Butler County, Missouri

Broadband Expansion Economic Benefit Analysis

Butler County, located in Missouri's southern Ozarks and home to Poplar Bluff, had fixed broadband access at nearly 76% of locations in 2024, below the state average of 84%. It is estimated that 60% of county residents currently subscribe to (adopt) broadband services.



Two expansion scenarios estimate the benefits to Butler County if broadband adoption increased by 10 (minimum) and 20 (maximum) percentage points. Exhibit B1 shows the number and percentage of households assumed to have broadband by year 10. Exhibit B2 shows the benefit model inputs for each scenario.

Characteristic	Base Value	Minimum Scenario	Maximum Scenario
Total Households	16,490	16,490	16,490
Households that Have Adopted Broadband	9,894	11,543	13,192
Households that Have Not Adopted Broadband	6,596	4,947	3,298
Percent of Households Adopting Broadband	60.0%	70.0%	80.0%

Exhibit B1. 10-Year Fixed Broadband Household Adoption Scenarios

Sources: U.S. Census 2019-23 ACS. Adoption rate estimate from a 2025 engineering study.

Exhibit B2. 10-Year Economic Benefit Direct Model Inputs

Basic Assumptions	Minimum Scenario	Maximum Scenario	
Percent of Households that Adopted Broadband by Year 10	70.0%	80.0%	
Broadband Installation Investment to Serve Remaining Households	\$58,524,605	\$58,524,605	
Telemedicine Benefits	•		
Patient Savings from Reduced Use of Emergency Departments	\$8,977,294	\$17,954,588	
Patient Savings from Initial Health Consultation via Internet	\$3,470,995	\$6,941,989	
Patient Transportation Savings due to Telemedicine	\$126,283	\$252,567	
Missed Work Income Savings to Patient	\$97,576	\$195,153	
Education Productivity Benefits			
K12 Teacher Productivity Savings	\$3,539,261	\$3,539,261	
Income and Employment Benefits	•		
Household Income Increases	\$2,014,496	\$8,070,463	
Farm Income Changes	\$13,556,708	\$27,113,415	
Annual Average Direct Employment Increases by Year 10	211	422	

Notes: Dollar values represent 10-year benefit in nominal figures.

Butler County 10-Year Broadband Expansion Benefit Results

Benefits arise from both fixed broadband infrastructure construction and broadband adoption. Construction investment benefits start in year one and household adoption benefits begin in year two. The temporary construction activity and associated jobs conclude in year four. In each scenario, new jobs, labor income and GDP include the total impact of direct inputs (from Exhibit B2) and indirect purchases, such as new local spending in the county spurred by those inputs.

Minimum Scenario: 10 Percentage Point Gain in Fixed Broadband Adoption over 10 Years In the minimum scenario, the annual average increase of 340 jobs is realized in year 10. On average, annual employment is 1.0% higher than 2023 county employment. This scenario adds an annual average of 1.1% and 0.9% to county labor income and GDP, respectively, compared with 2023 levels.

Characteristic	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	10-Year Total*	Avg. Annual Change**
New Annual Average Employment	72	319	316	182	160	196	232	268	304	340	340	1.0%
New Labor Income (in millions)	\$3.21	\$15.0	\$15.5	\$10.2	\$9.9	\$12.2	\$14.5	\$16.8	\$19.1	\$21.4	\$137.8	1.1%
New GDP (in millions)	\$4.80	\$22.2	\$22.9	\$14.9	\$14.1	\$17.1	\$20.2	\$23.3	\$26.4	\$29.4	\$195.3	0.9%

Exhibit B3. Minimum Scenario – Total Economic Benefits by Year

Notes: Income and GDP in 2025 dollars. *Total employment is for year 10 as jobs are not cumulative, and other figures are cumulative totals. **Average annual change compared to 2023 figures.

Maximum Scenario: 20 Percentage Point Gain in Fixed Broadband Adoption over 10 Years In the maximum scenario, the annual average increase of 684 jobs is seen in year 10. On average, annual employment is 1.7% higher than 2023 county employment. This scenario adds an annual average of 2.0% and 1.6% to labor income and GDP, respectively, compared with 2023 levels.

Characteristic	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	10-Year Total*	Avg. Annual Change**
New Annual Average Employment	72	360	399	306	321	393	466	539	611	684	684	1.7%
New Labor Income (in millions)	\$3.21	\$17.5	\$20.6	\$17.8	\$19.8	\$24.5	\$29.1	\$33.7	\$38.3	\$43.0	\$247.6	2.0%
New GDP (in millions)	\$4.80	\$25.7	\$30.0	\$25.5	\$27.9	\$34.1	\$40.3	\$46.5	\$52.7	\$58.9	\$346.3	1.6%

Exhibit B4. Maximum Scenario – Total Economic Benefits by Year

Notes: Income and GDP in 2025 dollars. *Total employment is for year 10 as jobs are not cumulative, and other figures are cumulative totals. **Average annual change compared to 2023 figures.

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