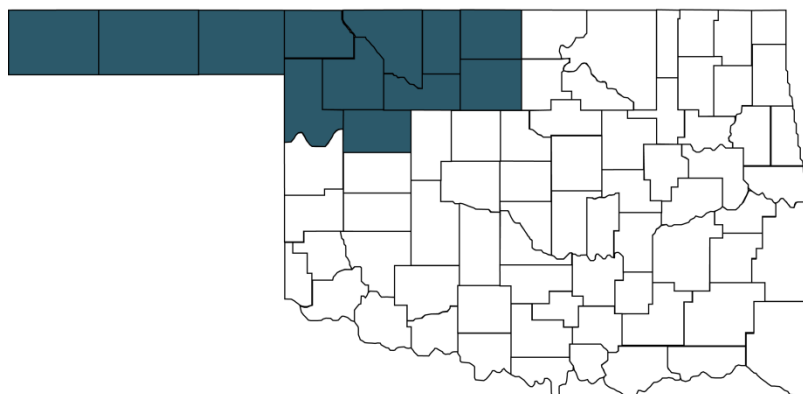


Northwest Oklahoma Regional Ecosystem Report

February 2014

Overview

The Northwest(NW) Oklahoma Region, in this briefing, is comprised of the following counties: Alfalfa, Beaver, Cimarron, Dewey, Ellis, Garfield, Grant, Harper, Major, Texas, Woods and Woodward.

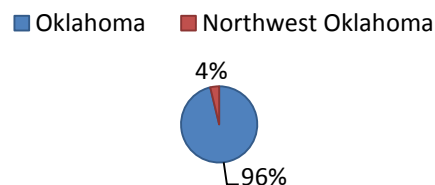


Set against the backdrop of four state parks and a diverse topography, the area once known as No Man's Land in Northwest Oklahoma has transformed itself into a part of the state renowned for its economic stability. With the resurgent oil and gas industry, coupled with investment into the large-scale wind power the region harnesses, NW Oklahoma represents the new frontier in America's quest to end reliance on foreign energy.

Demographics of Northwest Oklahoma

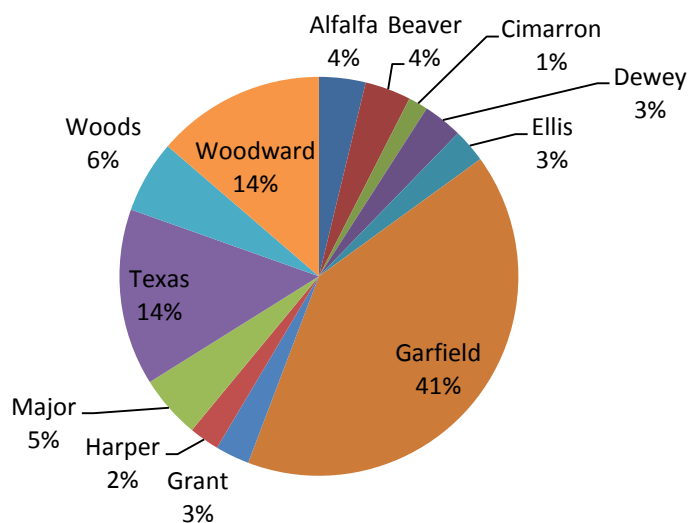
The Northwest Region is comprised of 12 counties and has a total population of 150,471, which accounts for 3.9% of the state's total population. The region is predominantly rural with only 3 of the 12 counties having a population greater than 10,000 people.

NW Oklahoma as a Percentage of Total State Population



- Garfield is the most populous county in the NW Oklahoma region with a population of 61,189 individuals, or 41% of the total NW Region's population.
- Enid (49,854 people of Garfield county) represents the largest city in Northwest Oklahoma.
- Texas and Woodward are the next most populous counties with populations of 21,498 people and 20,548 people, respectively.
- The city of Guymon and the city of Woodward drive the population counts in Texas and Woodward counties respectively.
- The remaining 9 counties in the region have populations ranging from 2,385(Cimarron) to 8,832(Woods).

NW Oklahoma Population by County

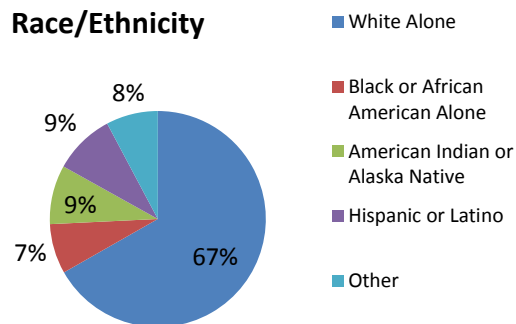


Source: Census Quick Facts

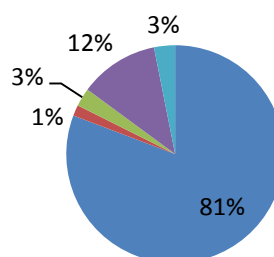
Population Breakdown by Race/Ethnicity

- NW Oklahoma has a significant white population making up 80.2% of the total population in the area, which is 12.3 percentage points higher than the state composition.
- Hispanics are the second most populous ethnic group in the area with 11.7% of total population compared to the state average of 9.3%.
- The three other groups measured all had total populations less than the state averages. Black and Native American populations were 1.6% and 2.7% of total population in the area. Both of which were greater than 5 percentage points less than state averages.

State of Oklahoma Pop. by Race/Ethnicity



Northwest Oklahoma Pop. by Race/Ethnicity

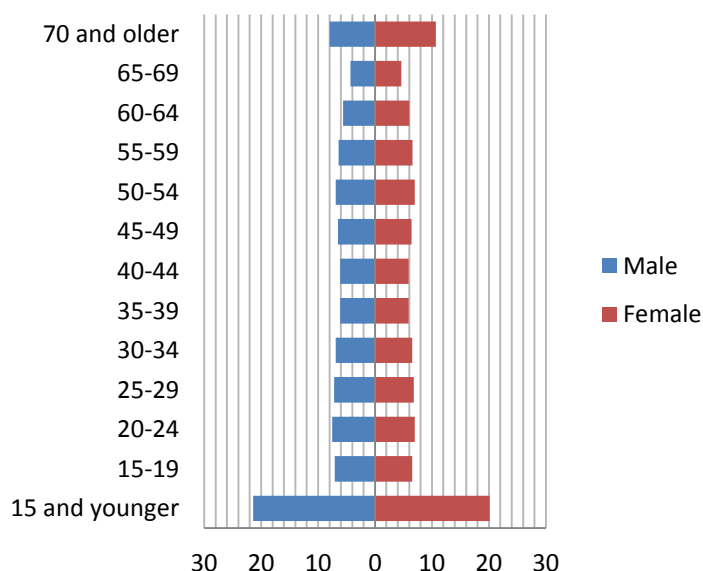


Source: ACS 2008-2012

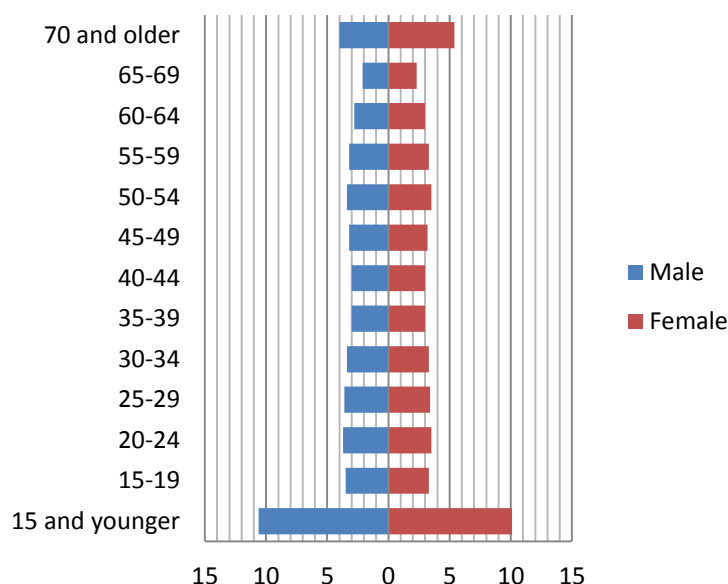
Age and Sex Data for Northwest Oklahoma

- With 50.9% of the population in Northwest Oklahoma being male, it has a higher proportion of males living in the region when compared to the state (49.6%).
- Conversely, the state has a higher proportion of females (50.4%) than Northwest Oklahoma (49.1%).
- The age range breakdown by percentage of population is very similar across both NW Oklahoma and statewide. With 19 and under making up more than a quarter of the population in NW Oklahoma and statewide the opportunity to have a well-educated workforce will exist for both the short and long-term.

NW Oklahoma Age/Sex Data by Percentage of the Population



Oklahoma Age/Sex Data by Percentage of the Population



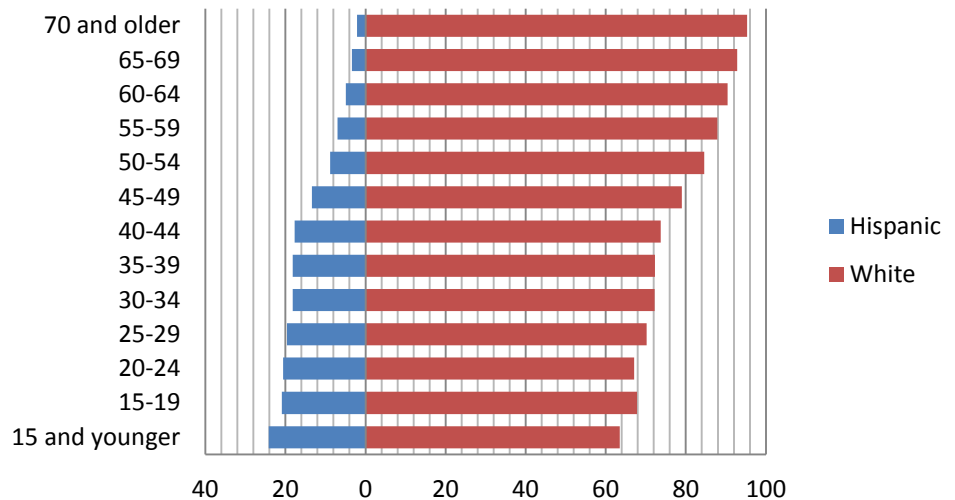
Source: EMSI 2013.4

Age by Race/Ethnicity

Race and ethnicity are unique data sets in that a person can be white alone (race) and Hispanic (ethnicity) or black alone (race) and Hispanic (ethnicity). Of course a person can be of two or more races as well such as white and black. However, for race and ethnicity, to get the total amount of people in a region, ethnicities may not be added to race as the result would be greater than the population of a region.

- As may be seen in the accompanying chart, race and ethnicity statistics indicate a large proportion of Hispanics in NW Oklahoma in younger age categories.
- Hispanics make up 20% or greater of the population in ages 29 and younger. For perspective, the highest other race/ethnicity besides white or Hispanic in any age group is black(alone) in the 20-24 age range at 4.2% of population.

Hispanics and Whites as Percentages of Population in NW Oklahoma by Age Group



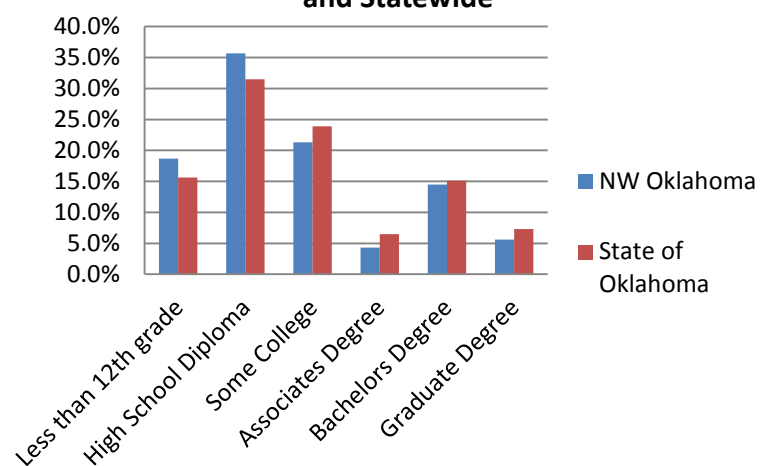
Source: EMSI 2012

- Educators and job training providers would be well-served to have workforce services in place for Hispanic individuals as they age and become increasingly active participants in the NW Oklahoma workforce.

Educational Attainment

- Over 70% of people that live in NW Oklahoma have at least a High School Diploma.
- Northwest Oklahoma has a higher proportion of people 25 years old and older whose highest level of formal education was a high school diploma or lower.
- Governor Fallin's emphasis on post-secondary education and the Career Tech initiative could increase the opportunity for students to take advantage of the educational opportunities that exist in NW Oklahoma in both the short and long-term future.

Educational Attainment in NW Oklahoma and Statewide



Source: EMSI 2013.4

Northwest Oklahoma Educational Assets

Career Techs, colleges and universities in Northwest Oklahoma are instrumental to develop the workforce. They are assets that allow the region and the rest of the state to supply the organizations and companies in Northwest Oklahoma with the labor and skills necessary to keep them operational and competitive in a global economy.

Career Techs

- **Autry Technology Center**(Enid): Autry educated over 750 students in 2011-2012. 421 of these students were adults, while 347 of them were high school students. Autry offered 715 classes across a wide range. 94% of the student body went onto to further education or to a job related to their field of study.
- **High Plains Technology Center**(Woodward): High Plains educated 259 full time students in 2011-2012. 153 of which were still in high school, while 106 were adult students. 93% of students continued on to further education or to a job related to their field of study.
- **Northwest Technology Center**(Alva & Fairview):Northwest educated 210 full time students during 2011-2012. 128 of them were high school students while 82 were adults. 93% of students continued on to further education or to a job related to their field of study.

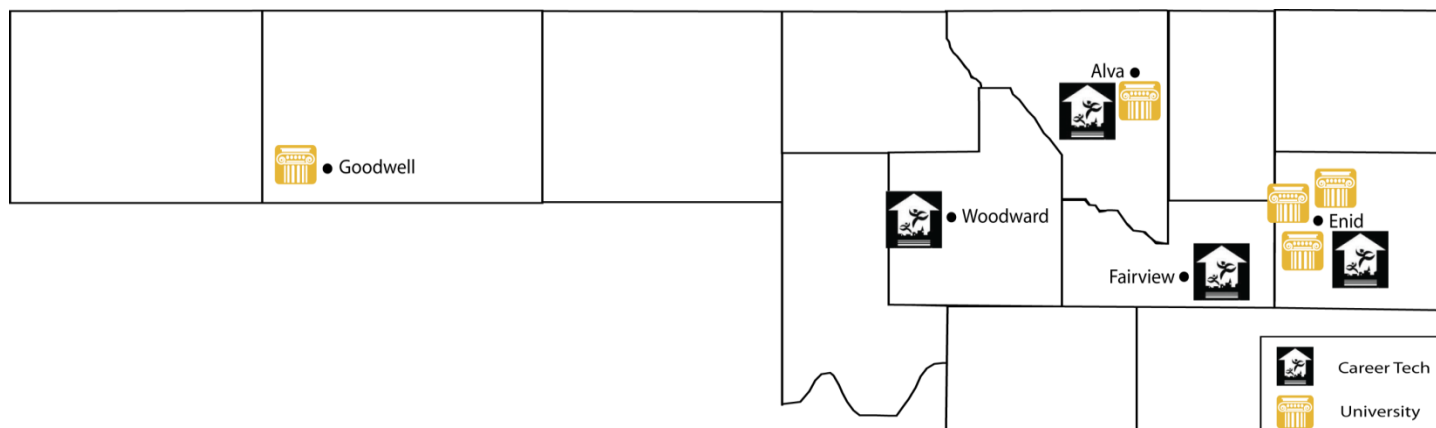
Universities and Colleges

In addition to the Career Techs, there are 4 Universities/Colleges with 6 campuses located in the Northwest Region.

- Embry-Riddle Aeronautical University(Vance Air Force Base)
- Northern Oklahoma College(Enid)
- Northwestern Oklahoma State University(Alva, Enid, Woodward)
- Oklahoma Panhandle State University(Goodwell)

Trend: In 2012-2013 there were 861 Associates degrees and Certificates awarded at the three public universities/colleges the region. In that same time period, 564 Bachelor's degrees or higher level degrees were awarded across the three public universities/colleges in the region.

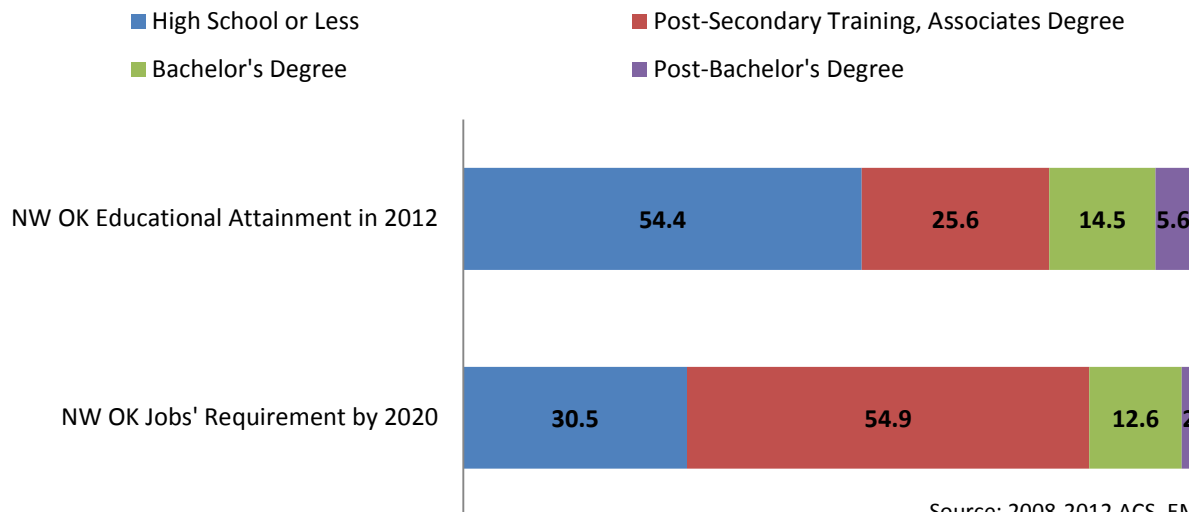
*Data provided by the Oklahoma State Regents for Higher Education



NW Oklahoma's Role in Filling the Educational Gap in the State

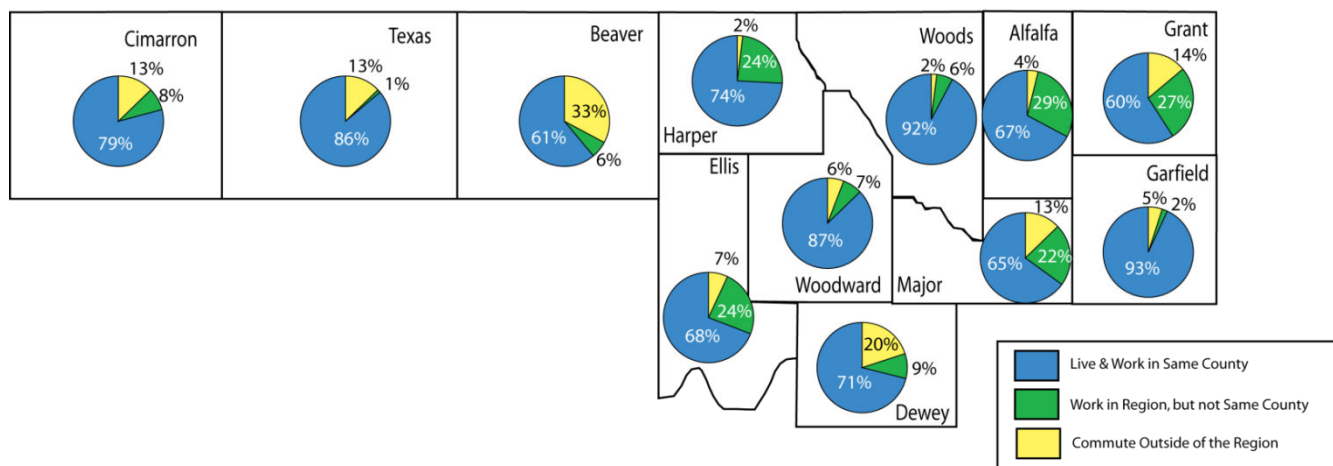
- A high proportion (54.4%) of Northwest Oklahoma's population aged 25 years and older have a maximum educational attainment being a high school diploma.
- Job projections for new jobs by 2020 indicate that a high proportion (54.9%) of the jobs will need post-secondary training or an Associate's degree.
- This gap between current educational attainment and future requirements for jobs represents an opportunity for Career Techs and colleges in NW Oklahoma.
- Values in the graph are calculated by the total number of each occupation's educational requirement, divided by the total number of occupations.

NW Oklahoma Educational Gap for New Jobs



Commuting Data

- Much of the commerce occurring in NW Oklahoma is driven by Garfield County. Neighboring counties Alfalfa, Grant and Major have 3 of the 5 highest percentages of commuters that go out of county but stay in region, the largest county by percentage that these counties workers commute to is Garfield.
- As a percentage of the whole, an overwhelming number of commuters stay in county throughout the NW region, over 87%. Given the stronghold the agriculture industry has on this region it is not surprising that there is little inter-region commuting, only 7%, as many individuals likely work either on their own property or on property close to their home.
- Three of the four counties in the region that are home to Career Techs have the highest percentage of individuals that stay in county for their employment. This would seem to be correlated to the centers of commerce that exist in Alva, Enid and Woodward.



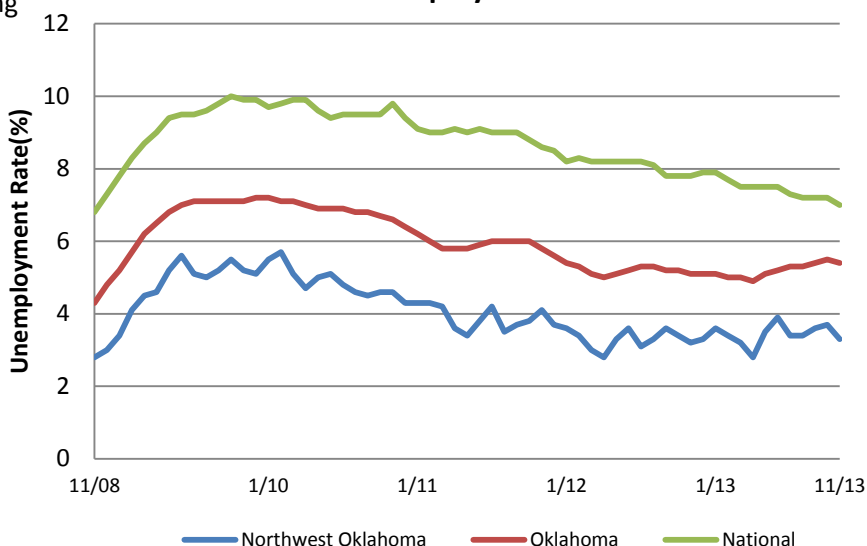
Economic Data

Employment and unemployment numbers have both reflected positively on the economy in NW Oklahoma. Texas County is the only county with an unemployment rate higher than 5.0% at 5.1%. The lowest unemployment rate in the region is Ellis County at 2.8%.

Unemployment Rate

- Compared to the national average, the unemployment rate in NW Oklahoma has been significantly lower. The NW Oklahoma economy showed strong resiliency during the recession, never breaching 6.0% unemployment, and a generally declining unemployment trend has existed since 2010.
- Oklahoma and NW Oklahoma compare favorably to the national unemployment rate, NW Oklahoma has consistently aided in lowering Oklahoma's unemployment rate compared to the national average.
- As of November 2013 Oklahoma had the 13th lowest unemployment rate in the country, at 5.4%. NW Oklahoma's unemployment rate in November of 2013, as a region, was 3.3%.

5 Year Unemployment Rate Trend

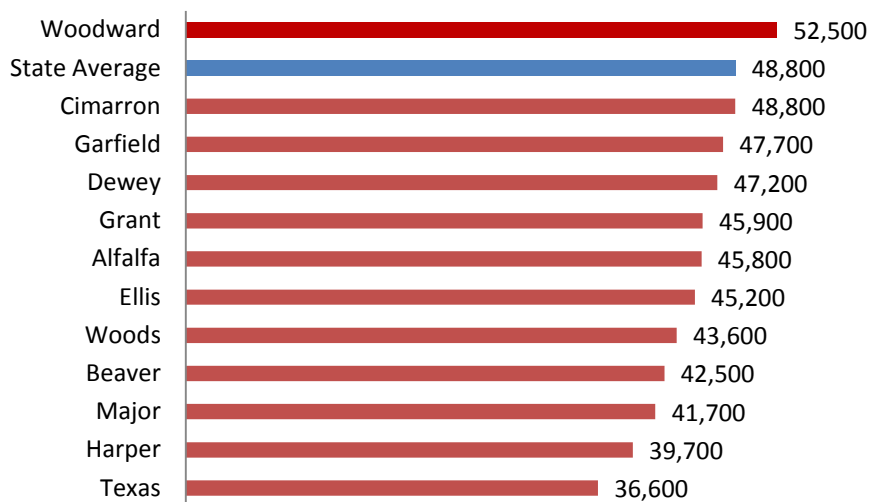


Source: BLS(LAUS)

Wages by County and Industry

- Across all industries, the average annual salary in NW Oklahoma was \$45,300 in the first quarter of 2014.
- This is approximately \$3,500 less than the state average annual salary of \$48,800 as of the first quarter of 2014.
- Of the 12 counties in NW Oklahoma, Woodward County has the highest average wages at \$52,500, which is approximately \$3,700 higher than state average.

County-by-County Salaries



Source: EMSI 2014.1

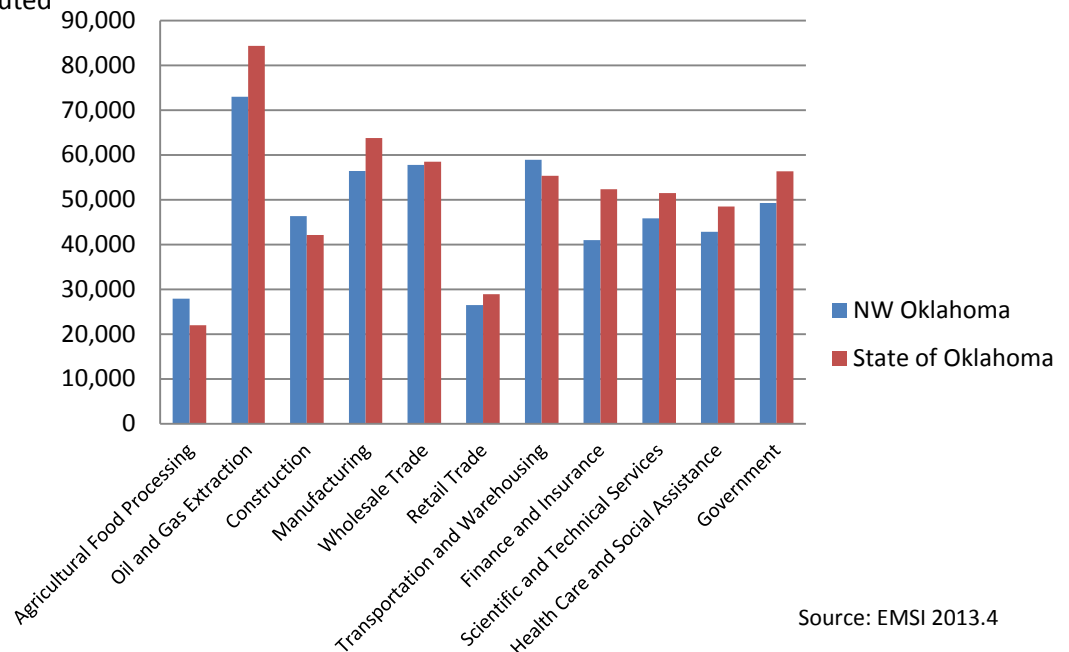
- Most industries in NW Oklahoma have average yearly earnings when compared to the state.
- Two industries run counter to this trend – the Agricultural & Food Processing Industry and the Transportation & Warehousing Industry.

- The agricultural food processing industry pays approximately \$5,000 higher annual wages in the NW Region compared to the state. This pay difference is attributed

to the large number of individuals employed in the industry in Northwest Oklahoma.

- Transportation and Warehousing employees also earn a higher annual wage compared to their state counterparts in NW Oklahoma. If anything, this highlights the role the oil and gas industry plays in NW Oklahoma.

Industry Average Earnings in NW Oklahoma and Statewide



Source: EMSI 2013.4

Given both the importance of the industry to the global economy and the price margins in place those undertaking the task of both transporting and warehousing oil and gas receive a higher amount of pay in NW Oklahoma than elsewhere in the state.

Major Employers in Northwest Oklahoma

In the past 3 years, the Northwest Region has had **several significant new business investments and expansions** including Koch Industries (\$1 billion investment), Northstar Agri Industries, Pelagic Tank, and AdvancePierre Foods. The table below lists some of the region's major employers.

Name of Company:	Location:	Industry:	Employees:
Seaboard Foods LP	Guymon	Hog and Pig Farming	5000-5500
Vance Air Force Base**	Enid	Government	2500-3000
AdvancePierre Food Co	Enid	Meat Processing	2000-2500
Walmart	Multiple	Retail Trade	1000-1500
Integrus Health Center	Enid	Health Care and Social Assistance	1000-1500
Enid Public Schools	Enid	Education	1000-1500
Parrish Enterprises	Enid	Mftg. Industrial Machinery	600-1000
CSC Applied Technologies***	Enid	Prof., Science, Tech. Services	600-1000
St. Mary's Regional Medical Center	Enid	Health Care and Social Assistance	600-1000
Continental Resources	Enid	Oil and Gas Extraction	400-600
Marsau Enterprises	Enid	Wholesale Trade	400-600
Two Rivers Pipeline & Construction	Enid	Construction	400-600
Patterson UTI Drilling	Woodward	Oil and Gas Extraction	200-400
Hamm Management/Services	Multiple	Transportation and Warehousing	200-400
Guymon Public Schools	Guymon	Education	400-600
Woodward Independent School District	Woodward	Education	400-600
Key Energy Services	Multiple	Oil and Gas Extraction	400-600
Beaver Express Service, LLC	Woodward	Transportation and Warehousing	200-400
Cudd Pressure Control	Woodward	Oil and Gas Extraction	200-400
Hitch Enterprises	Guymon	Beef Cattle Ranching and Farming	200-400
Woodward Hospital	Woodward	Health Care and Social Assistance	200-400
Terra International(Oklahoma) Inc.	Woodward	Nitrogenous Fertilizer Mftg.	200-400
Liberty Pressure Pumping	Woodward	Oil and Gas Extraction	200-400
Northwestern Oklahoma State University	Alva	Education	200-400
SandRidge Operating	Alva	Oil and Gas Extraction	200-400
Gefco	Enid	Oil and Gas Field Ops. Mftg.	100-200
Central National Bank and Trust	Enid	Finance and Insurance	100-200
Alva Independent School District	Alva	Education	100-200
Oklahoma Panhandle State University	Goodwell	Education	100-200
Archer-Daniels-Midland	Multiple	Flour Manufacturing	100-200
Northern Oklahoma College	Enid	Education	100-200
Bennett Construction	Beaver	Construction	100-200
Share Medical Center	Alva	Health Care and Social Assistance	100-200
Koch Nitrogen Company	Enid	Nitrogenous Fertilizer Mftg.	100-200
Gonzales Welding & Construction Inc	Medford	Construction	100-200

**Vance's employment is made up of 1200 Active/Reserved Duty military members and 1300 federal civilian, contractor and private employees.

***CSC Applied Technologies employment number may overlap with employment numbers at Vance AFB. Source: OneSource/Lexis

Ecosystems Impact in Northwest Oklahoma on Occupations and Salaries

The Oklahoma Department of Commerce identified five ecosystems in Oklahoma that are important to the economy to generate wealth, have employment growth potential, or where the state has a competitive advantage. In each ecosystem, there are critical occupations that are necessary for future growth and advancement. In addition to the five statewide ecosystems, there are ecosystems at the regional level that are important for regional economies. Two of these regional ecosystems are Construction and Health Care.

Aerospace & Defense

There are 3,474 jobs in the Aerospace & Defense Ecosystem in NW Oklahoma with average earnings of \$59,600.

The table below highlights some of the critical occupations for the Aerospace & Defense ecosystem in Northwest Oklahoma. These are occupations that are important for the ecosystem to thrive in Northwest Oklahoma but the totals in the table do not necessarily indicate that the occupations listed are employed within the Aerospace & Defense ecosystem.

There are approximately 3,700 people in Northwest Oklahoma employed in the critical occupations below. As a projection of demand, it is estimated that there will be more than 200 annual openings in occupations demanded by the Aerospace & Defense ecosystem in Northwest Oklahoma and that by 2020 total employment will grow to more than 4,200 jobs. This growth is not solely due to the Aerospace & Defense ecosystem.

Critical Occupations in Aerospace & Defense in NW Oklahoma

SOC	Description	Median Hourly Earnings	Education Level
11-1021	Computer User Support Specialists	\$15.77	Associate's degree
13-2011	Electrical and Electronics Drafters	\$21.90	Associate's degree
15-1151	Accountants and Auditors	\$23.64	Bachelor's degree
17-2051	Civil Engineers	\$40.86	Bachelor's degree
17-2071	Electrical Engineers	\$31.70	Bachelor's degree
17-2112	Industrial Engineers	\$45.26	Bachelor's degree
17-2141	Mechanical Engineers	\$28.93	Bachelor's degree
17-3012	General and Operations Managers	\$36.77	Bachelor's or higher degree, plus work experience
49-2091	Mobile Heavy Equipment Mechanics, Except Engines	\$18.71	Long-term on-the-job training
49-3011	Industrial Machinery Mechanics	\$28.10	Long-term on-the-job training
49-3042	Machinists	\$17.29	Long-term on-the-job training
49-9021	Avionics Technicians	\$21.82	Postsecondary non-degree award
49-9041	Aircraft Mechanics and Service Technicians	\$22.38	Postsecondary non-degree award
51-4041	Heating, Air Conditioning, and Refrigeration Mechanics	\$18.75	Postsecondary non-degree award
51-4121	Welders, Cutters, Solderers, and Brazers	\$16.04	Postsecondary non-degree award

Source: EMSI

As previously mentioned, the critical occupations above are necessary for the Aerospace & Defense ecosystem to thrive. Just as important, these critical occupations are necessary for other industries as well. Other industries that demand these occupations include Engineering Services, Crude Petroleum & Natural Gas Extraction, and Oil & Gas Field Machinery Manufacturers among others in Northwest Oklahoma.

Agriculture & Bioscience

There are 14,837 jobs in the Agriculture & Bioscience ecosystem in NW Oklahoma with average earnings of \$37,700.

The table below highlights some of the critical occupations for Agriculture & Bioscience ecosystem in Northwest Oklahoma. These are occupations that are important for the ecosystem to thrive in Northwest Oklahoma but the totals in the table do not necessarily indicate that the occupations listed are employed within the Agriculture & Bioscience ecosystem.

There are approximately 10,400 people in Northwest Oklahoma employed in the occupations below. This does not mean that the people employed in the occupations are employed solely in the Agriculture & Bioscience ecosystem.

Occupations in Agriculture & Bioscience in NW Oklahoma

SOC	Description	Median Hourly Earnings	Education Level
17-2051	Civil Engineers	\$40.86	Bachelor's degree
11-1021	General and Operations Managers	\$36.77	Bachelor's or higher degree, plus work experience
11-3051	Industrial Production Managers	\$38.55	Bachelor's or higher degree, plus work experience
29-1131	Veterinarians	\$22.07	First professional degree
49-3041	Farm Equipment Mechanics and Service Technicians	\$13.58	Long-term on-the-job training
49-9041	Industrial Machinery Mechanics	\$28.10	Long-term on-the-job training
51-3021	Butchers and Meat Cutters	\$10.83	Long-term on-the-job training
51-8091	Chemical Plant and System Operators	\$32.96	Long-term on-the-job training
51-3023	Slaughterers and Meat Packers	\$8.84	Moderate-term on-the-job training
51-9061	Inspectors, Testers, Sorters, Samplers, & Weighers	\$21.54	Moderate-term on-the-job training
45-2091	Agricultural Equipment Operators	\$32.94	Short-term on-the-job training
51-3022	Meat, Poultry, and Fish Cutters and Trimmers	\$10.36	Short-term on-the-job training
53-3032	Heavy and Tractor-Trailer Truck Drivers	\$17.66	Short-term on-the-job training
53-7051	Industrial Truck and Tractor Operators	\$14.40	Short-term on-the-job training
11-9013	Farmers, Ranchers, and Other Agricultural Managers	\$12.99	Work experience in a related occupation

Source: EMSI

As previously mentioned, these occupations are necessary for the Agriculture & Bioscience ecosystem to thrive. Just as important, they are necessary for other industries as well. Other industries that demand these occupations include General Freight Trucking, Nitrogenous Fertilizer Manufacturing, and Grain Merchant Wholesalers among others in Northwest Oklahoma.

Energy

There are 7,788 jobs in the Energy Ecosystem in NW Oklahoma with average earnings of \$87,900

The table below highlights some of the critical occupations for the Energy ecosystem in Northwest Oklahoma. These are occupations that are important for the ecosystem to thrive in Northwest Oklahoma but the totals in the table do not necessarily indicate that the occupations listed are employed within the Energy ecosystem.

There are approximately 7,400 people in Northwest Oklahoma employed in the critical occupations below. This does not mean that the people employed in the occupations are employed solely in the Energy ecosystem.

Occupations in the Energy Ecosystem in NW Oklahoma

SOC	Description	Median Hourly Earnings	Education Level
17-2171	Petroleum Engineers	\$53.06	Bachelor's degree
19-2042	Geoscientists, Except Hydrologists and Geographers	\$49.77	Bachelor's degree
11-1021	General and Operations Managers	\$36.77	Bachelor's or higher degree, plus work experience
47-2152	Plumbers, Pipefitters, and Steamfitters	\$14.74	Long-term on-the-job training
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	\$18.71	Long-term on-the-job training
49-9041	Industrial Machinery Mechanics	\$28.10	Long-term on-the-job training
51-8092	Gas Plant Operators	\$23.76	Long-term on-the-job training
51-8093	Petroleum Pump System Operators, Refinery Operators, and Gaugers	\$23.41	Long-term on-the-job training
47-2073	Operating Engineers and Other Construction Equipment Operators	\$17.31	Moderate-term on-the-job training
47-5012	Rotary Drill Operators, Oil and Gas	\$22.21	Moderate-term on-the-job training
47-5013	Service Unit Operators, Oil, Gas, and Mining	\$18.88	Moderate-term on-the-job training
47-5071	Roustabouts, Oil and Gas	\$16.50	Moderate-term on-the-job training
51-4121	Welders, Cutters, Solderers, and Brazers	\$16.04	Postsecondary non-degree award
47-5011	Derrick Operators, Oil and Gas	\$19.00	Short-term on-the-job training
53-3032	Heavy and Tractor-Trailer Truck Drivers	\$17.66	Short-term on-the-job training

Source: EMSI

As previously mentioned, these occupations are necessary for the Energy ecosystem to thrive. Just as important, they are necessary for other industries as well. Other industries that demand these occupations include General Freight Trucking, and Commercial & Industrial Equipment Maintenance.

Information & Financial Services

There are 3,240 jobs in the Information & Financial Services ecosystem in NW Oklahoma with average wages of \$53,400.

The table below highlights some of the critical occupations for the Information & Financial Services ecosystem in Northwest Oklahoma. These are occupations that are important for the ecosystem to thrive in Northwest Oklahoma but the totals in the table do not necessarily indicate that the occupations listed are employed within the Information & Financial Services ecosystem.

There are approximately 4,100 people in Northwest Oklahoma employed in the critical occupations below. This does not mean that the people employed in the occupations are employed solely in the Information & Financial Services ecosystem.

Occupations in the Energy Ecosystem in NW Oklahoma

SOC	Description	Median Hourly Earnings	Education Level
15-1151	Computer User Support Specialists	\$15.77	Associate's degree
13-2011	Accountants and Auditors	\$23.64	Bachelor's degree
13-2051	Financial Analysts	\$30.93	Bachelor's degree
15-1121	Computer Systems Analysts	\$24.24	Bachelor's degree
15-1131	Computer Programmers	\$24.68	Bachelor's degree
15-1132	Software Developers, Applications	\$24.91	Bachelor's degree
15-1142	Network and Computer Systems Administrators	\$26.37	Bachelor's degree
41-3031	Securities, Commodities, and Financial Services Sales Agents	\$16.26	Bachelor's degree
11-1021	General and Operations Managers	\$36.77	Bachelor's or higher degree, plus work experience
11-3031	Financial Managers	\$39.67	Bachelor's or higher degree, plus work experience
13-1111	Management Analysts	\$22.35	Bachelor's or higher degree, plus work experience
49-9052	Telecommunications Line Installers and Repairers	\$20.51	Long-term on-the-job training
43-3031	Bookkeeping, Accounting, and Auditing Clerks	\$13.21	Moderate-term on-the-job training
43-9041	Insurance Claims and Policy Processing Clerks	\$11.84	Moderate-term on-the-job training
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	\$22.82	Postsecondary non-degree award

Source: EMSI

As previously mentioned, these occupations are necessary for the Information & Financial Services ecosystem to thrive. Just as important, they are necessary for other industries as well. Other industries that demand these occupations include Computer Systems Design, Engineering Services and Wholesale Trade among others.

Transportation & Distribution

There are 5,073 jobs in the Transportation & Distribution ecosystem in NW Oklahoma with average earnings of \$62,000.

The table below highlights some of the critical occupations for the Transportation & Distribution ecosystem in Northwest Oklahoma. These are occupations that are important for the ecosystem to thrive in Northwest Oklahoma but the totals in the table do not necessarily indicate that the occupations listed are employed within the Transportation & Distribution ecosystem.

There are approximately 5,700 people in Northwest Oklahoma employed in the critical occupations below. This does not mean that the people employed in the occupations are employed solely in the Transportation & Distribution ecosystem.

Occupations in the Transportation & Distribution Ecosystem in NW Oklahoma

SOC	Description	Median Hourly Earnings	Education Level
13-1081	Logisticians	\$31.34	Bachelor's degree
11-1021	General and Operations Managers	\$36.77	Bachelor's or higher degree, plus work experience
49-3041	Farm Equipment Mechanics and Service Technicians	\$13.58	Long-term on-the-job training
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	\$18.71	Long-term on-the-job training
49-9041	Industrial Machinery Mechanics	\$28.10	Long-term on-the-job training
51-8093	Petroleum Pump System Operators, Refinery Operators, and Gaugers	\$23.41	Long-term on-the-job training
43-5032	Dispatchers, Except Police, Fire, and Ambulance	\$18.53	Moderate-term on-the-job training
49-9071	Maintenance and Repair Workers, General	\$14.17	Moderate-term on-the-job training
49-3011	Aircraft Mechanics and Service Technicians	\$22.38	Postsecondary non-degree award
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	\$17.27	Postsecondary non-degree award
51-4121	Welders, Cutters, Solderers, and Brazers	\$16.04	Postsecondary non-degree award
53-3032	Heavy and Tractor-Trailer Truck Drivers	\$17.66	Short-term on-the-job training
53-7051	Industrial Truck and Tractor Operators	\$14.40	Short-term on-the-job training
11-3071	Transportation, Storage, and Distribution Managers	\$35.35	Work experience in a related occupation

Source: EMSI

As previously mentioned, these occupations are necessary for the Transportation & Distribution ecosystem to thrive. Just as important, they are necessary for other industries as well. Other industries that demand these occupations include Support Activities for Oil & Gas Operations and Oil & Gas Machinery Manufacturing among others.

Construction (Regional Complementary)

There are 7,152 jobs in the Construction ecosystem in NW Oklahoma with average earnings of \$52,000.

The table below highlights some of the critical occupations for the Construction ecosystem in Northwest Oklahoma. These are occupations that are important for the ecosystem to thrive in Northwest Oklahoma but the totals in the table do not necessarily indicate that the occupations listed are employed within the Construction ecosystem.

There are approximately 8,000 people in Northwest Oklahoma employed in the occupations below. This does not mean that the people employed in the occupations are employed solely in the Construction ecosystem.

Occupations in the Construction Ecosystem in NW Oklahoma

SOC	Description	Median Hourly Earnings	Education Level
11-1021	General and Operations Managers	\$36.77	Bachelor's or higher degree, plus work experience
11-9021	Construction Managers	\$28.36	Bachelor's degree
17-2051	Civil Engineers	\$40.86	Bachelor's degree
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	\$17.86	Moderate-term on-the-job training
43-3031	Bookkeeping, Accounting, and Auditing Clerks	\$13.21	Moderate-term on-the-job training
47-2031	Carpenters	\$14.25	Long-term on-the-job training
47-2051	Cement Masons and Concrete Finishers	\$10.98	Moderate-term on-the-job training
47-2073	Operating Engineers and Other Construction Equipment Operators	\$17.31	Moderate-term on-the-job training
47-2111	Electricians	\$20.95	Long-term on-the-job training
47-2152	Plumbers, Pipefitters, and Steamfitters	\$14.74	Long-term on-the-job training
47-2211	Sheet Metal Workers	\$20.57	Long-term on-the-job training
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	\$18.75	Postsecondary non-degree award
51-4041	Machinists	\$17.29	Long-term on-the-job training
51-4121	Welders, Cutters, Solderers, and Brazers	\$16.04	Postsecondary non-degree award
53-3032	Heavy and Tractor-Trailer Truck Drivers	\$17.66	Short-term on-the-job training

Source: EMSI

As previously mentioned, these occupations are necessary for the Construction ecosystem to thrive. Just as important, they are necessary for other industries as well. Other industries that demand these occupations include Support Activities for Wholesale Trade, Machine Shops and Oil & Gas Pipeline Construction among others.

Healthcare (Regional Complementary)

There are 7,296 jobs in the Healthcare ecosystem in NW Oklahoma with average wages of \$44,600.

The table below highlights some of the critical occupations for the Healthcare ecosystem in Northwest Oklahoma. These are occupations that are important for the ecosystem to thrive in Northwest Oklahoma but the totals in the table do not necessarily indicate that the occupations listed are employed within the Healthcare ecosystem.

There are approximately 3,800 people in Northwest Oklahoma employed in the occupations below. Most of these people employed in the listed occupations would be employed within the Healthcare ecosystem.

Occupations in the Healthcare Ecosystem in NW Oklahoma

SOC	Description	Median Hourly Earnings	Education Level
25-2011	Preschool Teachers, Except Special Education	\$9.40	Associate's degree
29-1141	Registered Nurses	\$26.44	Associate's degree
29-2021	Dental Hygienists	\$36.17	Associate's degree
29-2034	Radiologic Technologists	\$22.70	Associate's degree
11-9111	Medical and Health Services Managers	\$33.17	Bachelor's degree
29-1051	Pharmacists	\$52.16	First professional degree
29-1069	Physicians and Surgeons, All Other	\$98.26	First professional degree
29-2052	Pharmacy Technicians	\$11.33	Moderate-term on-the-job training
31-9092	Medical Assistants	\$11.24	Moderate-term on-the-job training
43-6013	Medical Secretaries	\$11.43	Moderate-term on-the-job training
29-2041	Emergency Medical Technicians and Paramedics	\$15.37	Postsecondary non-degree award
29-2061	Licensed Practical and Licensed Vocational Nurses	\$17.14	Postsecondary non-degree award
29-2071	Medical Records and Health Information Technicians	\$12.22	Postsecondary non-degree award
31-1014	Nursing Assistants	\$9.57	Postsecondary non-degree award
31-1011	Home Health Aides	\$8.78	Short-term on-the-job training

Source: EMSI