2020

Labor Markets in New Mexico's Career and Technical Education Region K



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NS4ED

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Introduction

Career Technical Education (CTE) provides students of all ages with the academic and technical skills necessary to succeed in future careers and to become lifelong learners. In total, about 12.5 million high school and college students are enrolled in CTE across the nation. Funded by the Carl D. Perkins Career and Technical Education Act (Perkins), CTE prepares these learners for the world of work by introducing them to workplace competencies, and makes academic content accessible to students by providing hands-on experiences in various industry sectors.¹

More than 62,000 New Mexico students are enrolled in CTE programs, and more than 17,000 are "concentrators," who take two or more CTE courses. CTE Concentrators graduate high school at a rate more than 23 percentage points higher than the general student body. More than half of the state's community college students are enrolled in CTE programs, with more than 33,000 concentrating in CTE fields.

Federal legislation requires a Comprehensive Local Needs Assessment for proposed CTE programs, and the New Mexico Public Education Department commissioned this initiative to provide parameters and guidance to CTE program applicants. Our intention is to provide intelligence on regional labor markets and economic trends to inform CTE strategies that make high-quality career opportunities more available to the students we serve.

The Region

Region K comprises a number of school districts and charter schools:

- Artesia
- Carlsbad Municipal
- Dexter Consolidated
- Eunice
- Hagerman Municipal
- Hobbs Municipal

- Jal
- Lake Arthur Municipal
- Loving Municipal
- Lovington
- Roswell Independent
- Tatum Municipal

Regional Education Cooperatives (REC) exists to provide educational services to students, staff, and families of the member districts and communities. REC's provide ancillary support and technical assistance in implementing federal and state statutes and regulations; professional development; and support for members in meeting the Public Education Department's requirements The Region is served by Regional Education Cooperatives #7 and #8.

Five postsecondary institutions serve the area: Eastern New Mexico University-Roswell, New Mexico Junior College, New Mexico State University-Carlsbad, the University of the Southwest and the New Mexico Military Institute. The districts lie primarily in Eddy, Chaves and Lea Counties, all of which are within the Eastern Workforce Region.

 $^{^1\,}https://webnew.ped.state.nm.us/bureaus/college-career-readiness/career-technical-education/$

The Key Findings

The People

- CTE Region K has seen uneven population trends over recent years, with Eddy and Lea Counties experiencing net positive growth since 2010, while Chaves County has declined by a net 1.6%.
 Combined, the region's population has decreased 4.3% since that time, including a 7.8% increase in Lea County and 7.4% in Eddy.
- It is notable that the population of the Region is aging. The youngest age band, those under 10 years old has experienced slight decline since 2010, while those 65 years and older have increased significantly (11.9%).
- More than 54% of the population in the Region Kas either a high school diploma and no college experience or some college experience and no degree.
- The percentage who hold a bachelor's degree or higher (14.9%) is significantly lower than the national average of 30.9%.

The Employers

The largest industries in the region are

- 1. Mining, Quarrying, and Oil and Gas Extraction
- 2. Government and Government Enterprises
- 3. Retail Trade
- 4. Health Care and Social Assistance
- 5. Accommodation and Food Service
- 6. Construction

One of the unique characteristics of this Region Ks the concentration of the *Mining, Quarrying & Oil/Gas Extraction* industry and the services that support it. For example, workers in this region are concentrated in the *Natural Gas Extraction* industry at a rate more than 17 times the national average and in Crude Petroleum Extraction at more than 40 times the average.

According to the New Mexico Department of Workforce Solutions, there are six organizations in the region who employ more than 500 workers.

- Mosaic Company
- Carlsbad Medical Center
- Leprino Foods

- Eastern New Mexico Medical Center
- Pollard Bus Company
- Lea Regional Medical Center

The Jobs

The occupation families with the largest projected growth include:

- 1. Construction and Extraction (8,280 new jobs)
- 2. Transportation and Material Moving (2,595)
- 3. Installation, Maintenance and Repair (1,410)
- 4. Management (1,120)

- 5. Sales and Related Occupations (1,052)
- 6. Production (889)
- 7. Architecture and Engineering (781)

This report sought to identify "Quality Careers," which are projected to grow significantly in coming years in this region and which typically pay higher-than-average wages.

Several of these Quality Careers were from the Health Sciences cluster, including *Registered Nurses* (\$67,505, 83 new jobs), *Occupational Health and Safety Specialists* (\$66,919, 77) and *Clinical Laboratory Technicians* (\$45,933, 16). Others came from the Construction and Extraction cluster, including *Service Unit Operators-Oil/Gas/Mining* (\$59,874, 825) *Equipment Operators* (\$44,425, 569) and Production Occupations like *Petroleum Pump System Operators*, *Refinery Operators and Gaugers* (\$72,780, 141) and *Welders/Cutters/Solderers/Brazers* (\$55,214, 227). The region's single largest-growth occupation among these quality careers is *Truck Drivers* (\$43,503, 1,746).

The Observations

This report identifies three segments of the regional economy which can serve as a starting point for conversations about the region's economic priorities.

Natural Resources and Mining

This region's economy centers on natural resources and the construction and extraction activities that are born from that. The Mining sector directly employs more than 16,000 workers in this region. The 21st Century mining sector is a source of high-quality career opportunities that offer high wages and cutting edge technologies. Demand for transportation, specialized engineering and other services are also driven by success in this sector.

Architecture and Engineering

Many of the occupations that offer both high demand and higher-than-average wages come from the Architecture and Engineering Cluster. In particular, Nuclear Engineers, Engineering Technicians, Health and Safety Engineers and Industrial Engineering Technicians are projected to experience significantly increased demand. High quality career opportunities in this field exist at every level of education.

Industrial production technology

Manufacturers employ more than 3,000 people in this region. Occupations like machinists and welders are in constant demand and offer high wages and valuable opportunities to develop.

Other areas that were considered for this recommendation, but ultimately not included were:

- Health Care Practitioners and Technical Occupations
- 21st Century Transportation

The People

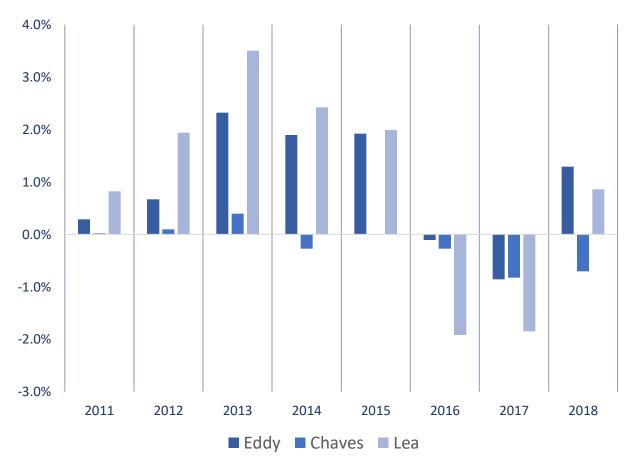
Population

There are 12,145 students enrolled in grades 9-12 across the region's twelve school districts. Trends in the region's population will have an obvious effect on that enrollment and warrants regular analysis. CTE Region K has seen uneven population trends over recent years, with Eddy and Lea Counties experiencing net positive growth since 2010, while Chaves County has declined by a net 1.6%. Combined, the region's population has decreased 4.3% since that time, including a 7.8% increase in Lea County and 7.4% in Eddy.

Table 1: Population by County, 2010-2018:

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018
Eddy	53,901	54,056	54,416	55,668	56,690	57,724	57,667	57,205	57,900
Chaves	65,727	65,739	65,800	66,059	65,880	65,878	65,697	65,153	64,689
Lea	64,599	65,130	66,382	68,644	70,211	71,496	70,254	69,057	69,611



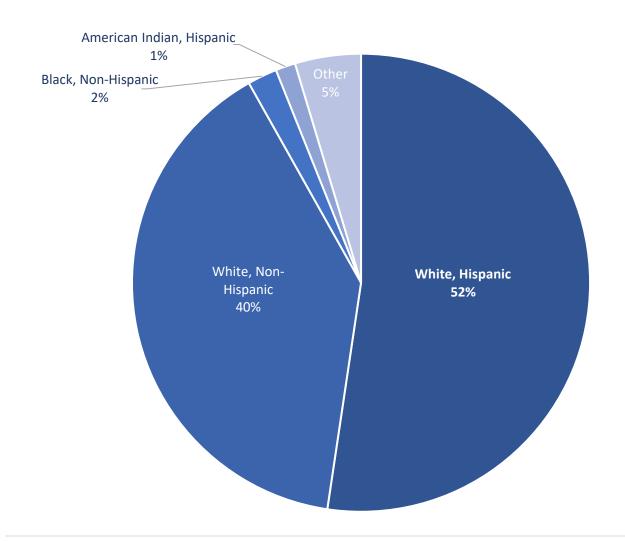


Demographics-Race and Ethnicity

Table 2: Region K Population, by Race and Ethnicity:

Race/Ethnicity	2010 Population	2018 Population	Change	% Change	2018 % of Total
White, Hispanic	86,312	100,822	14,510	16.8%	52.5%
White, Non-Hispanic	84,780	76,065	(8,715)	-10.3%	39.6%
Black, Non-Hispanic	4,085	4,026	(59)	-1.4%	2.1%
American Indian, Hispanic	2,089	2,694	605	29.0%	1.4%
Other, Hispanic	3,154	4,014	860	27.3%	2.1%
Other	4,093	4,953	860	21.0%	2.6%

United States Census Bureau, Annual Population Estimates



Demographics-Age

It is notable that the population of the Region is aging. The youngest age band, those under 10 years old has experienced slight decline since 2010, while those 65 years and older have increased significantly (11.9%).

Table 3: Region K Population, by Age:

Age Cohort	2010 Population	2018 Population	Change	% Change	2018 % of Cohort
Under 10	29,221	28,955	(266)	-0.9%	15.07%
10-19	27,934	29,753	1,819	6.5%	15.48%
20-29	24,859	25,875	1,016	4.1%	13.46%
30-39	22,217	26,214	3,997	18.0%	13.64%
40-49	22,804	21,384	(1,420)	-6.2%	11.13%
50-64	33,356	33,339	(17)	-0.1%	17.35%
65+	23,833	26,680	2,847	11.9%	13.88%

United States Census Bureau, Annual Population Estimates

Demographics-Educational Attainment

Table 4: Region K Population by Educational Attainment:

Education Level	Population
Less than 9 th Grade	13.6%
9 th Grade to 12 th Grade	9.2%
High School Diploma	31.9%
Some College	22.2%
Associate's Degree	8.1%
Bachelor's Degree	9.4%
Graduate Degree or Higher	5.5%

United States Census Bureau, American Community Survey

More than 54% of the population in the Region Kas either a high school diploma and no college experience or some college experience and no degree.

The percentage who hold a bachelor's degree or higher (14.9%) is significantly lower than the national average of 30.9%.

The Employers

To gain perspective on the businesses who employ workers in Region K, we look at data from the New Mexico Department of Workforce Solutions, in particular the *Quarterly Census of Employment and Wages*. Data from that instrument are organized according to the *North American Industry Classification System (NAICS)*, in which businesses are categorized by their primary lines of business into general industry sectors, then subdivided into more granular industry definitions. For this report, we look first at the general industry sectors, then at the detailed industries they include.

An Employment Location Quotient is an indexed value that illustrates the concentration of an industry in a particular location. An LQ of 1.0 indicates that employment in the target industry is exactly equal to the national average. An LQ of 2.0, then would indicate that employment in the target industry is double the national average.

Employment, Top Industry Sectors, Region K

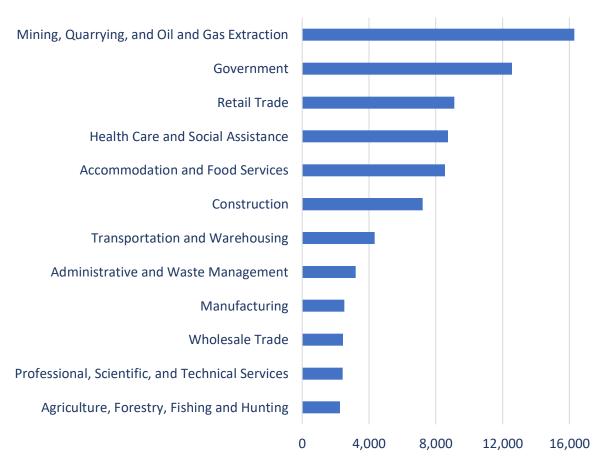


Table 5: Components of Top Industry Sectors, Region K:

Sector/Top Detailed Industries	2019 Jobs	Average Wages	Location Quotient
Mining, Quarrying and Oil and Gas Extraction			
Support Activities for Mining	12,703	\$72,146	63.21
Crude Petroleum Extraction	2,401	\$124,470	40.05
Other Nonmetallic Mineral Mining and Quarrying	742	\$88,066	109.38
Natural Gas Extraction	371	\$125,543	17.00
Government			
Education (Local Government)	5,368	\$41,500	1.18
Local Government, Excluding Education and Hospitals	3,388	\$51,419	1.03
State Government, Excluding Education and Hospitals	1,146	\$49,644	0.88
Education (State Government)	935	\$35,406	0.59
Health Care and Social Assistance			
General Medical and Surgical Hospitals	2,029	\$67,900	0.75
Home Health Care Services	1,139	\$18,238	1.33
Services for the Elderly and Persons with Disabilities	1,017	\$18,208	0.91
Offices of Physicians	915	\$66,256	0.61
Nursing Care Facilities (Skilled Nursing Facilities)	729	\$37,089	0.80
Construction			
Oil and Gas Pipeline and Related Structures Construction	2,335	\$66,244	22.99
Electrical Contractors and Other Wiring Installation Contractors	1,119	\$65,247	2.01
All Other Specialty Trade Contractors	666	\$61,712	3.31
Site Preparation Contractors	599	\$64,605	2.93
Highway, Street, and Bridge Construction	459	\$53,644	2.32
Plumbing, Heating, and Air-Conditioning Contractors	391	\$44,229	0.59
Power/Communication Line and Related Structure Construction	384	\$75,102	3.23
Commercial and Institutional Building Construction	235	\$41,770	0.60
Industrial Building Construction	212	\$61,428	2.18

Sector/Top Detailed Industries	2019 Jobs	Average Earnings	Location Quotient
Transportation and Warehousing			
Specialized Freight (except Used Goods) Trucking, Local	1,855	\$75,128	14.07
General Freight Trucking, Local	454	\$58,736	3.00
Pipeline Transportation of Natural Gas	432	\$119,008	25.49
General Freight Trucking, Long-Distance	358	\$68,533	0.80
Manufacturing			
Petroleum Refineries	608	\$106,216	15.32
Dairy Product (except Frozen) Manufacturing	520	\$60,819	7.09
Other Basic Inorganic Chemical Manufacturing	173	\$140,288	7.59

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Detailed Industries by County

It is also instructive to look at detailed industries in each of the counties that make up this CTE Region. In our quest to prioritize industries and occupations, one of the most valuable pieces of intelligence we can utilize is industry employment data.

Table 6: Employment by Industry, Eddy County, 2019:

Eddy	2019 Jobs	Average Wages/ Earnings	Location Quotient	Age 45+
Support Activities for Mining	5,654	\$74,633	76.39	32.9%
Restaurants and Other Eating Places	1,808	\$19,246	0.80	22.8%
Crude Petroleum Extraction	1,575	\$128,484	71.30	41.8%
Education (Local Government)	1,495	\$42,790	0.89	48.0%
Local Government, Excluding Education and Hospitals	1,130	\$60,740	0.93	46.0%
Waste Treatment and Disposal	897	\$100,609	42.87	66.8%
General Medical and Surgical Hospitals	890	\$72,977	0.89	46.2%
Oil and Gas Pipeline and Related Structures Construction	740	\$61,543	19.79	34.5%
Other Nonmetallic Mineral Mining and Quarrying	736	\$87,835	294.77	51.8%
Merchandise Stores, Warehouse Clubs and Supercenters	709	\$28,781	1.72	42.3%

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Table 7: Employment by Industry, Chaves County, 2019:

Chaves	2019 Jobs	Average Wages/ Earnings	Location Quotient	Age 45+
Restaurants and Other Eating Places	2,420	\$16,963	1.57	19.3%
Education (Local Government)	1,460	\$43,120	1.28	48.0%
Local Government, Excluding Education and Hospitals	1,014	\$43,618	1.23	46.1%
Animal Production	1,000	\$35,218	26.40	48.5%
State Government, Excluding Education and Hospitals	676	\$49,637	2.08	42.6%
Education (State Government)	646	\$36,334	1.64	51.2%
Services for the Elderly and Persons with Disabilities	632	\$18,473	2.27	50.0%
Merchandise Stores, Warehouse Clubs and Supercenters	589	\$25,191	2.10	36.2%
Offices of Physicians	546	\$68,120	1.44	40.8%
Dairy Product (except Frozen) Manufacturing	520	\$60,819	28.31	41.3%

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Table 8: Employment by Industry, Lea County, 2019:

Lea	2019 Jobs	Average Wages/ Earnings	Location Quotient	Age 45+
Support Activities for Mining	6,806	\$70,501	88.82	36.0%
Restaurants and Other Eating Places	2,455	\$17,244	1.04	21.2%
Education (Local Government)	2,413	\$39,720	1.39	47.4%
Oil and Gas Pipeline and Related Structures Construction	1,591	\$68,444	41.07	38.7%
Local Government, Excluding Education and Hospitals	1,244	\$49,314	0.99	46.1%
Specialized Freight (except Used Goods) Trucking, Local	1,138	\$75,137	22.63	45.3%
Crude Petroleum Extraction	730	\$119,843	31.92	42.7%
General Medical and Surgical Hospitals	726	\$66,690	0.70	41.2%
Supermarkets and Other Grocery (except Convenience) Stores	724	\$22,199	1.31	31.5%
Electrical Contractors, Wiring Installation Contractors	687	\$66,166	3.24	30.7%

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The Jobs

Another instrument of the New Mexico Department of Workforce Solutions that provides valuable perspective on career opportunities in this Region Ks the *Occupational Employment Statistics* Series. Employment and wages are estimated for more than 750 occupation categories, and to evaluate growth in demand for particular occupations, we return the occupations with the largest growth since 2010.

Table 9: Occupation Employment, Region K, 2010-2019:

Description	2010 Jobs	2019 Jobs	2010 - 2019 Change	2010 - 2019 % Change	Annual Openings	Median Annual Earnings
Heavy and Tractor-Trailer Truck Drivers	2,030	3,544	1,514	75%	571	\$43,503
Roustabouts, Oil and Gas	1,624	3,127	1,503	93%	641	\$32,903
Construction Laborers	1,110	1,971	861	78%	311	\$31,661
Supervisors-Construction Trades/Extraction	925	1,664	739	80%	244	\$61,480
Secretaries and Administrative Assistants	2,721	3,402	681	25%	482	\$33,013
Food Prep/Serving Workers, Fast Food	1,997	2,657	660	33%	481	\$19,677
Personal Care Aides	1,189	1,829	640	54%	300	\$20,113
Service Unit Operators, Oil, Gas, and Mining	574	1,057	483	84%	214	\$59,874
General and Operations Managers	1,155	1,633	478	41%	194	\$87,973
Construction Equipment Operators	788	1,200	412	52%	185	\$44,425
Industrial Machinery Mechanics	399	800	401	101%	107	\$63,114
Cashiers	2,018	2,388	370	18%	469	\$21,875
Sales Representatives, Services, All Other	254	555	301	119%	87	\$43,337
Cooks, Restaurant	537	824	287	53%	130	\$24,258
Rotary Drill Operators, Oil and Gas	577	855	278	48%	178	\$33,935
Laborers& Freight, Stock, Material Movers	980	1,250	270	28%	203	\$28,609
Electricians	506	727	221	44%	111	\$53,126
Retail Salespersons	1,751	1,948	197	11%	333	\$23,775
Stock Clerks and Order Fillers	1,002	1,192	190	19%	176	\$24,038
Customer Service Representatives	717	900	183	26%	130	\$30,329
Waiters and Waitresses	1,238	1,409	171	14%	300	\$20,436
Substitute Teachers	697	867	170	24%	123	\$27,488
Derrick Operators, Oil and Gas	678	843	165	24%	203	\$47,653
Petroleum Pump System Operators, Refinery Operators, and Gaugers	272	436	164	60%	61	\$72,780

Many factors go into an evaluation of a career's potential, including demand and earning potential. The New Mexico Department of Workforce Solutions also projects changes in total employment for every occupation by 2026. The occupations that are projected to experience the largest growth and that pay wages above the region's average are categorized here as high-quality careers, and detailed occupations are grouped into general "occupation families."

Table 10: Projected Change, Occupations, 2016-2026, Region K:

High Quality Career	2016 Jobs	2026 Jobs	New Jobs	% Change	Annual Openings	Average Earnings
Health Care Practitioners and Technical Occupation					<u> </u>	J
Registered Nurses	1,046	1,129	83	8%	69	\$67,505
Occupational Health and Safety Specialists	99	176	77	78%	16	\$66,919
Nurse Practitioners	46	70	24	52%	6	\$116,721
Occupational Health and Safety Technicians	36	56	20	56%	5	\$47,619
Clinical Laboratory Technologists and Technicians	80	96	16	20%	8	\$45,933
Dental Hygienists	60	72	12	20%	6	\$85,004
Radiologic Technologists	93	104	11	12%	7	\$54,747
Dentists, General	53	64	11	21%	3	\$154,461
Speech-Language Pathologists	55	65	10	18%	4	\$79,052
Psychiatrists	19	28	9	47%	2	\$233,149
Architecture and Engineering						
Civil Engineers	81	202	121	149%	24	\$88,518
Petroleum Engineers	101	175	74	73%	18	\$95,946
Mechanical Engineers	56	105	49	88%	10	\$84,759
Engineers, All Other	63	111	48	76%	12	\$99,498
Construction						
Supervisors-Construction Trades and Extraction	1,054	2,063	1,009	96%	278	\$61,480
Service Unit Operators, Oil, Gas, and Mining	666	1,491	825	124%	242	\$59,874
Operating Engineers, Equipment Operators	871	1,440	569	65%	198	\$44,425
Derrick Operators, Oil and Gas	522	1,040	518	99%	172	\$47,653
Electricians	509	930	421	83%	135	\$53,126

High Quality Career	2016 Jobs	2026 Jobs	New Jobs	% Change	Annual Openings	Average Earnings
Business and Financial Operations						
Accountants and Auditors	414	558	144	35%	61	\$58,689
Business Operations Specialists, All Other	376	484	108	29%	53	\$64,612
Financial Analysts	115	169	54	47%	19	\$147,035
Management Analysts	68	121	53	78%	15	\$68,210
Human Resources Specialists	135	186	51	38%	22	\$46,990
Market Research Analysts and Specialists	63	113	50	79%	14	\$48,132
Logisticians	45	92	47	104%	12	\$73,690
Compliance Officers	124	154	30	24%	16	\$83,110
Training and Development Specialists	97	123	26	27%	15	\$53,265
Buyers and Purchasing Agents	129	147	18	14%	17	\$57,687
Transportation and Material Moving						
Heavy and Tractor-Trailer Truck Drivers	2,613	4,359	1,746	67%	592	\$43,503
Computer Occupations						
Network and Computer Systems Administrators	100	130	30	30%	12	\$64,828
Computer User Support Specialists	165	190	25	15%	18	\$46,089
Computer Systems Analysts	69	92	23	33%	9	\$84,203
Computer Occupations, All Other	27	47	20	74%	5	\$77,689
Software Developers, Systems Software	38	53	15	39%	5	\$69,035
Production						
Welders, Cutters, Solderers, and Brazers	367	594	227	62%	78	\$55,214
Petroleum Pump System Operators, Refinery Operators, and Gaugers	368	509	141	38%	65	\$72,780
Gas Plant Operators	163	298	135	83%	44	\$69,372
Inspectors, Testers, Sorters, Samplers, Weighers	296	388	92	31%	55	\$64,871
Supervisors-Production and Operating Workers	342	426	84	25%	49	\$63,915
Machinists	103	165	62	60%	21	\$54,219

High Quality Career	2016 Jobs	2026 Jobs	New Jobs	% Change	Annual Openings	Average Earnings
Management						
Construction Managers	143	252	109	76%	26	\$91,819
Financial Managers	133	225	92	69%	24	\$90,906
Architectural and Engineering Managers	54	98	44	81%	10	\$122,209
Administrative Services Managers	110	152	42	38%	16	\$84,396
Education Administrators	145	171	26	18%	15	\$88,297

The Talent Development Ecosystem

Assets

CTE Region K is served by Regional Education Centers #7 and #8. Postsecondary educational institutions in the Region include Eastern New Mexico University-Roswell, New Mexico Junior College, New Mexico State University-Carlsbad, the University of the Southwest and the New Mexico Military Institute..

Awards

In 2018, the most recent academic year for which data are available, 2,349 degrees and certificates were awarded by these institutions, including 2,010 which were awarded in programs not offered as distance education.

Workforce Equilibrium

Finally, we use a crosswalk from the United States Department of Education to estimate the balance between the region's emerging supply of qualified talent and projected demand for workers with relevant skills. The difference between awards in a program and the aggregated number of openings in related occupations is quantified here as a "Workforce Equilibrium Value."

Ideally, the numbers representing emerging supply will be roughly equal to projected demand. Where an imbalance exists, there may be an opportunity to expand program offerings or to encourage students and jobseekers to consider careers in these fields. The educational system thus becomes a valuable factor in not only the success of individual students, but also in the economic success of the region.

Table 11: Program Awards and Openings in Related Occupations, Region K:

Description	2018 Awards	Openings- Related Occupations	2019 Jobs	Equilibrium Value
Automobile/Automotive Mechanics Technology/Technician	163	61	526	103
Liberal Arts and Sciences/Liberal Studies	129	31	320	98
Emergency Medical Technology/Technician (EMT Paramedic)	99	17	124	82
Nursing Assistant/Aide and Patient Care Assistant/Aide	83	69	576	14
Welding Technology/Welder	63	78	481	(15)
Registered Nursing/Registered Nurse	60	69	1,030	(9)
Airframe Mechanics, Aircraft Maintenance Technology	55	7	67	48
Counselor Education/School Counseling, Guidance Services	50	12	116	38
Graphic Design	46	6	43	40
Business Administration and Management, General	45	364	2,976	(319)
Criminal Justice/Police Science	42	47	564	(5)
Construction Trades, General	39	929	5,651	(890)
Medical/Clinical Assistant	34	40	287	(6)
HVAC and Refrigeration Maintenance Technology/Technician	34	13	111	21
Mental Health Counseling/Counselor	32	7	63	25
Business Administration, Management and Operations	23	65	566	(42)
Kinesiology and Exercise Science	21	2	21	19
Education, General	20	234	2,501	(214)
Cosmetology/Cosmetologist, General	20	10	72	10
Criminal Justice/Safety Studies	18	5	66	13
Quality Control and Safety Technologies/Technicians, Other	18	16	145	2
Corrections	18	37	427	(19)
Occupational Therapist Assistant	18	3	25	15
Business/Commerce, General	18	335	2,750	(317)
Automobile/Automotive Mechanics Technology/Technician	163	61	526	103
Liberal Arts and Sciences/Liberal Studies	129	31	320	98

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