Connected
A CONNECTED NATION Initiative

Addressing Your Community's Unique Needs
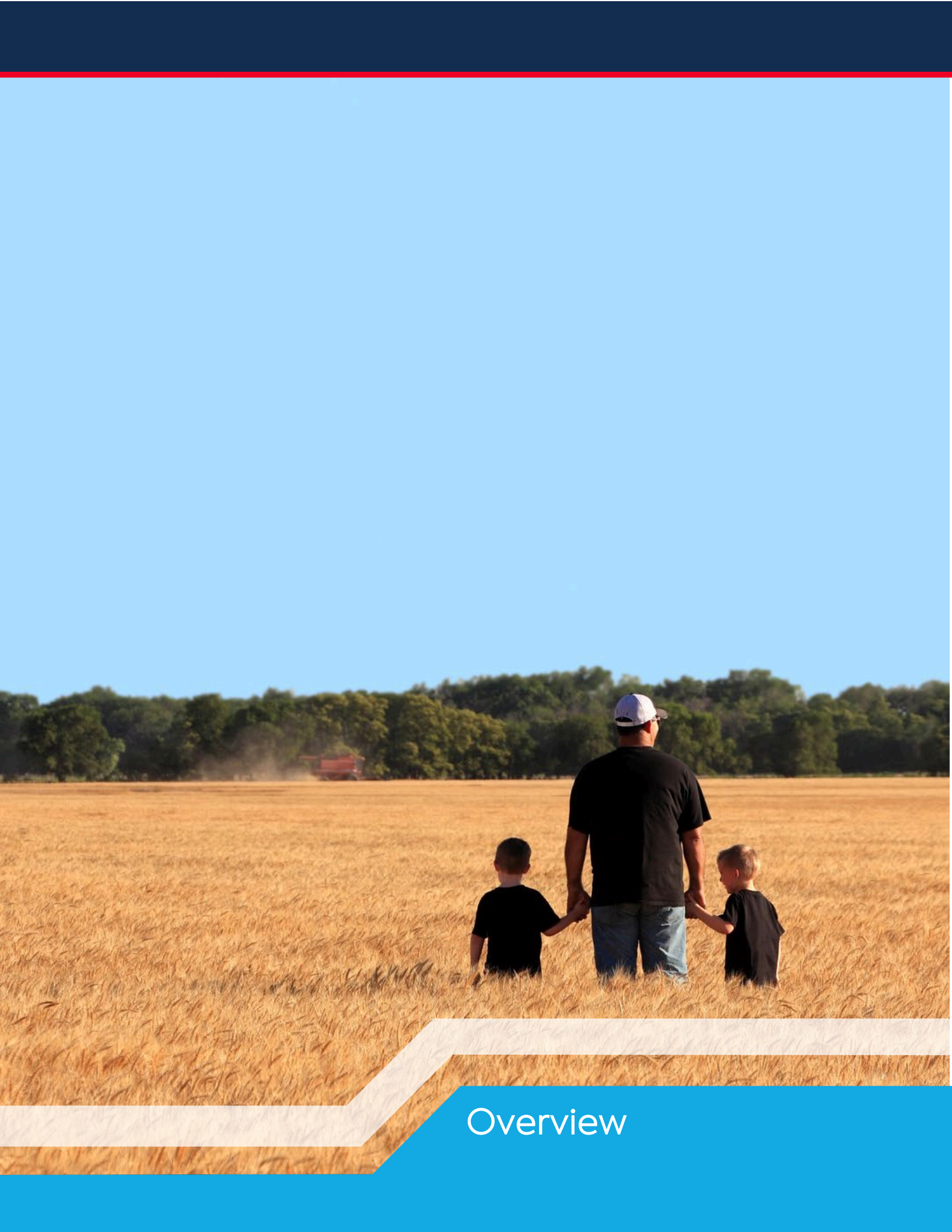
Stephens County, Oklahoma

Executive Summary

January 2024

CONNECTED NATION

connectednation.org

Stephens County Overview

To oday, technology plays a pivotal role in how businesses operate, how institutions provide services, and where consumers choose to live, work, and play. A community's success depends on how broadly and deeply it adopts technology resources, including access to reliable, high–speed networks, residents' digital literacy, and online resources for local business, government, and leisure.

As such, Stephens County stakeholders partnered with Connected Nation's Connected Community Engagement Program to conduct a study designed to determine the availability of broadband infrastructure, how county residents are adopting and using broadband services, and what action steps would have the greatest impact toward improving broadband access, adoption, and usage across every local sector.

Pursuant of this goal, between September and December 2023, Stephens County conducted a comprehensive survey of broadband technology access and adoption across the community that collected responses from 25 households. CN also met with community officials to determine community needs and gather qualitative data for consideration in the study.

This study approached broadband holistically – focusing on the quality of life offered when residents and community leaders alike access, adopt, and use broadband in a productive and meaningful capacity. With this approach, the assessment identified issues and action opportunities necessary to close the local Digital Divide.

Data collected as part of the engagement played an integral role in developing a unique, locally informed action plan for Stephens County. This document provides a summary of that assessment, as well as recommendations for improving broadband and technology access, adoption, and usage. Additionally, CN created an interactive map.

STEPHENS COUNTY, OKLAHOMA QUICK FACTS
Population
42,848
Households
17,032
Median Household Income
$57,065
Poverty Rate
16.9%
Adults with a Bachelor's Degree or Higher
18.9%
Hispanic or Latino
8.1%
Households with Broadband Access[1]
94.22%

Source: Stephens County U.S. Census Profile

[1] The current FCC definition of broadband is a minimum of 25 Mbps download and 3 Mbps upload. These data are derived from the FCC National Broadband Map – with numbers as of June 2023.

64%

of households in Stephens County report subscribing to fixed internet service

For households that do not subscribe to home internet service, the top barriers are a **lack of broadband service availability** and the **cost of internet service**.

87% of households in Stephens County have access to internet service at speeds needed to run many modern applications (100 Mbps downstream and 20 Mbps upstream). Statewide, *84.9%* of households have internet access at these speeds.

More than 7 out of 10 employed survey respondents in Stephens County (*72.7%*) report teleworking in some capacity. Of those, *25%* telework every day and an additional *25%* telework at least once per week.

Over half of households surveyed (*52.4%*) reported being dissatisfied with their current internet service. The top reasons for dissatisfaction were slow speeds, unreliable connections, and high prices.

More than 9 out of 10 households (*95.8%*) said they would like to have improved or additional options for home internet service.

Stephens County Infrastructure

According to FCC broadband data, updated in June 2023, 94.22% of Stephens County households have access to speeds of at least 25/3 Mbps – the current definition of broadband set forth by the Federal Communications Commission (FCC). Broadband service is distributed throughout the county.

Below is the list of Stephens County internet service providers (ISPs). Please contact your ISP for the most up-to-date information on speeds, prices, and service areas.

BROADBAND INFRASTRUCTURE QUICK FACTS

Unserved Households (25/3 Mbps)	984
Households Served (10/1 Mbps)	96.07%
Households Served (25/3 Mbps)	94.22%
Households Served (100/20 Mbps)	86.95%

These data are derived from the FCC's latest national broadband map, which can be found here.

PROVIDER	TECHNOLOGY	MAXIMUM DOWNLOAD SPEED (Mbps)	MAXIMUM UPLOAD SPEED (Mbps)
360 Communications	Fixed Wireless	25	3
Arbuckle Communications	Fixed Wireless	50	5
AT&T Inc.	Fixed Wireless	25	3
AT&T Inc.	Copper	25	5
Dobson Fiber	Fiber	1,000	1,000
Nextlink	Fixed Wireless	500	100
Pioneer Telephone Cooperative	Copper	46	7
Pioneer Telephone Cooperative	Fiber	1,000	1,000
Sparklight	Cable	1,000	50
T-Mobile	Fixed Wireless	25	3
U.S. Cellular Corp.	Fixed Wireless	25	3
Verizon	Fixed Wireless	50	5
Windstream Oklahoma	Copper	50	8

Household Survey Results
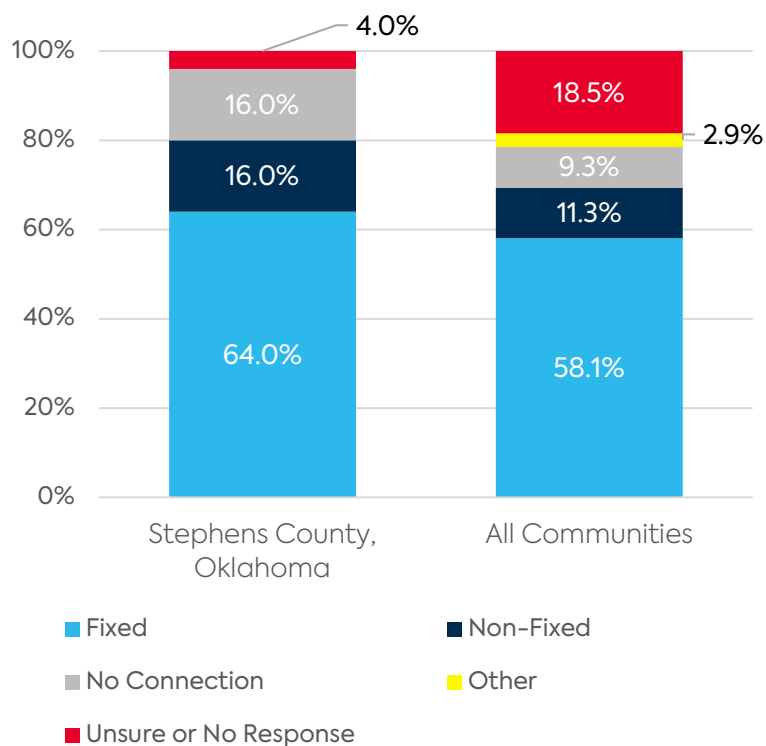
Household Survey Results

The following section provides an overview of results from a broadband survey conducted in Stephens County between September and December 2023. Altogether, CN received 25 survey responses from households across the county; respondents provided insights into their internet connectivity or lack thereof. Data from Stephens County are compared to data from hundreds of other rural Connected communities that participated in the program across Texas, Michigan, and Oklahoma to benchmark and identify areas for improvement.

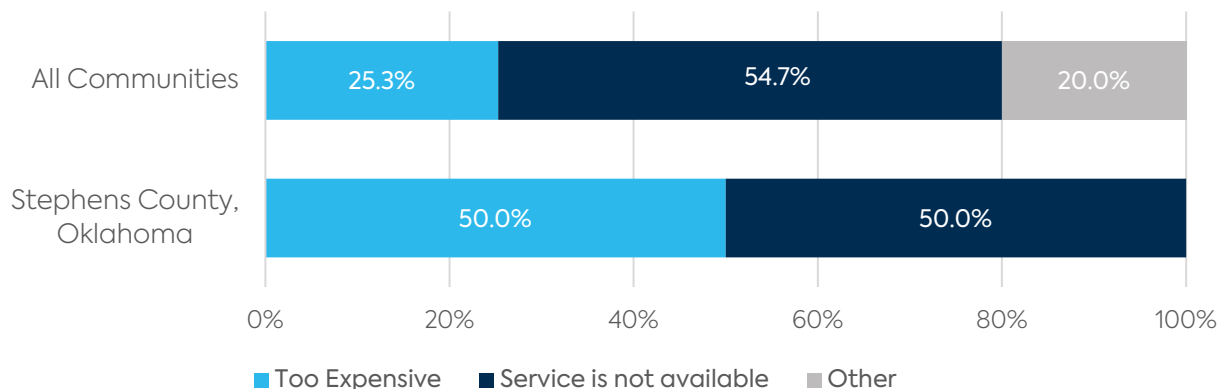## Home Broadband Adoption

ADOPTION

In Stephens County, 64% of households that took the survey subscribe to fixed broadband service delivered via a cable, DSL, fiber, or fixed wireless technology, while 16% indicate they have internet service delivered via dial-up, satellite, or mobile wireless service. This leaves 16% without internet and 4% of survey respondents unsure of what service they have or provided no response.

Among those without a home internet connection, 50% said they did not have broadband because it was too expensive. An additional 50% say service is not available.
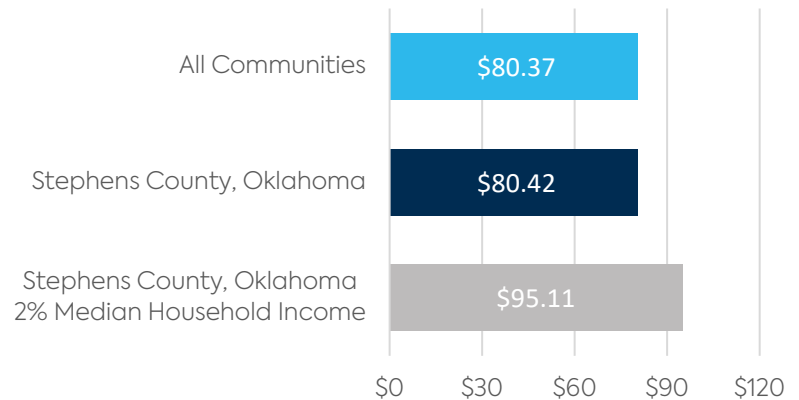
Primary Barrier
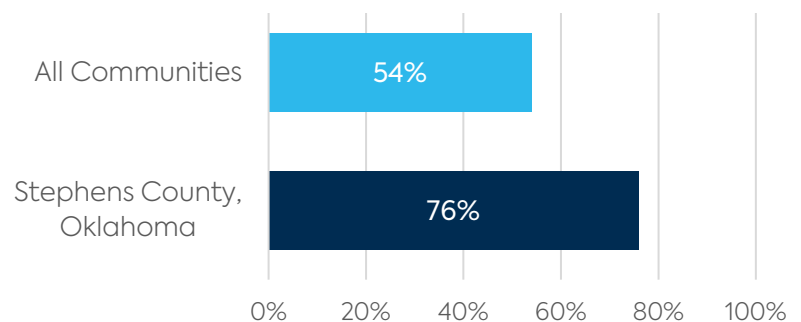
CONNECTION DETAILS

Two percent of monthly income is a recognized standard for measuring the affordability of a home internet connection. Respondents indicate that, on average, their internet connection costs about $80.42 per month. This is on par with the monthly cost in other communities ($80.37). Two percent of the median household income in Stephens County is $95.11 per month.

The FCC currently defines broadband as an internet connection with a download speed of at least 25 Mbps and an upload speed of at least 3 Mbps. On average, respondents indicate that their connection's advertised download speed is 235.6 Mbps. In Stephens County, 76% of internet-connected households subscribe to download speeds faster than 25 Mbps.
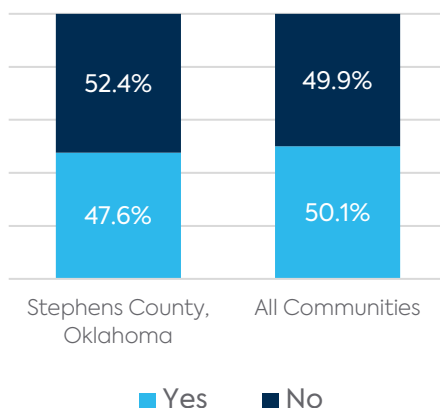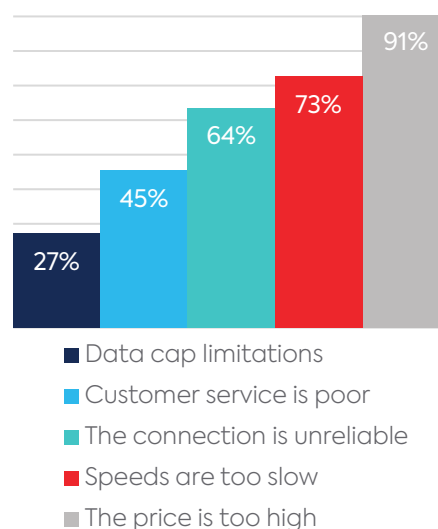
Average Monthly Cost

All Communities	$80.37
Stephens County, Oklahoma	$80.42
Stephens County, Oklahoma 2% Median Household Income	$95.11

$0 $30 $60 $90 $120

Percentage of Respondents with At Least 25/3 Mbps

All Communities	54%
Stephens County, Oklahoma	76%

0% 20% 40% 60% 80% 100%

Does Your Internet Meet Your Needs?

	Stephens County, Oklahoma	All Communities
No	52.4%	49.9%
Yes	47.6%	50.1%

■ Yes ■ No

Why Doesn't Your Internet Meet Your Needs?

- Data cap limitations: 27%
- Customer service is poor: 45%
- The connection is unreliable: 64%
- Speeds are too slow: 73%
- The price is too high: 91%

■ Data cap limitations
■ Customer service is poor
■ The connection is unreliable
■ Speeds are too slow
■ The price is too high

Are You Interested in More Choices at Home?

Stephens County, Oklahoma
- No: 4.2%
- Yes: 95.8%

■ Yes ■ No
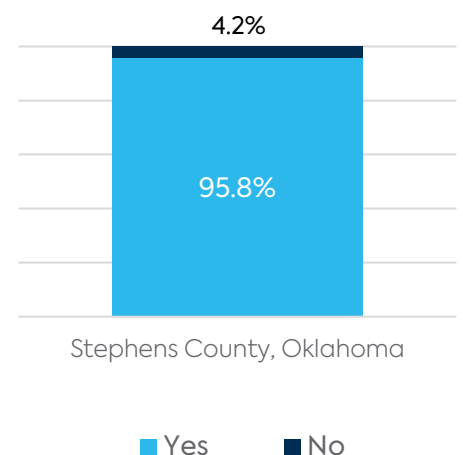
Household Survey Results

Competition provides residents with choices for service, allowing households the ability to switch providers if their current service does not meet their needs. Just under half (47.6%) of responding households indicate that their internet connection meets their needs. This is a slightly lower rate of satisfaction than among households in other communities (50.1%).

When asked why their connection does not meet their needs, 91% of dissatisfied households indicate that the price is too high, 73% report that their internet connection is too slow, 64% say their connections are unreliable, and 45% indicate that their customer service is poor. Respondents could choose more than one reason for dissatisfaction.

Finally, more than 9 out of 10 respondents (95.8%) indicate that they are interested in additional internet choices for their home.
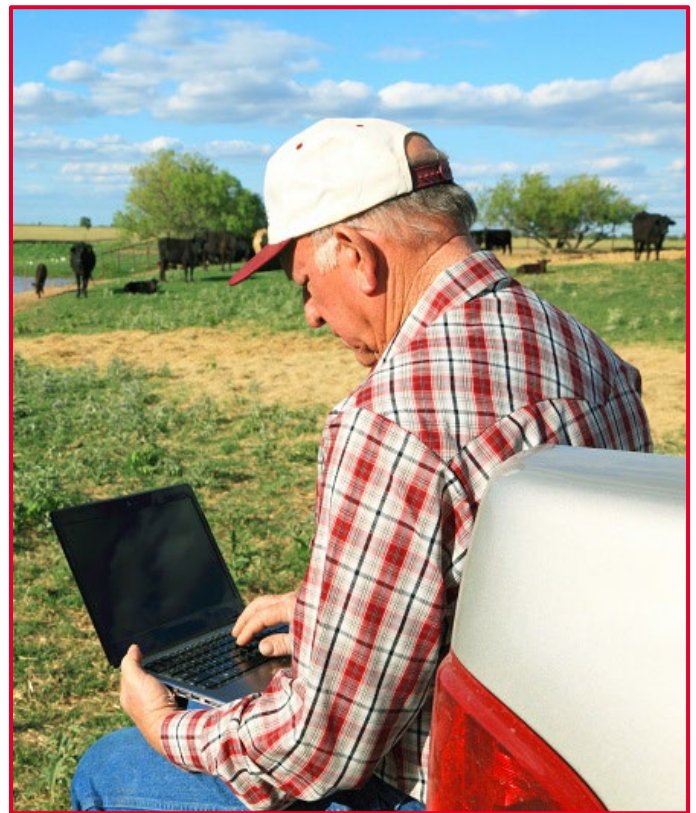
MOBILE CONNECTIVITY

More than 3 out of 5 households (62.5%) reported that they subscribe to mobile internet service they access via a smartphone or similar mobile device. This is less than what is reported in other Connected communities (68.7%).

Additionally, 40% of mobile-connected households report that they either rely on those mobile connections as their primary source of home internet connectivity or use mobile service to connect other household devices to the internet.

Households Subscribing to Mobile Internet Service

Stephens County, Oklahoma	All Communities
4.2%	3.0%
33.3%	28.3%
62.5%	68.7%

■ Yes ■ No ■ Other
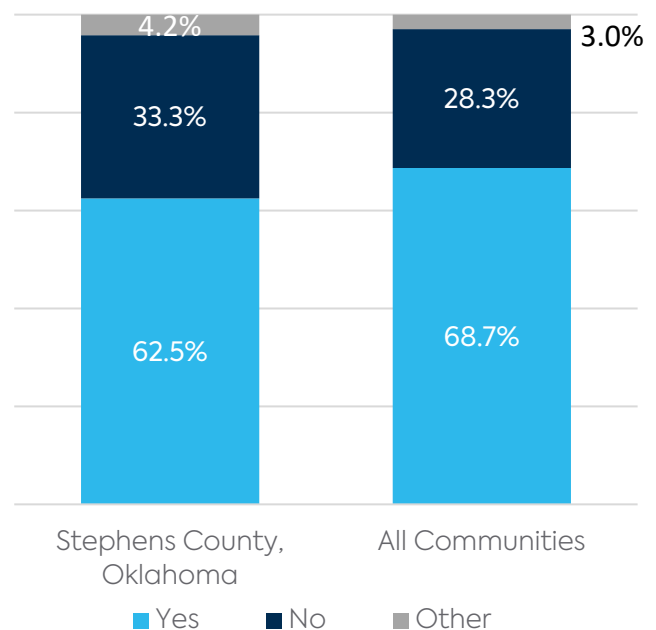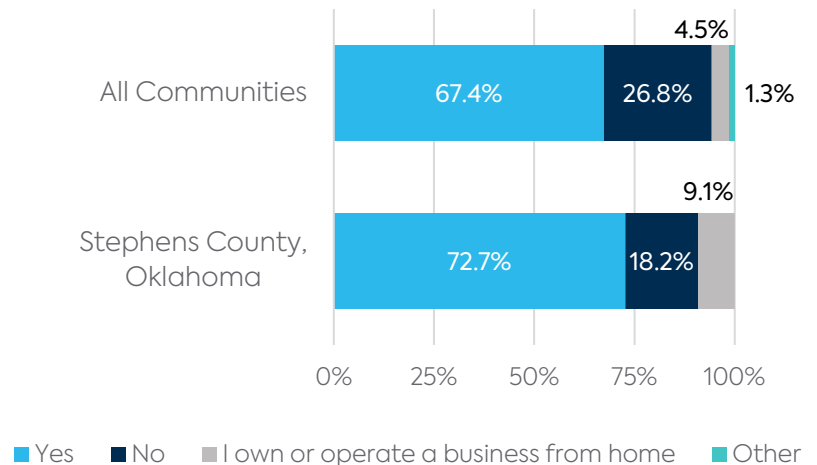
Household Survey Results

TELEWORK

Teleworking, or telecommuting, refers to working outside of the conventional workplace by way of telecommunications or computer-based technology. The COVID-19 pandemic forced many organizations to allow their staff to telework.
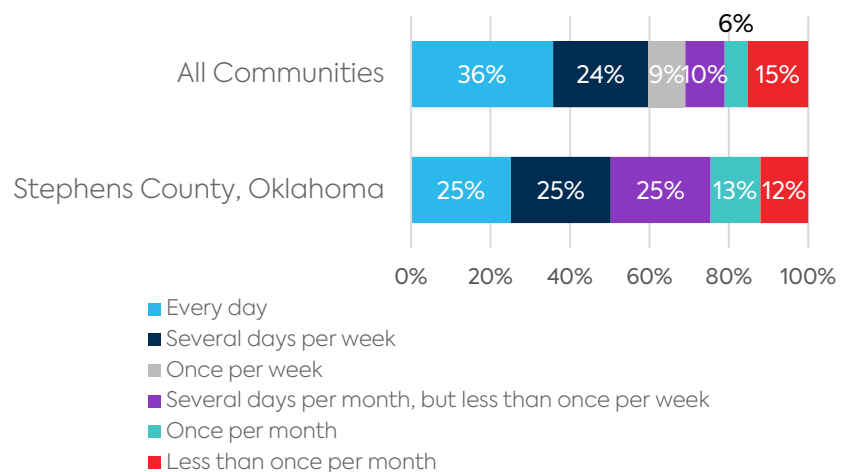
Teleworking is quickly becoming a critical part of growing a local economy because it represents an opportunity to attract and retain employees even when employees are not located in the same community as their employers. However, this only works if those employees have access to advanced broadband infrastructure.

Almost three out of four employed respondents in Stephens County (72.7%) telework at least part of the time. One out of four teleworkers (25%) work remotely every day, while an additional 25% telework several days per week.

Do You Currently Telework?

	Yes	No	I own or operate a business from home	Other
All Communities	67.4%	26.8%	4.5%	1.3%
Stephens County, Oklahoma	72.7%	18.2%	9.1%	

How Frequently Do You Telework?

	Every day	Several days per week	Once per week	Several days per month, but less than once per week	Once per month	Less than once per month
All Communities	36%	24%	9%	10%	6%	15%
Stephens County, Oklahoma	25%	25%		25%	13%	12%

Recommendations

The following recommendations are presented to assist Stephens County in expanding broadband access and adoption throughout the community.

A residential survey was deployed in Stephens County between September and December 2023 to assess the connectivity, affordability, and general technology needs of the county's residents. Based on data from this countywide survey, online research, and direct community feedback, the following recommendations are presented to Stephens County.

Goal 1: Align county leadership, resources, and community assets to increase access, adoption, and use of high-speed broadband for all residents in Stephens County.

Oklahoma was allocated $797 million under the Infrastructure Investment and Jobs Act (IIJA) via the Broadband, Equity, Access, and Deployment (BEAD) Program and the Digital Equity Act. These programs will fund projects that help expand high-speed internet access and ensure Oklahoma communities have the information technology capacity needed for full participation in our society, democracy, and economy by promoting diverse digital advancement projects. This federal funding opportunity is a once-in-a-generation infusion of money the state will administer to eligible entities via a competitive grant program. Therefore, for the county to capitalize on this opportunity, it is paramount that Stephens County establish a formal Broadband Council to ensure that: 1.) the community is staying on top of the state, local, and federal broadband happenings, and 2). the community is prepared to act expediently when the right opportunity comes along to close the local Digital Divide.

Objective: Stephens County should capitalize on state and federal funding opportunities to promote greater broadband access for residents, businesses, and local entities representing agriculture, education, public safety, and others.

Action 1 – Establish central broadband leadership in Stephens County by creating a formal Broadband Council.

Establishing leadership is essential. A Broadband Council representing key community sectors and county partners ensures the county stays informed of critical broadband efforts and opportunities. The Broadband Council will maintain a local presence to keep the community interested and engaged in internet adoption and expanded internet

deployment.

Broadband Council advisory members should include representatives from a variety of community stakeholders, such as:

- **Health care:** Local physicians or hospital staff
- **Government:** County Commissioners, Mayor, City Council, County IT Director
- **Education (K-12):** Superintendents, School IT Directors
- **Public Safety:** County Sheriff's Office, Police Department, Fire and Rescue and surrounding Volunteer Fire Departments, Emergency Medical Services
- **Agriculture:** County Ag Agent, leading ag producers
- **Business:** Chamber of Commerce, Economic Development
- **Library:** Public Library Directors, librarians
- **Community At-Large:** Someone from the community who is interested in broadband.

The Broadband Council should meet regularly to discuss broadband opportunities and share information regarding connectivity across their respective sectors.

Responsibilities of the Broadband Council should include:

- Staying abreast of state and national broadband policy initiatives and notable broadband news. The council should stay current on publications, events, and policy briefs published by the Oklahoma Broadband Office, Oklahoma Broadband Expansion Council, and Oklahoma Broadband Governing Board and monitor notable broadband developments via industry newsletters and focused research.
- Keeping the community informed of projects and progress and invite community participation to maintain buy-in and high adoption rates. Getting community buy-in is essential to community initiatives' long-term success and sustainability. The success of local initiatives requires community support, transparency, and engagement. Not only will this help keep the momentum going, but it will show internet service providers (ISPs) there is true interest in expanded service in the area, which will encourage greater investment in the region.
- Supporting applications from qualified entities for applicable state and federal grant programs.
- Attending workshops, webinars, meetings, and general training that specifically discuss telecommunications and broadband.
- Providing digital literacy and digital skills assistance to the community's at-risk populations.
- Holding regular meetings. The council should meet at least once a quarter. Meetings can be held virtually, in person, or in a hybrid capacity to accommodate members' needs.

These meetings should provide updates on community activities, allow time for guest speakers and presentations, and offer an open discussion forum about county broadband advancements.

Action 2 – Develop a website to promote local broadband resources.

The county should create a website as a one-stop resource guide for ISPs, community residents, and local leaders. The website should include resources related to digital literacy, digital skills, reduced-cost broadband offerings, public computing centers, and other relevant broadband information for residents and ISPs. Having a comprehensive set of resources in one location makes it easier for the public to access this information and for the county to highlight all of the available connectivity supports.

Timeline: Establish a Broadband Council and set up a website with pertinent resources immediately.

Responsible parties: Government leaders, business leaders, economic development, and chamber of commerce

Resources
- [Oklahoma Broadband Office](#)
- [Oklahoma Broadband Governing Board](#)
- [The Oklahoma Broadband Expansion Council](#)
- [Oklahoma State Broadband Map](#)
- [HB 3363 Oklahoma State Broadband Expansion Act](#)
- [Coronavirus State and Local Fiscal Recovery Funds, County Allocation](#)
- [Final Rule](#)
- [BroadbandUSA: Federal Funding Guide](#)
- [Guide to Federal Broadband Funding Opportunities in the U.S.](#)

Broadband readiness
- [Smart Cities Readiness Guide](#)
- [Next Century Cities Becoming Broadband Ready Toolkit](#)
- [Municipal Boards: Best Practices for Adoption Technology](#)

Broadband leadership
- [Ector County TX forms taskforce to set up broadband office](#)
- [City of Memphis: Broadband Project Manager, Senior](#)

- [Letter: Do your part on broadband](#)
- [The Anatomy of a Community Broadband Manager](#)
- [TARA Leadership: Rondella Hawkins](#)

Goal 2: Work with internet service providers (ISPs) to improve internet access and speeds.

Objective: Ensure all residents have access to the internet and speeds that meet their needs for work, education, telehealth, and quality of life purposes.

Data from Stephens County indicates that 76% of surveyed households subscribe to download speeds faster than 25 Mbps. Despite this, 52.4% of respondents reported dissatisfaction with their current service. Ninety-one percent of respondents said the price was too high, while 64% said the connection was unreliable. Ninety-six percent of all respondents said they would like improved or additional options for broadband.

Action 1 – Maintain open communication and positive relations with ISPs working or scheduled to work in the county, as well as ISPs interested in expanding in the county.

ISPs can be key partners for communities looking to expand broadband access. Checking in regularly with ISPs allows community leaders to stay abreast of construction and expansion progress or changes in plans, to identify challenges they are facing, and to communicate community goals and objectives. This open communication allows ISPs to better understand community needs and for communities to better understand the obstacles and barriers ISPs face. This understanding can encourage creative problem-solving, which can lead to finding solutions through public-private partnerships. Public-private partnerships are arrangements between public entities, such as local governments, and private entities, such as ISPs, to achieve a common goal. They are often, but not always, funding arrangements.

Additionally, the county should strive to be an environment that is amenable to business. This means having easy-to-use websites that allow ISPs and vendors quick access to relevant information, as well as fostering a business environment that rewards open communication and timely resolution of concerns.

Action 2 – Provide survey data to all local providers.

When meeting with providers, community leaders should address the Connected survey

results, highlighting the need for faster service at an affordable price. It is important that providers understand the consumer base in Stephens County in order to provide the best customer service experience. Fifty-two percent of households with a broadband subscription report being dissatisfied with their service, citing slow speeds (73%), unreliable connection (64%), high prices (91%), and poor customer service (45%) as the leading reasons for dissatisfaction. Despite the long list of providers available in Stephens County, over 95% of those surveyed want more choices at home. Armed with this information, broadband providers can strategically address their service areas, and improve access and education about services throughout the county.

Action 3 – Pursue state and federal funding for broadband advancement.

As mentioned previously, the infusion of federal funds to the state via BEAD and DEA is an opportunity for Oklahoma communities to support ISPs and other entities that are looking to expand infrastructure and programs that support robust broadband delivery. Stephens County should explore the best ways to support providers who are considering buildouts in the community.

In addition, there are other funding sources that promise opportunities for broadband, such as the U.S. Economic Development Association or U.S. Department of Agriculture. (Funding guides are linked in the resource section.) Capitalizing on this once-in-a-generation funding opportunity will be paramount to ensuring that Stephens County residents have faster, more reliable broadband for years to come.

Action 4 – Partner with local ISPs to promote low-cost broadband programs.

In Stephens County, the average monthly cost of internet is $80.42. For those that do subscribe, the cost of the internet is the leading factor for dissatisfaction, with 91% of respondents citing the monthly cost as a hefty burden. The county should work with community leaders and institutions to publicly promote programs and opportunities designed to reduce the cost of broadband service.

Below are some programs and resources that are available to residents.
- **Resources to locate affordable internet service or computers:** Using online resources, Stephens County residents can identify local and national providers who offer special low-cost services for vulnerable populations, older adults, and low-income families with children. Resources include EveryoneOn (https://www.everyoneon.org/), which helps residents locate low-cost internet

services and affordable computers by ZIP Code and by need, based on their participation in assistance programs.

- **State and federal low-cost programs:** There are two critical programs that offer discounts for broadband to eligible households:
    - o Lifeline is a federal program administered through the Federal Communication Commission (FCC) Universal Service Administrative Co. that lowers the monthly cost of phone or internet services for eligible consumers. Consumers can get up to $9.25 off the cost of phone, internet, or bundled services each month. Households can qualify based on income or participation in federal or tribal assistance programs.

        The Affordable Connectivity Program (ACP)* was created to help households struggling to afford internet service. The ACP provides a $30 a month credit toward internet coverage ($75 a month for qualifying residents on tribal lands) and up to $100 for the purchase of a device. Households can qualify based on income or participation in federal or tribal assistance programs. To receive the connected device discount, consumers must enroll in the ACP with a participating provider that offers connected devices. The internet company will provide the discount to the consumer, then seek reimbursement. Find out which providers participate by clicking here. The ACP tool kit is a great resource that communities can use to promote the program to residents.

        The ACP is set to expire in spring 2024 unless Congress appropriates more funds. Because this is an expiring program, it's more important than ever for community leaders and residents to partner with local ISPs to provide low-cost broadband programs to bridge the affordability gap so no home is left offline.

Additionally, ISPs often offer their own low-cost options or subsidized programs to consumers at a greatly reduced cost. The IIJA requires internet providers that receive federal grant money to offer low-cost service to eligible low-income households. Local advocacy for internet affordability, using Stephens County-specific data, will be essential to ensuring residents can continue to access online information and virtual resources. The Broadband Council can play an integral role in helping local ISPs see the importance of affordable broadband plans for residents and businesses.

Timeline: The sooner Stephens County can begin infrastructure development and improvement, the better. Residents and businesses benefit when there is good broadband and open communication between ISPs and end users.

Responsible parties: Local and county governments, business leaders, Broadband Council

Resources
- [The FCC High-Cost program](#): [CAF](#) [A-CAM](#)
- [The Rural Digital Opportunity Fund (RDOF)](#)
- [Coronavirus State and Local Fiscal Recovery Funds, Allocation by County](#)
- [ARPA SLFRF](#), [Final Rule](#)
- [BroadbandUSA: Federal Funding Guide](#)
- [Guide to Federal Broadband Funding Opportunities in the U.S.](#)
- [ACP Program](#)
- [Lifeline Program](#)

Goal 3: Ensure that Stephens County residents and businesses have digital literacy skills to improve digital engagement and improve outcomes in business, public safety, workforce readiness, and quality of life.

Objective: Partner with libraries and community organizations to provide digital literacy training.

Broadband connects people to the world and opens the door to myriad opportunities. Where there is broadband, there is development, achievement, and innovation. In rural Oklahoma, broadband fosters economic development, greater scholastic achievement, advancement in agriculture and farming, connection to telehealth services, infrastructure improvement, and general technological advancements. In Stephens County, it is important to embrace broadband for how it can both contribute to and improve the current way of life.

To effectively engage online, an individual must have the digital skills necessary to safely navigate the internet. It is critical for residents to take advantage of applications that support their education, health, and workforce needs. Many organizations and institutions locally and nationwide provide digital training and support to their clients to ensure they can access programs and resources online. Promoting these opportunities and encouraging new partnerships to ensure all residents have the digital skills necessary to participate in the digital world will increase engagement, adoption, and use of the internet in Stephens County.

Action 1 – Develop curriculum for free community workshops.

Community leaders should partner with local and regional organizations to facilitate free digital literacy and digital skills workshops designed to increase digital engagement across the county. Workshop curriculum should be curated using material created by the county and publicly available programs, such as AARP and Digital Learn (resources linked below). Classes could be offered at local facilities, such as the school gym or the community center, and be advertised through the local media. The intention is for residents and community leaders to understand the importance of digital engagement and to feel comfortable using online platforms. The more the community engages online, the more residents will reap the benefits of the digital world.

Workshop topics can include:
- How to teleconference
- Cybersecurity 101
- Microsoft Office skills
- Intro to social media and website building
- Telehealth basics

Connected Nation provides digital literacy training classes to Connected communities free of charge. To learn more, reach out to us today!

Action 1A – Provide instruction in varied formats for greater community involvement.

In addition to hosting in-person workshops, the general curriculum should be available for pickup at frequently accessed public locations in the form of paper handouts. Handouts function as a "grab and go" resource for residents to take with them to review later. In this way, everyone can benefit from the content in whatever way is most compatible with their schedule and preferred learning method.

Action 2 – Partner with community stakeholders for workshop execution.

Finding broadband champions who can share the impact of technology from their perspective can help class participants understand the broad impacts of connectivity. Industry leaders can speak to the importance of broadband in their respective line of work. For example, a banker can discuss the benefits of online banking, while the school IT Director can discuss the importance of online safety. Building on local expertise will help drive workshop attendance and meet the unique needs of Stephens County residents.

Timeline: Digital literacy and digital skills workshops for residents and businesses should be available throughout Stephens County by fall 2024. The community should routinely assess the curriculum to determine if updates are needed.

Responsible parties: Broadband Council, community anchor institutions such as businesses, schools, libraries, organizations, local government leaders and elected officials, broadband providers, and community residents

Resources

Digital Literacy
- [Connected Nation Digital Literacy Workshops](#)
- [Digital Learn – Free courses to learn anything about computers](#)
- [Digital Literacy Curriculum for K–12](#)
- [Free Applied Digital Skills – Google for Education](#)
- [Live, Virtual Classes for Seniors](#)
- [AARP Joins Nonprofit to teach tech to older adults](#)
- [The complete guide to digital skills](#)
- [Grow with Google](#)

Cybersecurity
- [Cybersecurity courses](#)
- [Cybersecurity & Infrastructure Security Agency](#) - [Cyber Resource Hub](#)
- [Connected Nation Cybersecurity Workshops](#)

Goal 4: Identify opportunities for economic advancement in Stephens County using broadband and related technologies.

Action 1 – Pursue grants to advance local community development using broadband technologies (e.g., workforce development, telehealth, digital literacy, etc.).

In conjunction with the countywide Connected Engagement program, Stephens County has been allocated grant-writing funds. For specifics, please contact Connected Nation.

The goals and actions outlined in this document provide the framework for county leaders to prepare for and pursue applicable funding opportunities and program advancements

designed to close the Digital Divide in Stephens County. Through countywide partnerships and collaborative efforts, the community can advocate for and provide equitable, affordable, and reliable broadband access for all residents, businesses, and community anchor institutions.