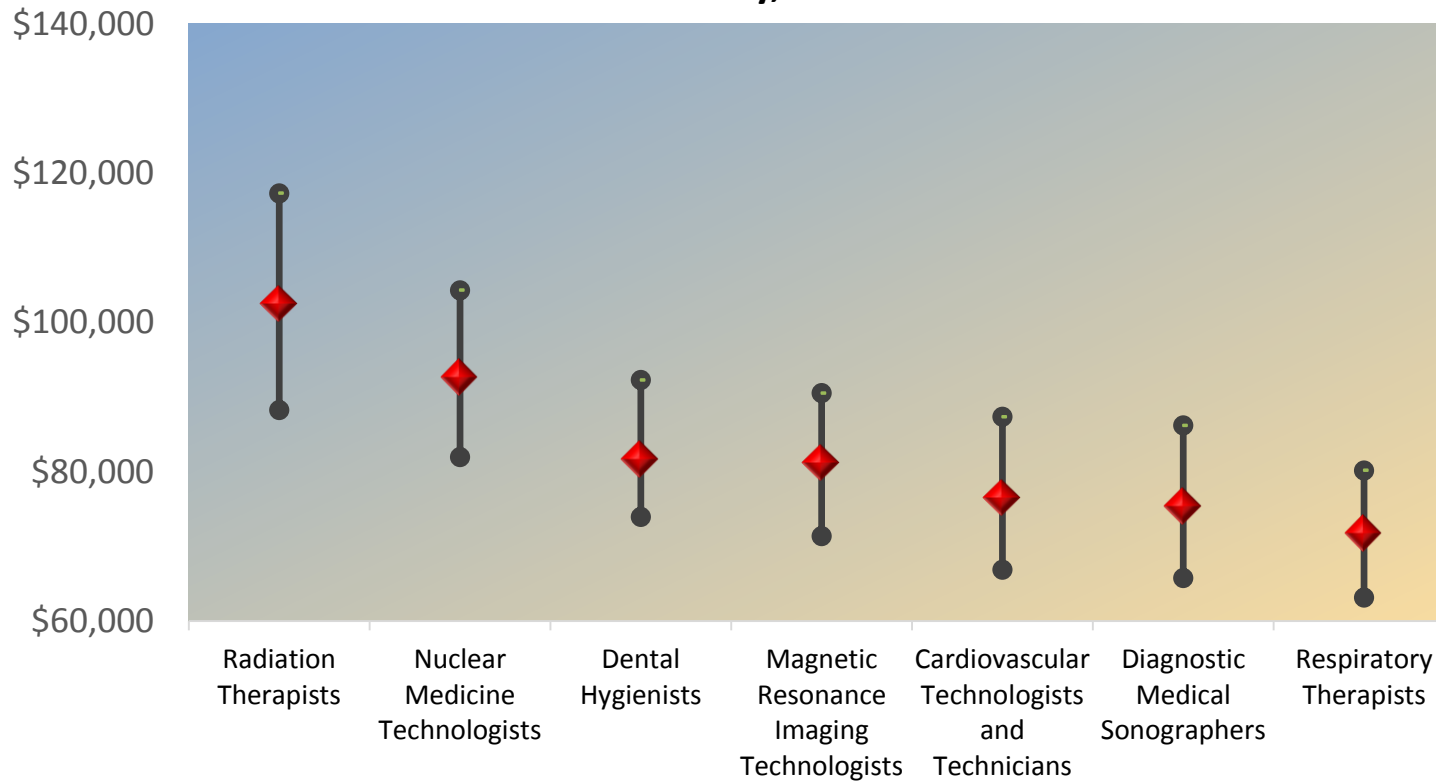
*Includes Surgeons 29-1067 (Weighted Salary)



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

Healthcare

**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.

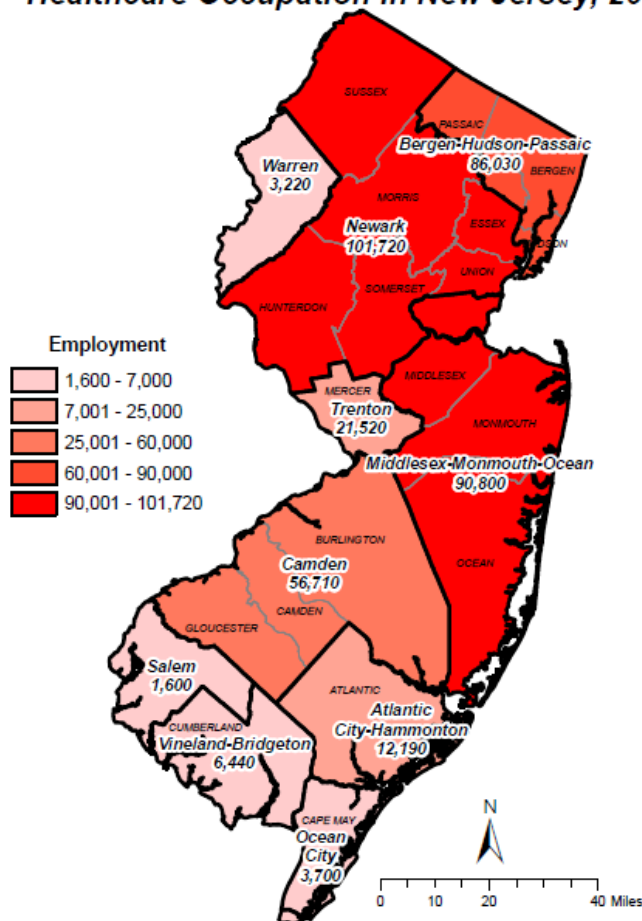


The geographic distribution of healthcare employment is largely based on population and need

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.

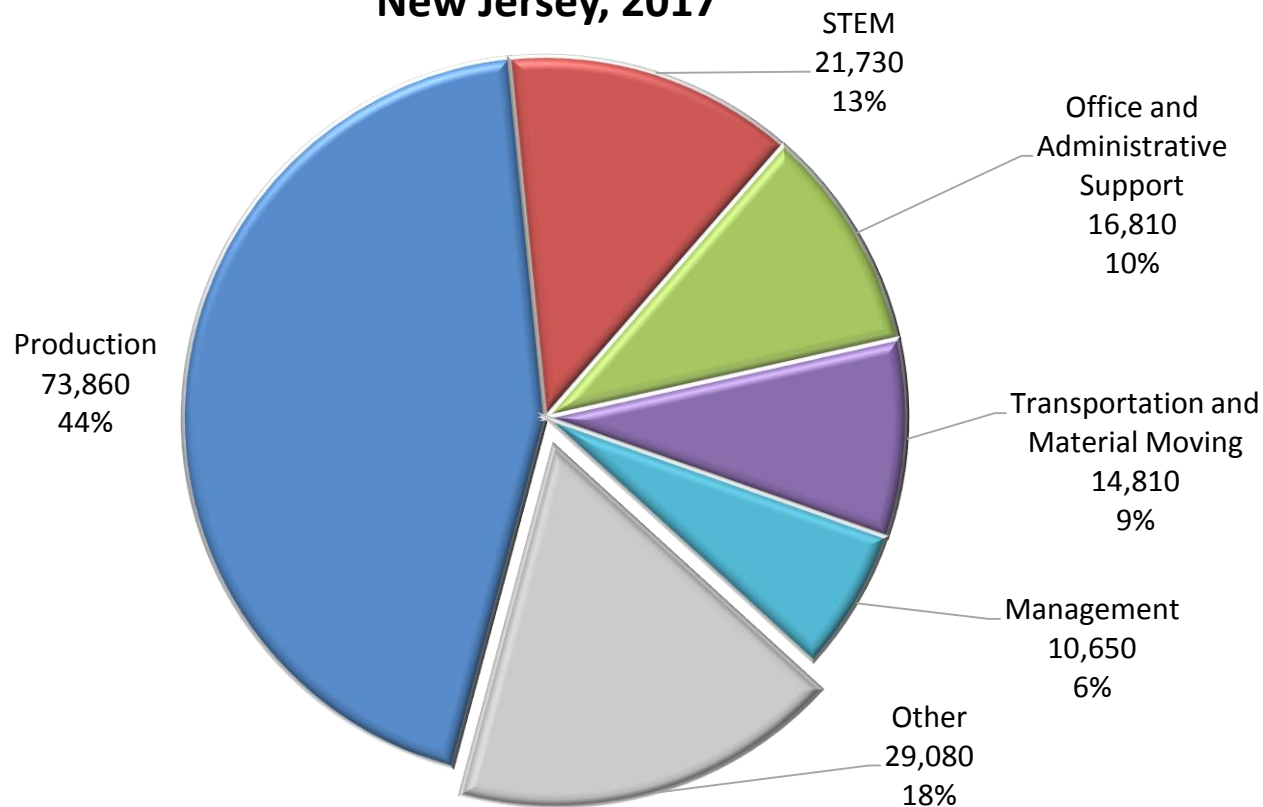
The Trenton-Ewing Labor Area, in Central New Jersey, is home to several large hospitals and many ambulatory care facilities that support them. 38



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.

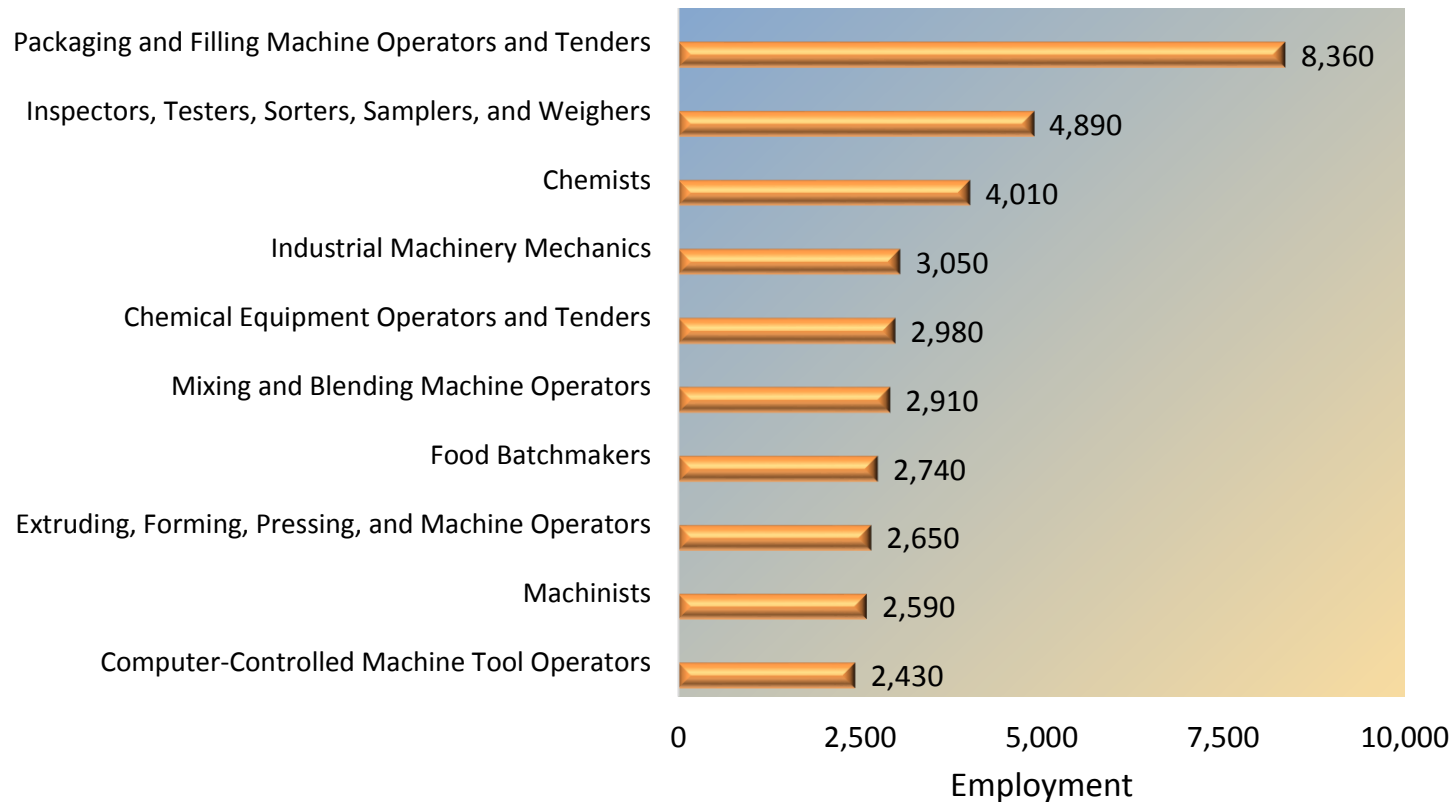
Management and office and administrative support occupations account for roughly 16 percent of employment.



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

*Weighted Salary

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.

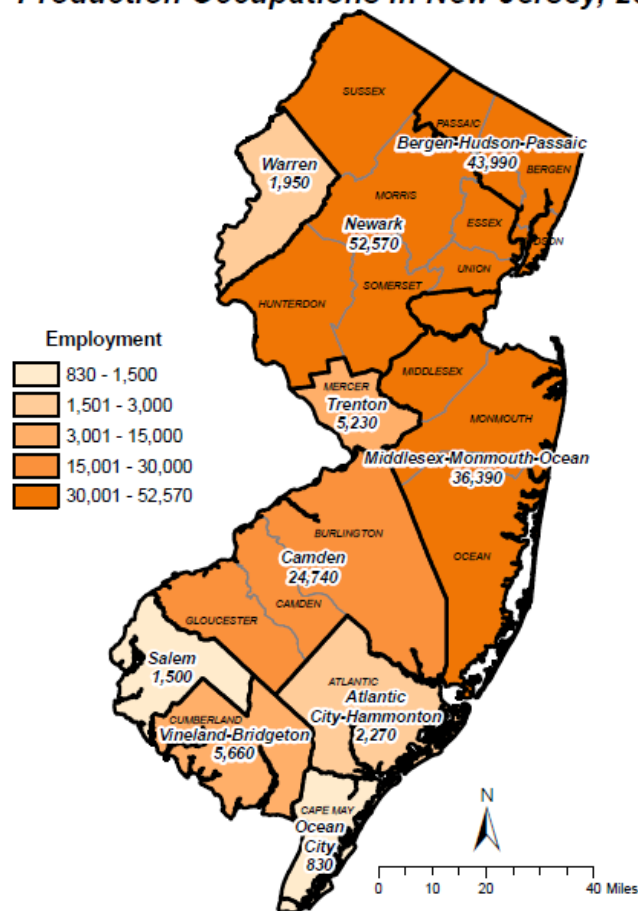


Production occupations, which can vary greatly depending on what is being produced, are found in every Labor Area in New Jersey

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.

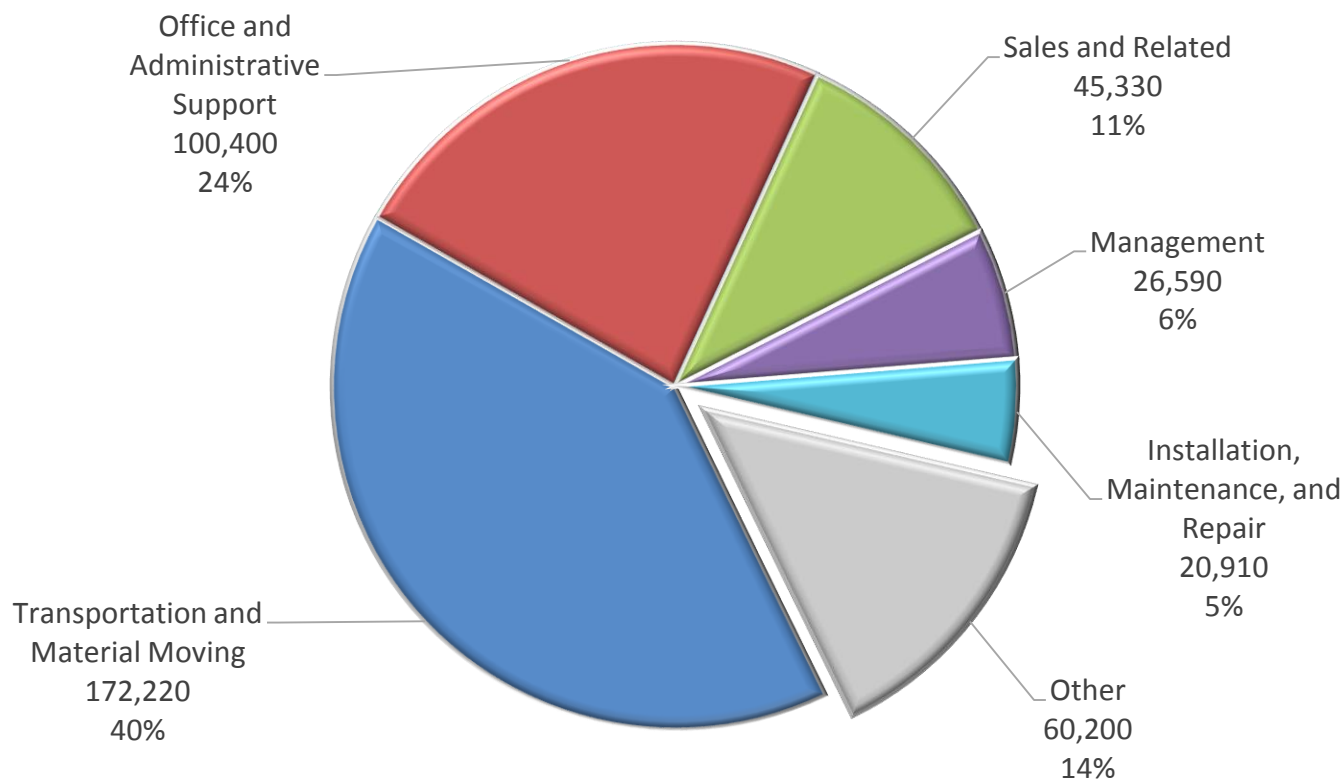
The remaining six Labor Areas account for just nearly 10 percent of the state's production workers.



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.

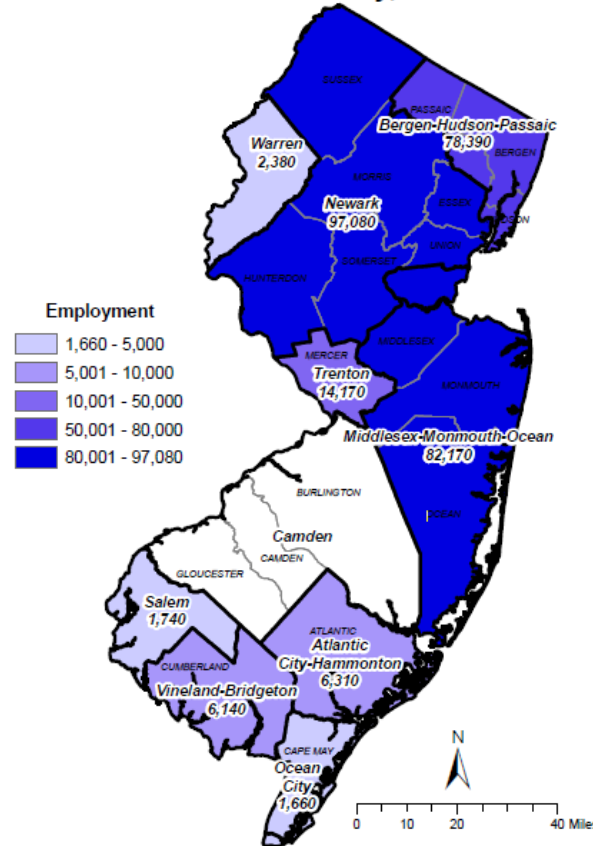


New Jersey has a distinct geography and transportation infrastructure which links several major U.S. cities locally and access to the world through its international airports and seaports

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.

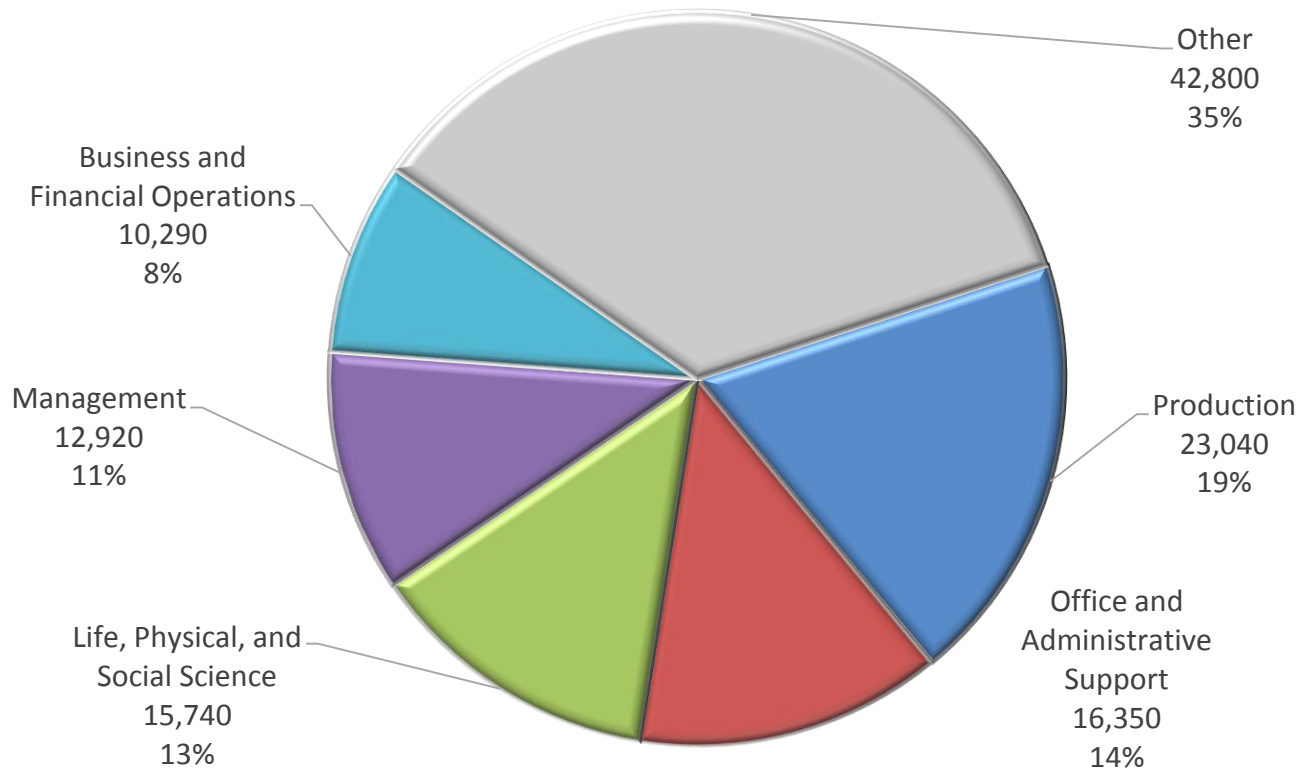
The Camden Labor Area in the south is host to many of New Jersey's trucking and warehousing companies. It is also home to the Port of Camden and the Gloucester Marine Terminal.



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.

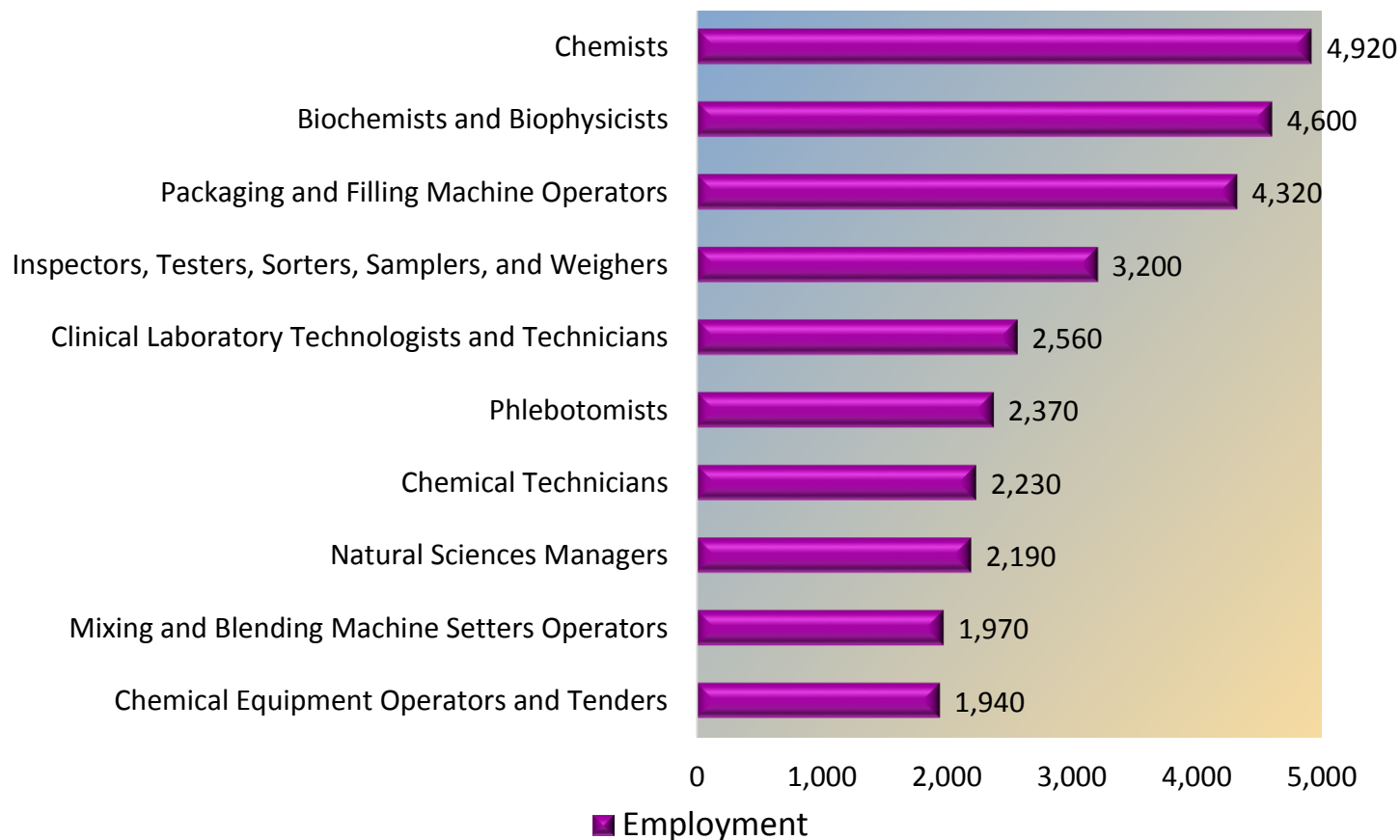
The “other” occupations are largely comprised of STEM and sales occupations who aid in the development and sales of the products created in this sector.



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

Biopharmaceuticals & Life Sciences

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.

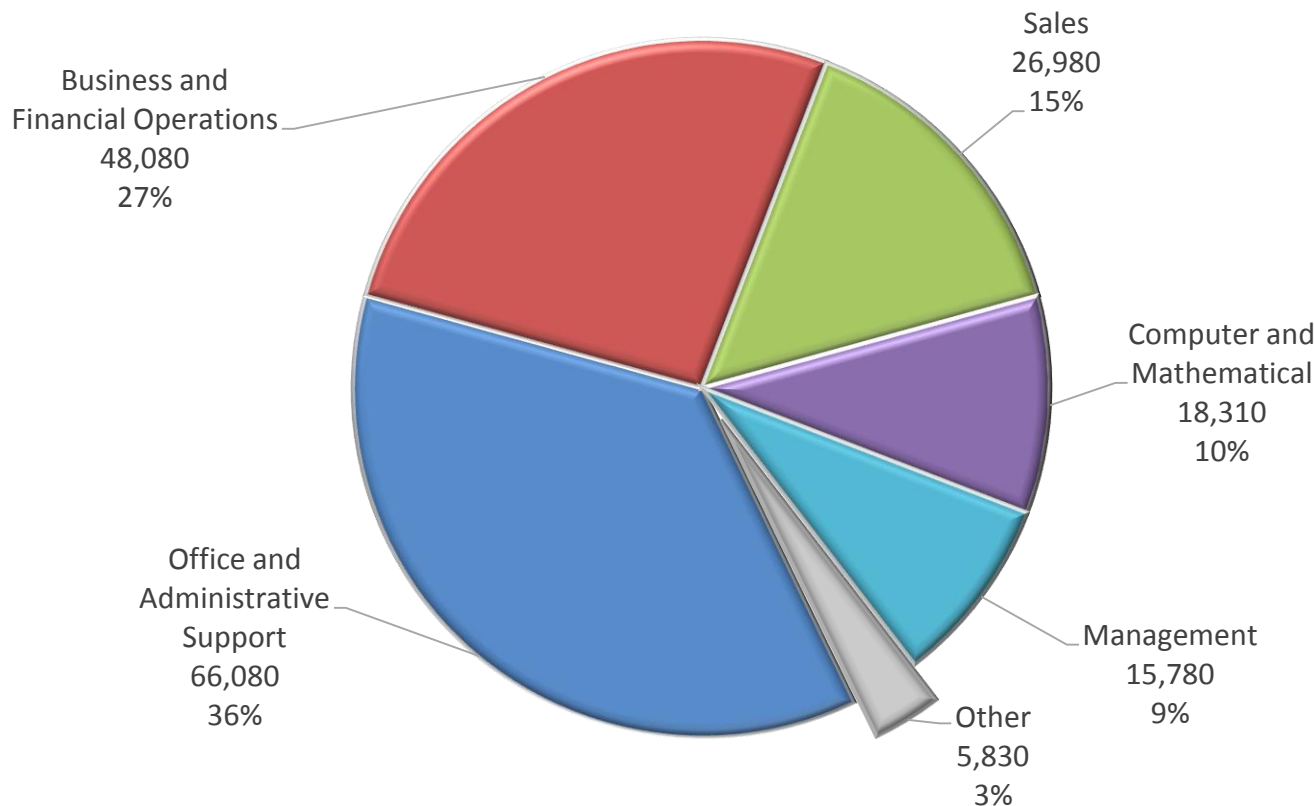
New Jersey ranks second in the total number of chemists employed, behind only California. Combined, these two states account for more than twenty percent of all chemists in the nation. New Jersey also pays its chemists 3.2 percent more than the nation average of \$81,870.



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.

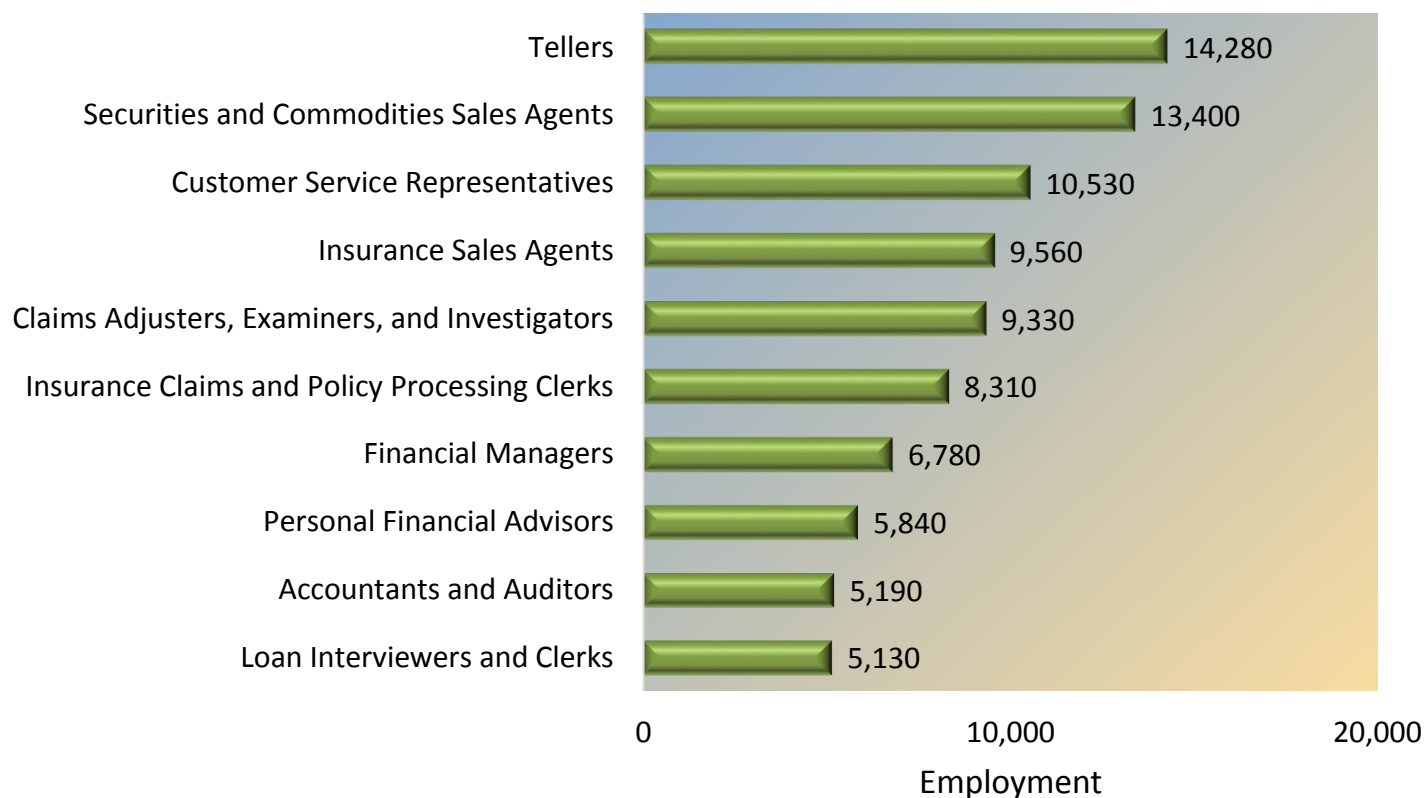
The remaining three occupational groups that make up about 45 percent of employment in the financial services sector typically require at least a bachelor's degree and tend to earn much higher average wages.



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.

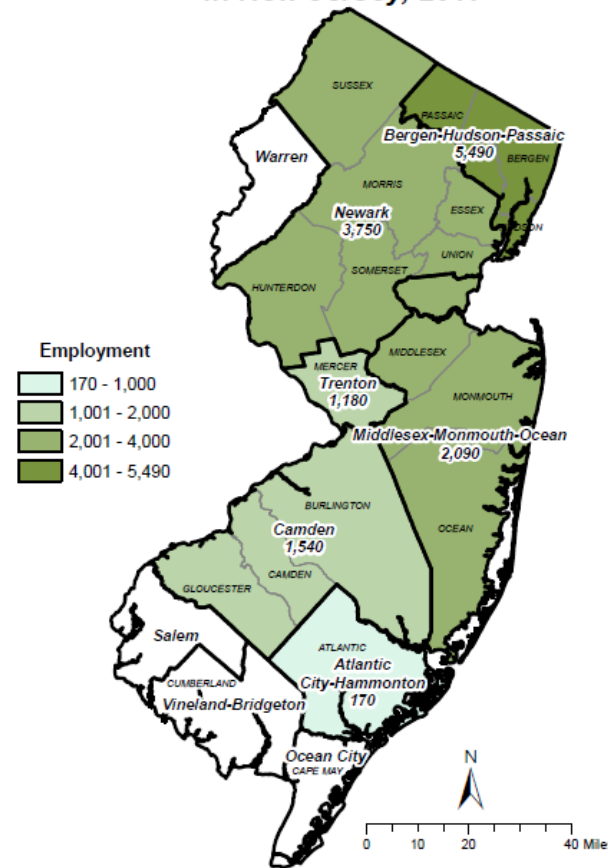


Securities and commodities sales agents are typically employed in Labor Areas near either the New York or Philadelphia stock exchanges

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.

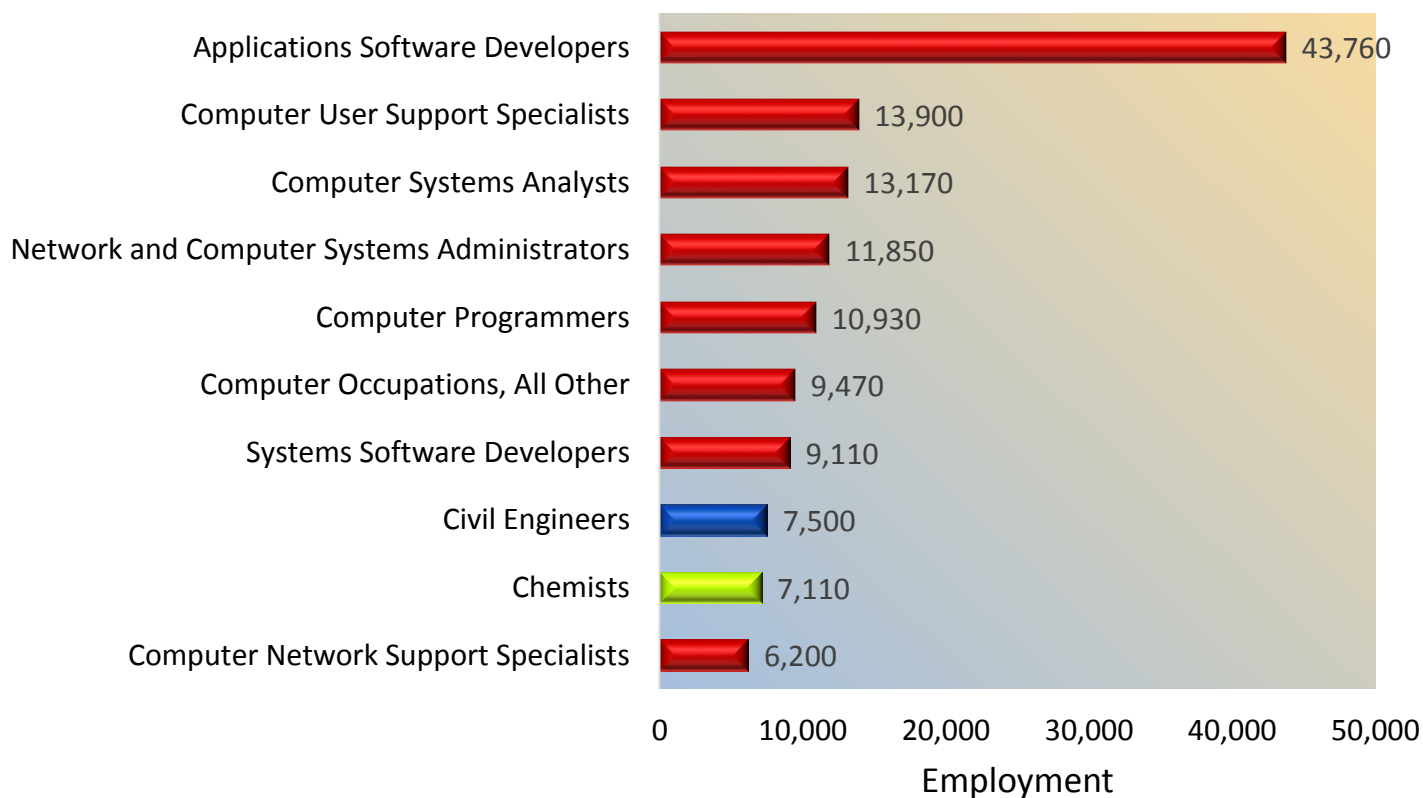


*STEM occupations are found across all industries

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.

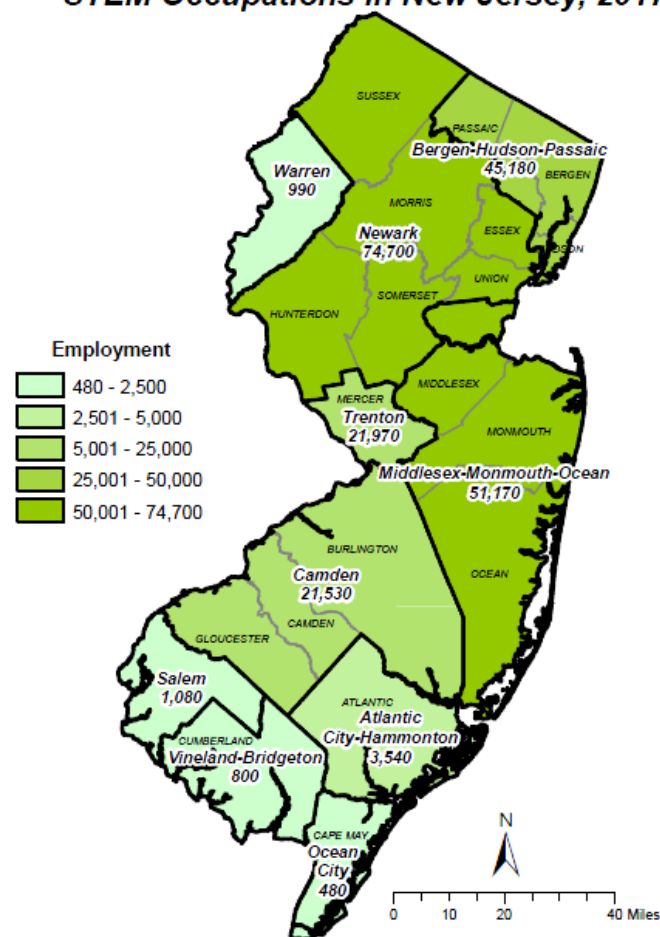


There are STEM workers employed in all parts of the state, but with concentrations in a few Labor Areas

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.*



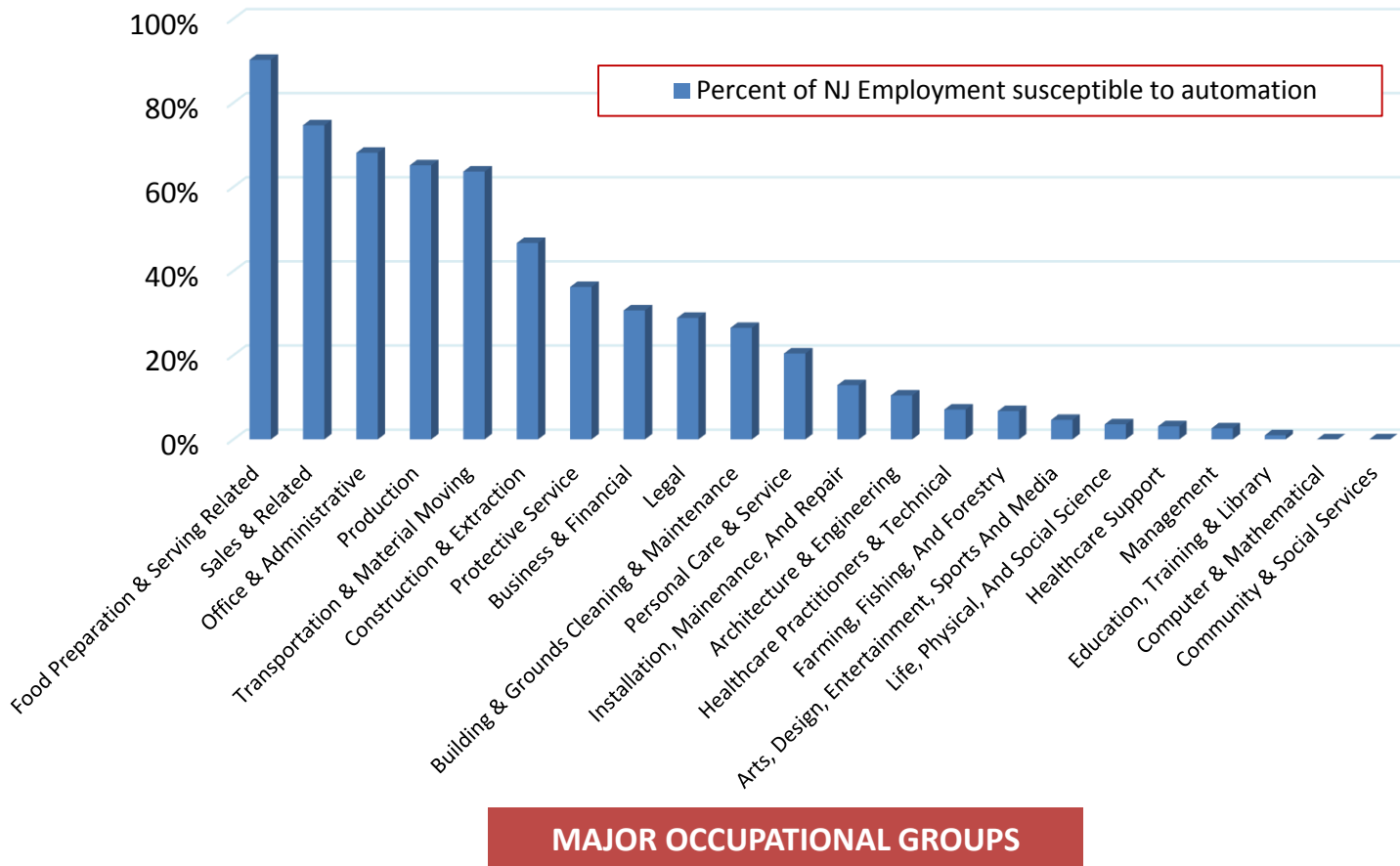
More than forty percent of New Jersey's employment is highly likely to become automated in the future

Automation of Occupations

Most Likely



Least Likely



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

*Minimum NJ Employment of 200.

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.



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

*Minimum NJ Employment of 200.

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.



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

Appendix A

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

Appendix B

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

Appendix B

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

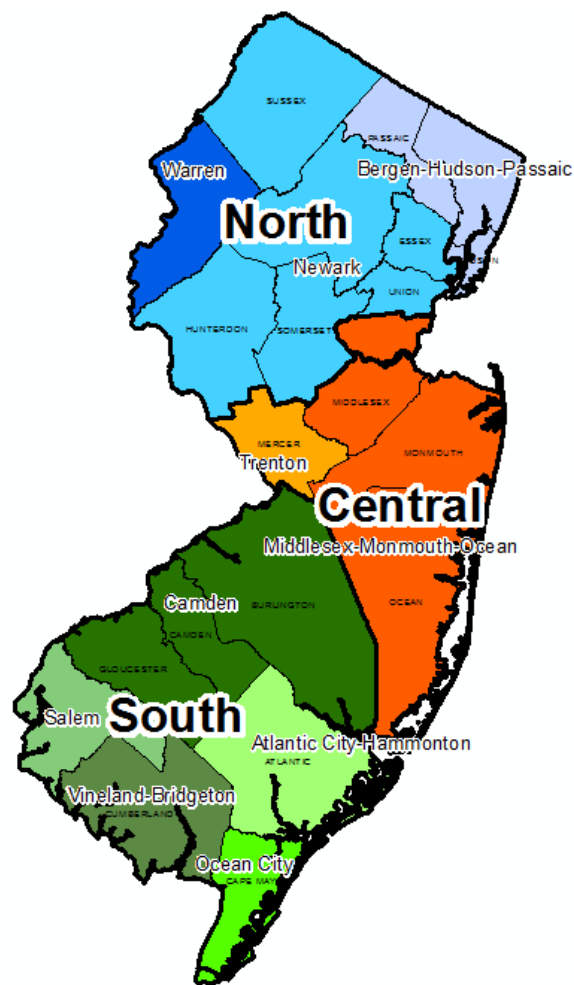
Biopharmaceuticals and Life Sciences

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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