## 5.7 Socioeconomic Resources (18 CFR § 4.41 (f)(5))

## 5.7.1 Existing Environment

#### 5.7.1.1 General Land Use Patterns

The proposed Lewis Ridge Project is located in southeastern Kentucky near the borders of Tennessee and Virginia, within Bell County. The nearest communities to the proposed site are Blackmont, Tejay, Balkan, and Callaway. Bell County has a high number of mining, quarrying, oil and gas extraction, utilities, agriculture, forestry, fishing, and hunting industries (DataUSA 2025). Bell County, Kentucky, produced 302 million tons of coal from 1879 to 2004, with 108 million tons extracted by surface mining (Carey 2007). General land use in the Project Vicinity is further described in Section 5.11.

The counties of Kentucky are divided into Census County Divisions (CCDs), which are subcounty statistical geographic areas representing contiguous areas of one or more communities. These CCDs are used by the U.S. Census Bureau to tabulate and present data from the decennial census (U.S. Census Bureau 2018). Due to the relatively small population in the Project Vicinity and surrounding areas, the following socioeconomic data are presented by CCD, as tabulated by the U.S. Census Bureau. CCDs covering a 5-mile radius around the Lewis Ridge Project include the Tejay CCD to the east and south, and the Pineville CCD to the west and north (Figure 5-33).

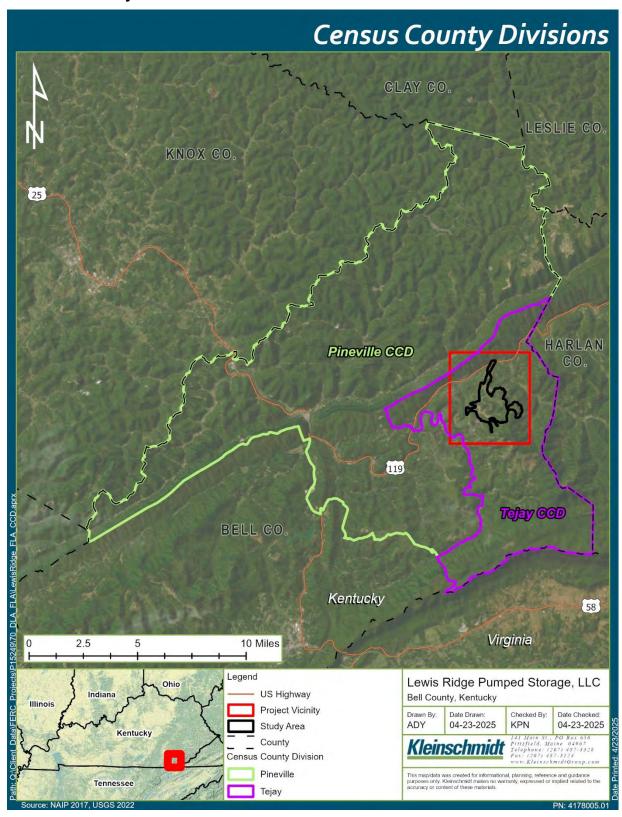


Figure 5-33: Census County Divisions within a 5-Mile Radius of the Proposed Lewis Ridge Project

### 5.7.1.2 Population Patterns

Table 5-26 summarizes the population estimates for Bell County, Kentucky, the Commonwealth of Kentucky; Tejay CCD; and Pineville CCD.

Table 5-26: Estimated Population and Population Changes from 2010 to 2024

Place	2010 Census	2020 Census	Percent Change 2010 – 2020	2023/2024 Estimates*	Percent Change 2020 – 2023/2024
Kentucky	4,339,367	4,505,836	3.8%	4,588,372	1.8%
Bell County, Kentucky	28,691	24,097	-16.0%	23,051	-4.3%
Tejay CCD	1,896	1,292	-31.8%	1,801	39.4%
Pineville CCD	10,095	7,819	-22.5%	7,508	-4.0%

Sources: U.S. Census Bureau 2023a, 2023b, 2024

Population density is summarized in Table 5-27. The Tejay CCD (Figure 5-33) is approximately 53 square miles and includes the communities of Tejay, Balkan, and Callaway. The Tejay CCD has an estimated population of 1,801 with a population density of 33.9 people per square mile (U.S. Census Bureau 2023a). The Pineville CCD (Figure 5-33) is approximately 164 square miles and has an estimated population of 7,508 with a population density of 45.8 people per square mile (U.S. Census Bureau 2023b). Bell County is approximately 359 square miles and has a population density of 67.1 people per square mile; both of which are lower than the state average density of 114.1 people per square mile (U.S. Census Bureau 2024).

**Table 5-27: Population Density Statistics** 

	Kentucky	<b>Bell County</b>	Tejay CCD	Pineville CCD
Population	4,505,836	24,097	1,801	7,508
Land Area (Square Miles)	39,492	359	53	164
Population per Square Mile	114.1	67.1	33.9	45.8

Source: U.S. Census Bureau 2023a, 2023b, 2024

<sup>\*</sup> Estimates include 2024 data for the Commonwealth of Kentucky and Bell County and 2023 data for Tejay and Pineville CCDs.

In Bell County and Kentucky, the age distribution of men and women is relatively balanced, with populations generally declining after age 60–64. According to the U.S. Census Bureau (2023c), in Bell County, the most populous age group for men is 35–39, while for women it is 55–59. Statewide, the largest age group for men is 20–24, and for women, it is 60–64 (U.S. Census Bureau 2023d). The median age is 41.2 in Bell County, 39.2 in Kentucky, 40.8 in Tejay CCD, and 41.3 in Pineville CCD (U.S. Census Bureau 2023c, 2023d, 2023e, 2023f).

# 5.7.1.3 Economic Indicators and Employment

Table 5-28 presents household characteristics, vacancy rates, income levels, and poverty statistics for Bell County, Kentucky, and its subregions. As shown, the estimated median household incomes in Tejay CCD (\$35,313), Pineville CCD (\$36,796), and Bell County overall (\$32,403) are all significantly lower than the statewide median of \$61,118 (in 2023 dollars) (U.S. Census Bureau 2023c, 2023d, 2023e, 2023f). Additionally, poverty rates in these areas are notably higher than the state average, with Tejay CCD having the highest at 28 percent, compared to 16.4 percent for Kentucky (U.S. Census Bureau 2023c, 2023d, 2023e, 2023f). Regarding housing units and vacancy, the Pineville CCD had more housing units and a higher vacancy rate than the Tejay CCD, which had fewer units and a lower percentage of vacancies.

Table 5-28: Household Characteristics, Household Income, Poverty, and Vacancy Statistics

	Tejay CCD	Pineville CCD	Bell County, Kentucky	Commonwealth of Kentucky
Total Housing Units	631	3,827	11,517	1,769,102
Median Household Income in 2023 Dollars	\$35,313	\$36,796	\$32,403	\$61,118
Persons in Poverty (%)	28.0%	24.4%	27.1%	16.4%
Estimated Vacancy Rates	10.4%	21.7%	17.9%	9.0%

Sources: U.S. Census Bureau 2023c, 2023d, 2023e, 2023f, 2023g, 2023h, 2023i, 2023j

The largest industries in Bell County, Kentucky, are educational services, health care and social assistance, and retail trade. The highest paying industries are mining, quarrying, and oil and gas extraction (\$70,551), finance and insurance (\$59,286), and transportation and warehousing (\$58,533). On average, males in Kentucky earn 1.32 times more than females.

Between 2022 to 2023, employment in Bell County declined by 1.53 percent. The most common job groups by number of people living in Bell County are office and administrative support occupations, education instruction and library occupations, and sales and related occupations. (DataUSA 2025).

## 5.7.2 Potential Impacts of the Proposed Lewis Ridge Project

The Lewis Ridge Project is expected to generate substantial economic benefits for Bell County and the surrounding region throughout both its construction and operational phases. Anticipated economic impacts of the Lewis Ridge Project are detailed in the *Economic and Financial Impact Analysis*, which assessed the total (direct, indirect, and induced) income, employment, and tax impacts of the construction and operations phases of the Lewis Ridge Project, and was completed by Highland Economics, LLC in 2025 (Appendix P). The economic analysis was based on an assumed construction cost of \$1.68 billion and an estimated operating budget of approximately \$15 million (Highland Economics, LLC 2025). The following section summarizes the potential impacts of the proposed Lewis Ridge Project on socioeconomic resources and summarizes the results of that economic analysis.<sup>38</sup>

As described in the economic analysis, the Lewis Ridge Project will generate economic activity throughout the nation, but the area with the most anticipated economic impact will be in Bell County and the states of Tennessee and Kentucky. Table 5-29 presents estimated direct employment and wages by place of residence during the projected 4-year construction period. An estimated 2,570 jobs, totaling an income of \$534 million, is anticipated during construction. Similarly, Table 5-30 shows estimated direct employment and wages by location of residency during the operations of the Lewis Ridge Project (following completion of the construction). As shown, 45 to 55 direct, on-site jobs totaling an annual income of \$6,750,000 to \$8,250,000 are anticipated during operation of the Lewis Ridge Project. (Highland Economics, LLC 2025).

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<sup>&</sup>lt;sup>38</sup> Figures presented herein regarding potential economic impact are considered to be estimates. The report includes detailed information on the methodology, analytical approach, and key assumptions underlying the analysis (Appendix P).

Table 5-29: Direct Project Jobs (Full-Time Equivalents) and Labor Income (2025 Dollars) by Residency During Construction Phase

Phase/Type of Impact by Worker Residency	Annual Average Impact	Total Average Impact			
Bell County Residents					
Employment	190 to 240	860			
Labor Income	\$24,000,000 to \$29,000,000	\$106,000,000			
Elsewhere KY/TN Residents (no	et including Bell County)				
Employment	290 to 360	1,290			
Labor Income*	\$55,000,000 to \$68,000,000	\$246,000,000			
Total KY/TN Residents (including Bell County)					
Employment	490 to 590	2,150			
Labor Income*	\$79,000,000 to \$97,000,000	\$352,000,000			
Other Area (Outside KY/TN) Residents					
Employment	90 to 120	420			
Labor Income*	\$41,000,000 to \$50,000,000	\$182,000,000			
All Workers					
Employment	580 to 710	2,570			
Labor Income*	\$120,000,000 to \$147,000,000	\$534,000,000			

Source: Highland Economics, LLC 2025

Table 5-30: Direct On-Site Project Jobs (Full-Time Equivalents) and Labor Income (2025 Dollars) by Residency During Operation Phase

Phase/Type of Impact by Worker Residency	Annual Average Impact			
<b>Bell County Residents</b>				
Employment (Jobs)	20 to 30			
Labor Income	\$3,375,000 to 4,125,000			
Elsewhere KY/TN Residents				
Employment (Jobs)	20 to 30			
Labor Income	\$3,375,000 to \$4,125,000			
All Workers				
Employment (Jobs)	45 to 55			
Labor Income	\$6,750,000 to \$8,250,000			

Source: Highland Economics, LLC 2025

Table 5-31 summarizes total economic impact (including direct, indirect, and induced) estimates across Kentucky and Tennessee. While direct impacts are the jobs and income to the construction and operations workers at the Lewis Ridge Project, indirect impacts refer to employment and income generated through the purchase of goods and services needed, which includes everything from legal and environmental services to tires and equipment. Induced impacts result from increased household spending by those workers, which supports additional jobs and income; this can include retail, healthcare, real estate, and food services. As shown, the Lewis Ridge Project is expected to support over 1,000 jobs and generate up to \$157 million annually in labor income across Kentucky and Tennessee during the construction phase through direct, indirect, and induced impacts. During operations, the Lewis Ridge Project is anticipated to support up to 170 jobs and generate approximately \$17.2 million in annual labor income through similar economic channels (Highland Economics, LLC 2025).

Table 5-31: Summary of Total Economic Impacts (Direct, Indirect, Induced) in Kentucky and Tennessee

Geography/Type of Impact	Annual Av	Annual Average Impact			
Geography/Type of Impact	Construction	Operations			
Bell County					
Total Employment (Part and Full-Time Jobs)	240 to 300	30 to 40			
Total Labor Income	\$26,000,000 to \$32,000,000	\$3,900,000 to \$4,700,000			
Elsewhere in KY/TN					
Total Employment (Part and Full-Time Jobs)	1,060 to 1,290	100 to 130			
Total Labor Income	\$102,000,000 to \$125,000,000	\$10,100,000 to \$12,400,000			
Total KY/TN					
Total Employment (Part and Full-Time Jobs)	1,300 to 1,590	130 to 170			
Total Labor Income	\$128,000,000 to \$157,000,000	\$14,000,000 to \$17,200,000			

Source: Highland Economics, LLC 2025

With respect to in-migration, it is anticipated that the construction phase of the Lewis Ridge Project will result in a temporary influx of workers; however, there is no evidence to suggest that long-term in-migration will place a substantial burden on regional governmental services or public facilities. Approximately half of the projected 45 to 55 on-site operational employees are expected to reside in Bell County, while the remainder are likely to commute from surrounding areas in Kentucky and Tennessee (Highland Economics, LLC 2025). During the construction period, an estimated one-third of the annual workforce (approximately 190 to 240 individuals) is expected to be composed of Bell County residents (Highland Economics, LLC 2025). The geographic dispersion of the workforce across Bell County, Kentucky, Tennessee, and throughout the nation is anticipated to help spread potential burden on governmental services in the region such as police, fire, health, and educational facilities. Additionally, it is anticipated that costs associated with potential additional public services that may be needed in the area would be offset by the anticipated economic stimulus to the region and additional tax revenues generated by the Lewis Ridge Project.

Regarding housing impacts, as shown in Table 5-28, Bell County has a vacancy rate of approximately 17.9 percent, corresponding to an estimated 2,082 vacant housing units (U.S. Census Bureau 2023i). As noted in the economic analysis, a portion of the workforce is expected to commute from outside the county, which will help distribute housing demand across a broader region. The existing total housing units are anticipated to be sufficient to accommodate the temporary population increase associated with the Lewis Ridge Project; however, the economic activity generated may also stimulate new residential development. This activity includes the hiring of workers from both the local area and the broader region, procurement of materials and equipment, and the payment of sales, property, and income taxes. In turn, workers are expected to spend their earnings within the community, supporting local businesses and contributing to public revenues. This circulation of income is projected to create a multiplier effect, indirectly supporting additional employment, income, and tax generation, which may further incentivize housing construction in the area.

There will be no residences or business establishments displaced by the proposed Lewis Ridge Project.

In conclusion, the Lewis Ridge Project is expected to provide a substantial economic boost to the region both temporarily and permanently through job creation and tax revenue.

The Lewis Ridge Project will substantially increase demand for labor, materials, and services for the construction of the project. The Lewis Ridge Project is projected to support thousands of temporary jobs over the construction period, including Bell County residents, and generate hundreds of millions in labor income. The broader regional impact could reach up to 6,300 job-years and \$627 million in labor income. Based on the economic study conducted, it is anticipated that Bell County alone could see up to 1,200 job-years and \$127.6 million in labor income from the construction of the Lewis Ridge Project, based on the available workforce. Additionally, the Lewis Ridge Project is expected to contribute approximately \$60 million in state tax revenue during construction, and \$16.5 million in property tax revenue for Bell County in the first year following construction.

Once operational, the Applicant anticipates the Lewis Ridge Project to continue to provide jobs and substantial tax revenue for the area. Bell County will continue to receive annual property tax revenue based on net profitability. It is anticipated that the Lewis Ridge Project will directly employ 45 to 55 people, with roughly half of those positions anticipated to be filled by local residents. These positions, along with indirect and induced employment, could support up to 170 jobs and generate as much as \$17.2 million in annual labor income across the region. These long-term benefits will be further enhanced by efforts to prioritize local hiring, utilize apprenticeship programs, and engage experienced regional labor so that economic gains are rooted in the local community. LRPS is partnered with a local non-profit, Shaping our Appalachian Region (SOAR), to help the local workforce meet project needs.

## **5.7.3** Agency Consultation and Applicant Recommendations

# 5.7.3.1 Agency Consultation

Documentation of consultation is provided in Appendix A. Consultation specific to socioeconomic resources is summarized below.

LRPS conducted a meeting with the Kentucky Cabinet for Economic Development on September 9, 2022, during which the Kentucky Cabinet for Economic Development noted their interest in the economic impacts of the Lewis Ridge Project and stated their support of the Lewis Ridge Project.

LRPS held a Joint Agency and Public Meeting and Site Visit on January 25, 2023. Brief discussion occurred regarding the economic impacts of the Lewis Ridge Project (temporary and permanent jobs). No comments were received specific to socioeconomics in comments following the Joint Agency and Public Meeting.

LRPS distributed a Draft Study Plan on June 13, 2024. LRPS filed the Revised Study Plan with FERC on August 16, 2024. No studies pertaining to socioeconomic resources were requested or included in the Revised Study Plan. LRPS filed its DLA on September 30, 2024, and no comments pertaining to socioeconomic resources were received.

### 5.7.3.2 Applicant Recommendations

LRPS anticipates the Lewis Ridge Project to provide broad benefits to socioeconomic resources through both its construction and operational phases. As a result, LRPS is not proposing any specific PM&E measures related to socioeconomic resources.

#### 5.7.4 References

- Carey, D.I. 2007. Generalized Geologic Map for Land-Use Planning: Bell County, Kentucky. Kentucky Geological Survey Map and Chart. 181. Available online: <a href="https://uknowledge.uky.edu/cgi/viewcontent.cgi?article=1180&context=kgs\_mc">https://uknowledge.uky.edu/cgi/viewcontent.cgi?article=1180&context=kgs\_mc</a> Accessed: July 31, 2024.
- DataUSA. 2025. Bell County, Kentucky. Available online: <u>Bell County, KY | Data USA</u>. Accessed May 2025.
- Highland Economics, LLC. (2025). Economic and Fiscal Impact Analysis of the Lewis Ridge Pumped Storage Project. May 2025.
- U.S. Census Bureau. 2024. Quick Facts | Kentucky; Bell County, Kentucky. Available online: <a href="https://www.census.gov/quickfacts/fact/table/bellcountykentucky,KY/PST045223">https://www.census.gov/quickfacts/fact/table/bellcountykentucky,KY/PST045223</a>. Accessed May 2025.
- U.S. Census Bureau. 2023a. Tejay CCD, Bell County, Kentucky, DP05 ACS Demographic and Housing Estimates and S0101 Age and Sex. Available online: <a href="https://data.census.gov/table/ACSDP5Y2023.DP05?g=060XX00US2101393456">https://data.census.gov/table/ACSDP5Y2023.DP05?g=060XX00US2101393456</a>. Accessed May 2025.
- U.S. Census Bureau. 2023b. Pineville CCD, Bell County, Kentucky, DP05 ACS

  Demographic and Housing Estimates and S0101 Age and Sex. Available online:

- https://data.census.gov/table/ACSDP5Y2023.DP05?g=060XX00US2101393456. Accessed May 2025.
- U.S. Census Bureau. 2023c. Bell County, Kentucky. Available online: <u>Bell County, Kentucky Census Bureau Profile</u>. Accessed May 2025.
- U.S. Census Bureau. 2023d. Kentucky. Available online: <u>Kentucky Census Bureau Profile</u>. Accessed May 2025.
- U.S. Census Bureau. 2023e. Tejay CCD, Bell County, Kentucky. Available online: <u>Pineville CCD, Bell County, Kentucky Census Bureau Profile</u>. Accessed May 2025.
- U.S. Census Bureau. 2023f. Pineville CCD, Bell County, Kentucky. Available online: <u>Tejay</u> <u>CCD, Bell County, Kentucky Census Bureau Profile</u>. Accessed May 2025.
- U.S. Census Bureau. 2023g. Tejay CCD, Bell County, Kentucky, B5002 Occupancy Status. Available Online:

  <a href="https://data.census.gov/table/ACSDT5Y2023.B25002?q=vacancy+rates+in+Tejay+CCD,+Bell+County,+Kentucky">https://data.census.gov/table/ACSDT5Y2023.B25002?q=vacancy+rates+in+Tejay+CCD,+Bell+County,+Kentucky</a>. Accessed June 2025.
- U.S. Census Bureau. 2023h. Pineville CCD, Bell County, Kentucky, B5002 Occupancy Status. Available online:

  <a href="https://data.census.gov/table/ACSDT5Y2023.B25002?q=vacancy+rates+in+Pineville+CCD,+Bell+County,+Kentucky">https://data.census.gov/table/ACSDT5Y2023.B25002?q=vacancy+rates+in+Pineville+CCD,+Bell+County,+Kentucky</a>. Accessed June 2025.
- U.S. Census Bureau. 2023i. Bell County, Kentucky, B5002 Occupancy Status. Available online:
  <a href="https://data.census.gov/table/ACSDT5Y2023.B25002?q=vacancy+rates+in+Bell+County,+Kentucky">https://data.census.gov/table/ACSDT5Y2023.B25002?q=vacancy+rates+in+Bell+County,+Kentucky</a>. Accessed June 2025.
- U.S. Census Bureau. 2023j. Kentucky, B5002 Occupancy Status. Available online: <a href="https://data.census.gov/table/ACSDT1Y2023.B25002?q=vacancy+rates+in,+Kentucky">https://data.census.gov/table/ACSDT1Y2023.B25002?q=vacancy+rates+in,+Kentucky</a>. Accessed June 2025.
- U.S. Census Bureau. 2018. 2020 Census Participant Statistical Areas Program (PSAP)

  Quick Reference: Census County Divisions. Available online: 2020 Census

  Participant Statistical Areas Program (PSAP) Quick Reference: Census County

  Divisions. Accessed July 30, 2024.