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The Economy of Eastern Colorado

John Griswold

The northeastern and eastern regions of Colorado comprise 10 counties that are home to 2.1% of the total Colorado population. The counties included in this region are Cheyenne, Elbert, Kit Carson, Lincoln, Logan, Morgan, Phillips, Sedgwick, Washington, and Yuma; they make up the Department of Local Affairs' (DOLA) regions 1 and 5. The 2015 population growth rate of 0.8% in Eastern Colorado is relatively flat compared to the annual statewide growth rate of 1.9%. With 112,386 residents, the region's population is at its highest level since 1990. According to State Demography Office data, the three fastest-growing counties in 2015 in the Eastern Colorado region were Kit Carson (2.4%), Elbert (2.3%), and Sedgwick (1.7%). The counties that grew, Elbert, Kit Carson, Sedgwick, and Morgan, accounted for nearly 90% of growth. The three counties with the lowest population growth rates were Yuma (-1.2%), Phillips (-1.1%), and Cheyenne (-0.7%). Together, these counties contributed to a loss of 180 residents in 2015, a 1.1% decrease in the total population of the three counties.

According to the Colorado Department of Labor and Employment, covered wages and jobs in Eastern Colorado totaled 37,287 and accounted for 1.5% of total Colorado employment in 2015. Eastern Colorado workers earn 1% of total Colorado wages, and average annual pay increased by 2.8% in 2015, on par with statewide average annual wage growth. Per capita personal income in the region averaged $42,361. The industry composition in Eastern Colorado is dominated by agriculture, which accounted for 17.7% of total employment and provided 26.3% of the region's total output in 2015. The government is the second-largest employer in the region; however, the industry is responsible for only 4.4% of total output. Retail trade is the third-largest employer, at 8.9% of employment, but contributes only 3.1% of total output. Manufacturing is typically a high output per employee industry; this notion reigns true in the region as 7% of manufacturing workers account for 23.5% of the region's economic output. Together, these four industries accounted for 48.6% of total employment and 57.2% of total output in 2015. Although the agricultural industry is experiencing significant consolidation, it remains the largest employer in Eastern Colorado. The manufacturing and mining industries show future growth potential as workers leave the agricultural space and seek jobs elsewhere.

Elbert County, in particular, has contributed significantly to the region's

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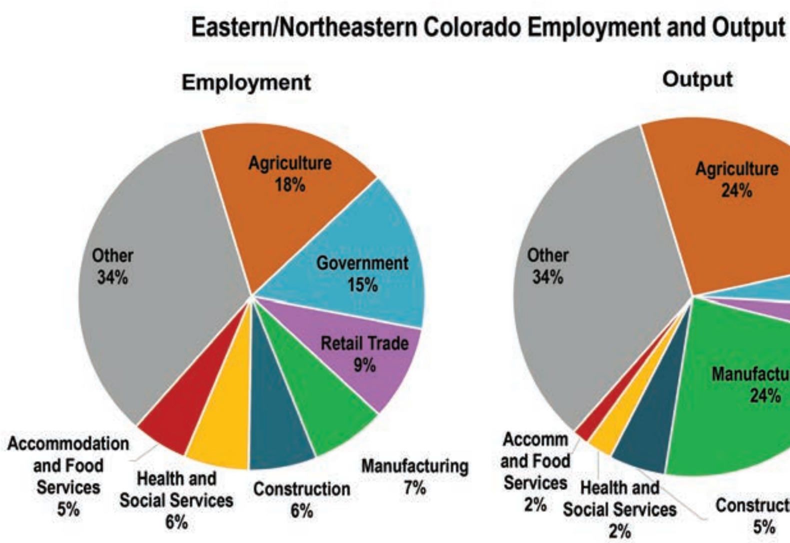

Source: IMPLAN (2014).

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FROM THE EDITOR

This issue of the *CBR* highlights the economy of Northeastern Colorado, which comprises 10 counties—Cheyenne, Elbert, Kit Carson, Lincoln, Logan, Morgan, Phillips, Sedgwick, Washington, and Yuma. With 112,861 residents, the region's population is at its highest level since 1990. Agriculture, government, retail trade, and manufacturing accounted for 48.6% of total employment and 57.2% of total output in the region in 2015.

The articles in this issue, primarily written by industry and community leaders, provide insight into the region's economy, focusing on key industries and unique innovations and challenges facing Northeastern Colorado communities.

Please contact me at 303-492-1147 with comments or questions.

—Richard Wobbekind

population growth in recent years as it has sustained a compound annual growth rate (CAGR) of 3.6%, effectively adding an average of 598 new residents per year since 1990. Growth in the county is double the population growth rate of Colorado and nearly four times that of the United States. Much of this growth can be attributed to Elbert's increasing role as a feeder county to Denver as the city's footprint expands and citizens move east. Elbert County's growing popularity as a "bedroom community" for Denver helps explain the 11.5% increase in services-providing employment compared to a 1.4% decrease in goods-producing jobs. Job growth in 2015 was 4.6% while the other nine counties in this region recorded a combined decline of 0.3%. Wages in the county grew 8.1%, and average wages in the state increased by 6% in the same time period. Favorable economic activity, affordable housing options, and Elbert's proximity to Denver have contributed significantly to the county's growth, and this is expected to continue as Denver's population increases.

Among the decreasing counties, much of the decrease in Eastern Colorado's population (65%) is from Yuma County. The county accounts for 10.6% of the region's employment and wages. Yuma experienced 1.9% growth in wages in 2015; however, employment decreased 1.1%. Negative employment growth has led residents to seek employment elsewhere, which explains declines in both services-providing and goods-producing industries. Consolidation in the agricultural industry, coupled with increases in productivity and the size of farms in Eastern Colorado, has contributed greatly to the decrease in employment in recent years.

Although Logan and Morgan counties make up only 21% of the region in area, they are responsible for 57% of earnings and 45% of the total residents. These adjacent counties are located along Interstate 76 and are quickly becoming the energy hub of the Eastern Plains. Easy interstate access and transportation networks, in combination with access to bountiful natural resources, are attracting new mining and oil and gas production. Logan County currently has 527 wind turbines under construction or planned, which has contributed to the county's job and wage growth. Located in Morgan County, Fort Morgan is the county's largest municipality and is home to 40% of the county's total population. Industrial livestock is one of the largest industries in the municipality as Cargill Meat Solutions employs 2,100 of the county's 14,808 workers. Logan and Morgan counties are located directly in the center of the Denver Julesburg (DJ) Basin and have remarkable potential for economic growth when the price of petroleum increases.

Oil and gas production in the Eastern Colorado region has been impacted significantly by the drop in petroleum prices as many exploration and production companies can no longer achieve breakeven production prices. According to the Colorado Oil and Gas Conservation Commission, annual petroleum production in the region has declined 14.4% from 2014 to 2015. The slowdown in drilling has affected Cheyenne and Lincoln counties the most as they contribute 76.7% of the region's overall production; however, these counties are relatively small producers in comparison to neighboring Weld County. Although production is down, declining petroleum production is not a region-specific issue. The total Colorado rig count is down 63.8% in the same time period. Eastern Colorado is not the largest petroleum-producing region in the state, but the region's proximity to Weld County has introduced oil and gas accessory jobs, including transportation and disposal. As the price of oil increases to breakeven levels in the DJ Basin, Eastern Colorado should experience an uptick in employment and population as exploration and production firms ramp up production.

In 2015, taxable sales in Eastern Colorado totaled $1.2 billion, a 1% increase from 2014. Morgan, Logan, and Elbert counties account for 67.8% of total taxable sales, which is not surprising as they have the highest number of residents and employees. A 12-month rolling sum analysis illustrates that taxable sales began to decline in November 2015. The December 2015 rolling sum analysis shows that taxable sales were down 1.9% from the peak in October 2015.

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Foreign-Trade Zones: Attracting Investment in Primary Jobs to Eastern Colorado

Joe Kiely

The Town of Limon has one of the best retail economies in the state. Retail sales in the town averaged about $85,800 per capita in 2015 compared to Denver, at $41,300. Limon's position in the transportation system, where five major highways intersect, including I-70 and the growing Ports-to-Plains freight corridor, is why it is called "Hub City." However, the Limon Board of Trustees recognized that the retail service industry, while good for local government revenue, was not nearly as positive to the town's citizens and local economy as primary industries, including distribution, manufacturing, and assembly, could be. Therefore, the trustees decided to pursue the establishment of a Foreign-Trade Zone.

A Foreign-Trade Zone (FTZ) is an authority, granted through the Foreign Trade Zone Board in the U.S. Department of Commerce, designed to encourage U.S. job activity by allowing delayed or reduced duty payments on foreign components while using the U.S. labor force for production and distribution. From a local viewpoint, a FTZ is a tool that encourages the growth of primary jobs in the United States that could be offshored and creates tax revenues for counties, municipalities, school districts, and special districts.

Duty payments on most imported components or products are due as soon as the component enters the United States. Those same components or products can be imported into a FTZ site, and the duty is deferred until the final product enters the U.S. market. If the imported component is combined with domestic components into a final product, the duty paid is the lesser of the individual components or the final assembled component. If the final product is exported and never enters the U.S. market, no duty is paid to the United States. So while local communities benefit and Colorado primary employees are used in processes, the company has a clear savings in customs duty.

Studying the global supply chain for distribution, manufacturing, and assembly led to an understanding that in a global economy, many distribution, manufacturing, and assembly processes include one or more foreign components. The question becomes, how do we attract those primary industries, especially to a rural area? For Limon, one of the answers was to have access to tools to encourage those primary industries to locate in the community. One tool was a FTZ designation. Limon and Lincoln County, with the Town of Limon as Grantee, received a Grant of Authority for FTZ No. 293 on June 11, 2015.

The Limon FTZ was granted authority for up to 2,000 acres. The service area was limited by regulation and application to 60 miles or 90 minutes from the Port of Denver. The Limon FTZ Service Area includes all of the counties of Adams and Arapahoe and major portions the counties of Elbert, Lincoln, and Morgan. Any site, allowed by local land use regulation, is eligible within the service area. The Grant of Authority allows

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Photo provided by Joe Kiely

designation of subzones outside the service area when operations cannot feasibly be moved to, or accommodated in, the service area.

The Limon FTZ is organized under the alternative site framework (ASF). The ASF, instead of predetermining sites at specific locations in the service area, provides the flexibility for a business to locate in the best location for their supply chain needs. A usage-driven site may consist of a warehouse, a portion of warehouse, or multiple closely located warehouses.

Limon is often asked why it applied for a large service area, including an urban area and a large rural area outside of its local area. Why not limit the service area to local communities? Having the FTZ authority guarantees nothing. Limon and its partners in Lincoln County understood that developing relationships with international business interests would be critical to encouraging investors to consider Limon and Lincoln County. Rural Colorado must demonstrate its ability to meet global business needs so the service area also includes large areas of other rural counties.

As far as successes, Limon is early in the development of the FTZ, but already, the Limon FTZ has opened dialogues with businesses that would have never reached out to Limon prior to the establishment of the FTZ. As most people understand, economic development is a long-term effort, and this effort is still in its infant stages in terms of marketing and outreach.

Recently, the Limon FTZ was selected by the Colorado Office of Economic Development and International Trade for a Competitive Advantage Program under the Colorado Blueprint 2.0 – Blueprint Initiatives. The state's rural communities and regions were invited to apply for specialized resources to help make their economies more robust. Developers of the program are planning to establish a set of best practices and a strategy for marketing a primarily rural area to international business markets.

The Limon FTZ will work with businesses, local governments, and economic development organizations to identify and process potential users. More complete information on FTZ No. 293, including a guidebook, is available online at www.townoflimon.com/index.php/economic-development/foreign-trade-zone-no-293/limon-ftz-guidebook.

Joe Kiely is Director of the Limon FTZ. He may be contacted at jkiely@townoflimon.com or at 719-775-2346.

Lincoln County, Colorado – A Rural County in the Crosshairs of Transportation and Energy Expansion

Troy McCue

Across the United States, a total of 23 counties have the name of our 16th president, Abraham Lincoln. Lincoln County, Colorado, was founded in 1889 and interestingly forms a backward "L" on the Eastern Plains of the state. Had the original founders instead formed the county to display a forward "L," the marketing possibilities would be endless. Lincoln County is home to just over 5,500 residents, but covers a total of 2,586 square miles of land mass, ranking eighth largest of 64 counties in the state. At exactly an hour's drive east of the Front Range and crisscrossed by major U.S. highways and two railroads, the county looks forward to industry expansion related to energy, transportation, and affordable warehousing and manufacturing.

Lincoln County has been home to a thriving agricultural industry for generations. Namely, dryland wheat and hay production, as well as cow-calf and beef yearling productions, have been the mainstays for the rural economy. According to the U.S. Census of Agriculture, the number of people in Lincoln County directly involved in production agriculture in 1950 was 2,042, amounting to nearly 40% of the county's population. Today, due largely to a changing national shift and technological advancement in agriculture, the U.S. Census reports that as of 2012, 749 people, or 13% of the population is employed in the agricultural and agribusiness sectors. In the 21st century, Lincoln County has seen enormous investment in the wind and oil industry, forever changing the landscape of the Eastern Plains.


Photo courtesy of Troy McCue

Beginning with the Cedar Point Wind Energy Project in 2011, and followed in quick succession by Limon I, II, and III wind projects by Nextera (company of Florida Power & Light), the county presently is home to just under 500 wind turbines. Supplying the Front Range with green power in the state's mandate for renewable energy, Lincoln County's northern horizons are populated with the energy-harvesting turbines. The trend and expansion in the wind energy sector continues with Xcel Energy's planned Rush Creek II Project, which promises another 80 turbines for the east-central part of the county, to be completed in 2017.

Wind energy in recent years has been accompanied by development in the oil and gas sector. Prior to the decline of crude oil prices in 2015, Lincoln County had over 120 active permits for oil development and saw production of nearly 1.4 million barrels per year, according to the Colorado Oil and Gas Inspection Service. Although present production of crude oil and natural gas is roughly 50% of its peak, there has been extensive geographic research across the Niobrara formation of the Denver Basin that lies under Lincoln County. At some point in the future, once crude oil prices return to moderately higher values, or when drilling production technology lowers the development costs further, Lincoln County could be the likely beneficiary of greater oil and gas development and production.

Growth in highway traffic counts—seen every year across the state's Eastern Plains—is especially felt in Lincoln County. The daily counts at the busy service exits in Limon are routinely totaling in excess of 7,600, and the commercial corridor of Highway 40/287 that connects Limon and the county seat of Hugo has daily counts of more than 4,500. These counts are projected to continue to grow by another 13% by 2020, according to Colorado Department of Transportation (2014). Lincoln County's participation in the transportation corridor association of the Ports-to-Plains Alliance and the Heartland Expressway shows the area's commitment to playing an increasing role in the future development of the multi-directional freight transportation system.

"As the Ports-to-Plains Corridor continues to develop as an alternative to congested Interstate 25 in Colorado and Interstate 35 in Texas, Oklahoma and Kansas, Lincoln County's location at the intersection of an interstate and the Ports-to-Plains Corridor and its proximity to the Front Range economy means that Limon is also well positioned for interstate and international commerce," said Joe Kiely, vice president of operations of the Ports-to-Plains Alliance. "Lincoln County is already reaping the benefits of a strong retail sector driven by growing traffic counts and is looking beyond to use this transportation system to bring primary jobs including small manufacturers, assembly and distribution facilities into Hub City." Additionally, Class I rail giant Union Pacific and short line Kyle Railroad (subsidiary of Genesee

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& Wyoming Railroads) continue to round out the multimodal perspective of Lincoln County's transportation future.

When looking at all the aspects for Lincoln County's future, one message is clear: Lincoln County will grow. The economic development efforts are focusing on two items countywide: workforce development and the building of available housing. Very typical of rural Colorado, housing shortfalls are the leading challenge for keeping and employing an adequate local workforce. Additional items to support the workforce include adequate childcare and access to affordable healthcare. The good news is that Lincoln County is home to a leading health care organization, Lincoln Community Hospital and Care Center.

The hospital, located in the county seat of Hugo, is spreading its set of services across the county, touching neighboring Kit Carson County with a clinic in Flagler, a family practice center in Limon, and a newly acquired assisted living center, also in Hugo. A late, very dynamic addition to the host of health services is AIRLIFE services, based in Denver. The service in Hugo now houses a full-time medical helicopter and crew for rural emergency response and transport services to the greater Colorado hospital network.

Lincoln County's proximity to the Front Range, with open and congestion-free highways and railways, coupled with affordable land and a friendly business atmosphere, all point to greater growth in coming years. One new feature is the recent approval of a Foreign Trade Zone status. Offering deferred duty benefits to those companies importing goods, the zone promises to attract further foreign investment in the region. There are a handful of small manufacturers in the region, such as Doric Vaults, a burial vault producer, in Limon, and this sector is set to grow.

The rural folks out on the windy plains in the left-facing "L" county, Lincoln County, look forward to a promising economic future. The steady replacement of the agricultural employment sector with jobs in sectors ranging from transportation to energy, and from health services to manufacturing is leading to a more diverse economy and population. The important thing to remember is that Lincoln County is ready for growth, and extends an invitation to all who may like to invest there.

Troy McCue is the Executive Director of the Lincoln County Economic Development Corporation. He may be contacted at 719-775-9070, or tmccue@lincolncountyed.org.

Photo courtesy of Troy McCue

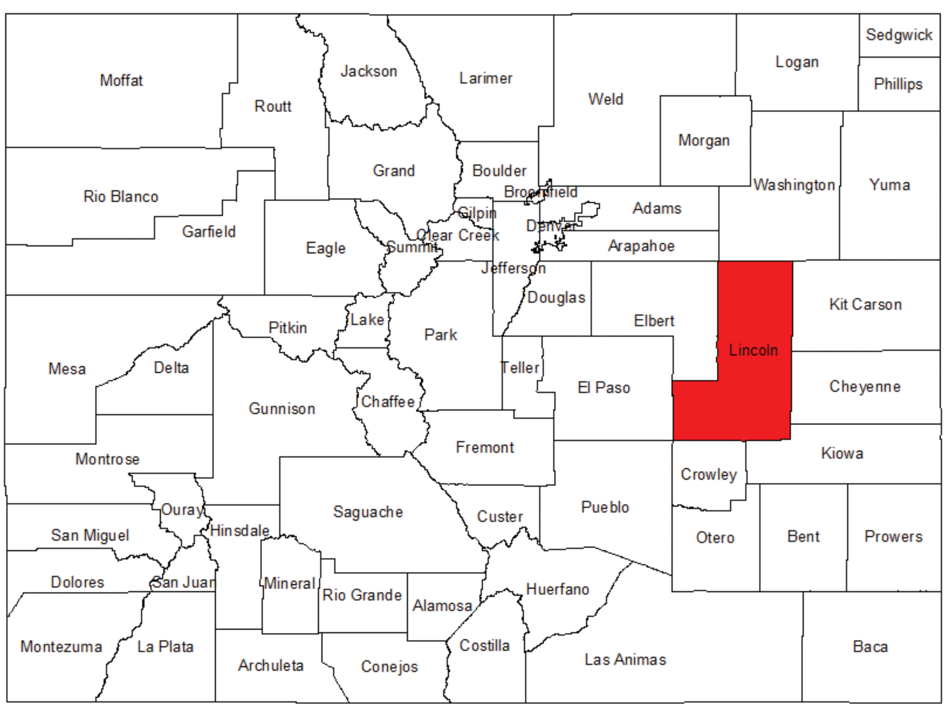

Photo courtesy of Joyce Lightle, The Burlington Record

The Economic Impact of Prison Closing in Burlington

Rol Hudler

Burlington, located in Kit Carson County, is a community of 4,254 people along I-70 on Colorado's Eastern Plains. Aside from the impact of the Great Recession, the city has recorded consistent employment and population growth over the past two decades. Part of this growth has been attributable to a major local employer—the Kit Carson Correctional Center.

Corrections Corporation of America (CCA), headquartered in Nashville, announced in June it would be closing the Kit Carson Correctional Center by the end of July.

The private prison population in Burlington has been declining over the past several years as it has been throughout the state of Colorado. At the time of the announcement, the Kit Carson Correctional Center had only 402 inmates. The facility could house approximately 1,450.

In an attempt to keep the facility open in Burlington, the state legislature had approved an increase in operating expense of $3 million for the Kit Carson Correctional Center. Officials from CCA came back and informed the state of Colorado it would need an increase of $6 million to keep the doors open.

The state could not justify the figures desired by CCA and the decision was made by CCA to close its Burlington facility.

The closure is a huge hit to the economy of Burlington as well as several nearby communities.

At the time of the closing, the prison had 142 employees and 402 inmates. Of the 142 employees, 64 were correctional officers. CCA offered some positions in other facilities it owns to Burlington employees, and the Colorado Department of Corrections also hired personnel from the Burlington prison.

Of the 142 employees, 70 resided in Burlington; 44 in Goodland, Kansas (which is 30 miles east of Burlington); approximately 15 in Stratton; and the remainder in the surrounding area.

The loss of workers in the community is the largest concern. It is estimated the loss of employee wages could exceed $2.4 million to the City of Burlington.

The assessed valuation of Kit Carson County is $154,589,494. CCA's prison in Burlington had an assessed valuation of $15,175,233. CCA has been responsible for 9.8% of the assessed valuation in Kit Carson County.

This past year, taxes collected in Kit Carson County were $12,200,655. Of that amount, CCA paid $1,217,998, which represents 10.1% of total tax revenue collected.

The city's largest hit from the closure of the prison will be in utilities. Burlington owns the electrical system and provides water and sewer service to the facility. The total utility bill from the prison in 2015 was $619,367. CCA represented by far the largest utility customer in the city's system.

CCA also paid the city 25 cents per inmate per day. This figure totals close to $65,000, which is calculated based on the past inmate population. It would have been considerably higher had the inmate population not declined during the past four years.

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Obviously, these losses represent a severe hit to the Burlington economy.

Despite the closure, the Burlington economy and community have exhibited resiliency. It has had substantial business growth over the past year. Several of these firms are large, which will help lessen the blow of the prison closing. Tax rolls will benefit from them next year.

An interesting side note to the prison closing is school enrollment. A total of 53 students were enrolled in the school district whose parents worked for CCA. Because of this, officials were anticipating a large drop in students.

LOCAL TAXES PAID BY CCA, 2015

Entity	Amount
Kit Carson County	$576,792
Re-6J School District	$415,753
Fairview Cemetery District	$8,650
Fire Protection District	$31,354
Health Service District	$45,528
City of Burlington	$130,515

Source: Kit Carson County Treasurer.

However, the first day of school, the district had an increase of 15 students.

CCA, along with Kit Carson County and the City of Burlington, are working together to get the facility reopened as soon as possible. This is a huge task as inmate population throughout most of the United States has been declining.

The Kit Carson Correctional Center is one of CCA's newest facilities, and it is located on I-70. These are plus factors as the company aggressively markets the prison to other states.

Rol Hudler is with the City of Burlington and may be contacted at rol.hudler@burlingtoncolo.com.

Northeast Colorado Agriculture – It Means Much More than Corn and Cows

Trae Miller

Northeastern Colorado is the agricultural capital of Colorado. With the four top ag-producing counties in the state located in this region, that point is hard to argue. It is something the region is also very proud of; however, it is equally important to highlight the diversity of the type of ag production the region has, as well as the other industries that are thriving in the area.

Ag in Northeast Colorado is not just corn, wheat, and cattle. The area historically pioneered ag diversification in the form of sugar beets and beet processing; dairy, beef, and commercial bison processing; and the development of grains and field crops for human consumption. Alternative crops like soybeans, canola, and most recently, industrial hemp are also being developed, and Sterling is home to the state's first ethanol plant, Sterling Ethanol.

One thing the Northeast region has done well is vertical integration in the ag sector. Not only does it have cow-calf operators that raise calves, but it also has feed yards that take the calves and feeds them with local crops. The beef plant in Fort Morgan then commercially processes the animals and the beef ultimately ends up on the plates of consumers around the state. Similarly, Sterling Ethanol uses locally grown grain to process into ethanol, generating feed by-products that are then fed in the feed yards around the region. Other elements of the beef supply chain include innovative businesses like Performance Plus, which formulates proprietary liquid feed supplements to increase production while lowering input costs of animal feeding operations. Logan County even capitalizes on the "back-end" of animal production. Humalfa is a company that partners with area cattle feeders to turn the manure waste into high-powered organic fertilizer. The product is bagged for sale in retail outlets and is available by the truckload for area farmers to spread on their fields. The fertilizer helps farmers to grow more crops to be fed to more cattle, which then creates more Humalfa fertilizer. We truly have the complete cycle.

There are other ag products integrated in the same but less involved way. Trinidad Benham is an ag processing company located in Logan County. It processes specialty crops, such as specific bean varieties, that are grown in the Northeastern area and around the country. Those crops are cleaned, processed, and packaged in Sterling. Ultimately, those packages are sold to consumers through retail outlets such as Walmart and food service companies that supply restaurants.

Millet is another niche product that is being produced in Logan County. The facility not only processes locally grown millet, but brings in product from other states, too. Clean Dirt Farms, west of Sterling, processes the grain by cleaning and dehulling it to make it ready for human consumption. As a gluten-free product, it has become popular and can be purchased in stores like Whole Foods and Sprouts along the Front Range.

The same integrated supply chain model happens with many different crops and facilities across Northeast Colorado. The Leprino Foods' cheese- and dairy-processing facility in Fort Morgan processes local milk from dairies across the northeast region, from Yuma to the Front Range. There is bison processing in Brush, which has opened new opportunities for local cattle feeders to diversify by feeding bison that are sent to that facility. Oregon Trail Jerky, located in Wiggins, Colorado, turns regionally raised and processed beef into a finished product that is sold to consumers across the country.

Similar to what has been done with these agriculture-driven products, Northeast Colorado is now eyeing industrial hemp as the next opportunity for a vertically integrated production system. The region obviously has the ag production capability, the land, the necessary water, the expertise, and innovative mentality. The next step is to start identifying a commercial and viable market with a formal outlet for the crop and set up processing to create the necessary opportunities. New challenges accompany this opportunity due to legal issues and the nature of the plant. Those barriers are coming down so there is hope we can have the same success with hemp as the region has had with so many other ag products. The potential of this new cash crop is also driving innovation. Equipment, growing, and harvesting techniques have had to be developed and adapted to fit the unique properties of the plant. This forces the farm community to be innovative with finding new solutions to production challenges.

When most people think of agriculture and Northeast Colorado they picture some cows, maybe some corn and wheat, but rarely do they realize the scope of what agriculture in Northeast Colorado means. Yes, it is the main lifeblood in many cases, but it is also all of yours! As you have your barbecue next summer, meat-filled football parties, or simply buy groceries, remember the impact Northeast Colorado has on your opportunity to eat those foods, and likewise, remember the effect you have on rural Northeast Colorado economies when you buy those foods.

Although agriculture is what built the Northeast communities and continues to sustain them, the region has much more to offer. Specialized manufacturing and fabrication businesses are thriving in the region. Due to the area's deep agricultural roots, pun intended, the Northeast and Logan County is home to successful innovation. Farmers have adapted to be very resourceful and innovative when it comes to solving problems and challenges within their operations. That mentality has come down through the generations to create a region of problem solvers and entrepreneurs, which has helped develop a strong manufacturing sector.

Examples of these businesses in Logan County include ag-related companies such as Nichols Tillage Tools and Graham Electric Planter; multiple specialized fabricators, such as Industrial Welding; Rylind Manufacturing; and Frontier Fabricating. In addition, a strong sector of machinists and shops supports the oil and gas industries, including general

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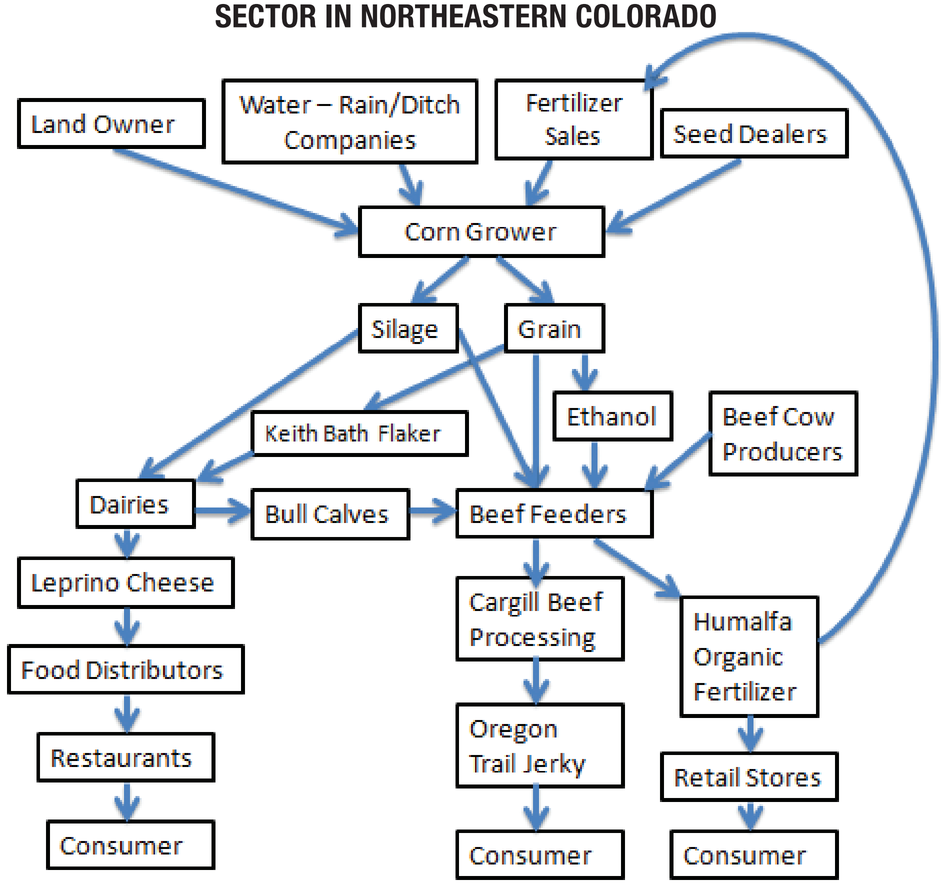
VERTICALLY INTEGRATED AGRICULTURAL SECTOR IN NORTHEASTERN COLORADO



One example of the vertical integration existing in the agricultural sector of Northeast Colorado centers around corn production. This is only one small piece of the big picture.

machining companies Luft Machine, Skylyne Machine, and Farley Machine Works. Also, Wisdom Rides is an example of a unique niche manufacturer in the region.

Ag-related manufacturing is yet another aspect of the thoroughly integrated agricultural sector of the region. Companies like Nichols Tillage Tools and Graham Electric Planter help keep area producers on the cutting edge of technology and ensure that equipment avoids costly down time. Nichols Tillage Tools relocated the family business to Sterling over 30 years ago. The company manufactures various replacement components for farm implements that are typically used to cut through the soil and therefore wear out quickly. Using proprietary hard surfacing processes Nichols produces high-quality shields and blades that are shipped around the country and the world. In a recent expansion, Nichols constructed a new state-of-the-art laser cutting facility to enhance the flexibility of its operation. According to owner Rob Nichols, this allows them to quickly adapt to different product orders and produce shorter runs of material than having to change out their forge dies. With more 100 employees, Nichols is a major player in the Logan County economy.

Another unique ag-related manufacturer is Graham Electric Planter. Graham is a family-owned company founded in 2008 to solve problems the family was facing in its own farming operation. The founder of the company began work on its current technology after adapting data collection systems that he had developed for the drag racing industry. In 2011, Graham sold its first commercial units. Sadly, in 2015 the young founder, Toby Graham, passed away from an unexpected brain aneurism; however, with the help of his brother Marty and Marty and Toby's parents, the company has continued to thrive and is entering global markets. Their products are electric drive motors that interface with other technologies to provide precision to ag producers while planting their crops. The new versions of Graham equipment allow farmers to adjust their planters as they move to an accuracy level within an inch. This technology also allows them to run the system with devices they are already familiar with, either in cab monitors or in a simple touch screen tablet. One of the key features of Graham equipment is the ability to control each row of the field individually. By interfacing their software with agronomist data records a customized prescription that can be tailored to individual soil types and moisture to increase the efficiency of ag producers. Graham systems help farmers reduce costs, increase yields, and save time. This type of technology will ensure the American farmer is able to feed the world well into the future.

Logan County is fortunate to boast some other very unique manufacturing businesses and fabricators that serve other industries. One of these is focused on the oil and gas industry, but like many others, regularly works with businesses outside that sector. Frontier Fabricating produces oil and gas storage tanks in Sterling. Frontier is a start-to-finish shop that works with major oil exploration and drilling companies across the multistate region. The shop is unique in its ability to work with very large tanks, first building them on their sides then standing upright to finish. Frontier uses robotic welders for part of the process to ensure a high-quality, leak-proof product. The company also has the ability to produce airtight tanks such as those used by septic tank pumping companies. A specialized focus, with the ability to be flexible with the jobs they take, ensures Frontier is successful while heavily tied to such a cyclical industry.

Industrial Welding & Supply Company, in Sterling, is another specialized manufacturer that focuses largely on building Colt truck dump beds and trailers. This past summer it celebrated 50 years of business in Sterling. Like many of the shops in the area, the company has learned to be flexible and adapt to demand. Industrial Welding & Supply has built custom trailers for frac heaters and hot oil tanks, for example.

Other unique businesses include Rylind Manufacturing located in Atwood. Rylind bought an existing shop in 2008 and added the location to its portfolio of other assets. The company manufactures specialized heavy equipment attachments, such as loader buckets, road grader blades, and plows for snow removal. Though the local shop is focused on snow removal attachments, it regularly helps area farmers with various projects as they come up.

Probably the most unique of all manufacturing or fabricating businesses in Logan County is Wisdom Rides of Merino. Wisdom began its core business of trailer mounted carnival rides in 1969. The family-owned business began with an innovative idea from Jerry Wisdom—mounting a Ferris wheel on a tank hauler trailer for their traveling carnival in 1957. That project kicked off the concept of creating portable carnival rides that were easier and faster to assemble for traveling shows. Today, the business is operated by the next generation of the Wisdom family, continuing the work of creating new attractions and serving the global entertainment world. A recent factory tour revealed the construction of a small roller coaster for children in Saudi Arabia. Wisdom's has also recently completed projects for Santiago, Chile, and two rides for Da Nang, Vietnam. The company employs 35 people and has been a staple in Logan County and the small town of Merino for decades.

It is clear to see that agriculture is a big part of Northeastern Colorado, and that means so much more than planting seeds and harvesting grain. The sector is a spider web of industry, production, processing, and even manufacturing that supports the region. Agriculture has bred an innovative and entrepreneurial way of thinking and doing business that resonates across all sectors of manufacturing, fabrication, and industry in Northeast Colorado.

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Morgan County: Investing in Infrastructure for the Future

Josh Miller and Chelsea Gondeck

In Colorado, water is more precious than gold, and energy production supplies a wide variety of jobs. As a major industrial, agricultural, and manufacturing hub of the northeast region, Morgan County and its 28,254 residents share a similar perspective with the state.

In the 1990s, Morgan County saw rapid natural population growth and net migration. In the early 2000s, the county experienced slower growth with slight declines during the Great Recession. Since that time, growth has continued at a much slower pace. However, Morgan County is projected to reach nearly 40,000 in population in the next 15 years. With increased population comes an increased demand on resources. Anyone involved in water and energy infrastructure knows that these resources require years of planning and preparation. Morgan County has been extremely progressive in securing the appropriate resources for the expected growth and expansion. With leadership from several entities, the county has secured resources for decades to come.

Water Resources

Since the early 2000s the City of Fort Morgan has been a recipient of water supply from the Colorado-Big Thompson (C-BT) Project. The project, which began construction in the late 1930s, provides water to a multitude of municipal, rural-domestic, and industrial entities in northern Colorado and has served as Fort Morgan's single municipal provider since 2000. The project collects water from the Colorado River Basin on the Western Slope and uses a complex system of reservoirs, pipelines (including the 13.1-mile Alva B. Adams Tunnel), and pump plants to deliver snowmelt to the Eastern Plains.

Increasing demand has limited the availability of additional C-BT water, so the City of Fort Morgan wanted to find another source of drinking water to supply the city into the future. That supply needed to be of similar quality to C-BT and, in order to be most cost effective, deliverable through the current C-BT infrastructure. In 2002, the City of Fort Morgan joined with 14 other participants, including Morgan County Quality Water, to pursue the Northern Integrated Supply Project (NISP), a water storage project that, through the work of Northern Water, met these criteria. NISP will consist of two reservoirs (Glade and Galeton), pumping plants, and pipelines that will provide reliable water supplies from the Rocky Mountains to 15 Northern Colorado water partners. With a storage capacity of 170,000 acre-feet, Glade Reservoir will be larger than the widely known Horsetooth Reservoir. While the construction of the reservoir will require several miles of U.S. Highway 287 to be relocated, it will provide a recreational amenity to the state as well as 40,000 acre-feet of fresh mountain water to each partner. NISP will also store the abundance of water over and above the legal requirements of interstate river compacts that has been exiting the state to neighboring Nebraska; more than three million acre-feet of water has been allowed to flow out of Colorado unnecessarily since 2009 alone, simply because there was nowhere to store it.

Photo courtesy of Josh Miller

Energy Production

With Colorado's Renewable Energy Standard requiring 30% of electricity to be produced from renewable sources by 2020 (including 3% from distributed generation), the energy sector in Colorado will only continue to grow. As the most populous municipality and the county seat, the City of Fort Morgan has been historically active in pursuing a diverse portfolio of energy sources. The city owns and operates five utilities, one of which is the Light & Power Department that derives approximately a third of its supply from renewable sources. This capacity is provided by two Western Area Power Administration (WAPA) hydroelectric projects: the Colorado River Storage Project (CRSP) and Loveland Area Projects (LAP). CRSP and LAP produce hydroelectricity throughout the Colorado and Missouri river basins, and Fort Morgan has been receiving electricity from these WAPA projects since the early 1950s. Especially interesting is the cost effectiveness of such hydroelectricity. WAPA electricity can cost as much as 50% to 70% less than electricity from the city's other sources.

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Photo courtesy of Josh Miller

The city has also been exploring other renewable sources to meet the demand of both population growth and regulatory mandates. Several years ago Fort Morgan staff began discussions with a private developer, Creative Energy Systems (CES), on the potential of a waste-to-energy facility. Essentially, the 15-megawatt plant would produce energy by converting municipal solid waste from several counties through a proprietary pyrolysis process. The pyrolysis process would condense the waste into pellets that would be heated in an oxygen-deprived chamber, creating a gas byproduct that is converted to electricity. While the project has been under review for a number of years by collaborating agencies, the city is optimistic that the proposed facility will begin construction in the next 12 to 18 months. The project would also provide the region with a new primary employer, further diversifying the local economy, and contribute to the city's desire for local control through the establishment of a distributed-generation facility.

Broadband

Perhaps one of the most exciting investments the county is pursuing is broadband. In 2005, the Colorado State Senate produced controversial legislation (Senate Bill 152) on restricting a municipality's ability to provide high-speed bandwidth data transmission. However, with the Federal Communications Commission's challenge to overcome the digital divide created by older networks, the state's Department of Local Affairs established a broadband program to enhance planning efforts. Taking advantage of this opportunity, Morgan, Washington, Weld, Phillips, Sedgwick, Yuma, and Logan counties, through the Northeastern Colorado Association of Local Governments, hired a consultant to develop a strategic plan for implementing a regional broadband system.

For several years prior to the regional system planning, the City of Fort Morgan had been operating and maintaining its own fiber backbone to all of the city's anchor institutions, as well as the county and the local school district. This was possible due to the city leading the first successful ballot initiative in 2009 to opt out of SB-152, allowing the organization to pursue this vital asset. However, as demand for broadband Internet grew, city staff began researching what other communities had been doing—specifically, the Southwest Colorado Council of Governments' project and Longmont's gigabit network. With increased urgency from the city council to provide citizens and local businesses with a necessary service, in 2015 Fort Morgan's utilities director, in coordination with the newly established Economic Development and Marketing Department, released a request for proposals for the design and engineering of a citywide fiber-to-the-premise network. With approximately 5,400 utility customers, the city intends to reach every serviceable address with gigabit service in the next several years. The design and engineering are scheduled to be completed shortly, but the city must still decide how the system will operate. Fort Morgan could be the owner, operator, and service provider, or simply own the infrastructure and partner with a private internet service provider for customer service. Regardless, the city intends to have shovels in the ground by early 2017 to have the first phase of construction complete by 2018.

As it has historically illustrated, the City of Fort Morgan will continue to proactively address the growing infrastructure requirements as the county's population continues to diversify and expand. As the Capital of the Plains, Fort Morgan's mission states the desire to be "the city of choice for ourselves and future generations—beautiful, clean, and safe." CBR

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