



ECONOMIC RESILIENCY PLAN

FOR THE COMMUNITY OF MADISON COUNTY, KY

Prepared by the Bluegrass Area Development District and
MWM Consulting, LLC for the U.S. Department of Defense
Office of Local Defense Community Cooperation

This study was prepared under contract with the Bluegrass Area Development District, in partnership with MWM Consulting, with financial support from the Office of Economic Adjustment, Department of Defense. The content reflects the views of the Bluegrass Area Development District and MWM Consulting and does not necessarily reflect the views of the Office of Economic Adjustment.

Abstract

The destruction of the chemical weapons stockpile at the Blue Grass Army Depot in Richmond, Kentucky, originally comprised of 523 U.S. tons of weaponized blister and nerve agents in rockets and projectiles, is expected to complete Operations Phase by September 2023. The Economic Resiliency Plan provides a baseline for federal and local governments to ensure appropriate transition of jobs, mitigate the economic impact that could result from the release of an 1,800-person workforce, and provides a capture strategy to ensure that the jobs created by the project activities will stay within the region. Madison County hopes to diversify the regional economy and adjust its dependence on existing defense programs, and to recruit new industry to the area to employ this highly skilled workforce. The Economic Resiliency Plan focuses on the following areas of study: Financial Impact of the Chemical Weapons Demilitarization Project, Workforce, Market Assessment, and Target Industry Analysis coupled with workforce retention strategies.

May 2023
Final Report



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Section 1

Executive Summary

Executive Summary

The Blue Grass Army Depot (BGAD) is a 14,494-acre military installation in Madison County, Kentucky, providing conventional ammunition services, chemical defense equipment management, and manufacturing capabilities for the Department of Defense (DOD). Two-hundred twenty-five acres of the property is dedicated to chemical weapons storage and destruction and requires the participation of over 1,800 federal and contract employees. The Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP) is safely destroying the chemical weapons stockpile stored at the BGAD, which was originally comprised of 523 tons of weaponized blister and nerve agents. Stockpile destruction operations must be completed by the Chemical Weapons Convention international treaty commitment of September 30, 2023, and the Congressional mandate of December 31, 2023.²

The Office of Local Defense Community Cooperation (OLDCC) has identified a need for an economic diversification study for Madison County, Kentucky. Furthermore, OLDCC has determined that a substantial portion of Madison County is economically dependent on Department of Defense employment. There are currently no formal plans to promote and direct the reuse of the 1,800 highly skilled and trained employees connected to this mission to future employment opportunities within the county borders. It is expected there will be a gradual release of these employees between 2023-2026 into the local workforce.

The chemical demilitarization mission has been a significant contributor to the county's economy. Madison County has seen more than 1,800 new jobs, over \$1.1 billion in local payroll tax, and \$111 million spent in Madison County and surrounding counties. The Depot currently provides an average annual economic impact of approximately \$200 million and is the second largest per capita employer in Central Kentucky. Moreover, the project has injected over \$1.08 billion into the region via payroll and spent over \$190 million with Kentucky companies. Lastly, Madison County has received millions of dollars in annual funding from the Chemical Stockpile Emergency Preparedness Program (CSEPP) funding, which finances specialized training, additional public safety equipment, and an 800-megahertz radio system used in emergencies.

The completion of the chemical weapons destruction mission and the potential departure of the 1,800 highly paid, highly skilled workers will have far reaching and adverse financial implications on the local community and the region if workforce retention does not take place. This study is intended to provide community leaders with data-driven recommendations for workforce retention and industry attraction outside of the Blue Grass Army Depot base to ensure a sustainable transition of jobs in the region and to mitigate the adverse economic impact that may result from the completion of the chemical weapons destruction mission. Economic development strategies, specifically workforce retention and new industry attraction, must be prioritized in the immediate future to create employment opportunities for decommissioned employees and provide new revenue streams for the community.

1. Program Executive Office Assembled Chemical Weapons Alternatives, Facts: Chemical Munitions at Blue Grass <https://www.peoacwa.army.mil/2022/10/07/facts-chemical-munitions-at-blue-grass/>

2. Program Executive Office Assembled Chemical Weapons Alternatives, Facts: Chemical Munitions at Blue Grass <https://www.peoacwa.army.mil/2022/10/07/facts-chemical-munitions-at-blue-grass/>



Executive Summary, Cont.

Together, with a grant from OLDCC, the Bluegrass ADD, MWM Consulting, and Madison County leadership are investigating the possibilities for retaining the skilled personnel included in the decommission plan through a combination of existing industry needs and new industry recruitment via the Economic Resiliency Plan.

This study represents an initial analysis of the chemical weapon demilitarization workforce and wage assessment; an economic overview of Madison County, including employment and wage trends, industry clusters, commuting patterns, local and state business climate including tax incentive programs and permitting & regulatory procedures, transportation and accessibility, utility infrastructure, vacancy rates and construction costs, education, and quality of life in Madison County; and recommended target industries to attract for workforce retention.

The FY2023 National Defense Authorization Act (NDAA) includes a provision that directs the Secretary of Defense, in consultation with the Secretary of the Army, to conduct a feasibility study to assess potential missions, plants, or industries feasible for Army or the U.S. Department of Defense needs following the completion of the chemical demilitarization mission at the BGAD. Facility reuse and utility retention will also be analyzed. The feasibility study is required to be completed and submitted to Congress by March 1, 2023. As of April 1, the feasibility study has not begun.



Executive Summary, Cont.

The findings of this study point to an overwhelming opportunity for the community to use the potential loss of workforce for existing industry growth and new industry recruitment. The chemical weapon demilitarization workforce is highly skilled with a multitude of skillsets and levels of experience in an industrial-type atmosphere. MWM Consulting has been determined the majority will be well-suited to transition to an industrial related project. Thus, many of our findings will be focused on industrial and manufacturing activity. The following industries would be well-suited to absorb the workforce becoming available: 1. Automotive/EV related projects, 2. Food & Beverage, 3. Data Centers, 4. Chemical/Petrochemical, and 5. Primary Metals.

Madison County possesses several sites and buildings available throughout the county and the cities. However, most publicly controlled sites and buildings are large enough to handle the average acreage or square footage requests being seen by the Cabinet for Economic Development, and/or adequate utility infrastructure is not in place. It is recommended that the three governmental bodies collaborate on a joint venture project large project together. Ideally, ending in ownership (or optioning) a large site together. Lastly, it is recommended that the community use the specific occupation and wage details provided within this study and partner with the Cabinet for Economic Development in the recruitment of new industries. Through regional and state collaboration, there will be one consistent message which will increase the likelihood of success.





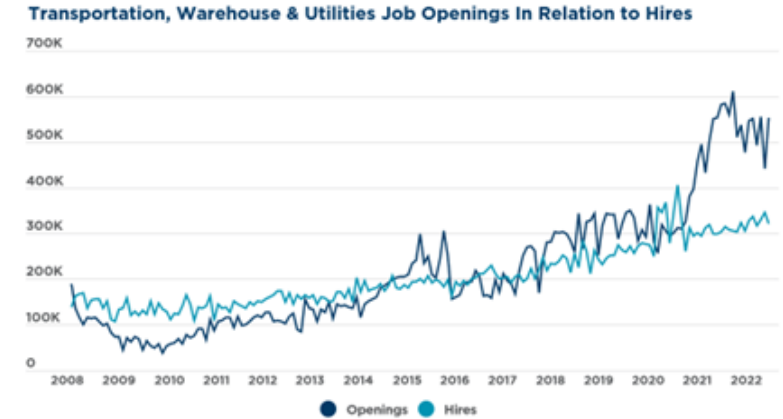
Section 2

Introduction

Introduction

There are many considerations when a company is evaluating and selecting an industrial site on which to locate their new or expanding industry. Availability of skilled workforce, sufficient acreage or square footage of existing facility, utility infrastructure, competitive state and local incentives, and overall operating costs are primary considerations when evaluating a location for a distribution center or manufacturing facility.³

Manufacturers continue to struggle to fill critical jobs as companies navigate America's labor shortage. A recent survey by Area Development Magazine found availability of skilled labor to be the second most crucial factor in location priorities, as industrial job openings continue to exceed the available workforce.⁴ The most recent survey conducted by Job Openings and Labor Turnover Survey found that the number of manufacturing, transportation, warehouse, and utility job openings have escalated to historical numbers while hiring trends display a tight and competitive labor market.^{5,6} Furthermore, a recent study by Deloitte and The Manufacturing Institute concluded that the manufacturing skills gap in the United States could result in 2.1 million unfilled jobs by 2030.⁷



Source: Job Openings and Labor Turnover Survey, 2022
Graphs created by Cushman & Wakefield

3. Site Selectors Guild, 2022 The State of Site Selection

4. Cushman & Wakefield, The War for Industrial Talent <https://www.cushmanwakefield.com/en/united-states/insights/war-for-industrial-talent>

5. Cushman & Wakefield, The War for Industrial Talent <https://www.cushmanwakefield.com/en/united-states/insights/war-for-industrial-talent>

6. U.S. Bureau of Labor Statistics, Job Openings and Labor Turnover Survey <https://www.bls.gov/ilt/>

7. Deloitte, Creating pathways for tomorrow's workforce today <https://www2.deloitte.com/us/en/insights/industry/manufacturing/manufacturing-industry-diversity.html>



Introduction

Among the Site Selectors Guild consultants who primarily advise industrial location decisions, only 4% place workforce as the top location decision factor. While workforce stays of paramount importance, the limited inventory of sites/buildings with adequate utility infrastructure has become a more principal factor than workforce availability.⁸

Automotive manufacturing and related industries are a primary employer in Madison County's economy and have the potential to absorb a portion of the BGCAPP workforce. However, while existing industries in Madison County have job vacancies, the demand is not great enough to reabsorb the projected available employees into the Madison County workforce. The community can work to offset the potential loss of workforce by proactively anticipating the release of employees and coupling site acquisition with strategically marketing the available workers to existing industries, site selection consultants, and targeted industries.

The lack of industrial sites combined with substantial infrastructure and employment needs have challenged industrial consultants to find suitable sites and caused a delay in project schedules. The quantity, skillsets, and high level of expertise of the chemical weapons workforce at the BGAD coupled with a predictable project timeline and occupational release dates positions Madison County to provide a real solution to America's workforce shortage. As industrial companies continue to expand in the area and new businesses locate in the community and surrounding counties, the release of employees from the chemical weapons mission creates a pipeline of highly skilled workers who have worked in a similar environment to an advanced manufacturing operation. It is our recommendation that the community focus on developing a strategic, long-term plan for retaining these workers in Madison County and the regional workforce and using the information as a recruitment tool for new industry.⁹

8. Site Selectors Guild, 2022 The State of Site Selection

9. Site Selectors Guild, 2022 The State of Site Selection

INDUSTRIAL PROJECTS: AGREEMENT WITH STATEMENTS ON REAL ESTATE, SITES AND BUILDINGS (1=DON'T AGREE AT ALL, 5=COMPLETELY AGREE)

Projects schedules are being delayed due to a lack of industrial sites



Sites and building availability is a more important factor than workforce availability for my industrial clients



There is "nowhere left" for my clients to go due to the lack of industrial sites and buildings



States and provinces are adequately investing in infrastructure to address the lack of sites and buildings



% AGREEMENT ON WEIGHTING OF TALENT IN LOCATION DECISIONS BY SECTOR OF SPECIALIZATION (OFFICE VERSUS INDUSTRIAL)

The availability of quality talent is the single-most important consideration during **office location engagements**



The availability of quality talent is the single-most important consideration during **industrial project engagements**



Introduction

Post Chemical Weapons Demilitarization Economic Resiliency Committee

The Post Chemical Weapons Demilitarization Economic Resiliency Committee is an advisory committee made up of local elected officials and stakeholders from the City of Berea, City of Richmond, and Madison County Fiscal Court to provide support and guidance to grantee Bluegrass Area Development District (BGADD) and MWM Consulting related to the Economic Resiliency Plan. Advisory members and grantees met monthly or bi-monthly to discuss data collection, new discoveries, and the development of the Economic Resiliency Plan. Local employers, industry, and chemical demilitarization contractors and the Cabinet for Economic Development were engaged to collect data around the existing and force in the region. This group's planning is part of the Federal grant awarded to prepare a plan for workforce development in a post-CSEPP and post-demil community.

MWM Consulting, a full-service economic development and management consulting firm specializing in commercial real estate advisory, site selection and location analysis, and tax incentive negotiation services for new and expanding industries contracted with the Bluegrass ADD in the development and implementation of the Economic Resiliency Plan. The firm collected and analyzed economic data pertaining to Madison County's existing industry, workforce and residents, and individuals employed by private and governmental agencies involved in the chemical demilitarization mission. MWM used the data to conduct an Asset and Challenges Assessment, ultimately identifying future opportunities to bring a competitive industry to the community based on the available workforce and skill sets that already exist within the market.

Meeting Dates

The Post Chemical Weapons Demilitarization Economic Resiliency Committee agreed to meet the first Thursday of every month in the Madison County Fiscal Court Annex. Meetings took place in-person unless otherwise noted: January 6, 2022; February 3, 2022; March 3, 2022; April 7, 2022; May 5, 2022; June 2, 2022; July 7, 2022; August 4, 2022; September 1, 2022; November 3, 2022 (via zoom); January 5, 2023; and February 2, 2023.

Advisory Members

Madison County

- Reagan Taylor, Judge Executive
- Jill Williams, Deputy Judge Executive

City of Berea

- Bruce Fraley, Mayor

City of Richmond

- Robert Blythe, Mayor
- David Stipes, Economic Development Director

Blue Grass Area Development District

- David Duttlinger, Executive Director
- Amy Glasscock, Workforce Director
- Rolando Thacker, Business Services Manager

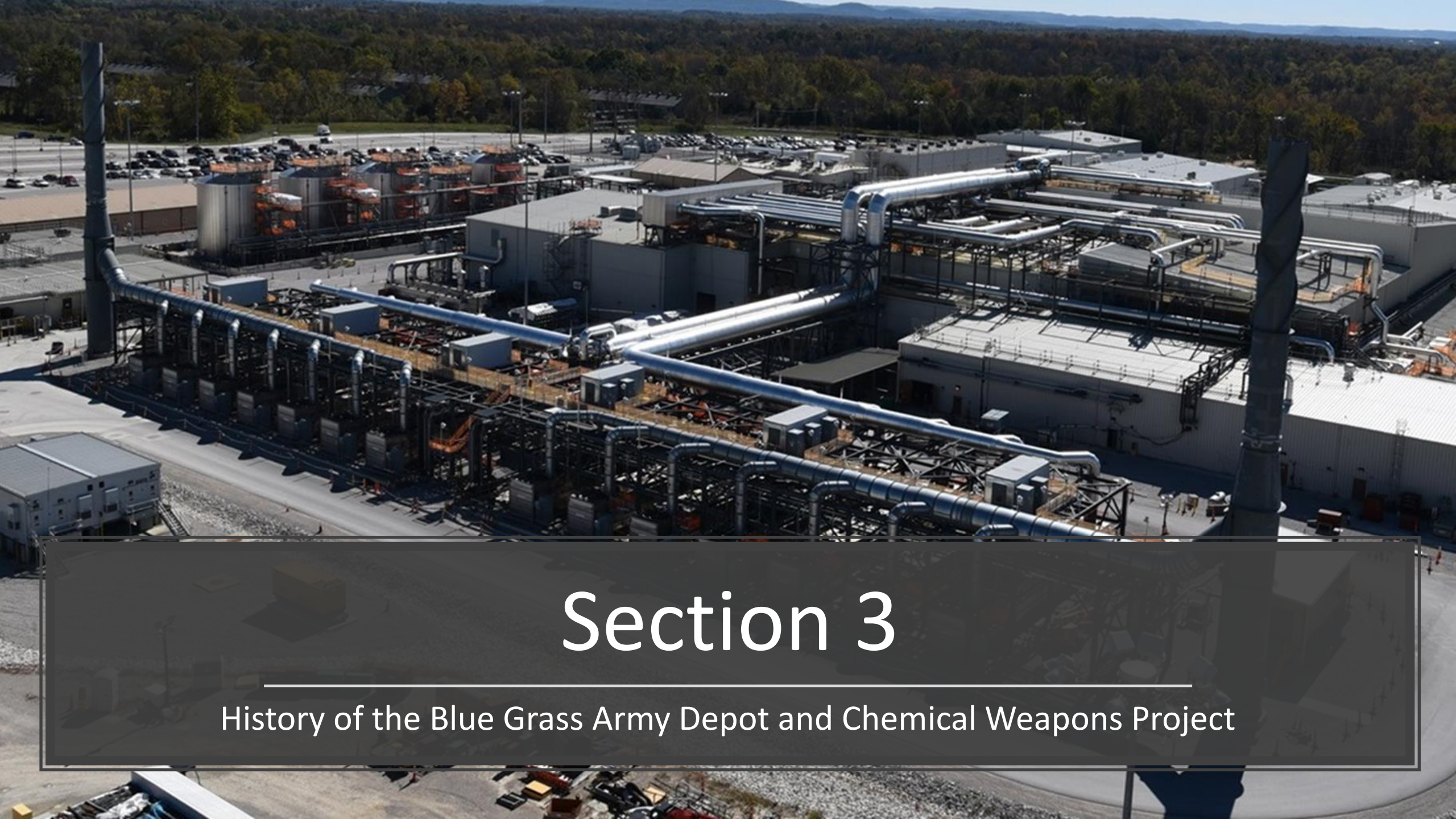
Chemical Destruction Community Advisory Board

- Craig Williams, Co-Chair

MWM Consulting

- Lucas Witt, Co-Founder & Partner
- Elizabeth Carter, Project Manager
- Audrey Grace Hacker, Project Manager





Section 3

History of the Blue Grass Army Depot and Chemical Weapons Project

History of the BGAD & Chemical Weapons Project

The Blue Grass Army Depot (BGAD) is a government-owned, government-operated (GOGO) Department of Defense (DoD) installation with multiple missions and projects that support the U.S. Joint Warfighter. The BGAD holds approximately 1,200 buildings/902 igloos with a storage capacity of 3.2 million square feet over 14,494-acres. The installation provides conventional ammunition services, chemical defense, and non-lethal combat equipment through shipping, storage, and maintenance. Capabilities include industrial services support; ammunition maintenance, renovation, disassembly, and demilitarization; thermal arc coating for Air Force bombs; water washout facility with flaker belt; Molten Salt Research and Development Facility; ultrasonic testing for mortar ammunition; Chemical Material Surveillance Program; quality assurance and joint logistics support; and ammunition life cycle management. The BGAD also serves as a large training ground for service members.

BGAD is one of five ammunition distribution centers and one of only two remaining storage sites for the United States' National Chemical Weapons Stockpile. The stockpile was originally comprised of more than 500 tons of weaponized blister agent (designated as H agent, also called mustard agent) and nerve agents (two types: VX and GB) in rockets and artillery projectiles. Under international treaty obligations by the Chemical Weapons Convention to destroy stockpiled chemical weapons, the Army is committed to safely destroy these weapons by the mandated date of September 30, 2023. U.S. public law mandates stockpile destruction by December 31, 2023.

In 2003, Bechtel Parsons Blue Grass (BPBG) and its teaming partners – Amentum, Battelle Memorial Institute and GP Strategies - was awarded the systems contract by the DoD's Assembled Chemical Weapons Alternative Program to design, build, systemize, test, operate, and close the Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP) to destroy the chemical weapons stockpile at the BGAD. BGCAPP is a full-scale pilot plant designed to safely and efficiently neutralize the Blue Grass chemical weapons nerve agent stockpile.

Project Stages	Description	Status
Stage 1: Design	The facility was specifically designed to safely and efficiently destroy chemical weapons.	Complete
Stage 2: Construction	Construction was led by a team that has successfully designed, built and/or operated all the chemical destruction facilities in the United States.	Complete
Stage 3: Systemization	All machinery, equipment and processes were operated and tested with water or stimulants to ensure each function together as an integrated system.	Complete
Stage 4: Operations	Once systemization was satisfactorily completed, operations began with the gradual introduction of actual agent-filled munitions into the system.	Underway
Stage 5: Closure	Encompasses the planning and preparation, disposal of secondary waste, facility and equipment decontamination and decommissioning and demolition of facilities in accordance with public law and U.S. Army direction. Environmental permits are closed, personal property is dispositioned, real property is returned to Blue Grass Army Depot and the contract is closed.	Planning



History of the BGAD & Chemical Weapons Project

Destruction operations began in 2019 when chemical agent munitions were introduced into the system. By November 2022, 288 U.S. Tons of chemical agent had been destroyed. Upon completion of stockpile destruction, the fifth project stage, Closure, will commence and the facilities will be closed in accordance with all applicable laws, requirements, and regulations. Closure phase will continue for an additional 3-4 years following chemical weapons destruction operations for decontamination, decommissioning, dispositioning, and administrative closeout. The disposition of the rest of the facility has not yet been determined and will be negotiated among the Commonwealth of Kentucky, ACWA, and the BGAD.

A major employer in the region, the chem demil mission requires over 1,800 extensively trained, knowledgeable, and skilled employees working to ensure the safe destruction of the stockpile, many of whom have participated in closure activities at the seven previous U.S. chemical demilitarization sites. Employees in the Decommission Plan include Blue Grass Chemical Activity (161 employees); Bechtel National, Inc. (297 employees); Parsons (333 employees); Amentum (530 employees); Battelle (261 employees); GP Strategies (52 employees); PEO ACWA (33 employees); and Blue Grass Army Depot Security associated with BGCAPP and the chem demil footprint (175 employees).

It will be necessary to retain the highly skilled, valuable workforce for a period during Closure Phase to ensure the final part of the mission is complete. However, once Closure Phase is initiated, certain workforce positions may become non-essential to the functioning of the plant or for the Closure Phase, and those workforce members will be released from their assignment. The Bechtel Parsons Blue Grass Joint Venture (JV) will collectively develop program milestones and an integrated milestone schedule. Each contractor and federal employer will have their scope within the milestones and will develop an anticipated rollout schedule based upon milestone activity. Prior to milestone achievement, employers will provide employees with anticipated occupational release dates. Once a milestone is reached, pre-identified employees associated with its completion will be released from the project.



PROGRAM EXECUTIVE OFFICE
ASSEMBLED CHEMICAL WEAPONS ALTERNATIVES



History of the BGAD & Chemical Weapons Project



Timeline of Mission Activities

Chemical Destruction Mission Completion, September 2023 - Stockpile destruction operations must be completed by the Chemical Weapons Convention international treaty commitment of September 30, 2023, and the Congressional mandate of December 31, 2023. Blue Grass Chemical Activity is scheduled to complete shipment of all remaining chemical rockets to the BGCAPP plant by September 2023. When the last chemical agent is drained and the final rocket destroyed, Bechtel Parsons Blue Grass will receive Treaty Completion credit and the chemical destruction mission will be complete.

Storage Mission Completion, April 2025 - At the same time, Blue Grass Chemical Activity is returning the drained rocket warheads to the Chemical Limited Area (CLA) for temporary storage, as the warheads are destroyed via a Static Detonation Chamber (SDC) and cannot be destroyed at the same pace as the chemical agent. The plant will treat the drained warheads as secondary waste until all remnants are destroyed. This process is scheduled to be completed in April 2025. April 2025 is considered storage mission completion.

The Operations phase and the first phase of Closure are under contract. As of September 2022, Bechtel Parsons Blue Grass does not expect to have the next phase of closure under contract for at least one to two years.



Section 4

Economic Impact

Economic Impact

The past and current financial impact of the Blue Grass Army Depot, namely the chemical weapons destruction mission, on Madison County's economy cannot be overstated. The county has seen more than 1,800 new jobs, over \$1.1 billion in local payroll tax, and \$111 million spent in Madison County and surrounding counties.

The Depot currently provides an average annual economic impact of approximately \$200 million and is the second largest per capita employer in Central Kentucky. Moreover, the project has injected over \$1.08 billion into the region via payroll and spent over \$190 million with Kentucky companies. For over 30 years, Madison County has benefitted from millions of dollars annually from the Chemical Stockpile Emergency Preparedness Program (CSEPP). This funding has provided much needed equipment, resources, and labor to ensure the community stays safe. Furthermore, the Blue Grass Army Depot employs close to 5 percent of the county's labor force (2019) and contributes significant occupational tax dollars to the Madison County Fiscal Court's operating budget and the City of Richmond's operating budget.



Chemical Stockpile Emergency Preparedness Program

The Chemical Stockpile Emergency Preparedness Program (“CSEPP”) is a joint program between the U.S. Army and FEMA that assists communities located near U.S. Army chemical warfare agent stockpile sites with the primary mission of assisting, promoting, and evaluating preparedness in the off-base CSEPP communities. Kentucky CSEPP comprises Madison County, where the Blue Grass Army Depot is located, and communities adjacent to the Depot. KY CSEPP has two Immediate Response Zones (IRZ), six Protective Action Zones (PAZ), and two host counties which are affected by the chemical stockpile. Madison County is one of two areas considered Immediate Response Zones (IRZ).

Madison County’s Emergency Management Agency (EMA) and the Chemical Stockpile Emergency Preparedness Program (CSEPP) were merged to establish an all-hazards organization ready to support community emergency response. Should emergency conditions occur, Madison County EMA/CSEPP has several systems in place to notify residents of the threat and communication instructions to keep citizens safe. Once the chemical weapons stockpile at the Blue Grass Army Depot is destroyed, the KY CSEPP will be closed out of the CSEPP program, and funding will cease six months after the last munition is destroyed.

Each year, Madison County receives an allotment of funding earmarked to meet certain objectives. Since fiscal year 2017, the County has received \$102 million in CSEPP funding and received \$15 million for FY2021 to be used towards advanced trainings, public safety equipment, and maintenance of resources such as an 800-megahertz radio system and sirens used to alert and warn of dangerous or important situations. These systems and equipment are integral to the public safety of Madison County citizens and allow for improved response to the county’s emergency communication needs for small scale incidents and community wide events.



Chemical Stockpile Emergency Preparedness Program

Key program components and services provided are as follows:

- 800-megahertz radio system for all first responders and affiliate agencies, such as hospitals and schools, in Madison County. This radio system provides first responders with 90% radio coverage of the County.
- Outdoor Warning Sirens - There are 90 warning sirens located across Madison County, which provides redundancy in IRZ areas. These sirens are designated to alert citizens of a chemical agent accident, severe weather, etc.
- State-of-the-art Emergency Operations Center (EOC): EOC is currently staffed 24/7 while chemical destruction activities are underway.
- Network infrastructure for Madison County government departments and other departments that utilize the CSEPP program.
- Vehicles and other protective measures such as ambulances, fire trucks, evacuation capabilities for schools, etc.
- Maintenance of Sirens, AAR's and IPAWS Systems – Alert and warning for Madison County residents for dangerous situations, i.e. chemical incidents, weather related incidents, missing persons, etc.
- Mass-Notification System/Reverse 911 – Tool used to alert the public in the event of a release from the Blue Grass Chemical Activity.
- Decontamination Capabilities – Funds utilized to operate decontamination units at local hospitals and fire departments, including HAZMAT gear and trailers.
- Public outreach to educate and inform the public about disasters and how to protect themselves.

The CSEPP system has an annual expenditure of \$4.33 million. CSEPP funding to Madison County will cease 6 months post-mission completion and at that time, the community will be responsible for the current systems' maintenance and replacement costs. Madison County EMA/CSEPP are estimating \$2,140,000 in yearly cost to support necessary first responder services and the scaled-down emergency management program, including equipment and ongoing maintenance of the radio system and warning sirens. Madison County elected officials and community leadership have been planning for a post-CSEPP Madison County for several years. Due to the anticipated loss of federal funding, leadership is in discussion of how to scale back the current infrastructure and equipment while providing the same level of service that citizens have become accustomed to receiving. Without DoD Army funding, the community will be responsible for this cost. Local elected officials seek to retain the quality of life and services that residents have been provided since the late 1990's, as the DoD funding funneled to Madison County has provided millions of dollars and financed extensive emergency preparedness and public safety initiatives, programs, and equipment.

Occupational Tax

Madison County has three separate taxing jurisdictions – Madison County, the City of Richmond, and the City of Berea. Madison County jurisdiction is defined as areas outside of either city limits.

Madison County collects a 1% occupational tax on all people working within the county. Last year (FY21), the chemical weapons destruction operations generated \$1,391,806 to the county's occupational tax.

FY2021 - \$1,391,806
FY2020 - \$1,400,416
FY2019 - \$1,263,504
FY2018 - \$1,255,045
FY2017 - \$1,133,634

A portion of the chemical demilitarization mission employees work off-base at a location within the City of Richmond limits. Richmond collects a 2% occupational tax on all people working within the city. Last year (FY21), the chemical weapons destruction operations generated \$418,965.15 to the city's occupational tax.

FY2021 - \$418,965
FY2020 - \$431,912
FY2019 - \$413,816
FY2018 - \$381,484
FY2017 - \$365,298

By 2026, the chemical weapons destruction mission will be concluded at the Blue Grass Army Depot and therefore a loss of approximately \$1,400,000 in occupational tax collected annually for Madison County and approximately \$400,000 in occupational tax collected annually for the City of Richmond.

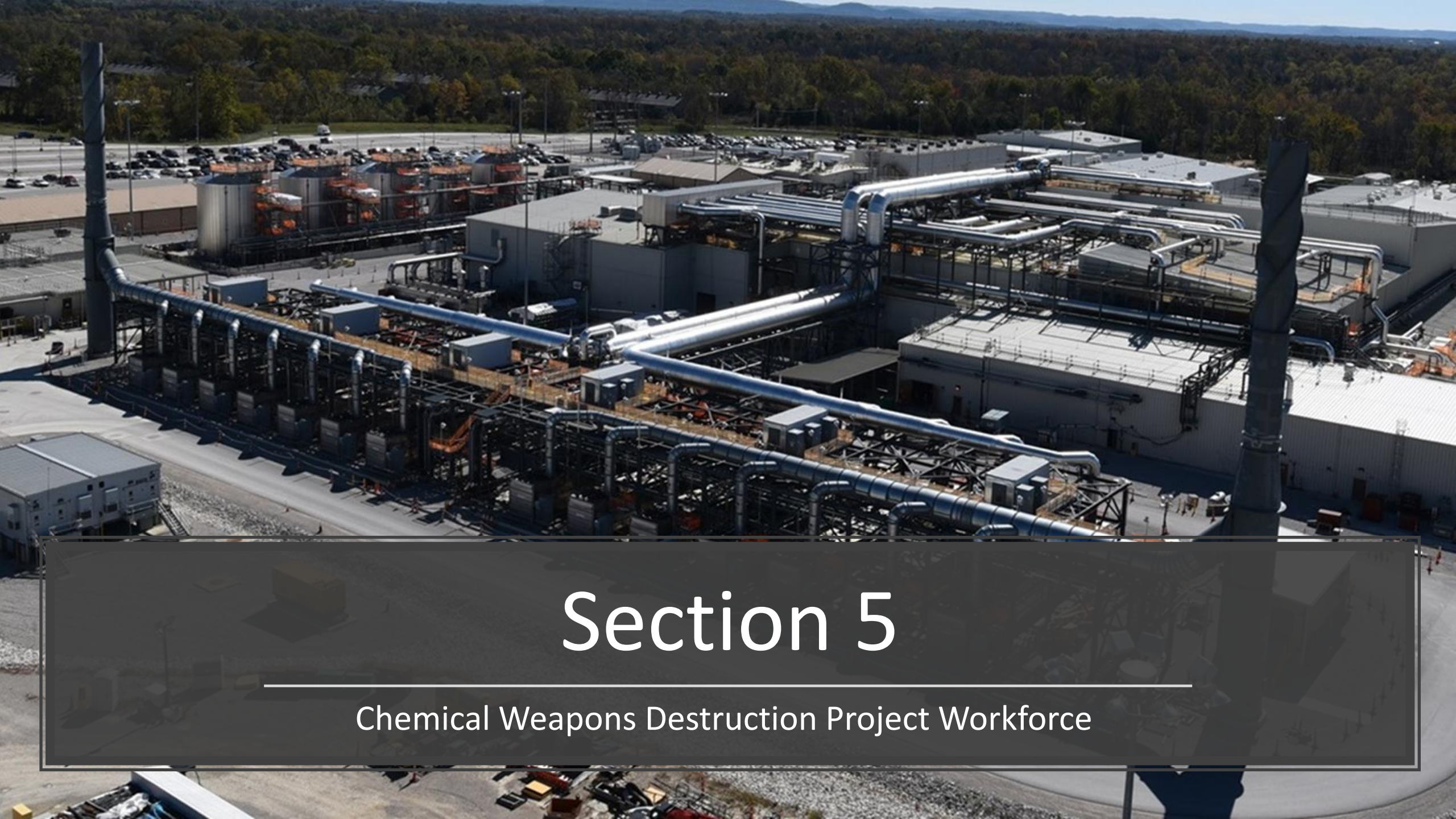


Impact of Loss of Funding

OLDCC uses a threshold of one and a half times the U.S. total (1.95%) to determine whether a substantial portion of a geographic area's economic activity is dependent on Defense expenditures. In 2019, the Blue Grass Army Depot employed 4.9% of Madison County's labor force. Madison County is economically dependent on DoD projects and employment, and the upcoming layoffs and loss of revenue are likely to have a significant impact on the region. At this time, the community does not have sufficient revenue streams to offset the recurrent costs of the emergency management programs and public safety benefits provided to citizens in Madison County. With an estimated \$2.14 million needed to maintain a scaled down emergency management program and an additional \$1.24 million in loss of occupational tax, the community will need to identify \$3.38 million in new, annual revenue streams to stabilize their operating budget and maintain the level of services desired.

Recommendations are as follows:

- Identify federal funding that can alleviate the loss of funding for a handful of years, taper down instead of a hard stop.
- Replace the loss of occupational tax via new industry recruitment to make up for the loss of jobs and therefore loss of occupational tax.
- Develop a cost sharing model for emergency management services between Madison County, the City of Richmond, the City of Berea, and affiliate agencies for services that are currently being provided by CSEPP funding.



Section 5

Chemical Weapons Destruction Project Workforce

Employers

The chemical stockpile was originally comprised of over 523 tons of nerve agent GB and VX, and mustard agent in projectiles, warheads, and rockets. The storage, maintenance, destruction, and ultimate completion of the chemical weapons destruction mission requires partnership between federal agencies and private contractors. The following data relates to the employers and the employees in the decommission plan.

Employees in the Decommission Plan - Federal Agencies

Blue Grass Chemical Activity (BGCA) is the federal employer responsible for safekeeping of the chemical weapons stockpile stored at the BGAD. Blue Grass Chemical Activity supports delivery of chemical munitions to BGCAPP for destruction and returning the drained rocket warheads to the Chemical Limited Area (CLA) and storing them temporarily. BGCA is a subordinate unit of the U.S. Army Chemical Materials Activity (CMA) and employs 161 federal employees. Primary occupations include Industrial Hygiene and Safety Professionals (specifically Toxic Material Handlers and Explosive Inspectors)

PEO ACWA is the Department of Defense agency responsible for managing the destruction of the Blue Grass chemical weapons stockpile by the Chemical Weapons Convention (CWC) treaty commitment of September 30, 2023. PEO ACWA's 33 employees provide administrative and technical services necessary to support the demil facility.

The Blue Grass Army Depot provides between 175 to 200 security employees to safeguard the chemical weapons storage and destruction areas. A large majority of these employees are former military and are term employees for the Blue Grass Army Depot.



Employers

Employees in the Decommission Plan - Private Contractors

Bechtel Parsons Blue Grass (BPBG) is the systems contractor selected by the Department of Defense's Program Executive Office, Assembled Chemical Weapons Alternatives (PEO ACWA) program to design, build, systemize, test, operate and close the Blue Grass Chemical Agent-Destruction Pilot Plant. BPBG is a Joint Venture of two contractors and three subcontractors.

Bechtel National, Inc. (Bechtel) is one of two prime contractors for the chemical weapons destruction program at the BGAD and employs 297 contract employees for the mission. Primary occupations are support-type functions, such as project controls (schedulers and estimators), quality assurance/quality control, document control, procurement functions, office and facility services, and construction. Of the 297 employees, 142 were local hires within 50 miles of the site. A large majority of the remaining workforce transferred from other Bechtel contracts.

Parsons Corporation (Parsons) is the second prime contractor for the chemical weapons destruction program at the BGAD and employs 333 contract employees, of which 65% are Operators. Operators perform general plant work and rotate stations to ensure diversification in training and capabilities. Parsons' workforce at BGCAPP is a mix between hourly workforce and professional, hiring most of the hourly workforce from the local community.

Amentum employs 530 contract employees at BGCAPP. Amentum's workforce primarily supports plant operations. Primary occupations within Amentum's workforce include machinery maintenance mechanic/mechanical technician, stationary engineer/control room operator, aircraft life support ALSE/SDA operator, sewage plant operator, and instrument mechanic.

GP Strategies Corporation (GP Strategies) employs 52 contract employees at BGCAPP that provide technical training and eLearning solutions, offering courses in chemical demilitarization, laboratory operations, maintenance, emergency response and toxic-area monitoring.

Battelle Memorial Institute (Battelle) employs 236 contract employees at BGCAPP. Battelle's primary responsibility is monitoring systems and equipment at the plant, such as emissions monitoring equipment and devices, carbon filters, and the stack. 58% percent of the workforce are technicians (monitoring, instrument, environmental, etc.). Additional primary occupations include chemists (lab tech and researchers), programmers, and statisticians.

	Bechtel Parsons Blue Grass	Blue Grass Chemical Activity	PEO ACWA	Blue Grass Army Depot - Security
Employer Type	Private Contractor	Federal Agency	Federal Agency	Federal Agency
Employees	1,473	161	33	175 – 200 (dedicated to this mission)
Primary Responsibility	Design, build, test, operate and close the Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP).	Responsible for the safe storage and transport of chemical weapons to the disposal facility.	Responsible for the destruction of the remaining U.S. chemical weapons stockpile.	Provide security to BGCAPP and storage facilities holding remaining chemical weapons stockpile.
Primary Occupations	Engineering, Plant Operations, Skilled Trades and Technicians.	Industrial Hygiene and Safety Professionals	Engineers, Project Management, and Administrative Services.	Security
Work Schedule	Bechtel – Dupont*, 24hr shifts (medical), 4-10's (office staff) Parsons – Dupont*, 98 hr. schedule, 5-8's, 4-10's. Amentum, Battelle, and GP Strategies – 4-10's and Dupont*	4-10's	Traditional work schedule	12-hour rotating schedule
Hazard Pay & Premium Pay	Hazard pay and premium pay are based on job position and where in the facility the employees work. Hazard pay is traditionally 4% - 8%. Bechtel Parsons Blue Grass pays a 10% shift differential for hours worked on second shift.	Employees eligible for hazard pay receive \$1-\$2 on top of their base pay.	N/A	No hazard pay. Premium pay for night shift.



Anticipated Occupational Release Dates

For Federal Agencies and Contract Employers

The Bechtel Parson Blue Grass JV will collectively develop an integrated program milestone schedule. Contractors and federal employers will have milestones specific to their activity and responsibilities and will develop an anticipated rollout schedule based on milestone activity. As of January 2023, Bechtel Parsons Blue Grass has not developed a firm release date schedule but confirmed that the first release of employees would occur September 1, 2023.

<p>Bechtel Parsons Blue Grass</p>	<p>The information below is a projected employment headcount moving into 2026 for Bechtel Parsons Blue Grass. Operations phase and Closure phase 1 are under contract. The next phase of Closure will be secured in 1-2 years. Average headcount to remain at BGCAPP over the remaining life of the chemical demilitarization mission is below:</p> <table border="1" data-bbox="744 651 1574 725"> <thead> <tr> <th></th> <th>2023</th> <th>2024</th> <th>2025</th> <th>2026</th> </tr> </thead> <tbody> <tr> <td>Average headcount to remain</td> <td>1,440</td> <td>1,274</td> <td>911</td> <td>536</td> </tr> </tbody> </table> <p>The first release of employees will occur in September 2023 and will include ~100 Ordinance Technicians. These individuals handle the ammunition, dismantle it, remove the hazardous components, etc. This group has experience with robotic and mechanical material moving equipment.</p>		2023	2024	2025	2026	Average headcount to remain	1,440	1,274	911	536
	2023	2024	2025	2026							
Average headcount to remain	1,440	1,274	911	536							
<p>Blue Grass Chemical Activity</p>	<p>Blue Grass Chemical Activity will retain their current workforce until April 2025. A 6-month transition period will take place April 2025 – October 2025 to downsize the workforce from 161 to 25. The small support staff of 25 will remain to support the plant demilitarization process for another year, then those positions will also be eliminated.</p>										
<p>PEO ACWA</p>	<p>As positions are no longer required in the closure phase, a well-defined process exists for government personnel that may include transitioning to other positions within the federal government, retention incentives, reduction-in-force, and normal attrition. Release of employees will be a phased approach.</p>										
<p>BGAD Security dedicated to the Mission</p>	<p>The first release of employees will largely depend on when the Chemical Limited Area (CLA) is closed. 80% of security guards dedicated to the project will remain until mission completion (2026).</p>										



Planning Surveys

Voluntary surveys were distributed to contractors, sub-contractors, and federal employers in fall 2022 to gain direct input from employees. Questions aimed to understand an employee’s current and future employment plans. The total number of responses vary by employer.

Amentum

Total Employees: 530

Number of Survey Responses: 306 (58% of workforce)

Takeaways

- Primary occupation groups of respondents: Mechanical Technician (48), DSA Operator (39), Instrument & Controls Technician (39), Control Room - Facility Operator (33), and Plant Operator (30).
- 32% of respondents hold an associate degree or higher.
- 36 respondents are certified safety professionals, 26 are heavy equipment operators, and 15 respondents hold a commercial driver’s license.
- Many respondents hold skilled trade certifications and are qualified to perform various types of work. Primary trade capabilities include Mechanic (57), Instrument & Control (36), Electrician (28), Welder (27), Laborer (22), HVAC (19), and more.
- Of the 306 respondents, 256 (84%) have expressed interest in finding an employment opportunity in the local community once their BGCAPP assignment ends.
- Local employment areas of primary interest fall heavily in skilled trade, project management, heavy equipment, safety professional, construction, and project controls/scheduling/estimating.

Current Job Title	
Control Room – Facility Operator	33
Electrical Technician	13
DSA Operator	39
Instrumentation and Controls Technician	39
Mechanical Technician	48
Plant Operator	30
PMB Attendant	10
Education Level	
Associates	50
Bachelors	36
Masters	10
Ph.D.	1
Current Qualifications	
Electrician	28
Welder	27
I&C	32
Carpenter	16
Laborer	22
Pipefitter	14
Plumber	12
Boilermaker	14
Painter	19
Mechanic	57
HVAC/Refrig. And A/C	19
Millwright	16
Metallurgist/Metallurgical Tech	7

Other	
Intend to remain at BGCAPP through end of assignment	274
Do not intend to retire	235
Would relocate with Amentum if opportunity arises	171
Interested in staying local, if possible	256
Would be interested in pre-termination training in:	
Nuclear operations worker training	243
Maintenance/Skilled Trade	233
College coursework	243
Local Employment Interest	
Construction	51
Skilled Trade/Craft	96
Heavy Equipment	58
Project Management	76
Project Controls/Scheduling/Estimating	43
Safety Professional	77
Procurement/Acquisitions/ Warehouse/Logistics	33
Business Management/ Payroll/Accounting	33
Human Resources/HPI/Workforce Development	25
I.T./Cybersecurity/Communications Systems	34
Emergency Response/Medical/ EMT/Firefighting	32
Professional Certifications	
CDL – Commercial Driver License	15
Heavy Equipment Operator	26
PMP - Project Management Professional	6
BCSP - Safety Trained Supervisor	36



Planning Surveys

Blue Grass Chemical Activity

Total employees: 161

Number of survey responses: 155 (96%)

Takeaways

- 54% of respondents live in Madison County.
- More than half of BGCA staff are military veterans.

After completion of assignment, 82% of employees plan to work but wish to continue federal service. 15% of respondents plan to retire after their BGCA assignment

County of Residence	
Clark	5
Estill	7
Fayette	8
Garrard	10
Laurel	10
Madison	83 (54%)
Pulaski	8
Other	25
Plans after BGCAPP Closure	
Continue Federal Service	127 (82%)
N/VSIP	1
Retire	22
Separate	1
Undecided	4

Other	
Average Age	46
Average Years of Gov't Service	11.4
Veteran Status	
Veteran	84
Not a Veteran	67
Unknown	4
Intends to remain until end of assignment	
Yes	132
No	5
Unknown	18

Planning Surveys

Bechtel Parsons Blue Grass

Total employees: 1,473

Number of survey responses: 309 (21% of total BGCAPP workforce)

Takeaways

- 62% (191) of respondents maintain residence in Madison County.
- 81% of respondents (251) will be seeking their next employment opportunity after they are released from assignment.
- Of those that plan to work after their BGCAPP assignment ends, 51% wish to continue employment with their current employer and 34% are undecided. Employees appear to have flexibility in location preference for future work.

Bechtel Parsons Blue Grass (2020 survey)

Total employees: 1,445 at time of survey

Number of survey responses: 753 (52%)

*Note: 753 employees responded to the survey. However, most employees did not complete the full survey.

Takeaways

- 65% of respondents (492) live in Madison County. Of the 35% that do not live in Madison County, 33% reside in Fayette County. The two counties alone make up 75% of respondents' home counties.
- Upon completion of assignment with BPBG, 52% wish to stay in Madison County or the county in which they reside.
- Of the respondents who intend to reside in their current home county, 75% plan to seek employment in the local area.

Kentucky County of Residence	
Madison	191
Fayette	26
Estill	24
Rockcastle	9
Other	59
Do you plan to retire after your release date?	
No – I will continue to seek work after BGCAPP	251
Yes – I plan to retire before my BGCAPP assignment ends	17
Yes – I plan to retire after my BGCAPP assignment ends	6
I am undecided about retirement	34
Interest in Professional Training Courses	
Yes	220
No	87
Of those who will be seeking work after their BGCAPP assignment, do you wish to continue employment with your current employer?	
Yes	127
No	6
Undecided	86

Interested in Jobs Located In:	
Madison County and neighboring counties in Central Kentucky	53
Kentucky – cities greater than 50 miles from Madison County	15
Locations outside of Kentucky	12
All of the above	140
Indicate Craft/Skilled Trades Status	
Carpenter	11
Electrician, Welder	54
Instrument & Control	11
Laborer	7
Mechanic	14
Painter	1
Pipefitter	1
Plumber	2
If you desire to find employment within Madison County after your assignment, what job classification would you pursue?	
Business Management/Payroll/Accounting	5
Engineering	11
Facilities Operations	7
Maintenance	24
Management/Supervision	14
Operations/Operations Support/Control Room	60
Safety/Industrial Hygiene/EH&S	18
Scientist/Lab	24
Other	64

Wage Data

Data collected between March and May of 2022 included occupation, job title, number of employees within each occupation category, and the wage/wage range for each position. Employee count and minimum/maximum wages are subject to change. The wages provided below reflect base pay and do not include hazard pay or premium pay for eligible employees, and do not account for overtime. Bi-weekly pay has been converted to an hourly wage without benefits for comparison purposes.

Madison County Existing Industry data was collected during Spring 2022. Eight existing industries voluntarily provided wage data to give a real-time comparison to the wage data provided by contractor employers and federal agencies. The data is not all inclusive of Madison County existing industry data, but rather, provides a wage comparison for a similar timeframe.

KYSTATS Occupational Employment and Wage Statistics (OEWS) program, in cooperation with the United States Bureau of Labor Statistics (BLS), produces statewide occupational employment and wage estimates annually for more than 700 unique occupations. 2022 Local Workforce Area (LWA) Occupational Employment & Wages Report provides the most recent occupational estimates for Kentucky's ten Local Workforce Areas. The wage range provided in the table below reflects 75th percentile hourly to experienced hourly wages and provides a comparison to a similarly skilled workforce.

Bechtel, Parsons, Amentum, Battelle, BGCA, and PEO ACWA participated in the data collection efforts. GP Strategies declined participation. Battelle provided wage data for 236 of their 261 employees. PEO ACWA wage data represents the ACWA sub-contractor LEIDOS only. Lastly, the Blue Grass Army Depot provided the number of security personnel dedicated to the chem demil mission and starting base pay. However, a wage range was not provided.

A blank indicates that the data specific to that occupation was not captured during the data collection efforts with existing industry, or BPBG, BGCA, and PEO ACWA do not employ that specific job title.

Breakdown by all Employers

Occupation Category	Number of Employees*
Administrative	82
Business Management/Payroll/Accounting/Finance	95
Emergency Response/Medical/EMT/Firefighting	43
Engineering/Design/Draft	116
I.T./Cybersecurity/Communications System	28
Industrial Hygiene/Safety Professional	64
Physical and Social Sciences	79
Plant Operations/Skilled Trade/Technician	922
Procurement/Warehouse/Logistics	55
Project Controls/Scheduling/Estimating	31
Quality Assurance/Quality Control	48
Security	186

*The table does not include employees contracted with GP Strategies.

*The table includes data for 236 of Battelle's 261 employees.



Occupation Category and Title	Employer					BGAD – Security
	Madison County Existing Industry ¹	2022 Bluegrass LWA Occupational Employment and Wages ²	Bechtel Parsons Blue Grass, excluding GP Strategies ³	Blue Grass Chemical Activity ³	PEO ACWA Field Office ³	
Administrative Services	\$16.91 - \$30.32		\$17.65 - \$132.27	\$25.96 - \$49.52		
Business Management, Payroll, Accounting, Finance	\$15.90 - \$48.09	\$39.06 - \$50.16	\$21.75 - \$99.76	\$31.76 - \$49.52	\$61.00 - \$71.00	
Program/Project Mgmt.			\$77.33 - \$88.50		\$61.00 - \$71.00	
Accounting	\$15.90 - \$48.09	\$23.75 - \$29.73	\$22.7 - \$41.23			
Financing		\$48.41 - \$94.59	\$65.07 - \$171.43			
Human Resources, Mgmt.		\$62.34 - \$74.53	\$75.48 - \$82.31			
Human Resources, Other	\$21.63 - \$48.09	\$23.89 - \$28.62	\$21.75 - \$59.68			
Emergency Response/Medical/ EMT/Firefighting			\$31.73 - \$127.40			
Physician		N/A	\$71.89 - \$127.40			
Nurse		\$37.38 - \$40.61	\$53.92			
Emergency Medical Technicians and Paramedics		\$23.25 - \$25.49	\$31.73 - \$33.80			
Engineering/Design/Draft	\$22.70 - \$48.09	\$30.38 - \$76.99	\$32.88 - \$106.79		\$48.00 - \$81.00	
I.T./Cybersecurity/ Communications Systems	\$25.84 - \$48.09		\$32.60 - \$83.95	\$37.98 - \$49.52		
Industrial Hygiene/Safety Professional	\$15.90 - \$31.25		\$32.75 - \$132.40	\$24.39 - \$58.65		
Hazardous Waste Coordinator				\$24.39 - \$28.51		
Toxic Material Handler/Explosive Inspector				\$24.39 - \$28.51		
Safety Specialist	\$25.74	\$38.85 - \$49.29	\$47.24 - \$132.40	\$37.98 - \$58.65		
Industrial Hygiene			\$32.75 - \$79.92			
Other ES&H	\$15.90 - \$31.25		\$37.14 - \$86.94			
Physical and Social Sciences		\$30.30 - \$51.93	\$67.38 - \$160.95	\$37.98 - \$49.52	\$50.00 - \$78.00	
Plant Operations/Skilled Trade/Technician	\$11.25 - \$48.09		\$17.88 - \$193.75	\$21.71 - \$69.23		
Janitorial			\$22.00 - \$25.23			
Maintenance	\$17.50		\$30.00 - \$65.37			
Operator	\$11.25 - \$30.00		\$27.24 - \$72.93			
Plant Manager			\$106.04			
Plant Operations Mgmt.	\$19.00 - \$50.48	\$38.35 - \$48.49	\$68.16 - \$171.43	\$45.19 - \$69.23		
Sewage Plant Operator		\$23.86 - \$30.37	\$27.24 - \$40.94			
Technician	\$15.90 - \$37.43		\$17.88 - \$134.13	\$21.71 - \$41.33		
Procurement/ Warehouse/Logistics	\$14.00 - \$31.25		\$21.42 - \$72.29	\$21.15 - \$49.52		
Inventory Management (including shipping/receiving)	\$14.50 - \$31.25	\$20.52 - \$24.73	\$29.42 - \$72.29	\$25.96 - \$34.13		
Logistics Management	\$14.65		\$36.05 - \$61.81	\$21.15 - \$49.52		
Project Controls/Scheduling/ Estimating			\$50.14 - \$95.45	\$37.98 - \$58.65	\$50.00 - \$58.00	
Quality Assurance/Quality Control	\$12.50 - \$48.09		\$30.15 - \$132.40	\$37.98 - \$58.65	\$50.00 - \$58.00	
Security		\$16.13 - \$32.72	\$28.14 - \$84.51			\$19.29 +

1. Madison County Existing Industry data was collected from leading employers in Madison County and is reflective of 2022 base wages.

2. Bluegrass LWA Occupational Employment and Wage Estimates was provided by the Kentucky Center for Statistics, Workforce Intelligence Branch, and is reflective of 2021 wage data for 75th percentile hourly and experienced hourly wages. Entry level, 25th percentile hourly, and median hourly wage data is not included in the numbers below.

3. Bechtel Parsons Blue Grass, Blue Grass Chemical Activity, and PEO ACWA data was collected from each employer and is reflective of 2022 base wages. Hazard pay and premium pay is not included in the hourly wages.

Wage Data

Average Hourly Base Pay for Key Occupations Across Bechtel Parsons Bluegrass, Blue Grass Chemical Activity, and PEO ACWA

- Plant Operations/Skilled Trade/Technicians - \$39.40 / hr.
 - Operators & Technicians - \$35.59 / hr.
- Engineers/Design/Draft – \$63.57 / hr.
- Industrial Hygiene/Safety Professional – \$41.13 / hr.
- Quality Assurance/Quality Control - \$60.80 / hr.

Takeaways:

- The workforce associated with BPBG, BGCA, and PEO ACWA's high skill level and training are reflected in the hourly base pay, as represented above.
- BPBG, BGCA, and PEO ACWA earnings are higher than average compared with similar job functions and skill levels across the Bluegrass region. This may be attributed to several factors:
 - The BGCAPP and BGCA workforce are highly skilled and highly trained with years of experience. Many were transfers from other US chemical demilitarization installation sites and some possess additional certifications and/or educational degrees.
 - There is a significant wage premium associated with chemical industry occupations.
 - Bechtel, Parsons, Amentum, Battelle, GP Strategies, BGCA, and PEO ACWA employees must pass a background check that can take up to a year to receive clearance.
 - While the chem demil workforce receives relatively high wages, their workplace is a high hazard area, and many jobs involve interaction with and potential exposure to highly hazardous chemicals agents.
 - Positions that involve storing or safeguarding chemical weapons, such as but not limited to, researchers, monitoring technicians, statisticians and project controls engineers, fall under the Chemical Personnel Reliability Program (CPRP). In addition to the standard pre-employment background check and drug screening, CPRP positions also require credit checks, physical examinations, additional background checks, and drug screenings.
 - The chem demil mission workforce does not consist of entry level employees, whereas entry level employees are considered in the average wage of existing industries.
- Skillset to skillset comparison and consideration of level of experience may provide a more precise comparison of wages between chem demil workforce as compared to Madison County industry and the Bluegrass LWA.



Section 6

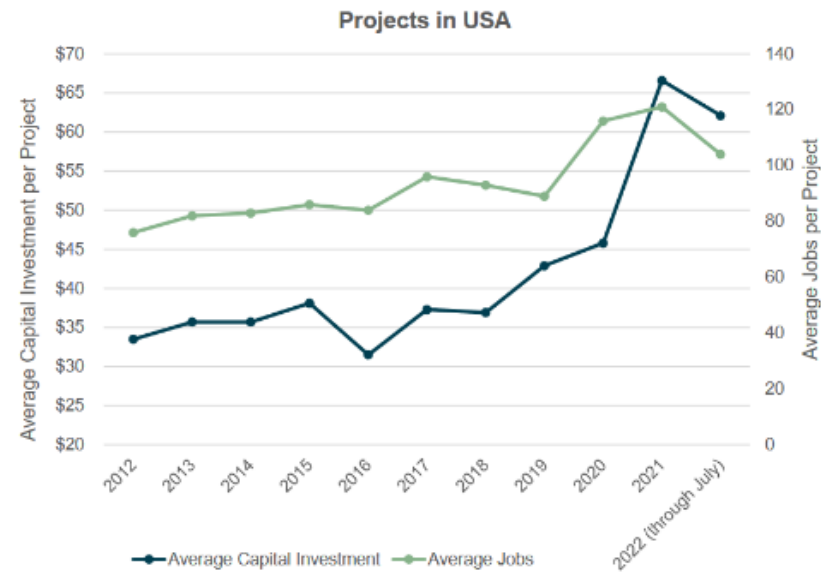
Industrial Activity

Industrial Activity

National Industrial Activity

While many industries were negatively impacted by the effects of COVID-19, industrial activity in the United States continued to boom during the pandemic. Average capital investment per project and average jobs per project skyrocketed to historical levels in both 2020 and 2021, and between January 2022 – July 2022, industrial projects in the United States averaged a capital investment of \$62.1 million and required 104 new full-time jobs.¹⁰

Year	Average Capital Investment	Average Jobs
2012	\$33.5	76
2013	\$35.7	82
2014	\$35.7	83
2015	\$38.1	86
2016	\$31.5	84
2017	\$37.3	96
2018	\$36.9	93
2019	\$42.9	89
2020	\$45.8	116
2021	\$66.6	121
Jan-July 2022	\$62.1	104



Graphs generated by GLS

Industrial Activity

State Level Industrial Activity

The table below provides the average requested square footage for projects requesting an existing building and the average requested acreage for projects requesting a greenfield site by target industry for all projects worked by the Kentucky Cabinet for Economic Development from January 2020 to October 2022. Outlier projects with atypical requests (500+ acres) have been excluded.

Announced projects over the last three years requested on average a minimum of 35 acres and a maximum of 60 acres.

Industry	Average Requested Square Footage	Average Requested Acreage
Aerospace	362,600	100
Agribusiness / Agritech	199,140	67
Automotive	469,258	190
Business/Financial Services	57,490	14
Chemicals	101,173	40
Distribution & Logistics	288,758	64
Food & Beverage	232,544	85
Healthcare	116,083	20
Manufacturing	246,686	146
Metals	193,957	119
Plastics & Rubber	240,096	62

The Kentucky Product Development Initiative (KPDI) is a statewide program to support the acquisition, exploration, or upgrades of industrial sites across Kentucky, and is intended to spur economic growth and site preparedness. The 2022 cycle of KPDI recently saw a submission of 86 full applications, representing 65 of Kentucky's 120 counties. Of the submissions, 35% of projects requested funding towards site development including the construction of build-ready pads and 24% of projects requested funding towards utility infrastructure extensions and/or improvements. Funding announcements will take place in January 2023.



Industrial Activity

State Level Industrial Activity

The New & Expanding Industry Report provided by the Cabinet for Economic Development is specific to projects worked and announced by the Cabinet between January 2020 – June 2022. Qualifying projects are those with at least one new job and/or \$100,000 or greater capital investment. An announced project can be classified within multiple industries. For example, a company produces a metal product for the automotive industry, so they would appear in both the Metals and Automotive-related industry categories.

Kentucky's Recently Announced Projects by Target Industry

Target Industry	Announcements	Investment	New Jobs
Manufacturing	385	\$15,661,944,059	22,038
Automotive-related	80	\$9,368,891,881	10,889
Service & Technology	189	\$1,682,100,284	10,656
Distribution & Logistics	80	\$572,019,816	4,445
Food & Beverage	113	\$2,342,223,046	3,092
Healthcare	39	\$428,291,603	2,427
Metals	43	\$1,884,833,095	2,367
Agribusiness and AgriTech	44	\$900,693,714	1,879
Plastics & Rubber	48	\$559,740,140	1,463
Chemicals	33	\$597,734,900	724
Aerospace	14	\$59,250,000	514



Industrial Activity

State Level Industrial Activity

Recent Announcements in Madison County, Kentucky

- Hyster-Yale Group, Inc. - \$37.7 million; 198 new jobs (2022)
- Asahi Bluegrass Forge Corporation - \$40 million; 50 new jobs (2021)
- Hitachi Automotive Electric Motor Systems America - \$86,800,000; NA jobs (2020)
- Sherwin Williams Company - \$42,930,000; 20 new jobs (2020)
- Richmond Auto Parts Technology Inc - \$21,758,800; 20 new jobs (2019)
- Thunder Mfg - \$2,200,000; 45 new jobs (2016)
- Asahi Forge of America Corporation - \$8,000,000; 16 new jobs (2015)
- Asahi Bluegrass Forge Corporation - \$20.3 million; 50 new jobs (2014)
- Alumisource Corporation - \$6.6 million; 20 new jobs
- AppHarvest (two facilities) - \$120 million; 300 new jobs (2021)
- Energys – Capital Investment Unknown; 80 new jobs (2022)



Industrial Activity

State Level Industrial Activity

Recent Announcements in Kentucky (CY 2022)

Food & Beverage

Double D Group, LLC - \$41.5 million; 240 new jobs (Muhlenberg)
Pernod Richard USA, LLC - \$196 million; 55 new jobs (Marion)
Blue Run Spirits, LLC - \$50.9 million; 45 new jobs (Scott)
Green River Distilling Company LLC - \$62.4 million; 25 new jobs (Hancock)
Heaven Hill Distilleries, Inc. - \$135.4 million; 38 new jobs (Nelson)
IJW Whiskey Company, LLC - \$200 million; 99 new jobs (Shelby)
Jim Beam Brands Co. - \$436.4 million; 51 new jobs (Nelson)
Kentucky Bourbon Distillers, LTD - \$92.9 million; 35 new jobs (Washington)
Poso Creek Family Dairy, LLC - \$5.2 million; 60 new jobs (Fulton)
Sazerac Distillers, LLC - \$503 million; 50 new jobs (Laurel)

Non-Retail Service or Technology

Flash Steelworks, Inc. - \$12.1 million; 250 new jobs (Bell)
Kroger Fulfillment Network LLC - \$4.1 million; 161 new jobs (Jefferson)
PPD Global Central Labs, LLC - \$59 million; 140 new jobs (Campbell)
River City Entertainment Group, LLC - \$65 million; 50 new jobs (Jefferson)
Trader Joe's East, Inc. - \$259.3 million; 91 new jobs (Simpson)
UPS Supply Chain Solutions, Inc. - \$178.5 million; 121 new jobs (Bullitt)
UPS Supply Chain Solutions, Inc. - \$155.5 million; 315 new jobs (Jefferson)
Verst Group Logistics - \$45.4 million; 100 new jobs (Grant)

Coal Severing and Processing

River View Coal, LLC - \$35 million; 260 new jobs

Manufacturing

ANP USA Inc. - \$49.6 million ; 93 new jobs (Hardin)
Ascend Elements, Inc. - \$310 million ; 250 new jobs (Christian)
Atlas Machine and Supply, Inc. - \$3.5 million ; 78 new jobs (Breckinridge)
Catalent Pharma Solutions, LLC - \$171.4 million – 262 new jobs (Clark)
Elevate Windows and Doors, LLC - \$16 million; 203 new jobs (Christian)
Enervenue, Inc. \$264 million; 450 new jobs (Shelby)
Hyster-Yale Group, Inc. - \$33.7 million; 198 new jobs (Madison)
KHW Venture, LLC - \$71.9 million; 60 new jobs (Hardin)
Legacy Metals, LLC - \$1.2 million; 100 new jobs (Christian)
Levy Environmental Services Company - \$32 million; 71 new jobs (Meade)
Logan Aluminum - \$249 million; 65 new jobs (Logan)
Lotte Aluminum Materials USA LLC - \$238 million; 122 new jobs (Hardin)
Novelis Corporation - \$364 million; 171 new jobs (Todd)
Owens-Brockway Glass Containers Inc. - \$239.3 million; 140 new jobs (Warren)
Quadrant Materials, Inc. - \$95.2 million; 200 new jobs (Jefferson)
Summit Polymers, Inc. - \$37.5 million; 218 new jobs (Anderson)

Service & Technology

Columbia Brands, USA, LLC - \$3.7 million; 175 new jobs (Henderson)
Total Quality Logistics \$8.1 million; 525 new jobs (Boone, Fayette and Jefferson)

Agritech/Agribusiness

Osmundson Mfg. Co - \$12.5 million; 80 new jobs
Trellis Loop Florence I, LLC - \$74 million; 125 new jobs (Boone)





Section 7

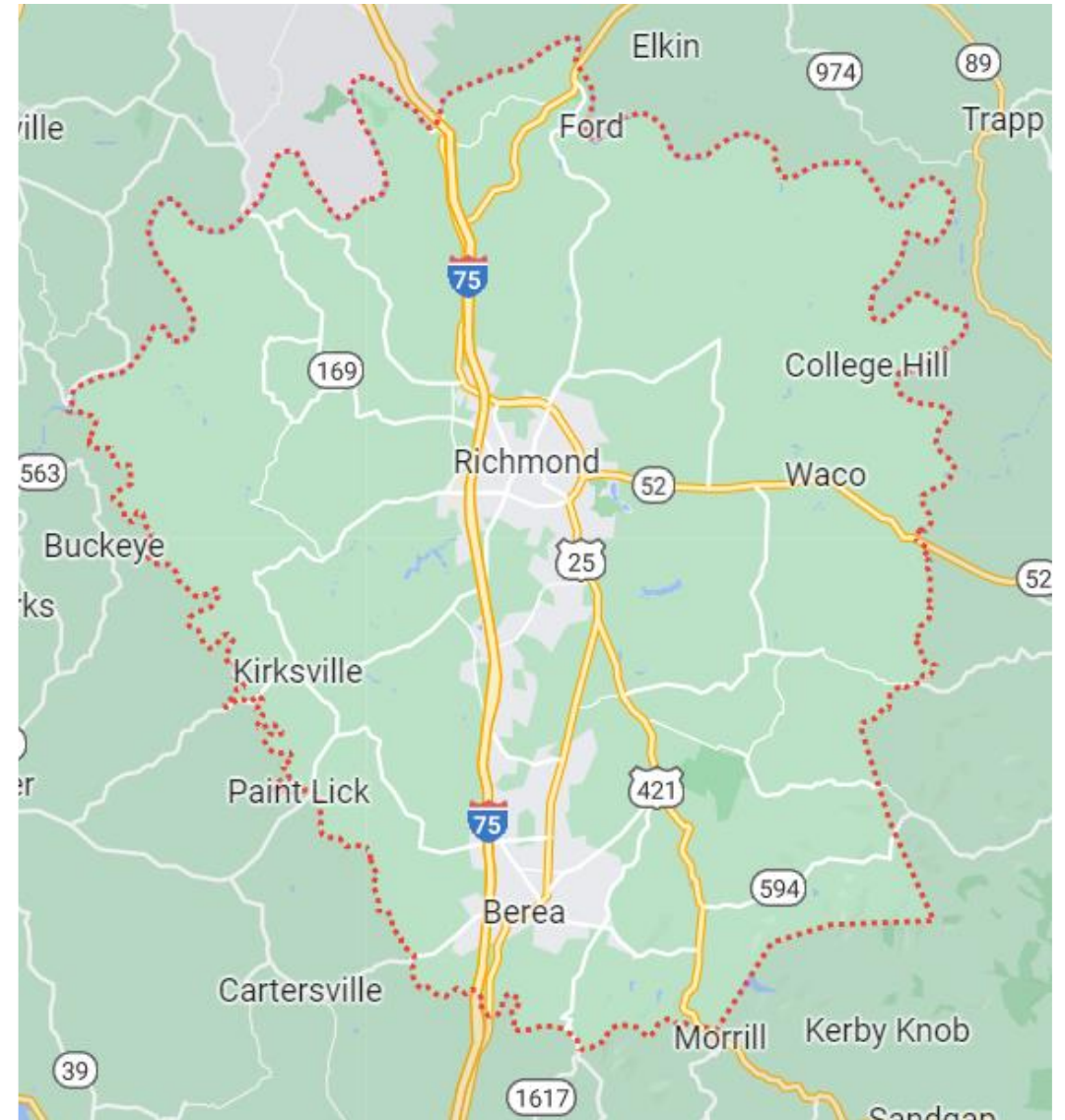
Market Assessment

Market Assessment

The demographics and workforce data of Madison County includes the City of Richmond, City of Berea, and the County, and is essential to understanding the industries and employees the community attracts and supports.

Madison County Location Overview

Madison County is in Central Kentucky and sits just south of Lexington-Fayette County with the Kentucky River as its border. Madison County is unique in that the county has two incorporated cities, Richmond and Berea. Madison County is one of the fastest growing areas in the state, experiencing both residential and industrial growth, and has a blend of urban, suburban, and rural environments.



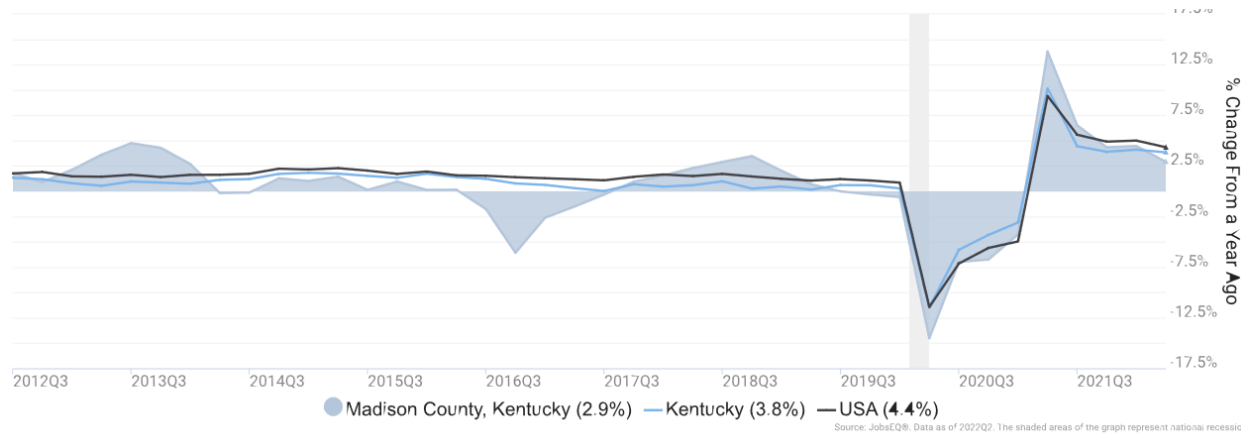
Economic Overview

Demographic Profile¹¹

The population in Madison County is 92,090 with a civilian labor force of 46,053 and a participation rate of 61.5%. Of individuals 25-64 in Madison County, 34.4% have a bachelor's degree or higher, which is 7.9% higher than the percentage of Kentucky, showing the importance of education and skill level of the labor force in Madison County. The median household income in Madison County is \$51,649 and the median house value is \$161,400.

Employment Trends¹²

As of 2022Q2, total employment for Madison County was 36,970. Over the year ending 2022Q2, employment increased 2.9% in the region as compared to 4.4% for the state of Kentucky. The unemployment rate for Madison County was 3.7% as of October 2022, in contrast to the US unemployment rate of 3.4%. One year earlier, in October 2021, the unemployment rate in Madison County was 3.9%.



Employment data are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and imputed where necessary. Data are updated through 2022Q1 with preliminary estimates updated to 2022Q. Source: JobsEQ

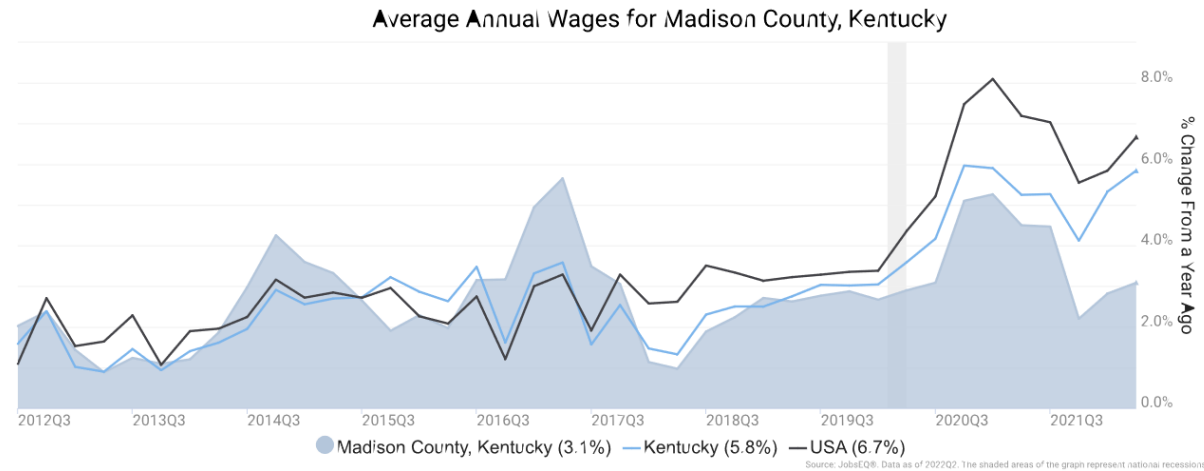
11. JobsEQ <http://www.chmuraecon.com/jobseq> Economic Overview for Madison County, Kentucky

12. JobsEQ <http://www.chmuraecon.com/jobseq> Economic Overview for Madison County, Kentucky

Economic Overview

Wage Trends ¹³

The average worker in Madison County earned annual wages of \$44,169 as of 2022Q2. Average annual wages per worker increased 3.1% in the region over the preceding four quarters. For comparison purposes, average wages were \$67,777 in the nation as of 2022Q2.



Annual average wages per worker data are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and imputed where necessary. Data are updated through 2021Q2 with preliminary estimates updated to 2022Q2.

Source: JobsEQ

13. JobsEQ <http://www.chmuraecon.com/jobseq> Economic Overview for Madison County, Kentucky

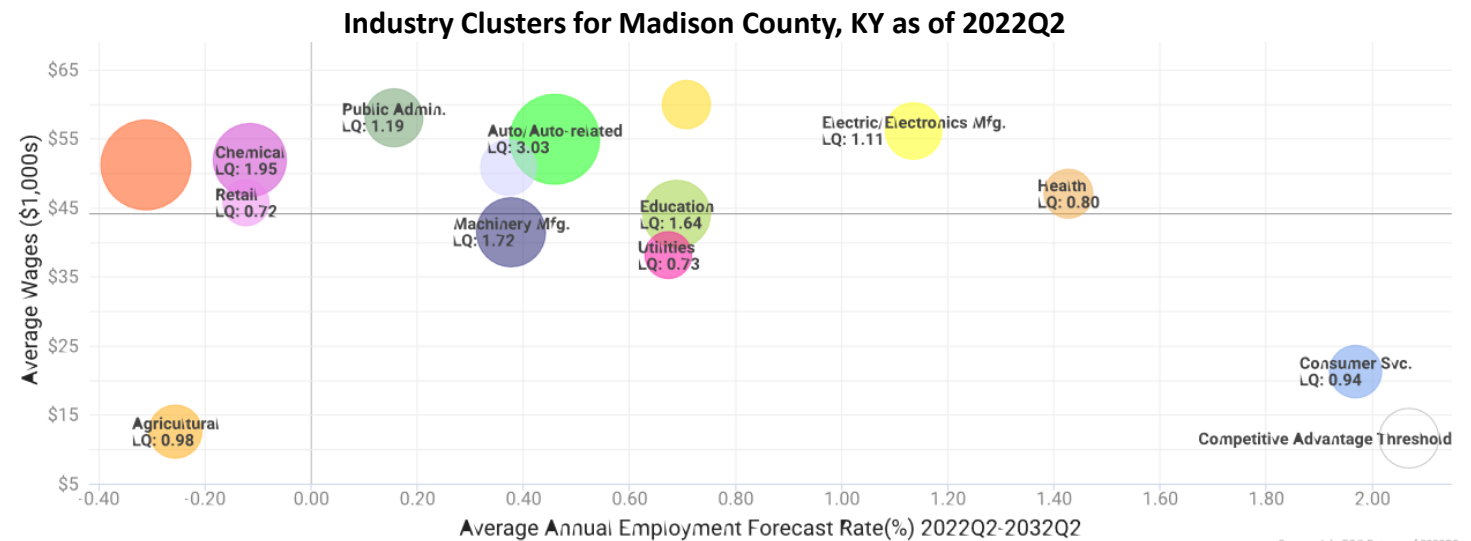


Leading Industries and Industry Clusters ¹⁴

The largest sector in Madison County is Educational Services, employing 5,539 workers. This number is driven by Eastern Kentucky University and Berea College. The next-largest sectors in the County are Retail Trade (4,860) and Manufacturing (4,843).

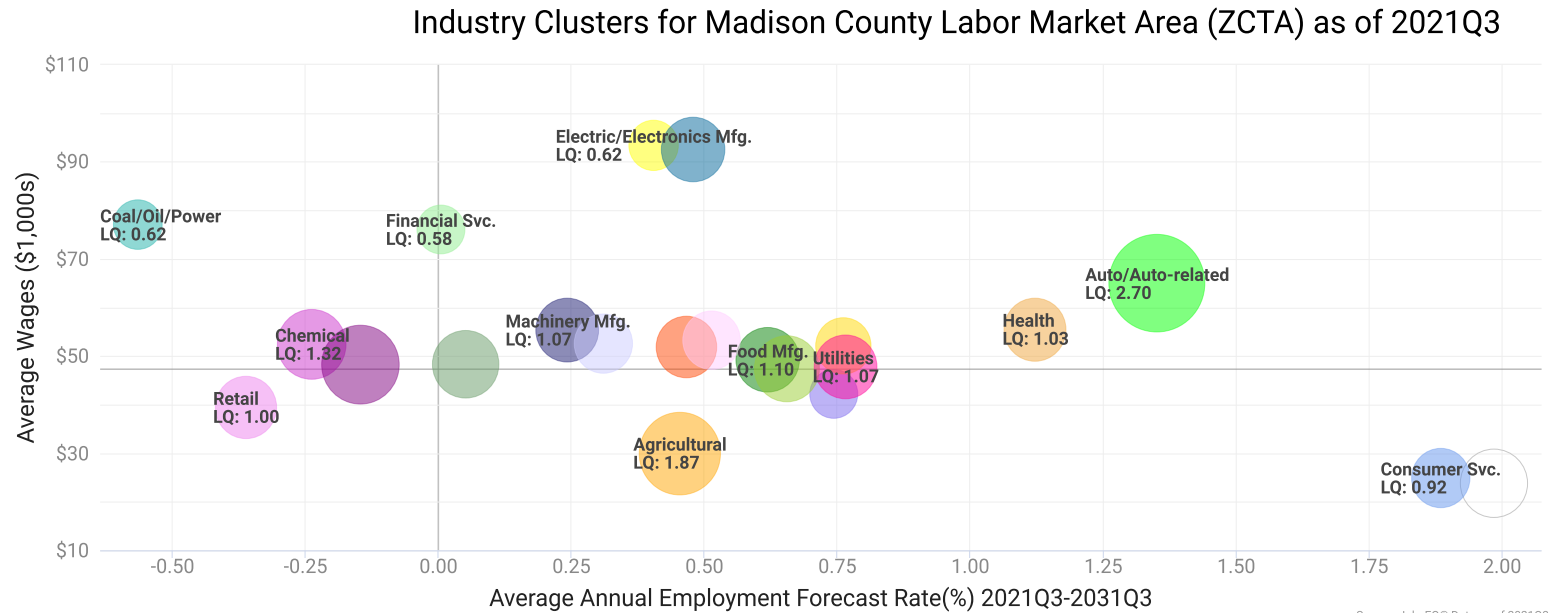
An industry cluster is a geographic concentration of interrelated industries or occupations and is a measurement of concentration in comparison to the nation. A location quotient of 1.00 indicates a region has the same concentration of an industry as the nation. A location quotient of 2.00 would mean the region has twice the expected employment compared to the nation and a location quotient of 0.50 would mean the region has half the expected employment in comparison to the nation.

The industry cluster in Madison County with the highest relative concentration is Metal and Product Manufacturing (LQ=3.04). This cluster employs 813 workers in the region with an average wage of \$51,243. The Auto/Auto-related industry holds the second highest relative concentration (LQ=3.03). The industry cluster with the third highest relative concentration is Chemical (LQ=1.95), followed by the Machinery Manufacturing industry (LQ=1.72). Once again, as companies in the industry look to relocate or expand, a higher LQ aids the company in knowing that the region has a highly skilled labor force available compared to the rest of the nation, making Madison County a great fit for manufacturing and automotive companies.



Leading Industries and Industry Clusters

The industry cluster in the Madison County Labor Market Area (LMA) (45-mile ZCTA) with the highest relative concentration is Auto/Auto-related with a location quotient of 2.70. This cluster employs 23,382 workers in the region with an average wage of \$65,005. Employment in the Auto/Auto-related cluster is projected to expand in the region about 1.4% per year over the next ten years. The industry cluster with the second highest relative concentration in Madison County LMA is Agricultural with a location quotient of 1.87, followed by the Chemical Industry cluster with a location quotient of 1.32.



Location quotient and average wage data are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics, imputed where necessary, and updated through 2021Q2 with preliminary estimates updated to 2021Q3. Forecast employment growth uses national projections from the Bureau of Labor Statistics adapted for regional growth patterns.



Industry Spotlight – Manufacturing¹⁵

As a top three sector in Madison County, Manufacturing employs 4,743 employees. Major industries within Madison County Manufacturing industry include Motor Vehicle Parts Manufacturing (1,415); General Purpose Machinery Manufacturing (687); Alumina and Aluminum Production and Processing (427); and Paint, Coating, and Adhesive Manufacturing (320).

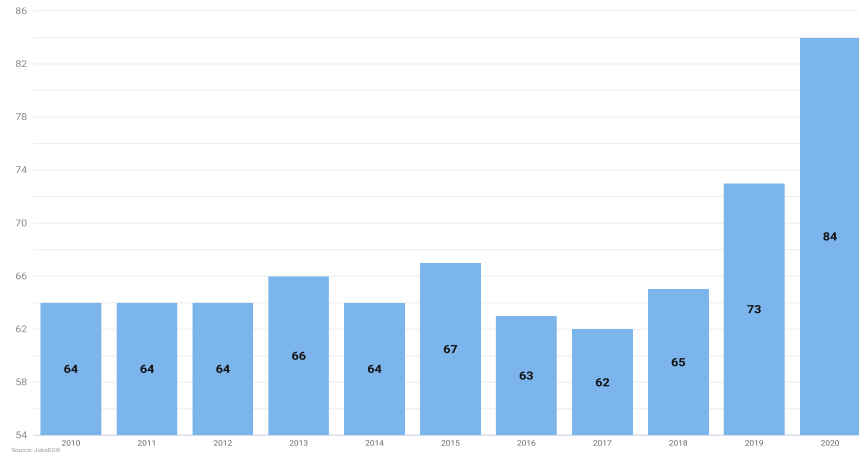
4-Digit Industry	Empl	Avg Ann		5yr History	Annual Demand
		Wages	LQ		
Motor Vehicle Parts Manufacturing	1,415	\$61,845	11.07		156
Other General Purpose Machinery Manufacturing	687	\$46,027	11.17		72
Alumina and Aluminum Production and Processing	427	\$49,945	32.42		42
Paint, Coating, and Adhesive Manufacturing	320	\$59,626	20.66		34
Other Electrical Equipment and Component Manufacturing	284	\$61,360	8.55		33
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	262	\$31,087	3.30		28
Rubber Product Manufacturing	234	\$43,459	7.70		24
Plastics Product Manufacturing	151	\$43,822	1.10		15
Coating, Engraving, Heat Treating, and Allied Activities	115	\$42,369	3.92		13
Nonferrous Metal (except Aluminum) Production and Processing	86	\$54,626	6.52		9
Remaining Component Industries	758	\$40,708	0.77		79
Manufacturing	4,743	\$56,970	1.62		511

15. JobsEQ <http://www.chmuraecon.com/jobseq> Economic Overview for Madison County, Kentucky



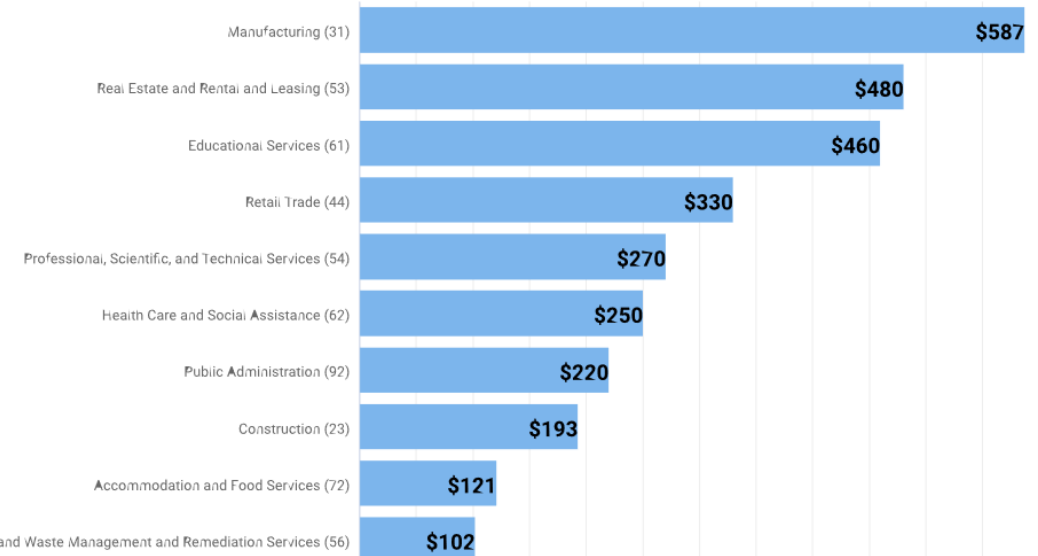
Establishments ¹⁶

In 2020, there were 84 Manufacturing establishments in Madison County, Kentucky (per covered employment establishment counts), an increase from 64 establishments ten years earlier in 2010.



Source: JobsEQ

Manufacturing contributed the largest portion of GDP in 2021, \$587,408,000. The next-largest contributions came from Real Estate and Rental Leasing (\$480,314,000); Educational Services (\$459,512,000); and Retail Trade (\$329,710,000).



Source: JobsEQ



Staffing Patterns

The mix of occupations points to the ability of a region to support an industry and its flexibility to adapt to future demand. Industry wages are a component of the cost of labor for regional employers.



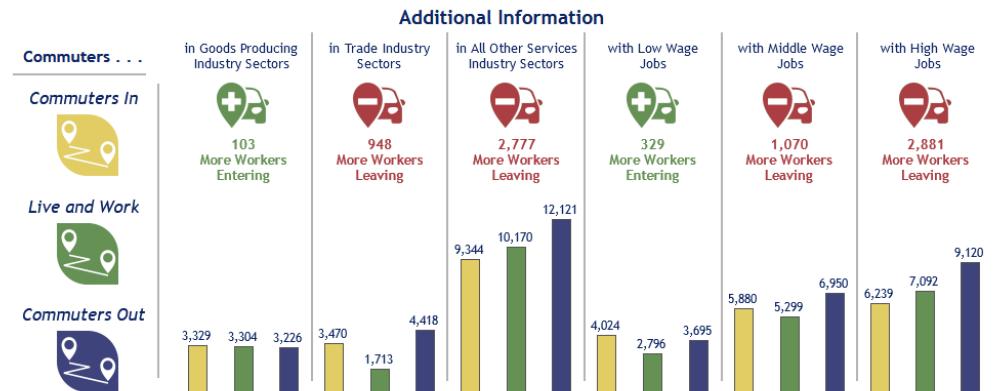
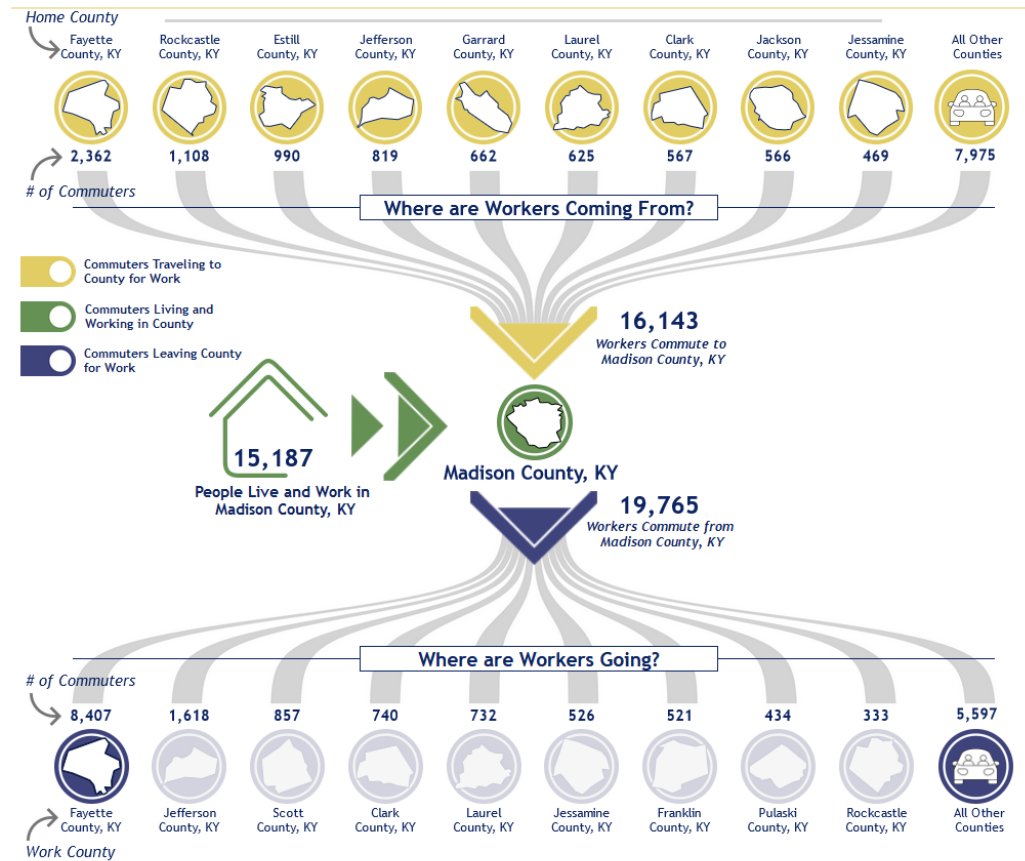
6-digit Occupation	Empl	Avg Ann Wages	Annual Demand
Team Assemblers	526	\$34,600	56
First-Line Supervisors of Production and Operating Workers	203	\$60,700	23
Inspectors, Testers, Sorters, Samplers, and Weighers	185	\$40,500	20
Machinists	185	\$40,500	21
Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	177	\$35,000	19
Laborers and Freight, Stock, and Material Movers, Hand	161	\$35,600	24
Welders, Cutters, Solderers, and Brazers	140	\$40,900	17
Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	115	\$35,300	15
Industrial Machinery Mechanics	111	\$54,800	14
Shipping, Receiving, and Inventory Clerks	98	\$37,100	9
Remaining Component Occupations	2,818	\$50,400	312
Total	4,719		

Commuting Patterns

17, 18

The average mean commute time for Madison County residents is 23.7 minutes which is consistent with the average commuting minutes across the state and the US. The commuter average represents an average across all industries and is unable to be separated by industry or occupation type.

The 2018 Commuting Patterns Report for Primary Jobs shows 15,187 people live and work in Madison County and 16,143 workers commute to Madison County for work. Of workers who commute from Madison County to a different county for employment, 43% leave for neighboring Fayette County (8,407 workers). Lastly, there are more workers leaving for middle wage and high wage jobs than workers entering the county for similar paying jobs. It is unclear whether commuters leaving the county for middle wage and high wage jobs are leaving due to lack of opportunity or occupations of interest or choose to live in Madison County for the affordable cost of living and work elsewhere.



17. JobsEQ <http://www.chmuraecon.com/jobseq> Economic Overview for Madison County, Kentucky

18. KY Stats, Commuting Patterns Report https://kystats.ky.gov/Reports/Tableau/KCPR_2021



Commuting Patterns ^{19, 20}

The 2019 Commuting Pattern Report for Madison County residents shows 35.7% of residents with primary jobs commuted greater than 25 miles and over 5,500 of the group commuting distances greater than 50 miles, meeting or exceeding the average commute time of 27.5 minutes. Those willing to commute greater than 50 miles primarily travel Northwest (1,602 commuters), West (1,347 commuters) and North (900 commuters) of their residence. The data does not provide the type of industry these workers fall under but provides additional indication of commuting habits of those in the region.

Madison County Residents Commuting Patterns, 2019		
Madison County residents with a primary job: 35,484		
Commuting Distance	Commuters	Percentage
Less than 10 miles	12,584	35.5%
10 to 24 miles	10,190	28.7%
25 to 49 miles	7,196	20.3%
Greater than 50 miles	5,515	15.5%

19. United States Census Bureau, On The Map <https://onthemap.ces.census.gov/>

20. KY Stats, Commuting Patterns Report https://kystats.ky.gov/Reports/Tableau/KCPR_2021



Business Climate

21, 22, 23, 24

Kentucky Business Climate

- Site Selection magazine placed Kentucky at 5th in its annual Prosperity Cup rankings in 2022, which recognizes state-level economic success based on capital investments.
- Kentucky has posted new record low unemployment rates for three consecutive months, falling from 3.9% in April to 3.8% in May and 3.7% in June.
- In 2021, private-sector new location and expansion announcements included a record \$11.2 billion in total planned investment and commitments to create a record 18,000 + full-time jobs across the coming years.
- Kentucky’s average incentivized hourly wage for projects statewide in 2021 was \$24 before benefits, a 9.4% increase over the previous years.
- In July 2022, the Governor announced the highest annual growth rate in 31 years.
- The Department of Housing, Buildings and Construction reported an increase in electrical, plumbing and HVAC mechanics licensing in late 2022, creating a 30% increase in newly licensed journeyman HVAC mechanics and a 48% increase in newly licensed journeyman plumbers.

Madison County Business Climate

In 2021, Richmond-Berea was identified as the number one ranked micropolitan community in Kentucky and was also named on Site Selection Magazine’s Top 100 micropolitan list, tying for 9th place nationally. Micropolitan areas contain an urban core and have a population between 10,000 and 50,000. “Top” micropolitan communities are identified based on number of qualifying projects from the previous calendar year, taking into consideration square footage, jobs created, and capital investment.

21. Arend, Mark, ‘North Carolina’s prowess in life sciences, aerospace and statewide business-recruitment teamwork are delivering enviable results’, *Site Selection Magazine*, May 2021, <https://siteselection.com/issues/2021/may/top-competitive-states-2021-prosperity-cup.cfm>

22. ‘State Provides \$500,000 Grant to Support Site Upgrades, Economic Growth in Berea’, Office of the Governor, July 2022, <https://www.kentucky.gov/Pages/Activity-stream.aspx?n=GovernorBeshear&prId=1421>

23. ‘Gov. Beshear: Over \$2.2 Million in Workforce Training Funds, Credits Approved for Nearly 9,500 Workers Statewide’, Office of the Governor, February 2022, <https://www.kentucky.gov/Pages/Activity-stream.aspx?n=GovernorBeshear&prId=1192>

24. ‘Gov. Beshear: Kentucky Just Reported the Highest Annual Growth Rate in 31 Years’, Office of the Governor, July 2022, <https://www.kentucky.gov/Pages/Activity-stream.aspx?n=GovernorBeshear&prId=1401>

	State Ranking
State Business Tax Climate Index Ranking	#18
Corporate Tax Ranking	#15
Individual Income Tax Rank	#17
Property Tax Rank	#21
Unemployment Insurance Tax Rank	#49
Total Tax Burden	8.77%
Property Tax Burden	1.55%
Individual Income Tax Burden	3.16%
Overall Tax Burden Rank	#22
State and Local Tax Burden	9.6%
State and Local Individual Income Tax Collections per Capita	\$1,347
Top Individual Income Tax Rate	5%
Top Corporate Income Tax Rate	5%
State Business Climate Index Ranking	#18
State Sales Tax Rate	6.00%
Sales Tax Rank	#13
Combined State and Average Local Sales Tax Rate	6.00%
Total Sales & Excise Tax Burden	3.62%
State Gasoline Tax Rate (cents per gallon)	\$0.2600

Source: Tax Foundation, 2022



State Tax Incentive Programs

Top incentive programs offered by the Kentucky Cabinet for Economic Development

- Kentucky Business Investment (KBI) – A program which provides income tax credits and wage assessments to new and existing agribusiness, headquarters operations, manufacturing companies, coal severing and processing companies, hospital operations, alternative fuel, gasification, energy-efficient alternative fuels, renewable energy production companies, carbon dioxide transmission pipelines and non-retail service or technology related companies that locate or expand operations in Kentucky. Projects located in certain counties may qualify for enhanced incentives.
- Kentucky Enterprise Initiative Act (KEIA) – A program which provides a refund on a portion of Kentucky Sales & Use Tax paid by approved companies for building and construction materials permanently incorporated as an improvement on real property. It is also available for eligible equipment used for research and development, data processing equipment or flight simulation equipment.



Kentucky Business Investment (KBI)	Income tax credits and wage assessments for up to 15 years
Kentucky Enterprise Initiative Act (KEIA)	Refund of sales and use tax paid for building and construction materials
Bluegrass State Skills Corporation (BSSC)	Job training grant up to 50% reimbursement for eligible training activities
Kentucky Industrial Development Act (KIDA)	Tax credit equal to 100% of state corporate income tax liability or retention of 3% of gross wages of new employment
Property Tax Abatement	Discretionary abatement of real estate taxes and personal property taxes

Permitting and Regulatory Procedures

The Kentucky Department of Environmental Protection consists of six environmental divisions: air, waste, water, enforcement, compliance assistance and program support. Many businesses operate or engage in activities that require an environmental permit or authorization. The tables below provide details on common permits for industrial facilities. Specific environmental regulations and permits that could apply to the construction and operation of a facility may vary depending on the specific location, activities, and potential pollutants emitted. “Regulatory Time Frame” indicates the maximum time it should take to receive final permitting determination from the agency, assuming a complete application has been received. This document is not a comprehensive list of Kentucky DEP permits and only identifies the permits typically applicable to industrial facilities.²⁵

AIR QUALITY ^{1, 2}			
Permit Type ³	Application Fee	Regulatory Time Frame	Potentially Permitted Activities
Registration	\$0	60 days	When a facility conducts activities that has the potential to emit air pollutants, an air permit or registration is typically required. In most cases, this authorization is required prior to construction or operation of the air pollution sources. The permit type applicable to a facility is based on the amount of air pollutants emitted. Some common facility types likely to need an air permit include fuel combustion, surface coating, mineral mining and processing, chemical manufacturing and use, woodworking and metallurgy.
State Origin Permit (Minor Source)	\$0	60 days (completeness determination) 60 days (final permit issuance) Total = 120 days	
Federally Enforceable State Operating Permit (FESOP)	\$0	60 days (completeness determination) 60 days (draft issuance) 30 days (public comment) 60 days (final permit issuance) Total = 210 days	
Title V Permit; Prevention of Significant Deterioration (PSD) Permit (Major Source)	\$0	60 days (completeness determination) 60 days (draft issuance) 30 days (public comment) 45 days (EPA comment period) 60 days (final permit issuance) Total = 255 days	

¹ If the facility is located in Jefferson County, your air permit would be issued by the Louisville Metro Air Pollution Control District (APCD). You can contact APCD at 502-574-6000.

² While there is not a permit application fee, annual emission fees may be applicable after the permit is issued. Actual emissions up to 25 tons is a flat fee of \$150. Sources that emit 25 tons or greater receive a fee on a per ton basis.

³ Facilities located in nonattainment areas may be subject to additional regulatory requirements and affect the permit type required. A nonattainment area is a locality where air pollution levels exceed National Ambient Air Quality Standards (NAAQS).



Permitting and Regulatory Procedures

WATER QUALITY			
Permit Type	Application Fee	Regulatory Time Frame	Potentially Permitted Activities
KY Pollutant Discharge Elimination System (KPDES) Operating Permits	General	\$0	7 - 30 days
	Individual	\$2,200 - \$7,000	180 - 210 days
KY Pollutant Discharge Elimination System (KPDES) Construction Stormwater Permit	\$0	7 - 30 days	
401 Water Quality Certification (WQC)	General <500 linear feet	\$0	30 days
	Individual >500 linear feet	\$1,000 - \$5,000 ⁷	30 - 180 days
Water Withdrawal Permit	\$0	120 days	
Floodplain Construction Permit	\$0	45 days	
Groundwater Protection Plan (GPP)	\$0	30 - 120 days	

⁵ Excludes coal mining.

⁶ Discharges into a municipality may require permission from the municipality. Pretreatment requirements may also apply.

⁷ Wetlands mitigation fees are calculated per area of impact.

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WASTE MANAGEMENT			
Permit Type	Application Fee	Regulatory Time Frame	Potentially Permitted Activities
Hazardous Waste Generator Registration	\$0 - \$600	30 - 60 days	A facility that generates 220 lbs. (100 kg) or more of non-acute or 2.2 lb. (1 kg) of acutely hazardous waste per calendar month, must register with the Division of Waste Management. Additional activities that require registration include recycling and transportation of hazardous waste (excludes on-site transportation) and generation of universal wastes, such as fluorescent lights, pesticides, batteries and thermostats.
Hazardous Waste: Treatment, Storage and Disposal (TSD) Permit ⁴	\$3,700 min.	180 - 365 days	A TSD permit is required prior to the construction or operation of a facility for the treatment, disposal or storage of hazardous waste or storage by a hazardous waste generator for more than 90 days.
Solid Waste: Registered Permit-by-Rule	\$2,500 - \$4,000	30 - 160 days	A registered permit-by-rule is needed for medical and solid waste transfer facilities, composting and land application facilities, one-acre construction demolition debris landfills, and sludge storage and treatment facilities.

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⁴ Application fees and time frame depends on complexity, types and amounts of units.



Existing Industry

The following table provides a snapshot of facilities in Madison County associated with Kentucky Cabinet for Economic Development programs. The following facilities have been identified as major employers and the data below includes the company name, employment number as of January 2020, and industry description. Data is taken directly from surveys completed by each facility or from phone or personal contact with the facility.²⁶

Berea			
	Hitachi	70	Brake systems (booster, master cylinder) electronic motors
	Hitachi Automotive Systems Americas	963	Manufacture and assembly of brake and suspension systems. Processes include machining, plating, painting, welding and assembly
	Hyster-Yale Group	653	Manufacture lift trucks
	Middletown Metal Works	65	Product fabrication; machine, weld, paint
	Kentucky Steel Center	55	Steel service center; coil slitting and steel sheets
	Novelis Corporation	140	Ingots made from recycled aluminum cans
	KI (USA) Corporation	139	Metal stamped & cationic painted automotive parts and components, arc and resistance welding
	Stemco Products, Inc	150	Manufacturing and distribution for Enpro products
	Pittsburgh Glass Works LLC	85	Automotive windshields, door glass, back windows

Richmond		
AGC Glass Company, North America	113	Automotive Glass
Asahi Bluegrass Forge	118	Automotive press forging gears, bearings, joints
The Allen Company	39	Mixed asphalt and crushed limestone
Asahi Forge of America Corp.	76	Hot forge manufacturing for the automotive industry
B&H Tool Works	86	Tooling, machining, stamping, and fabrication
Blue Grass Chemical Agent-Destruction Pilot Plant	1,455	Design, build, systemize, test, operate, and close a facility to destroy chemical weapons stockpiles
Blue Grass Plating Co, LLC	33	Zinc, black oxide, phosphate, electroplating, electrocoating
Concrete Materials Co	47	Ready-mix concrete and precast products
Conduent	83	Provide business processing solutions
EnerSys	660	Lead acid industrial batteries
Framebridge	58	Manufactures picture frames, shipping
Gill Industries	218	Automotive stamping
Kokoku Rubber	81	Compression and injection molding of rubber components
Lectrodryer, LLC	54	Designs and manufacturers desiccant dryers and purification systems for the removal of humidity and other impurities from air, gases and liquids
The Okonite Company	315	Insulated electrical cable
Petro Towery Inc	55	Petroleum equipment company
P-K Tool & Manufacturing Co	49	Metal stamping, production machining, fabricating & assembly; complete stamping die construction; robotic and resistance welding
Precision Tube Inc	70	Tube fabricating, wire forming, forklift components and CNC machining
Qualex Machining	175	Metal turning, threading, grooving, milling, drilling, tapping and welding, plasma & press brake laser
Quanex Building Products	160	Vinyl extrusions for windows and doors
Richmond Auto Parts Technology, Inc.	143	Automotive transmission gears; chassis components and automatic transmission components
Sherwin-Williams Company	323	Automotive coatings & finishes, Thompson's Waterseal woodcare products, military and industrial coatings; distribution of coatings related to products and materials for the Sherwin Williams Company
TEBCO of Kentucky Inc	80	Manufacture truck bodies, snowplows and related equipment and distribution
Uncle Charlie's Meats Inc	45	Meat & further processing, packaging and distribution

26. Kentucky Cabinet for Economic Development, Kentucky Facilities https://ced.ky.gov/KYFacts/Kentucky_Facilities



Transportation Infrastructure

Air Cargo Service

Kentucky is home to three major air-cargo delivery hubs: Amazon Air and DHL at Cincinnati/Northern Kentucky International Airport, and UPS at Louisville Muhammad Ali International Airport. Due to their presence, Kentucky ranks third as a national leader in total air cargo shipments.

Cincinnati/Northern Kentucky International Airport (CVG) in Hebron, Kentucky, is the seventh largest cargo airport in North America and 34th in the world, handling 1.24 billion pounds of cargo in 2019. Home to **DHL's global hub**, CVG handles approximately 90% of the DHL shipments that enter the United States. DHL Express U.S. specializes exclusively in international shipping for importers and exporters, employing more than 2,000 workers at CVG where nearly 100 flights operate daily. CVG is also home to **Amazon Air hub**. The \$1.5 billion project opened in 2021 and employs more than 2,000 workers featuring 100 flights daily at full capacity. The new hub builds on the company's presence in the Commonwealth, which includes 15 fulfillment centers and over 18,000 employees across the state. CVG has received several distinguished awards, including the 2020 Diamond Award for Air Cargo Excellence, Air Cargo Worldwide, named 2020 Best Regional Airport in North America, and received the Skytrax World Airports Award.

Louisville Muhammad Ali International Airport (SDF) in Louisville, Kentucky, was ranked top five in the world and top three in North America as busiest cargo airport in 2020 and named a top five Air Cargo Hub in the world again in 2021, as home of UPS Worldport. **UPS Worldport**, the largest fully automated package-handling facility in the world, turns more than 300 flights daily at SDF and processes an average of 2 million packages per day. In 2020, SDF handled more than 6.43 billion pounds of cargo, a 4.6% increase over the previous year.



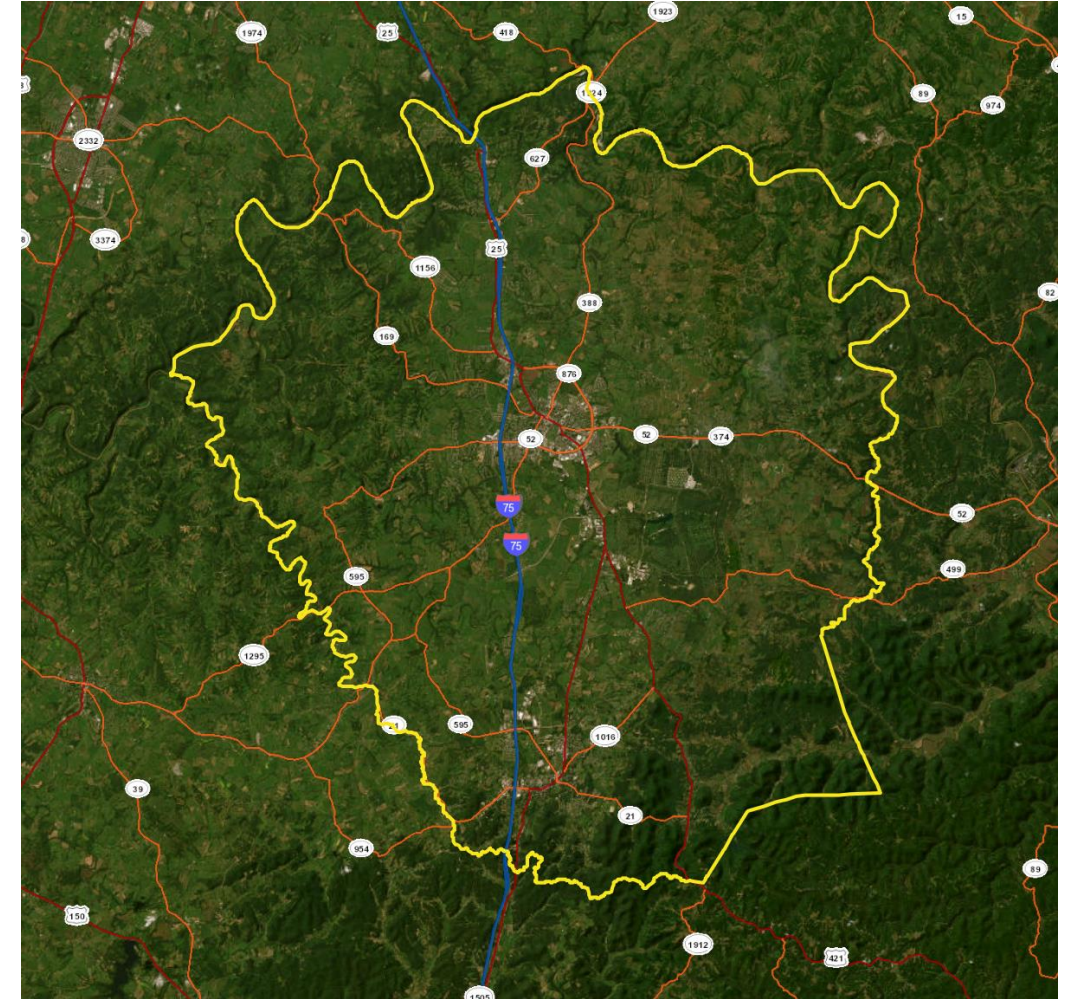
Transportation Infrastructure

Truck Service

Located at the center of a 34-state distribution area in the eastern United States, Kentucky's geographical advantage facilitates the distribution of goods and materials to a massive industrial and consumer market. Madison County is bisected by Interstate 75, a north-south interstate that runs through Florida, Georgia, Tennessee, Kentucky, Ohio, and Michigan.

There are seven interchanges on I-75 – exits 76 and 77 to Berea, and exits 83, 87, 90, 95, and 97 to Richmond. Two other major regional highways (Hwy 25 and Hwy 421) pass through the county from north to south and serve as major arteries for Berea and Richmond. Madison County routes on the National Highway System are I-75 in its entirety, US 25 from US 421 to KY 876, US 25, and KY 876 from I-75 to US 25.

In October 2022, the Kentucky Department of Transportation announced that the state will receive over \$1 billion in the next fiscal year for critical infrastructure projects to strengthen roads, bridges, tunnels and more across the state. Funding is coming from the Bipartisan Infrastructure Law, which was signed in November 2021.



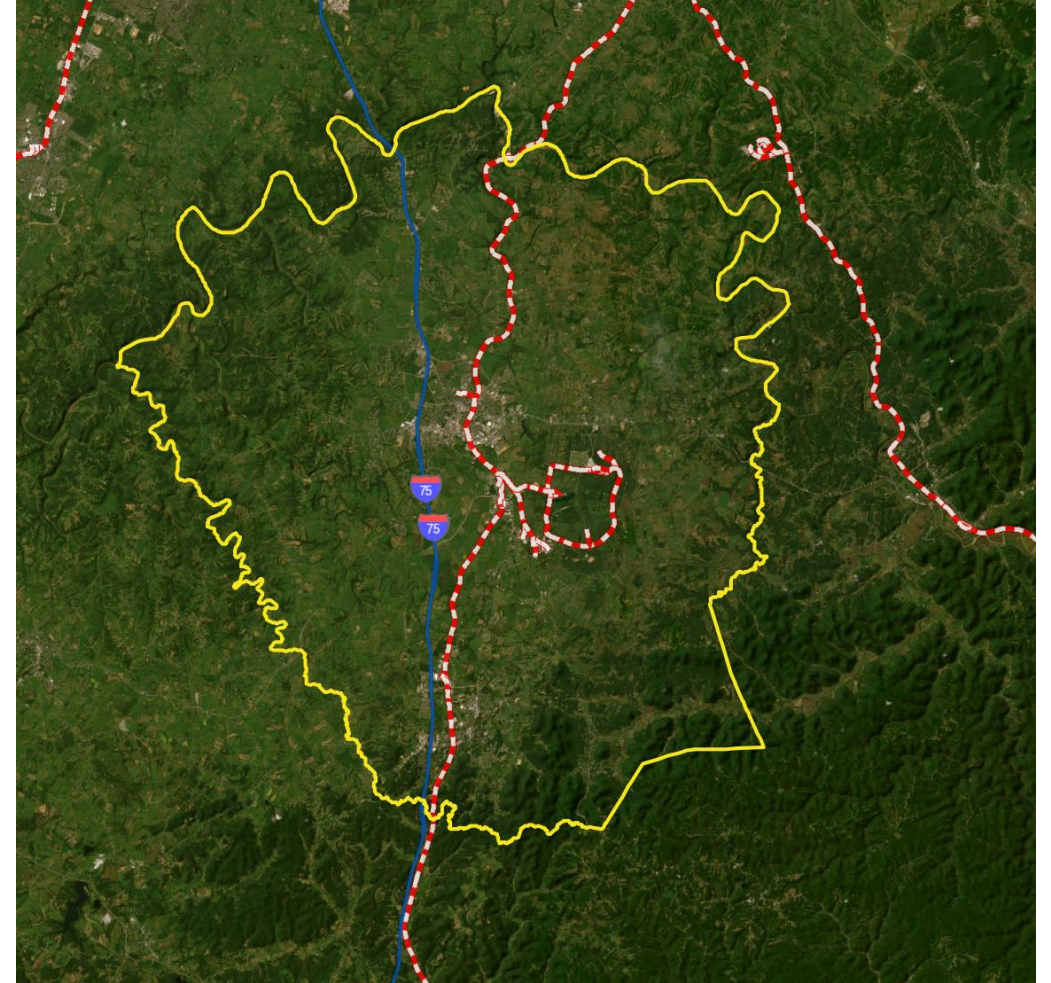
Transportation Infrastructure

Rail Service

Madison County is served by CSX Transportation – a Class I freight railroad and leading supplier of rail-based freight in North America. CSX links more than 240 short-line railroads and more than 70 ocean, river, and lake ports.

River Service

Kentucky has over 1,000 miles of commercially navigable waterways that provide a two-way route between inland markets and major ports on the Gulf of Mexico. The Ohio River flows 664 miles along the northern border of Kentucky, and the state has 11 active or developing public riverports. Madison County industry can reach the nearest river port via rail or road to the Port of Louisville.



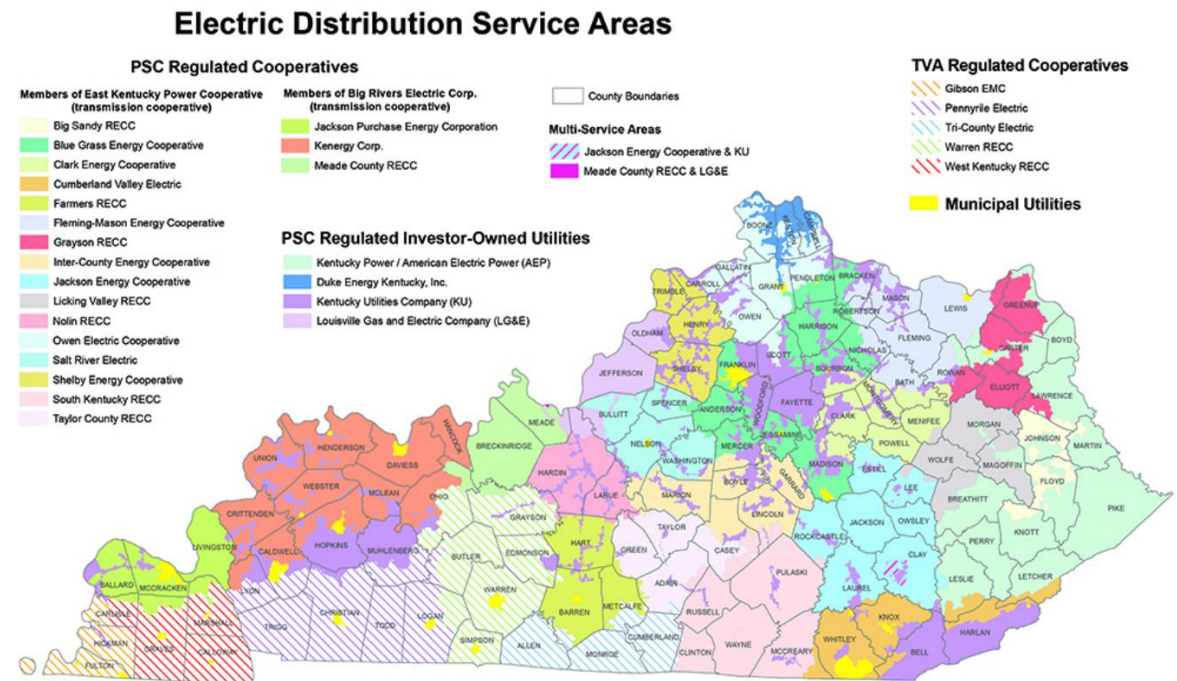
Utilities

Kentucky's geographical location and natural resources provides a competitive advantage in providing energy, natural gas, and water. Kentucky is directly located on the interstate natural gas pipeline corridor and has an abundant natural water supply from an extensive network of rivers, streams, and lakes, keeping Kentucky's utility costs among the lowest in the nation.²⁷ The Kentucky Public Service Commission (PSC) provides oversight to utility providers and ensures competitive rates.

Kentucky is the nation's fifth-largest producer of coal, with large reserves and proximity to coal burning utility plants. The Commonwealth also produces natural gas, a limited amount of crude oil, and is home to two ethanol facilities, four biodiesel production facilities, and two petroleum refineries, which produce 245,000 barrels per day.²⁸

Electric

Madison County's investor-owned electric provider is Kentucky Utilities. Electric cooperatives and municipal utilities operating in the county include Blue Grass Energy Cooperative, Clark Energy Cooperative, and Berea Municipal Utilities. Customer choice is not available, as Kentucky is a regulated state, and each service provider has designated service territories. Kentucky consistently maintains a low operating cost. In 2021, Kentucky had the 12th-lowest average electricity price of any state and the second-lowest price for a state east of the Mississippi River.²⁹ Renewable energy options and energy efficiency programs are available to customers.



Source: Public Service Commission of Kentucky

27. Kentucky Cabinet for Economic Development, Just the Facts: Utilities in Kentucky

28. Kentucky Cabinet for Economic Development, Just the Facts: Utilities in Kentucky

29. U.S. Energy Information Administration, State Profile and Energy Estimates <https://www.eia.gov/state/?sid=KY>

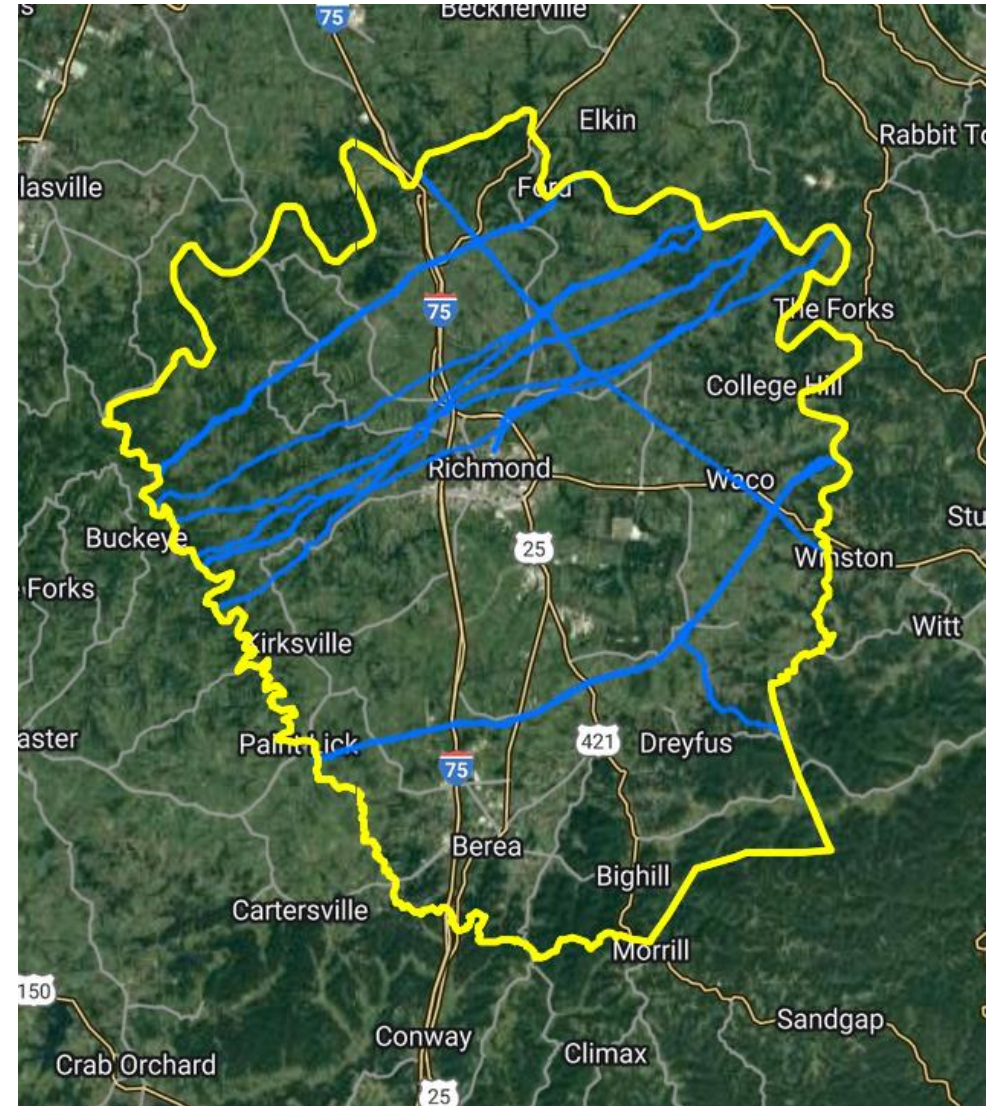
Utilities

Natural Gas

Four interstate natural gas pipelines run through Madison County. Pipeline operators are Enbridge Inc., Kinder Morgan's Tennessee Gas Pipeline, and TransCanada running east to west, and the Columbia Gas Transmission Company running north to south. Gas companies that distribute and transport natural gas throughout Madison County include Delta Natural Gas Company, Inc., and Columbia Gas of Kentucky. As a regulated state, gas companies can offer economic incentive rates for certain large industrial and commercial customers, for both new and expanding operations, and can also offer a discount or waiver of gas main extension costs. Industrial customers have the option to purchase gas off the open market and take advantage of the gas trading at a discount to the Henry Hub price point in the geographic area.

Water & Wastewater

Municipal service providers currently service water and/or wastewater services to residents and businesses within Madison County. The cities of Richmond and Berea provide water and wastewater services in territories annexed by the municipality. In some instances, the municipal water and/or wastewater lines provided by the municipality may service properties that fall outside of the municipality. Unincorporated areas are served by a variety of providers with established service areas. Sites in underdeveloped or remote areas may be outside of a service territory and have a septic system or similar type system.



Source: National Pipeline Mapping System (NPMS)

Vacancy Rates & Construction Costs

National Industrial Market

Vacancy rates for commercial and industrial real estate in the United States are at record lows. According to Jones Lang LaSalle's (JLL) United States Industrial Outlook report for 2022Q3, industrial markets continued to constrict, posting the seventh consecutive quarter of declining vacancy. The decline brought the national vacancy rate to an all-time low of 3.3%.

At the state level, a quarterly study of the 2022Q2 Louisville commercial sector by Cushman & Wakefield reported the area's vacancy rate is down to 1.5% for industrial real estate – the lowest overall rate ever recorded in the Louisville market.³⁰ To keep up with the demand for the area, over 9 million sq. ft. is under construction. Of that, 2.8 million sq. ft. is either build-to-suit or pre-leased.

The Lexington-Fayette County metro area has seen similar activity. Demand for industrial space is weaker than nationwide, as Fayette County has a slower absorption of industrial space. However, rent prices rose faster than nationwide and the vacancy rate is lower in this area.

The Madison County industrial market is the tightest it has been in decades. With new and expanding industries, including supplier networks, the shortage of industrial space is evident. Two industrial buildings are currently on the market in Madison County – a 5,800 sq. ft. building in Richmond and a 50,000-92,000 sf spec building in Berea. Rental rates in central Kentucky are currently at ~\$6.00 - \$6.50/SF.

National Industrial Market Indicators

	Current	YOY Change	Trend
Market Rent (psf)	\$10.61	11.6%	Up
Vacancy Rate	3.9%	(100 BPS)	Down
Sublet (sf)	64.3 M	(11.4 M)	Down
Under Construction (sf)	665 M	197 M	Up
Net Absorption (sf) (past 12 mos)	479 M	18.3	Up
Sale Transaction (past 12 mos)	28,212	3,474	Up
Sale Volume (past 12 mos)	\$140 B	\$52.2 B	Up
Market Sale Price (psf)	\$150	\$21	Up
Cap Rate	6.10%	(10 BPS)	Down

Source: data compiled from CoStar (as of August 2022)

8. Cushman & Wakefield, Marketbeat Louisville Industrial Q2 2022 https://commercialkentucky.com/wp-content/uploads/CK_Industrial_Q222.pdf



Vacancy Rates & Construction Costs

Infrastructure Upgrade Costs & Lead Times

Natural Gas

- Construction costs for 4" steel is estimated to be \$125 per foot. This does not include the cost of a regulator station, interstate highway bores, easements, or any additional facilities. Four to six weeks is the lead time to receive materials.
- Construction costs for 4" plastic is estimated to be \$27 per foot. This does not include the cost of a regulator station, interstate highway bores, easements, or any additional facilities. Forty to fifty weeks is the lead time to receive materials.
- A new tap on an interstate gas transmission pipeline is anticipated to cost at minimum \$1,600,000. Purchase station, odorizer, and measurement equipment is additional cost. Install cost would be additional (see construction rates above and footage estimates above that in chart).

Water

- Construction cost for 12" water line is estimated to be \$110 per foot.

Wastewater

- Construction cost for 8" force main is estimated to be \$75 per foot.
- A sewage pump station is estimated to cost \$250,000.

The numbers above reflect estimates as of December 2022 and are subject to change



Vacancy Rates & Construction Costs

Construction Costs

The building pricing provided below is based off quotes provided by a local developer during Q3 & Q4 of 2022. Actual future pricing may fluctuate outside of the ranges provided. Buildings greater than 100,000 SF experience economies of scale.

Scope of Budgetary pricing:

- 50,000 sq. ft.
- 28' Clear Height
- ESFR Sprinkler w/ Pump
- 1 Dock Door per 10,000 sq. ft.
- Dimly Lit
- 1200A Electrical Service
- 6" Reinforced Concrete Floors
- No Office Space
- Space Heated & Vented
- Structure & Energy to Match Kentucky Building Code

Unknowns Affecting Prices:

- Site Conditions Including Quality of Soil and Depth to Rock
- Storing Hazardous Materials
- MISC Needs (Trailer Storage, etc.)

Tilt/Precast Building – Summary

Prices displayed on a Per SQFT Basis

- Design & Engineering: \$1.5 - \$2.00
- Site-work & Improvements: \$14.50 - \$16.00
- Concrete: \$15.00 - \$16.00
- Tilt/Precast (Wall Panels + Steel): \$38.75 - \$45.00
- Openings (Dock, Overhead Doors, Mandors): \$2.50 - \$2.75
- Mechanical: \$4.50 - \$6.00
- Electrical: \$6.50 - \$7.50
- Fire Protection: \$6.00 - \$7.00
- MISC (Safety, Site Specific, etc.): \$7.50 - \$9.00

Tilt/Precast Shell Building: \$96.75 – 111.25 Per SQFT

Pre-Engineered Metal Building – Summary

Prices displayed on a Per SQFT Basis

- Design & Engineering: \$1.50 - \$2.00
- Site-work & Improvements: \$14.50 - \$16.00
- Concrete: \$15.00 - \$16.00
- PEMB (Supply & Erection): \$28.00 - \$30.00
- Openings (Dock, Overhead Doors, Man Doors): \$2.50 - \$2.75
- Mechanical: \$4.50 - \$6.00
- Electrical: \$6.50 - \$7.50
- Fire Protection: \$6.00 - \$7.00
- MISC (Safety, Site Specific, etc.): \$7.50 - \$9.00

Pre-Engineered Shell Building: \$86.00 - \$96.25 Per SQFT



Quality of Life

Madison County has three separate taxing jurisdictions – Madison County, the City of Richmond, and the City of Berea. The Madison County jurisdiction is defined as areas outside of either city limits.

State Sales Tax - Kentucky state sales tax rate is 6%.

Local Occupational Tax - Madison County has a 1.00% occupational tax for any work conducted outside of Richmond and Berea jurisdictions. Non-residents who work in Madison County also pay a local income tax of 1.00%. Residents of Richmond and Berea and nonresidents who work in Richmond or Berea pay a flat city income tax of 2.00% on earned income, in addition to the Kentucky income tax and the Federal income tax.

Property Taxes

Madison County - 0.973%

Richmond - 1.15%

Berea – 1.15%

Cost of Living³¹

Cost of Living Index – The Cost of Living Index estimates the relative price levels for consumer goods and services. When applied to wages and salaries, the result is a measure of relative purchasing power. The cost of living is 9.7% lower in Madison County than the U.S. average.

Cost of Living Information			
	Annual Average Salary	Cost of Living Index (Base US)	US Purchasing Power
Madison County, Kentucky	\$44,169	90.3	\$48,905
Kentucky	\$52,681	90.2	\$58,425
USA	\$67,777	100.0	\$67,777

31. JobsEQ <http://www.chmuraecon.com/jobseq> Economic Overview for Madison County, Kentucky



Quality of Life

Education

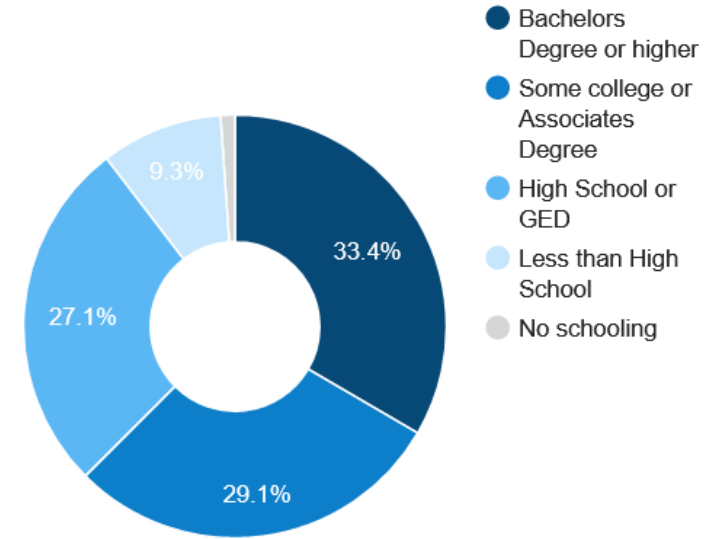
The percentage of county residents 25 years of age or older with a high school diploma or higher is 90%, which is the third highest percentage of high school graduates or higher across Kentucky counties. Furthermore, 41.9% of Madison County citizens possess an associate degree or higher. This rate is higher than the state level of 35.1% and falls just below the national average of 42.6%.

Educational Institutions

Higher education plays a major role in Madison County. As a major employer and the largest industry sector in the county, Education Services employs over 5,300 workers, largely due to Eastern Kentucky University and Berea College.³³

Eastern Kentucky University (EKU) is a full-service public university in Richmond, Kentucky. EKU includes six academic colleges and a graduate school that offers over 90 programs. Notable academic programs include: Aviation, the only four-year degree aviation program in Kentucky; College of Justice, Safety & Military Science with programs in Homeland Security, Criminal Justice, Fire and Safety, and Security Management; and Forensic Science. EKU has been named one of “America’s Top Colleges” by Forbes for 12 consecutive years, named a “Best Bang for the Buck” college by Washington Monthly, and Earned Top Ten status, the highest possible, in the Military Friendly Schools review.

Berea College in Berea, Kentucky, is one of only nine³⁴ federally recognized Work Colleges in the United States, and all students hold a labor position in which they work 10-12 hours per week in all areas of the College. Berea College enrolls 1,500 students and admits only students whose families are unable to afford tuition and awards each of them a four-year tuition scholarship. The College offers 33 majors and 39 minors, and consistently ranks among the nation’s leading liberal arts colleges. Washington Monthly 2021 College Ranking Guide ranked the college No. 3 Liberal Arts College in the US. In 2022, Money Magazine ranked Berea College No. 20 “Best Colleges in America” and No. 10 on the publication’s “Best Colleges in the South” list.³⁵



31. JobsEQ <http://www.chmuraecon.com/jobseq> Economic Overview for Madison County, Kentucky

32. Town Charts, Madison County, Kentucky Education Data <https://www.towncharts.com/Kentucky/Education/Madison-County-KY-Education-data.html>

33. JobsEQ <http://www.chmuraecon.com/jobseq> Economic Overview for Madison County, Kentucky

34. Work Colleges Consortium <https://www.workcolleges.org/colleges>

35. Berea College <https://bereaedu.wpenginepowered.com/wp-content/uploads/2022/06/2022-06-08-BBTN-Digital.pdf>

Quality of Life

Education, cont.

Other colleges and universities serving the region include the University of Kentucky, Transylvania University, Asbury University, Georgetown College, Kentucky State University, Midway University, and Centre College. Seventeen two-year colleges are within 60 miles of Madison County.³⁶

The Madison County Public School System includes 11 elementary schools, five middle schools, two high schools, and two new Area Technical Centers (ATC) – Ignite Academy North in Richmond and Ignite Academy South in Berea. In addition to the public school system, the community also includes a private and a parochial school including Bluegrass Christian School and St. Mark School.

Kentucky administered the Kentucky Performance Rating for Educational Progress to high school students. These figures display how well the school performed in reading, mathematics, and science.³⁷

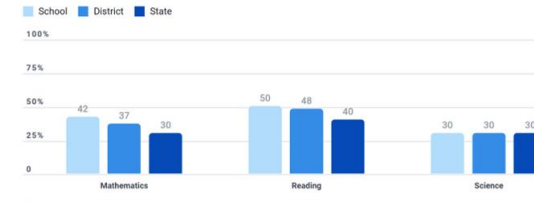
Madison County’s ATCs offer students and adult learners dual credit opportunities in partnership with Bluegrass Community and Technical College (BCTC) and nationally recognized industry certifications in all program areas to provide relevant academic, technical skill, and professional skills attainment.³⁸ Career center programs include: Machine Tool Tech; Construction Tech – Carpentry; Construction Tech – Electrician; Auto Tech; Welding and Welding Shop; Law/Public Safety; Business; Education; CAD; Health Science; Marketing; Diesel Lab; Engineering; Culinary; and Industrial Maintenance.

36. City of Richmond <https://richmond.ky.us/1272/Education>

37. U.S. News & World Report <https://www.usnews.com/education/best-high-schools/kentucky/districts/madison-county/madison-southern-high-school-8365>

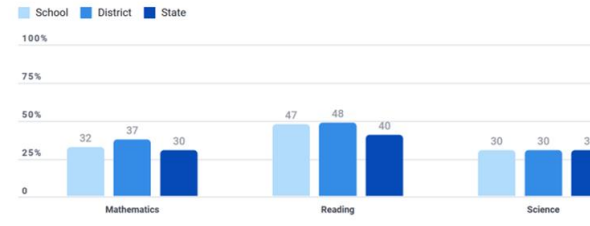
38. Kentucky Tech Madison County ATC <https://www.madison.kyschools.us/kytech/Content/1412>

Madison Southern High School



SCORECARD		71.05
Took at Least One AP® Exam		43%
Passed at Least One AP® Exam		12%
Mathematics Proficiency		42%
Reading Proficiency		50%
Science Proficiency		30%
Graduation Rate		95%

Madison Central High School



SCORECARD		66.61
Took at Least One AP® Exam		38%
Passed at Least One AP® Exam		22%
Mathematics Proficiency		32%
Reading Proficiency		47%
Science Proficiency		30%
Graduation Rate		91%

Source: U.S. News



Quality of Life

Arts & Culture

The City of Richmond is home to two State Parks - White Hall History Site and Fort Boonesborough - and the second-largest civil war battlefield.³⁹ Several historically significant locations, parks, wineries, and breweries are located within the city.⁴⁰ Eastern Kentucky University's Center for the Arts showcases dancing, music, and artists from across the world.

The City of Berea has a robust history of craftsmanship and cultural resources, specifically in Appalachian arts, and is recognized as the "Folk Arts and Crafts Capital of Kentucky."⁴¹ With the Kentucky Guild of Artists and Craftsmen, the Kentucky Artisan Center, numerous studio artists, shops and workshops, cultural tourism is estimated to bring in \$5 million in tax revenues annually.⁴² The Pinnacles in the Berea College Forest provide miles of hiking and biking opportunities and was recently recognized as the best hike in Kentucky by Outside magazine.⁴³



Fort Boonesborough
Source: Kentucky State Parks



Source:
Kentucky
Artisan
Center at
Berea



Source: VisitBerea.com

39., 40. VisitRichmondKY.com

41. VisitBerea.com

42. National Endowment for the Arts, Berea, KY: Wayfinding Design <https://www.arts.gov/impact/creative-placemaking/exploring-our-town/berea-ky-wayfinding-design>

43. Outside Online, The Best Hike in Every State, April 2019, <https://www.outsideonline.com/outdoor-adventure/hiking-and-backpacking/50-best-hikes-us/>

Housing Market

In October 2022, the average sale price of a home in Madison County was \$259,900, up 19.2% from the previous year.⁴⁴ The average sale price per square foot in Madison County was \$144, up 14.3% since last year with a median days on market of 5 days.^{45, 46} In comparison, Fayette County median sale price was \$300,000 and U.S. home prices sold for a median price of \$397,408 during the same period.^{47, 48}

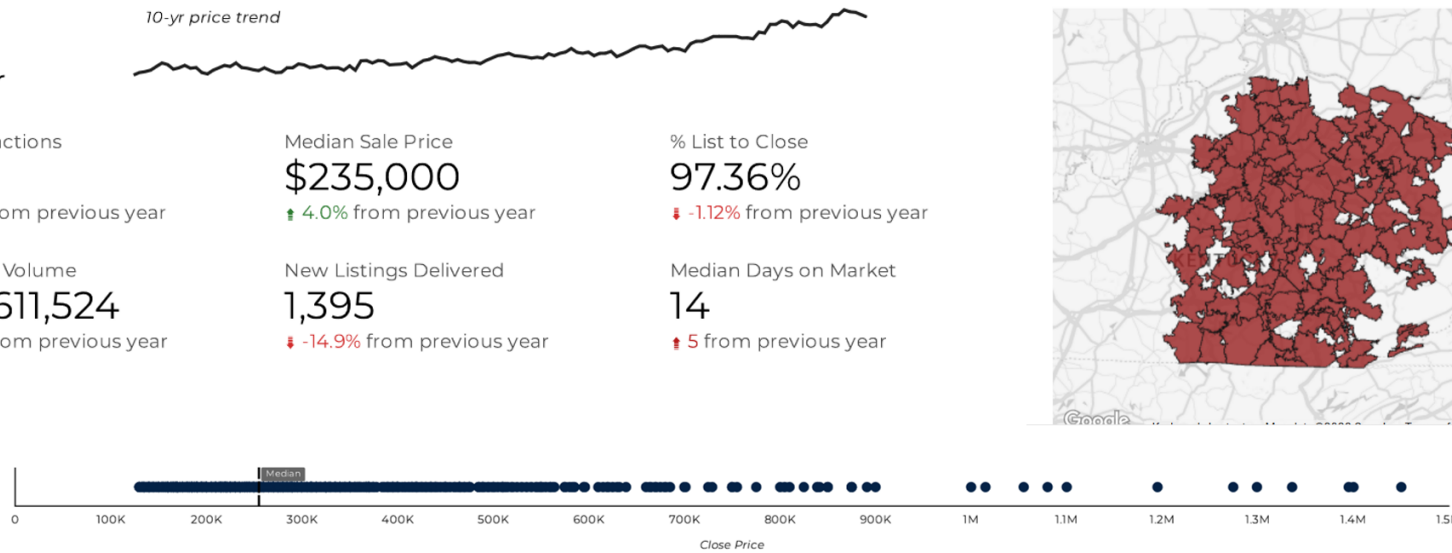
Summary Statistics	Oct-22	Oct-21	% Chg	2022 YTD	2021 YTD	% Chg
Absorption Rate	1.92	1.59	20.75	1.33	1.31	1.53
Average List Price	\$354,584	\$298,021	18.98	\$298,585	\$270,580	10.35
Median List Price	\$310,000	\$259,900	19.28	\$265,000	\$234,900	12.81
Average Sale Price	\$276,111	\$230,165	19.96	\$277,978	\$247,059	12.51
Median Sale Price	\$259,000	\$218,000	18.81	\$257,000	\$225,000	14.22
Average CDOM	21	19	10.53	27	22	22.73
Median CDOM	5	8	-37.50	6	5	20.00

Source: Lexington-Bluegrass Association of REALTORS

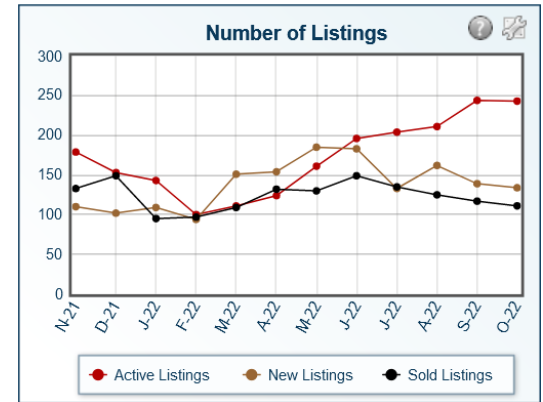
Bluegrass Housing Market Snapshot

October

# of Transactions	Median Sale Price	% List to Close
1,153	\$235,000	97.36%
↓ -23.7% from previous year	↑ 4.0% from previous year	↓ -1.12% from previous year
Total Sales Volume	New Listings Delivered	Median Days on Market
\$315,611,524	1,395	14
↓ -20.2% from previous year	↓ -14.9% from previous year	↑ 5 from previous year



Source: Lexington-Bluegrass Association of REALTORS



Source: Lexington-Bluegrass Association of REALTORS

44. Lexington-Bluegrass Association of Realtors, Lexington Area Housing Market Snapshot, November 2022,
 45. Redfin, Madison County Housing Market, December 2022, <https://www.redfin.com/county/1185/KY/Madison-County/housing-market>
 46. Lexington-Bluegrass Association of Realtors, Lexington Area Housing Market Snapshot, November 2022,
 47. Redfin, United States Housing Market, December 2022, <https://www.redfin.com/us-housing-market>
 48. Lexington-Bluegrass Association of Realtors, Lexington Area Housing Market Snapshot, November 2022,





Section 8

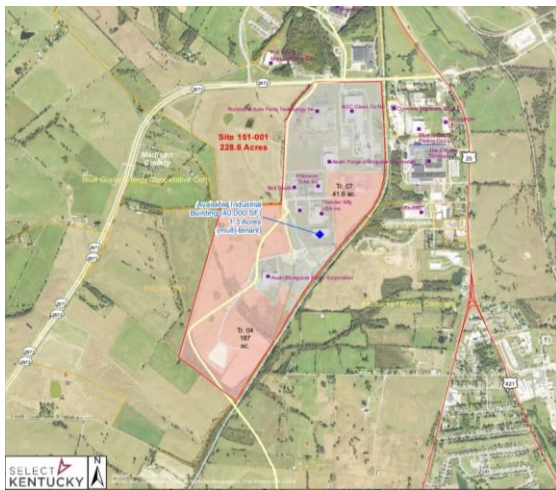
Sites and Buildings

Industrial Sites & Buildings

Madison County has a limited number of sites and buildings available that are zoned for light or heavy industrial purposes.

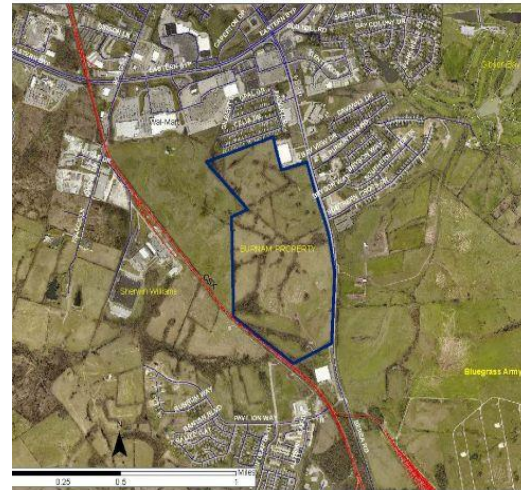
Sites

Madison County has nine sites listed as available on Kentucky's Zoom Prospector platform and 19 sites actively listed with real estate agents. Of the group, seven of the sites are zoned Industrial (light or heavy), 20 are zoned Commercial, and one is zoned Agricultural.



Richmond Industrial Park South III

Acres: 152
Zoning: I-2 (heavy industrial)
Sale Price: \$35,000/acre
Ownership: Public – Richmond Industrial Development Corporation



Burnam Property No. 3

Acres: 200
Zoning: I-2 (heavy industrial)
Sale Price: Undisclosed
Ownership: Private



Mayde Road Rail Site

Acres: 21
Zoning: I-2 (heavy industrial)
Sale Price: \$50,000/acre
Ownership: Public – Berea Industrial Development Authority



Pennington Brothers Industrial Site

Acres: 19.4
Zoning: Industrial
Sale Price: \$35,000/acre
Ownership: Private

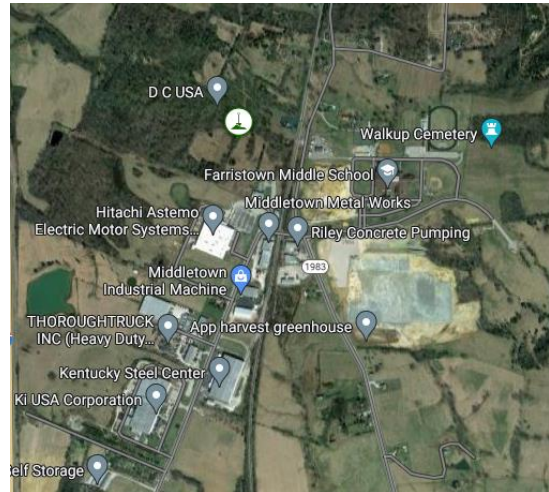
Industrial Sites & Buildings

Sites, Cont



Richmond Industrial Park South 2

Acres: 42 with 400,000 SF build ready pad
Zoning: I-2 (heavy industrial)
Sale Price: \$50,000/acre
Ownership: Public – Richmond Industrial Development Corporation



Berea Industrial Park

Acres: 87.7
Zoning: Industrial
Sale Price: \$42,000/acre
Ownership: Public – Berea Industrial Development Authority



1112 Mayde Road

Acres: 28.7
Zoning: I-2 (heavy industrial)
Sale Price: \$34,321
Ownership: Private

Industrial Sites & Buildings

Industrial Buildings



1601 Farristown Industrial Drive, Berea, KY 40403

SF: 50,000-92,000

Zoning: I-2 (heavy industrial)

For Sale/Lease: For Lease

Ownership: Private



145 N Estill Ave., Richmond, KY 40475

SF: 5,856

Zoning: I-2 (heavy industrial)

For Sale/Lease: For Sale

Ownership: Private

Utility Adequacy

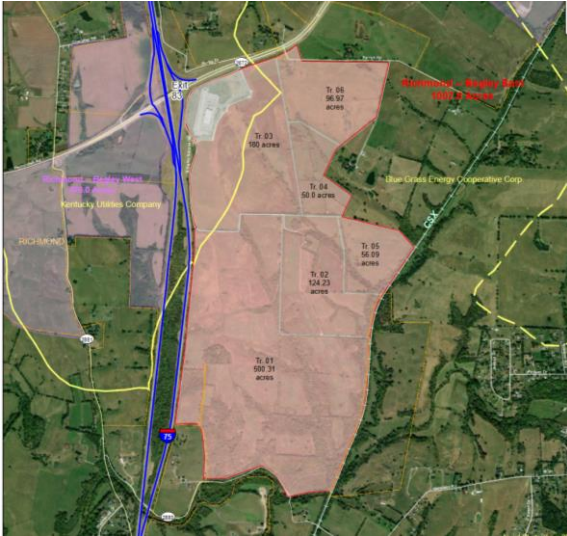
Industrial site selection is the process of examining potential options for an industrial client's new location project and strategically identifies the location that is best suited for a client's needs. Several evaluation guidelines are considered, among the top being transportation and utility adequacy. A property should be served by electric, natural gas, water, wastewater, and fiber telecommunications or be able to be in place or improved within a timeframe that matches a company's project timeline.

The below utility guidelines are recommended capacities to provide utility services based on the project's size: small, medium, large, and industrial park. Each project will have unique needs based on the type and scale of operation. The below levels are assumptions developed by Site Selection Group for Kentucky's Product Development Initiative program and are based on recent corporate site selection projects. These projections have been used as an indicator of utility adequacy at each property below.

	Small	Medium	Large	Industrial Park
Electric	1.5 MW	3 MW	5-10 MW	5-15+ MW
Natural Gas	8,000 mcf per month	15,000 mcf per month	25,000 mcf per month	15,000 mcf -32,000 mcf+ per month
Water	100,000 gpd	250,000 gpd	500,000 gpd	300,000 gpd – 800,000 gpd+
Wastewater	75,000 gpd	200,000 gpd	400,000 gpd	200,000 gpd – 600,000 gpd+

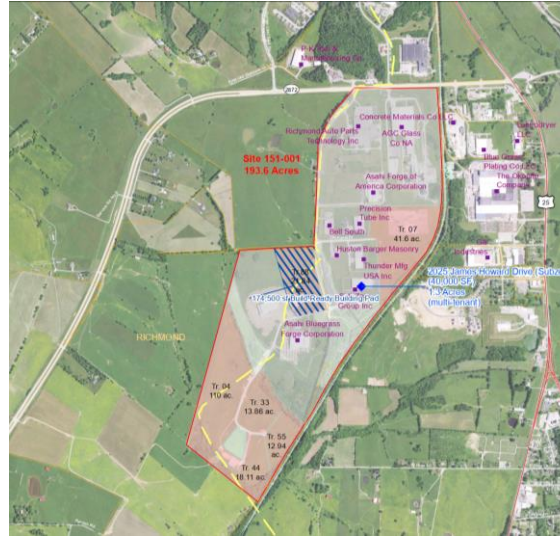


Attractive Sites for Industrial Activity



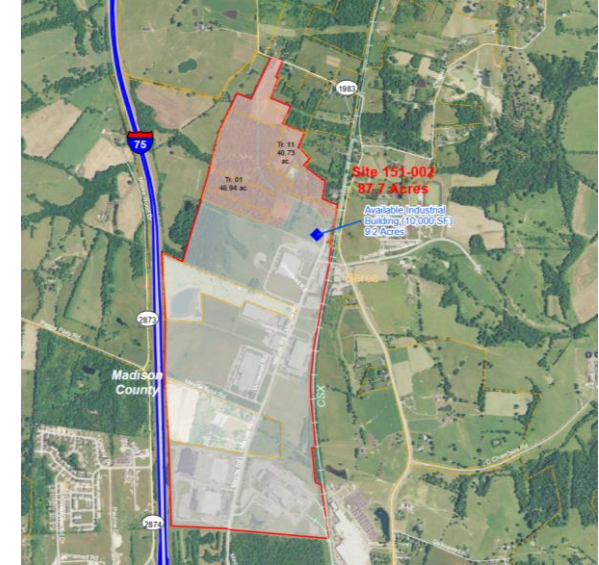
Begley East

Acres: 1007 acres
 Zoning: Commercial/Mixed Use
 Sale Price: Undisclosed
 Ownership: Private with Public Options



Richmond Industrial Park South III

Acres: 152 acres
 Zoning: I-2 (Heavy Industrial)
 Sale Price: \$35,000-\$50,000/acres
 Ownership: Public



Berea Industrial Park

Acres: 87 acres
 Zoning: I-2 (Heavy Industrial)
 Sale Price: \$42,000
 Ownership: Public

Notes related to sites 1, 2, 3, utility information:

Electric rates can vary based on renewables, interruptible options, and economic development riders.

Electric rates for the Berea Industrial Park include a 3% local and franchise tax and 6% sales tax. The rates provided do not include discounts available through the Economic Development Rider.

Natural Gas rate estimated calculations of Delta Gas Interruptible Service utilizing current NYMEX index and estimated delivery costs. Estimated rates include monthly customer charge, GTI R&D, Pipeline Replacement, Franchise Fee, School Tax and Sales Tax. Provided Information is an estimate and subject to change.

Site 1: Begley East

The Begley East property in the City of Richmond provides up to 1,007 acres of rail-served property for sale. The subject property is privately owned and the price per acre is undisclosed at this time. The site is directly adjacent to Exit 83 of I-75 and is adjacent to the existing Richmond Industrial Park. The Begley East property is currently zoned Commercial/Mixed Use and would be required to pursue a rezone for an industrial user. The City of Richmond recently optioned 600-acres of the property.

Utility Infrastructure

Electric	<p>Provider: Bluegrass Energy</p> <p>A 69kV line is currently located within 1 mile of the site and a 138kV line is located within 3 miles of the site. The existing 69kV line can be rebuilt as double circuit 138 & 69kV to support load service in the area. The existing 138 kV line can be extended to the site to provide additional support and redundancy.</p>
Natural Gas	<p>Provider: Delta Natural Gas Company</p> <p>8-inch steel line bisects the property</p> <p>Operated at 320 psig with an MAOP of 720 psig</p>
Water	<p>Provider: Richmond Utilities</p> <p>12" water main</p> <p>Total capacity of line serving the site – 2.5 mgd</p> <p>Excess capacity of line serving the site – 1.5 mgd</p>
Wastewater	<p>Provider: Richmond Utilities</p> <p>15"-18" wastewater line</p> <p>Total capacity of line serving the site – 3.0 mgd</p> <p>Excess capacity of line serving the site – 2.5 mgd</p>

	"All-in" Rate	Small	Medium	Large	Industrial Park
Electric	1.5 MW – 0.08779 3 MW – 0.08716 5 MW – 0.065348 10 MW – 0.065348 *Assumption: facility will operate 6am-10pm, load factor 85%.	1.5 MW The proposed level of electric service can be met without any improvements.	3 MW The proposed level of electric service can be met without any improvements.	5-10 MW The proposed level of electric service can be met without any improvements.	5-15+ MW The site is serviced by a nearby distribution substation that can meet the 10 MW demand. With an extension of nearby 138 kV lines to the site, 175 MW can be supported. Additional lines can be built to the site from other major substations in the region to serve a 250+ MW user.
Natural Gas	8,000 mcf/month - \$13.96 15,000 mcf/month - \$13.59 25,000 mcf/month - \$13.39 15,000 mcf – 32,000 mcf+/month - \$13.33	8,000 mcf per month The proposed level of natural gas service can be met without any improvements. Additional information would be required to determine if additional extension to facility or service line is needed.	15,000 mcf per month The proposed level of natural gas service can be met without any improvements. Additional information would be required to determine if additional extension to facility or service line is needed.	25,000 mcf per month The proposed level of natural gas service can be met without any improvements. Additional information would be required to determine if additional extension to facility or service line is needed.	15,000 mcf -32,000 mcf+ per month The proposed level of natural gas service can be met without any improvements. Additional information would be required to determine if additional extension to facility or service line is needed.
Water	100,000 gpd – \$3.00 250,000 gpd – \$3.00 500,000 gpd – \$3.00 800,000 gpd – \$3.00	100,000 gpd The proposed level of water service can be met without any improvements.	250,000 gpd The proposed level of water service can be met without any improvements.	500,000 gpd The proposed level of water service can be met without any improvements.	300,000 gpd – 800,000 gpd+ The proposed level of water service can be met without any improvements.
Wastewater	75,000 gpd – \$7.00 200,000 gpd – \$7.00 400,000 gpd – \$7.00 600,000 gpd – \$7.00	75,000 gpd The proposed level of wastewater service can be met without any improvements.	200,000 gpd The proposed level of wastewater service can be met without any improvements.	400,000 gpd The proposed level of wastewater service can be met without any improvements.	200,000 gpd – 600,000 gpd+ The proposed level of wastewater service can be met without any improvements.



Site 2: Richmond Industrial Park South III

The Richmond Industrial Park has 152 acres of I-2 (Heavy Industrial) zoned land available for sale, including a 174,500 square-foot certified build-ready pad on a 21.5-acre tract. The subject property is publicly owned by the Richmond Industrial Development Corporation and is listed at \$35,000 - \$50,000 per acre and \$50,000 per acre for the 21.5-acre build-ready site. The park is located 2.5 miles from Interstate 75 (I-75) and 36 miles from Blue Grass Airport. The property is surrounded by national and global companies such as RAPT, AGC Glass, The Okonite Company, Thunder Manufacturing, Asahi Forge of America, and Asahi Bluegrass Forge.

Utility Infrastructure: *Utility responses are specific to the 21.5 acre build-ready site within the development.

Electric	Provider: Kentucky Utilities and Blue Grass Energy 12.47kV distribution line and 69kV transmission line on site Nearest substation 1,000 ft from the property 13 MW capacity available to the property
Natural Gas	Provider: Delta Natural Gas Company 4-inch plastic line on property 8-inch steel line 5,600 ft from the property
Water	Provider: Richmond Utilities 12-inch line 50ft from property Total capacity of line serving the site – 1.64 mgd Excess capacity of line serving the site – 1 mgd
Wastewater	Provider: Richmond Utilities 12-inch gravity line 25 ft from the property Total capacity of line serving the site – 1.6 mgd Excess capacity of line serving the site – 1.4 mgd
Fiber	Underground fiber available to the property

	"All-in" Rate	Small	Medium	Large	Industrial Park
Electric	1.5 MW – \$0.08	1.5 MW	3 MW	5-10 MW	5-15+ MW
	3 MW – \$0.08	The proposed level of electric service can be met without any improvements. *Assumption: facility will operate 6am-10pm, load factor 85%.	The proposed level of electric service can be met without any improvements.	The proposed level of electric service can be met without any improvements.	Improvements needed to distribution line to meet 10+ MW electric need. Improvement would take approximately 4 months. Depending on the size of a project, necessary upgrades may be performed at no cost to the customer.
	5 MW – \$0.08				
	10 MW – \$0.08				
*Assumption: facility will operate 6am-10pm, load factor 85%.					
Natural Gas	8,000 mcf/month - \$13.96	8,000 mcf per month	15,000 mcf per month	25,000 mcf per month	15,000 mcf -32,000 mcf+ per month
	15,000 mcf/month - \$13.59	A 2,400 ft extension required to provide the proposed level of service. The extension can be completed in 3 to 4 months.	An 8,500 ft steel extension required to provide the proposed level of service. The extension can be completed in 6 to 9 months.	An 8,500 ft steel extension required to provide the proposed level of service. The extension can be completed in 6 to 9 months.	An 8,500 ft steel extension required to provide the proposed level of service. The extension can be completed in 6 to 9 months.
	25,000 mcf/month - \$13.39				
	15,000 mcf – 32,000 mcf+/month - \$13.33				
Water	100,000 gpd – \$3.00	100,000 gpd	250,000 gpd	500,000 gpd	300,000 gpd – 800,000 gpd+
	250,000 gpd – \$3.00	The proposed level of water service can be met without any improvements.	The proposed level of water service can be met without any improvements.	The proposed level of water service can be met without any improvements.	The proposed level of water service can be met without any improvements.
	500,000 gpd – \$3.00				
	800,000 gpd – \$3.00				
*Estimates provided per 100 cu. Ft.					
Wastewater	75,000 gpd – \$7.00	75,000 gpd	200,000 gpd	400,000 gpd	200,000 gpd – 600,000 gpd+
	200,000 gpd – \$7.00	The proposed level of wastewater service can be met without any improvements.	The proposed level of wastewater service can be met without any improvements.	The proposed level of wastewater service can be met without any improvements.	The proposed level of wastewater service can be met without any improvements.
	400,000 gpd – \$7.00				
	600,000 gpd – \$7.00				



Site 3: Berea Industrial Park

The Berea Industrial Park was recently expanded to include 87-acres of undeveloped vacant land. The property is zoned I-2 (Heavy Industrial) and located 1.9 miles from Interstate 75. The property is publicly owned by the Berea Industrial Authority (BIDA) and is listed at \$42,000 per acre. The property is surrounded by global companies, including Hitachi Automotive Systems America, Hitachi Astemo Electric Motor Systems America, Novelis, AppHarvest, and Hyster-Yale.

BIDA was recently awarded \$500,000 in funding to be used towards construction of a 150,000 sq. ft. pre-engineered pad, initial road infrastructure, utility extensions and tree clearing on a 25-acre parcel.

Utility Infrastructure:

Electric	Provider: Blue Grass Energy 12.47kV distribution line 200 ft from the site 69kV transmission line 1.1 miles from the site 2 MW capacity available to the property The nearest substation is 1.2 miles from the property.
Natural Gas	Provider: Delta Natural Gas Company 4-inch plastic line near the property line 8-inch steel line near the property line
Water	Provider: Berea Municipal Utilities 12-inch line 900ft from the site Total capacity of line serving the site – 4,700 gal/min Excess capacity of line serving the site – 1,500 gal/min
Wastewater	Provider: Berea Municipal Utilities 12-inch line 900 ft from the site Total capacity of line serving the site – 1 mgd Excess capacity of line serving the site – 0.25 mgd
Fiber	Fiber is near the property and can be extended to the property line.

	"All-in" Rate	Small	Medium	Large	Industrial Park
Electric	1.5 MW – \$0.077	1.5 MW	3 MW	5-10 MW	5-15+ MW
	3 MW – \$0.074	The proposed level of electric service can be met without any improvements.	Improvements needed to meet 3 MW user (new substation and circuit built to the site). Improvements made at no cost to the customer.	Improvements needed to meet 3 MW user (new substation and circuit built to the site). Improvements made at no cost the customer.	Improvements needed to meet 3 MW user (new substation and circuit built to the site). Improvements made at no cost to the customer.
	5 MW – \$0.068				
	10 MW – \$0.066				
*Assumption: facility will operate 6am-10pm, load factor 85%.					
Natural Gas	8,000 mcf/month - \$5.94	8,000 mcf per month	15,000 mcf per month	25,000 mcf per month	15,000 mcf -32,000 mcf+ per month
	15,000 mcf/month - \$5.64	A 4,000 ft plastic line extension and regulator station required to provide the proposed level of service. The extension can be completed in 8 to 10 months.	A 4,000 ft plastic line extension and regulator station required to provide the proposed level of service. The extension can be completed in 8 to 10 months.	A 4,000 ft plastic line extension and regulator station required to provide the proposed level of service. The extension can be completed in 8 to 10 months.	A 4,000 ft plastic line extension and regulator station required to provide the proposed level of service. The extension can be completed in 8 to 10 months.
	25,000 mcf/month - \$5.47				
	15,000 mcf – 32,000 mcf+/month - \$5.42				
Water	100,000 gpd – \$5.25	100,000 gpd	250,000 gpd	500,000 gpd	300,000 gpd – 800,000 gpd+
	250,000 gpd – \$4.60	A 900 ft extension required to provide the proposed level of service. The extension can be completed in 6 to 9 months.	A 900 ft extension required to provide the proposed level of service. The extension can be completed in 6 to 9 months.	A 900 ft extension required to provide the proposed level of service. The extension can be completed in 6 to 9 months.	A 900 ft extension required to provide the proposed level of service. The extension can be completed in 6 to 9 months.
	500,000 gpd – \$4.37				
	800,000 gpd – \$4.29				
*Estimates provided per 1,000 gallons.					
Wastewater	75,000 gpd – \$6.30	75,000 gpd	200,000 gpd	400,000 gpd	200,000 gpd – 600,000 gpd+
	200,000 gpd – \$6.30	A 900 ft extension required to provide the proposed level of service. This can be completed in 6 to 9 months.	A 900 ft extension required to provide the proposed level of service. This can be completed in 6 to 9 months .	A 900 ft extension required to provide the proposed level of service. This can be completed in 6 to 9 months.	A 900 ft extension required to provide the proposed level of service. This can be completed in 6 to 9 months.
	400,000 gpd – \$6.30				
	600,000 gpd – \$6.30				
*Estimates provided per 1,000 gallons.					





Section 9

Target Industry Analysis

Target Industry Analysis

While Madison County has experienced growth within the manufacturing industry and expects to continue trending towards growth, it is unlikely that existing industry will have the demand to absorb the available chemical demilitarization mission workforce or be able to provide a competitive hourly compensation to the chemical demilitarization workforce's current hourly or salary wage. Thus, strategic new industry recruitment will be needed and targeting specific industries based on the skillsets of the workforce coming available will likely provide the highest rate of success. Attracting new industry further supports the community's efforts towards economic diversification and shifting away from a single income source towards multiple sources.

To capitalize on the economic development momentum seen across the state in 2021 and 2022, MWM Consulting has identified five target industries for Madison County based on emerging and growing industries in the region, state, and nationally, and the county's key assets - highly skilled and highly trained workforce, central location on a major interstate, existing infrastructure and logistical strength, proximity to a metro market, and an environment that supports industrial activity and growth. Target industry recommendations are as follows: Automotive and Electric Vehicles; Food & Beverage; Data Center; Primary Metals Manufacturing with specific attention on Aluminum Industry; and Chemical and Petrochemical Industry.

Each of the industries identified will have very specific requirements for a new location project, including workforce needs, infrastructure demands, transportation requirements and other critical criteria that an industrial client will consider during the site selection process. Megaprojects will require an additional layer of complexity and often take years to come to fruition. The identification of target industries does not guarantee a successful project announcement but rather is intended to help the community make informed decisions about future site acquisition, marketing strategy, and industry recruitment.



Automotive & Electric Battery Industry

From suppliers to manufacturers, companies in the automotive industry are amid a historical transformation of transitioning to electric vehicle (“EV”) production and ensuring alignment with government regulations. The supply chain constraints caused by the pandemic have pushed many OEMs to begin requiring their supplier networks to be within a specific radius near the main plant. Automotive and EV battery operations are driving massive site selection projects across the U.S. and are estimated to create projects totaling over \$500 billion globally by 2030.⁴⁹ Conventional internal combustion engines vehicles continue to make up the majority of industry production, but a growing share of the auto sector works on EV technology.⁵⁰ As of summer 2022, the largest EV project announcements in the United States total \$54 billion in capital investment and 62,000 jobs, two of which located in Kentucky with \$7.8 billion in capital investment and 7,000 new jobs.⁵¹

Kentucky is home to 564 auto-related facilities that employ over 100,000 workers and is currently the number-one producer of light cars, trucks, and SUVs per capita in the United States. In 2019, Kentucky’s automotive-related exports totaled \$4.8 billion. Since June 2020, new and existing companies in Kentucky have announced over \$8.5 billion in EV-related investments which are creating over 8,000 full-time jobs for Kentucky residents.⁵² One out of every 17 workers in the U.S. automotive industry are in Kentucky and \$1 out of every \$11 in Kentucky’s economy is tied to the automotive industry. With two EV battery gigafactories totaling 116 GWh of capacity recently announcing in the state (Ford Motor Co. and SK On’s BlueOvalSK Battery Park in Glendale and Envision AESC’s operation in Bowling Green) Kentucky has marked itself as the electric-vehicle battery production capital in the United States and positioned Kentucky as an ideal destination for EV-related business.



Source: Kentucky Cabinet for Economic Development

49. Gioino, Joseph and Reeves, Alan, *Area Development*, 'Location Factors in the EV industry – "Mission Critical" or "Nice to Have"?', 2022, <https://www.areadevelopment.com/Automotive/q3-2022-auto-aero-site-guide/location-factors-in-EV-industry.shtml>

50. United States Energy Department Energy.gov

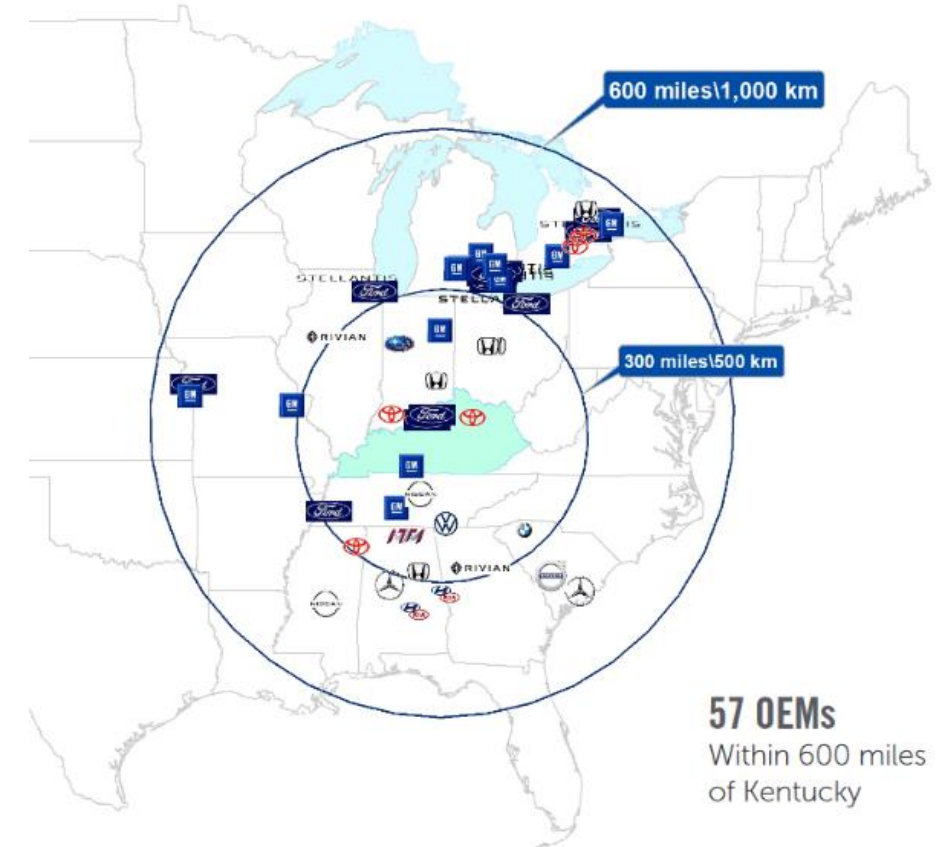
51. White, King *Site Selection Group*, 'EV Industry Driving Massive U.S. Site Selection Projects Valued at \$54 Billion', July 2022, <https://info.siteselectiongroup.com/blog/ev-industry-driving-massive-u.s.-site-selection-projects-valued-at-55-billion>

52. Kentucky Cabinet for Economic Development, *Automotive Industry in Kentucky*, 2022, https://cedky.com/cdn/11288_CED_Automotive_Guide_2022.pdf

Automotive & Electric Battery Industry

The state of Kentucky receives Requests for Information from prospective clients and their consultants. Between January 2020-October 2022, the average automotive/auto-related project worked in Kentucky requested an average of 190 acres for greenfield site projects. Automotive projects requiring an existing building requested an average of 469,258 square feet. An existing building of that size is not currently available in Madison County. However, on- and off-market properties, including listed properties that can be rezoned for industrial use, are available for greenfield opportunities.

The workforce in Madison County is well suited to support Automotive and Electric Vehicle operations. Industry cluster data shows a 2.97 times higher concentration of Auto/Auto Related employees and a 2.35 times higher concentration of chemical employees in Madison County compared to the U.S. average. Research shows that the sector with the highest wage increase in 2022 is the automotive sector, including the main industry and supplier industry sectors.⁵³ National average hourly earnings in motor vehicle and parts manufacturing (NAICS 3361,2,3) is \$23.68 - \$31.99 per hour as of October 2022.⁵⁴ The wages paid by this industry are higher than the average across all industries and may be viewed as favorable by chem demil workforce looking for their next employment opportunity. Lastly, Madison County is home to numerous national and global automotive and automotive related manufacturers including Hitachi Automotive Systems Americas, Hitachi Astemo, KI (USA) Corporation, Pittsburg Glass Works, AGC Glass, Asahi Forge of America, Asahi Forge of the Bluegrass, Enersys, Richmond Auto Parts Technology (RAPT), Hyster-Yale Group, Inc., and Thunder Manufacturing. U.S. Bureau of Labor Statistics, Automotive Industry: Employment, Earnings, and Hours <https://www.bls.gov/iag/tgs/iagauto.htm>



Source: Kentucky Cabinet for Economic Development

53. Mercer Turkey, Wage Increase Trends Interim Survey

54. U.S. Bureau of Labor Statistics, Automotive Industry: Employment, Earnings, and Hours <https://www.bls.gov/iag/tgs/iagauto.htm>

Food & Beverage Industry

National food and beverage manufacturing trends in 2020 and 2021 were driven by pandemic-related increases in consumption. Food Processing’s 2021 Capital Spending Outlook identified \$16 billion in capital projects among the nation’s largest food companies and projected a 13% increase in 2022.⁵⁵ The largest sector increase was among the pet food industry, followed by meat and poultry, including Tyson Foods’s new bacon processing plant in Bowling Green, Ky, with an estimated capital investment of \$355 million.⁵⁶

Kentucky is a strong national player in the food and beverage space, with more than 350 food and beverage facilities employing over 52,000 people.⁵⁷ Since 2014, Kentucky has announced 315 food and beverage projects totaling nearly \$4.8 billion in investment and close to 8,000 announced new jobs.⁵⁸ A significant contributor to the state’s success in the food and beverage industry is its signature bourbon and spirits industry. Bourbon in Kentucky is a \$9 billion industry generating more than 22,500 jobs with an annual payroll exceeding \$1.23 billion.⁵⁹ Moreover, the production and consumption of Kentucky bourbon provided over \$286 million in tax revenue for state and local governments last year.⁶⁰ Despite the challenges brought on by the COVID-19 pandemic, Kentucky’s food and beverage sector continued to grow. In 2020, the state announced 53 new locations or expansion food and beverage projects, totaling nearly \$1 billion in expected capital investment with the potential to create 1,500 new jobs.⁶¹

For calendar year 2022, the largest announcements total a combined \$1.72 billion and 698 new jobs. Additionally, Buffalo Trace is in the middle of a \$1.2 billion expansion.⁶²

Largest Food & Beverage Announcements, 2022

Company	Capital Investment	New Jobs	Project Location
Double D Group, LLC	\$41.5 million	240	Muhlenberg
Pernod Richard USA, LLC	\$196 million	55	Marion
Blue Run Spirits, LLC	\$50.9 million	45	Scott
Green River Distilling Company, LLC	\$62.4 million	25	Hancock
Heaven Hill Distilleries, Inc	\$135.4 million	38	Nelson
IJW Whiskey Company, LLC	\$200 million	99	Shelby
Jim Beam Brands Co.	\$436.4 million	51	Nelson
Kentucky Bourbon Distilleries, LTD	\$92.9 million	35	Washington
Sazerac Distilleries, LLC	\$503 million	50	Laurel

55. Food Processing <https://www.foodprocessing.com>

56. Food Processing, 2022 Capital Spending Outlook: Labor Situation Shapes Capital Spending Choices, April 2022 <https://www.foodprocessing.com/business-of-food-beverage/capital-spending/article/11289527/2022-capital-spending-outlook-labor-situation-shapes-capital-spending-choices>

57. Kentucky Cabinet for Economic Development, Existing industries – Food & Beverage https://ced.ky.gov/Existing_Industries/Food_Beverage

58. Kentucky Cabinet for Economic Development, Existing industries – Food & Beverage https://ced.ky.gov/Existing_Industries/Food_Beverage

59. Kentucky Distillers’ Association <https://kybourbon.com/industry/about/>

60. Kentucky Distillers’ Association <https://kybourbon.com/industry/about/>

61. Kentucky Cabinet for Economic Development, Hungry for more: Kentucky’s food and beverage industry continues to thrive <https://www.cincinnati.com/story/sponsor-story/team-kentucky-ced/2022/07/29/hungry-more-kentuckys-food-and-beverage-industry-continues-thrive/10158246002/>

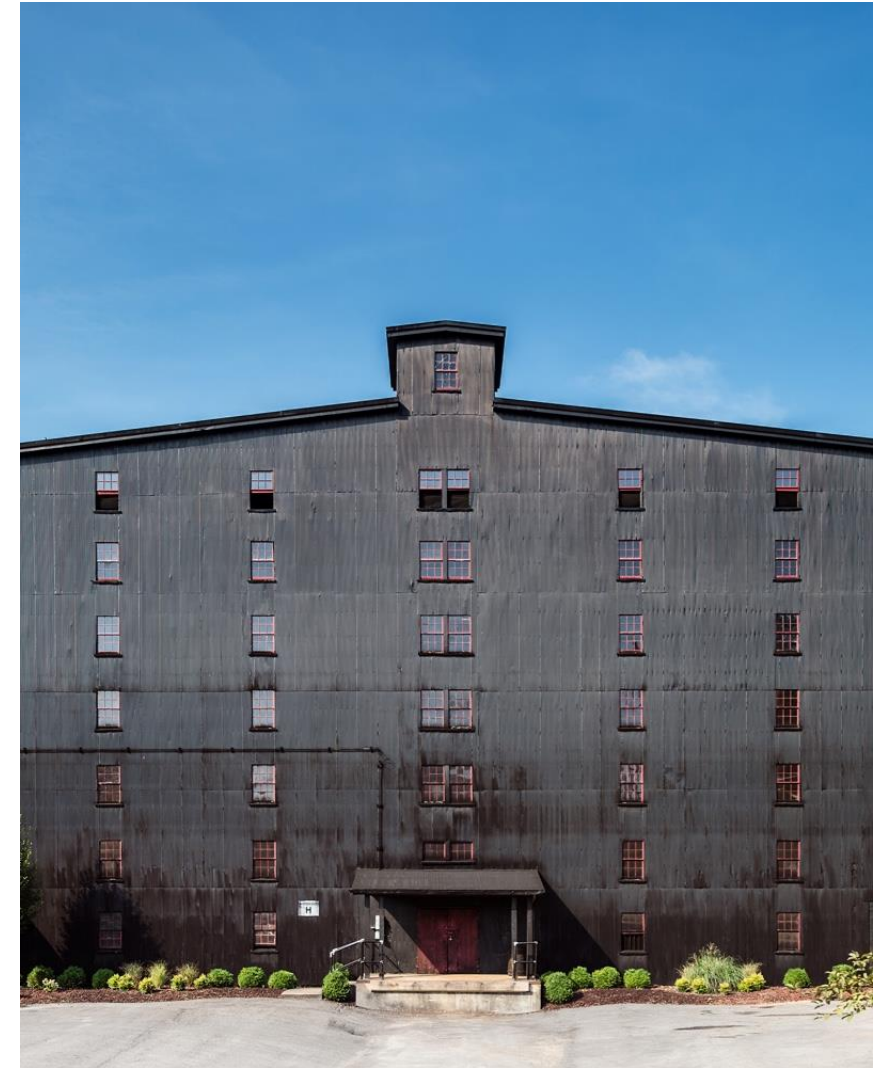
62. Thompson, Seth, *The Bourbon Review*, August 2021, ‘Full Report on Buffalo Trace Distillery’s \$1.2 Billion Expansion,’ <https://www.gobourbon.com/full-report-on-buffalo-trace-distillerys-1-2-billion-expansion/>



Food & Beverage Industry

The state of Kentucky receives Requests for Information from prospective clients and their consultants. Between January 2020-October 2022, Food and beverage projects worked in Kentucky requested an average of 85-acres for greenfield site projects. Food and beverage projects requiring an existing building requested an average of 232,544 square feet. An existing industrial building of that size is not currently available in Madison County. However, on- and off-market properties, including listed properties that can be rezoned for industrial use, are available for greenfield opportunities.

Food and beverage site selection projects are driven by two main factors – labor availability and reliable logistics – with many greenfield projects landing in the Southeast U.S. due to labor, tax incentives, and business climate.⁶³ Though Madison County does not have a history of food and beverage activity, the state’s success in the landing these projects coupled with the county’s central location and access to I-75 with seven exits, a skilled workforce, and reliable utility and transportation infrastructure provide attractive assets to a food and beverage company. Furthermore, Kentucky’s property tax on inventory located in the state, including distilled spirits aging in barrels,⁶⁴ would provide a new revenue stream for Madison County, as Kentucky’s tax rate is \$8.41 per bottle. The income a community receives from the barrel tax can be used for public services such as schools, libraries, health departments, fire departments, police and sheriff departments, and Emergency Medical Services (EMS).



Source: Sazerac Company

63. Food Engineering Magazine, Key issues in locating food manufacturing sites <https://www.foodengineeringmag.com/articles/100296-key-issues-in-locating-food-manufacturing-sites>

64. Sommer, Mark F. et. al., *Frost Brown Todd Attorneys*, September 2022, 'Kentucky Tax Talk: What's Next for Bourbon Barrel Revenue,' <https://frostbrowntodd.com/kentucky-tax-talk-whats-next-for-bourbon-barrel-revenue/>

65. KY Corn Growers Association, September 2022, 'Kentucky Distillers Set Records for Bourbon Barrel Inventories, New Fills – And Punishing Production Taxes,' <https://www.kycorn.org/news/2022/9/29/kentucky-distillers-set-records-for-bourbon-barrel-inventories-new-fills-and-punishing-production-taxes>

Data Center Industry

Data center site selection experts across the United States have identified six key criteria to be considered when identifying a site: availability, cost, and redundancy of electric power; low/moderate risk of adverse weather events or natural disasters; reasonable construction costs; telecommunication infrastructure; cooling technology and equipment; and quality of life.⁶⁶ The economic impact of data centers extends beyond full-time company employees, as discussed by the U.S. Chamber of Commerce: “While being built, a typical data center employs 1,688 local workers, provides \$77.7 million in wages for those workers, produces \$243.5 million in output along the local economy’s supply chain, and generates \$9.9 million in revenue for state and local governments. Every year thereafter, that same data center supports 157 local jobs paying \$7.8 million in wages, injecting \$32.5 million into the local economy, and generating \$11.1 million in revenue to state and local governments. And the economic impacts don’t stop there.”⁶⁷ Site Selectors Guild reports that 45% of consultants agree that the Data Center industry sector is likely to see megaprojects in the next five years.

The Cabinet for Economic Development does not currently collect sites and buildings requests for data center projects. Nationally, data center site selection projects can range from 50-acres to 1,500-acres depending on size, utility usage, and layout of project.



66. American Electric Power, Data Centers: Choosing an Optimal Site Location <https://aeped.com/wp-content/uploads/2019/12/Choosing-an-Optimal-Data-Center-Site.pdf>

67. Data Centers – Jobs and Opportunities in Communities Nationwide; U.S. Chamber of Commerce, Technology Engagement Center

Data Center Industry

The Madison County labor force, including the soon-to-be-available chemical demilitarization workforce, coupled with access to power and available land, positions Madison County to support a large data center project. Kentucky's historically low power rates and renewable energy options would offer reduced operating expenses for a data center facility, as data centers consume significant energy for powering and cooling equipment. Next, the county has a highly skilled and technically trained workforce and provides access to large student populations from schools such as the University of Kentucky, Eastern Kentucky University, and Bluegrass Community & Technical College. Lastly, Madison County has been home to the Blue Grass Army Depot for several years and could create an opportunity to recruit a company with an established presence at the chemical demilitarization site to locate a data center in Madison County and create a federal data center. With Bechtel as one of the area's largest employers and hundreds of Bechtel employees located in the county, exploration and landing of a data center project with Bechtel would provide the opportunity for employees at BGCAPP to transfer onto another Bechtel contract, thus retaining a portion of the workforce in Madison County.



Primary Metal Manufacturing, specifically Aluminum

Kentucky has a robust metals industry sector and Aluminum accounts for \$1.8 billion in the state's gross domestic product. The Commonwealth is home to over 230 metals-related facilities which employ approximately 25,000 Kentuckians.⁶⁸ One-hundred eight-five of these facilities are aluminum related and over 40 are steel and iron production companies employing over 6,400 full-time employees.⁶⁹ Since 2014, the state has seen over 140 new or expanding steel and iron ore projects totaling a capital investment of \$3.3 billion and 1,824 new jobs.⁷⁰ In 2021, Kentucky's metal industry announced over 1,700 full-time jobs with \$975 million in capital investment.⁷¹ Most recently, Novelis, the world's largest aluminum recycler and leading producer of flat-rolled aluminum, announced a \$365 million highly advanced recycling center for the automotive industry in North America, featuring advanced aluminum shredding and sorting technology with focus on closed-loop recycling programs. The recycling center will be built adjacent to their existing automotive finishing plant in Guthrie, Ky, with an estimated 140 new jobs. The state also saw large aluminum project announcements from Logan Aluminum (\$249 million capital investment, 65 new jobs) and Lotte Aluminum Materials USA LLC (\$238 million capital investment, 122 new jobs). Novelis's Madison County facility melts and casts ingots from 20% of the nation's recycled beverage cans. According to the U.S. Geological Survey, the state of Kentucky has the greatest capacity to produce aluminum in the nation.

Between January 2020-October 2022 in Kentucky, metals projects seeking a greenfield site requested an average of 119-acres and projected requesting an existing building requested on average 240,096 square feet. An existing industrial building of that size is not currently available in Madison County. However, on- and off-market properties, including listed properties that can be rezoned for industrial use, are available for greenfield opportunities.



68. Kentucky Cabinet for Economic Development, News Room, May 2022, 'Gov. Beshear, Novelis Break Ground on \$365 Million Recycling Center in Guthrie, Creating 140 Well-Paying Jobs,' https://ced.ky.gov/Newsroom/NewsPage/20220502_Novelis

69. Kentucky Cabinet for Economic Development, Existing Industries – Primary Metals https://ced.ky.gov/Existing_Industries/Primary_Metals

70. Kentucky Economic Development Guide 2021, <https://siteselection.com/cc/kentucky/2021/digital.html>

71. Kentucky Cabinet for Economic Development, News Room, May 2022, 'Gov. Beshear, Novelis Break Ground on \$365 Million Recycling Center in Guthrie, Creating 140 Well-Paying Jobs,' https://ced.ky.gov/Newsroom/NewsPage/20220502_Novelis

Primary Metal Manufacturing, specifically Aluminum

The Aluminum industry is a top three industry sector and major employer in Madison County, employing 427 employees in Alumina and Aluminum Production and Processing. On average, full-time employees in the Aluminum production and processing industry group have an average salary of \$63,859.00, which is higher than the average wage across manufacturing positions in Madison County and could be seen as a competitive salary to those coming from the chemical weapons destruction mission.⁷²

Annual Salary & Hourly Wages For All Primary Metal Manufacturing Jobs

Notes: Figures below represent **salary/wages only**. Benefits and other forms of compensation are not included. Figures exclude overtime wages and other forms of special compensation. Assumes 2,080 straight time hours worked per year.

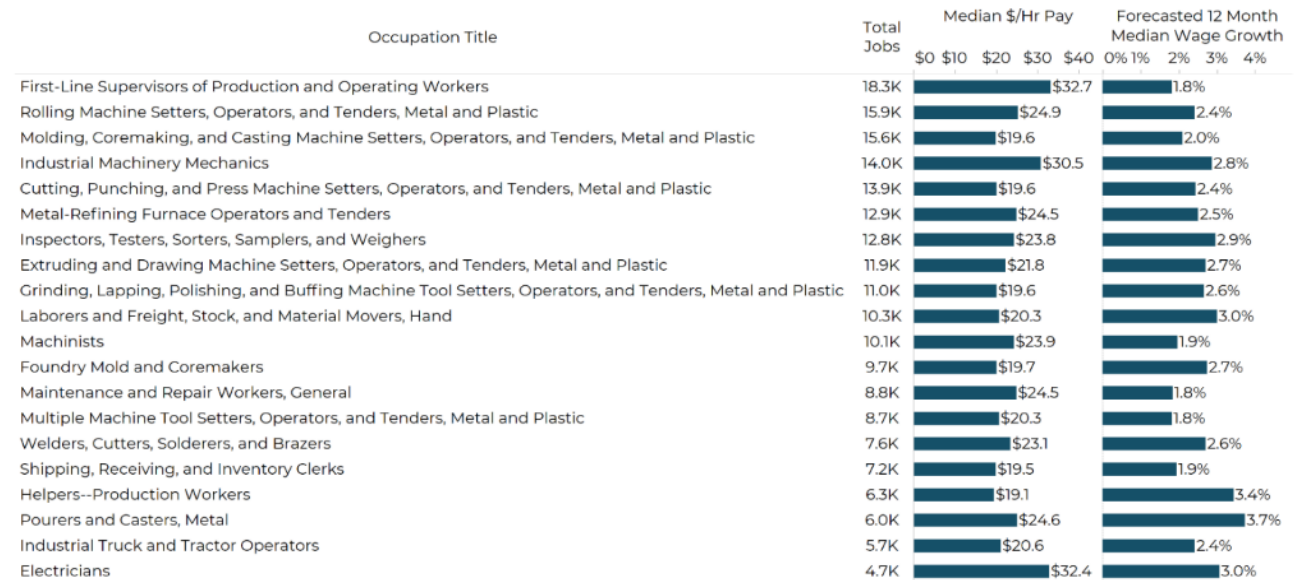
*All figures as of July



PCTL = Percentile, a salary/wage where a certain percentage of salary/wages fall below that number. In general, more experience, expertise and/or responsibility results in a higher pay.

Source: strategytitan.com/labortitan

National Hourly Pay & Employment for Top 20 Occupations in Primary Metal Manufacturing



Notes: Figures above represent **salary/wages only**. Benefits and other forms of compensation are not included. Figures exclude overtime wages and other forms of special compensation. Assumes 2,080 straight time hours worked per year.

Source: strategytitan.com/labortitan

72. Data USA <https://datausa.io/profile/naics/aluminum-production-processing>



Chemicals & Petrochemicals Industry

The U.S. chemical sector experienced mixed performance trends during 2020. Plastic resins reported growth while other sectors like synthetic rubber, basic chemical segments, and specialty chemicals declined.⁷³ However, the petrochemical sector remained unchanged.⁷⁴ In 2021, capital expenditure for the United States chemical industry reached \$30.7 billion. Lastly, in May 2022, Site Selectors Guild reported that 55% of consultants agree that the Chemicals and Petrochemicals industry sector is likely to see megaprojects in the next five years.

More than 210 Chemical manufacturing companies operate in Kentucky and employ over 15,000 Kentuckians.⁷⁶ In 2019, Kentucky exported over \$743 million in basic chemicals, a 7.6% increase over the previous year.

The state of Kentucky receives Requests for Information from prospective clients and their consultants. Between January 2020-October 2022, chemical projects seeking a greenfield site requested an average of 40-acres. Chemical projects requesting an existing building requested an average of 101,173 square feet. An existing industrial building of that size is not currently available in Madison County. However, on- and off-market properties, including listed properties that can be rezoned for industrial use, are available for greenfield opportunities.

Madison County's chemical industry is an important part of the community's economy. With companies like Sherwin Williams and the BGCAPP facility at the Blue Grass Army Depot installation, the county has a 2.35 times higher concentration of chemical industry workers than the U.S. average⁷⁷ and is well positioned to support a chemical-related operation with the highly skilled chemical workforce coming available from the Blue Grass Army Depot's chemical weapons destruction mission. Furthermore, this workforce has industrial knowledge of nuclear, chemical/petrochemical, and hazardous waste destruction. On average, full-time employees in the Industrial & Miscellaneous Chemicals industry have an average annual salary of \$87,389.00,⁷⁸ making Industrial & Miscellaneous Chemicals the 26th highest paying Industry Group in the United States. Attracting this type of industry would lend in Madison County's favor as they seek to retain a workforce that earns higher wages than those in similar jobs within the Bluegrass Region.

73. AG Chemi Group, February 2021, The Chemical Industry's COVID Recovery: How Long Until Healthy? <https://blog.agchemigroup.eu/the-chemical-industrys-covid-recovery-how-long-until-healthy/>

74. AG Chemi Group, February 2021, The Chemical Industry's COVID Recovery: How Long Until Healthy? <https://blog.agchemigroup.eu/the-chemical-industrys-covid-recovery-how-long-until-healthy/>

75. Statista, Capital expenditure of the United States chemical industry from 2004 to 2021, <https://www.statista.com/statistics/258988/capital-expenditure-of-us-chemical-industry-since-2001/>

76. Kentucky Cabinet for Economic Development, Existing Industries – Chemicals https://ced.ky.gov/Existing_Industries/Chemicals

77. JobsEQ <http://www.chmuraecon.com/jobseq> Economic Overview for Madison County, Kentucky

78. Data USA: Industrial & Miscellaneous Chemicals <https://datausa.io/profile/naics/industrial-miscellaneous-chemicals>





Section 10

Workforce Engagement

Workforce Engagement

The Bluegrass Workforce Innovation Board Staff have developed an informational website for only employees dislocated from this facility. The website is <https://www.ckycareers.com/bgcapp> and is accessible to employees associated with the Chemical Weapons Destruction mission at the Blue Grass Army Depot. The Workforce Staff have developed an informational sheet for the supervisors to provide to the employees with the website password, links for resources, as well as a QR Code to connect the employees directly to the website and is working to identify training/educational providers to host an orientation for the employees for those interested in furthering their education.

Throughout the transition and release of employees, the Bluegrass Workforce Team will hold multiple Rapid Response sessions prior to each layoff at the most convenient time for the employees. The Rapid Response sessions will be presented in person and multiple partner agencies will be in attendance. The partners required to attend include Workforce Innovation and Opportunity Act, Unemployment Insurance, Department of Labor, Vocational Rehabilitation, Veteran's Representatives, and Adult Education. If there are any additional partners needed to provide resource information, they will be able to attend as well. Employees will be provided a packet of information regarding the resources and services available to them due to the layoff.

The staff at the Kentucky Career Center in Richmond will be holding open appointments every Friday at the Career Center through the completion of the mission. Employees will have the opportunity to meet with career counselors, receive resume assistance, practice interview skills, job search, etc. Employers will also be present at the Career Centers on Fridays to meet with the employees seeking new employment.



Workforce Engagement

The Workforce Team plans to hold multiple job fairs in Richmond and Berea through the completion of the mission. The first job fair will be in Richmond in the Spring of 2023.

Workforce staff are working to identify potential grant opportunities to secure additional funds for the employees which could assist with training cost, support services, and other needs of the employees.

Training Opportunities for Chem Demil Project Employees

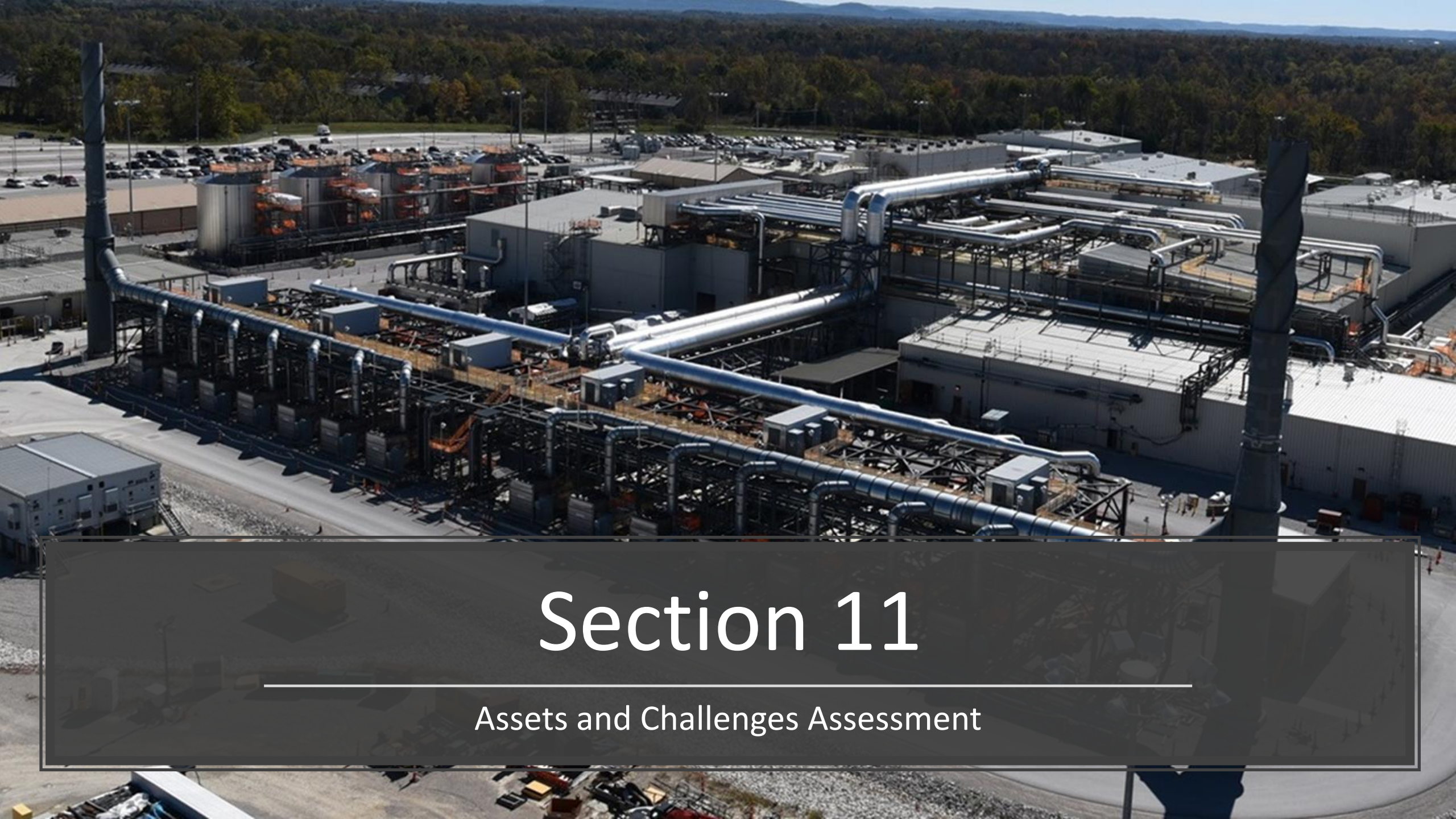
For some chem demil workers, additional education may be needed to obtain the skills for full-time employment in Madison County. The Kentucky Career Center offers job seekers access to employment, education, training, and support services to succeed in the labor market. A job seeker can be matched with an employer, provided one-on-one assistance to create a resume, practice interview skills, learn about their transferrable skills, and more.

Through partnership with the state of Kentucky, the Kentucky Career Center offers up to \$10,000 per participant for training and up to \$1,500 for supportive services. Enrollment can be short term or up to a 2-year degree in one of six high demand occupations: Advanced Manufacturing, Construction, Healthcare, Information Technology & Business, Childcare & Education, and Transportation, Distribution and Logistics.

Each year, the Kentucky Career Center receives Dislocated Worker funds through the Workforce Innovation and Opportunity Act (WIOA) to assist individuals laid off in the 17 counties of the Bluegrass Region. Funds can be used for additional education, internships, on-the-job training, and supportive services such as books, uniforms, transportation, etc. The goal of WIOA is to first assist individuals with full-time employment if they have obtained desirable skills. If a specific educational tract is of interest to multiple employees, the Kentucky Career Center will work with Bluegrass Community and Technical College (BCTC) Workforce Solutions to develop a cohort for those employees to obtain that certification or degree.

Transition Workforce Planners or employees can contact the Kentucky Career Center – Bluegrass for further information and details on available programs.





Section 11

Assets and Challenges Assessment

Assets & Challenges Assessment

MWM Consulting conducted an assessment to identify the community's assets and challenges as it relates to attracting new industrial clients and industrial growth, and retention of the chemical weapons mission workforce. The challenges identified are coupled with recommendations to attend to the barriers to industrial growth and employee retention. The challenges identified and recommendations are intended to provide the community with a foundation for improvement

Assets and opportunities identified are as follows:

Excellent Availability of Highly Skilled Labor - 1,800 chem demil workers will be released from their current assignment between 2024-2026. Bechtel Parsons Blue Grass employs 1,473 of the approximately 1,800-person workforce and is estimating ~1,200 of their staff to seek employment post-assignment. The relatively predictable project timeline and rollout schedule allows for long-term planning. Furthermore, the workforce coming available are highly skilled and highly trained with a track record for seeking long-term employment opportunities.

Transportation Access - Madison County is bisected by I-75 and has 7 exits throughout the county, thus providing fantastic transportation access for companies transporting goods and employees.

Low Land Costs - Lexington industrial market demands \$250,000 per acre - \$300,000 per acre. Madison County is closer to \$30,000 per acre - \$50,000 per acre. Vacancy rates in most of the nation's largest distribution hubs remain near historic lows. Developers are seeking developable land sites and available product in surrounding areas. With Lexington out of land and industrial land transacting at ~250,000-\$300,000 per acre, Madison County has an opportunity to capture those who want to be near Lexington without paying the cost. Additionally, Madison County land, transportation, utilities and LMA workforce offer the same benefits as what you would find if a company landed in Lexington.

Established Existing Industries with Extensive Supplier Networks - With the supply chain disruptions during 2020, 2021, and 2022, many manufacturers are requiring their supplier network to be within a specific radius. Capitalize on the existing industries in Madison County needing their suppliers nearby, and thus need for new employees for the growth.

Commuting Patterns of Madison County Residents - Nearly 20,000 Madison County residents are commuting from Madison County to other counties for work. Of the 19,765, 43% commute to neighboring Fayette County. Opportunity to capture these employees too.



Assets & Challenges Assessment

Deficiencies and barriers to chemical weapons mission workforce retention are as follows:

Lack of Available Land Sites

The majority of Site Selectors Guild Industrial Consultants agreed that the primary factor impacting the site selection process is that project schedules are being delayed due to a lack of industrial sites. Deficiency – lack of large tracts publicly controlled that are properly zoned for industrial activity or in a position to be rezoned for industrial use.

Commuting Patterns

MWM Consulting sees the current commuting pattern as both an opportunity and a barrier. Of the Madison County residents that commute out of county for work, more workers are commuting to middle wage and high wage jobs (16,070) than are entering. It is unknown if they are leaving due to lack of available opportunities for similar wage jobs, or if they commute for a higher wage job and live in Madison County because it's more affordable.

Development of Strategic Plan for New Industry Recruitment

The community is a bit behind in identifying a strategy for new industry attraction and retention of this workforce. Not only are there limitations on quality shovel-ready industrial sites, but the approximate timing of occupancy for greenfield construction is 12-18 months once a company transacts on a property.



Section 12

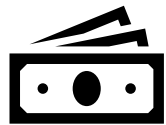
Recommended Next Steps

Recommended Next Steps

The urgency and importance of Madison County stakeholders' attention towards this effort to successfully retain cannot be overstated. Implementation of the goals, actions, and strategies identified within this strategic plan will require a collaborative approach amongst private and public sector parties. While we cannot predict the next industry to locate in Madison County, these recommendations have been developed to assist the community and economic development professionals to make informed decisions and investments in areas and activities that show the greatest return on investment.

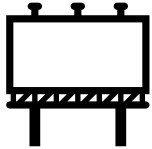


Acquisition or Optioning of Property Between the Three Governmental Bodies - Madison County offers a unique location for industrial related activity and is well positioned from a workforce perspective. The community has existing industrial products that fulfill the need for the average announced project across the state (35-60-acres). However, there are a limited number of sites and buildings available that are property zoned for light or heavy industrial purposes and no product that is both property zoned and greater than 200 acres under public control. The lack of larger products may prevent Madison County for competing for larger projects looking for property zoned, publicly controlled land with adequate utility infrastructure. The exploration and eventual acquisition of property with joint ownership between Madison County, Berea, and Richmond, while also providing adequate utilities and acreage to meet the average request as seen by the Cabinet for Economic Development, will allow Madison County to be more competitive for industrial-related projects. Once a site is acquired or optioned, the community will need to engage an engineering firm to assist with the due diligence process. Recommended exploring the opportunity for a Joint Venture or community economic development group encompassing the City of Richmond, City of Berea, and Madison County in the site acquired together to encourage consistent vision and messaging.

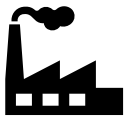


Consider Kentucky Product Development Initiative or Similar Funding Programs for Site Acquisition – The Kentucky Product Development Initiative (“KPDI”) is a statewide investment program to support upgrades at industrial sites throughout the state. The aim is to create jobs and corporate investment by enhancing the number and quality of available sites in Kentucky. It is highly recommended that funding opportunities such as KPDI are explored as one, joint application between Madison County, City of Richmond, and City of Berea. With an available labor force of this size, the community could service the workforce needs of a large project but currently there is not a site (of at least 250 acres) on the market that is publicly owned and available should a client show interest. Sites Selectors Guild 2022 State of Site Selection survey found that “consultants agree that states and provinces are not currently adequately investing in infrastructure to address the lack of sites and buildings. Communities that have invested in site-readiness initiatives typically have an advantage and are better positioned to compete for projects.”

Recommended Next Steps



Strategic Marketing of Publicly Controlled Site(s) - After site acquisition or optioning property, it is recommended to market the site and the available workforce with specific attention towards the chem demil workforce and timeline of release. The community will need to get connected with the Cabinet for Economic Development, regional economic developers, national economic development consulting firms, and regional and national real estate brokerages working site selection projects and should target consulting groups who assist companies in the target industries recommended in this plan. Lastly, it would be prudent for the community to consider hiring a strategic real estate broker who agrees to the community's vision and goal of landing specific types of companies to the area.



New Industry Attraction - While there is a need for the types of skills BGAD employees possess in existing industry, the demand is not great enough to absorb all 1,800+ employees into existing industry positions. Therefore, it is recommended to attract new industry with a specific need for these types of skilled employees as outlined above. Site selection firms, the Cabinet for Economic Development, and federal contractors like Boeing, Raytheon, Lockheed Martin, Northrop Grumman, General Dynamics Group, etc. would find value in a large group of highly skilled and highly trained individuals who currently work in the Defense space for the reasons noted above.



Strategic Marketing of Workforce – Should the desire be to expand the economic growth in the area, local leaders, state leaders, and economic developers must work collectively and consider marketing aimed towards specific site selection consulting firms like Site Selection Group, Global Location Strategies, Newmark Frank, KPMG, Cushman & Wakefield, etc. As a marketing strategy is implemented to attract the industries above, it is recommended that the Kentucky Cabinet for Economic Development staff be intimately involved in the process to ensure a consistent message is being delivered to potential industrial clients.

Recommended Next Steps



Identify Skill Gaps – Skill gaps were not examined during the duration of this study. It is recommended that the community leaders work with the Kentucky Career Center to identify skill gaps for existing industry operations. Re-training opportunities within the local community have been identified, but the community should work with appropriate parties to identify skill gaps so that employees can be re-trained/re-tooled to meet the current industry's needs.



Explore Funding Opportunities to Alleviate the Initial Burden of the Cease in CSEPP Funding – The CSEPP funding provided to Madison County has been substantial over the last 30 years. While funding is directly related to ensuring the community is prepared in the event of a large chemical-related accident, the funding has also provided endless opportunities to improve upon the communication capabilities and emergency response services Madison County is able to provide to citizens. These systems and equipment are integral to the public safety of Madison County residents. With the expected cease in CSEPP funding post-mission completion, it is our recommendation to explore post-demil grant funding availability to reduce short term impact of the cease in CSEPP funding. Should some form of funding remain and allow Madison County to carry out a scaled-down version of current services, it would be advantageous to identify if the program components would be deemed “above and beyond” expected services for an industrial client. If that is to be the case, it is recommended to incorporate the services that surpass expectations into the community’s marketing materials.



Reuse of the BGCAPP Facility – MWM Consulting did not analyze the reuse of the BGCAPP Facility. Per the NDAA for FY23, the Secretary of Defense, in consultation with the Secretary of the Army, will conduct a feasibility study to assess potential missions, plants, or industries feasible for Army or Department of Defense needs at the Blue Grass Chemical Agent-Destruction Pilot Plant following the demolition and remediation of the Blue Grass Chemical Agent-Destruction Pilot Plant located at the Blue Grass Army Depot in Richmond, Kentucky, and report the findings of that study to the congressional defense committees by no later than March 1, 2023. The study shall include: (1) Identification of any buildings and infrastructure in the Blue Grass Chemical Agent-Destruction Pilot Plant that could remain for future Army or Department of Defense use; (2) Cost savings associated with repurposing existing infrastructure for Army or Department of Defense purposes; (3) Opportunities to fulfill requirements for defense organic industrial base operations; (4) Opportunities to fulfill requirements of Army Material Command strategic planning, including ammunition production; and (5) Opportunities to fulfill Army or Department of Defense modernization requirements.