




**Connected**  
A CONNECTED NATION Initiative

Addressing Your Community's Unique Needs

Ellis County, Texas  
Executive Summary

January 2023

**CONNECTED  
NATION**   
[connectednation.org](http://connectednation.org)



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## Overview



**T**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 has become dependent on how broadly and deeply it adopts technology resources, which include access to reliable, high-speed networks, the digital literacy of residents, and the use of online resources for local business, government, and leisure.

As such, Ellis County stakeholders partnered with the Connected Nation Texas (CN Texas) 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 August and December 2022, Ellis County conducted a comprehensive survey of broadband technology access and adoption across the community that collected responses from 423 households. CN Texas staff 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 Ellis County. This document provides a summary of that assessment, as well as recommendations for improving broadband and technology access, adoption, and usage. Additionally, CN Texas created [an interactive map](#).

## ELLIS COUNTY, TEXAS QUICK FACTS

Population  
192,455

Households  
69,223

Median Household Income  
\$89,799

Poverty Rate  
8.7%

Adults with a Bachelor's Degree  
or Higher  
26.9%

Hispanic or Latino  
27.0%

Households with  
Broadband Access<sup>1</sup>  
99.92%

Source: [Ellis County US Census Profile](#)

<sup>1</sup>The current FCC definition of broadband is a minimum of 25 Mbps download and 3 Mbps upload. These data are derived from Connected Nation Texas and last updated in January 2022. <https://connectednation.org/texas/planning/>





# 67.3%

of households in  
Ellis 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 service**.

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**98.8%** of households in Ellis County have access to internet service at speeds needed to run many modern applications (100 Mbps downstream and 10 Mbps upstream). Statewide, **93.6%** of households have internet access at these speeds.

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About 3 out of 4 employed survey respondents in Ellis County (**74.3%**) report teleworking in some capacity. Of those, **51%** telework every day and **32%** telework at least once per week.

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More than 3 out of 5 households surveyed (**65.4%**) and 2 out of 5 businesses (**40.7%**) reported being dissatisfied with their current internet service. The top reasons for dissatisfaction were slow speeds, unreliable connections, and high prices.

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Over 9 out of 10 households (**93.7%**) said they would like to have improved or additional options for home internet service.



## Infrastructure Results



**A**ccording to CN Texas broadband data initially released in January 2022, followed by additional public feedback, field validation, and provider input, 99.92% of Ellis County households have access to broadband of at least 25/3 Mbps – the current definition of broadband set forth by the Federal Communications Commission (FCC). Broadband service in Ellis County is distributed throughout the county.

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

## BROADBAND INFRASTRUCTURE QUICK FACTS

Unserved Households (25/3 Mbps)  
55

Households Served (10/1 Mbps)  
99.93%

Households Served (25/3 Mbps)  
99.92%

Households Served (50/5 Mbps)  
99.31%

Households Served (100/10 Mbps)  
98.78%

Broadband data released by CN Texas in January 2022:  
<https://connectednation.org/texas/mapping-analysis/>

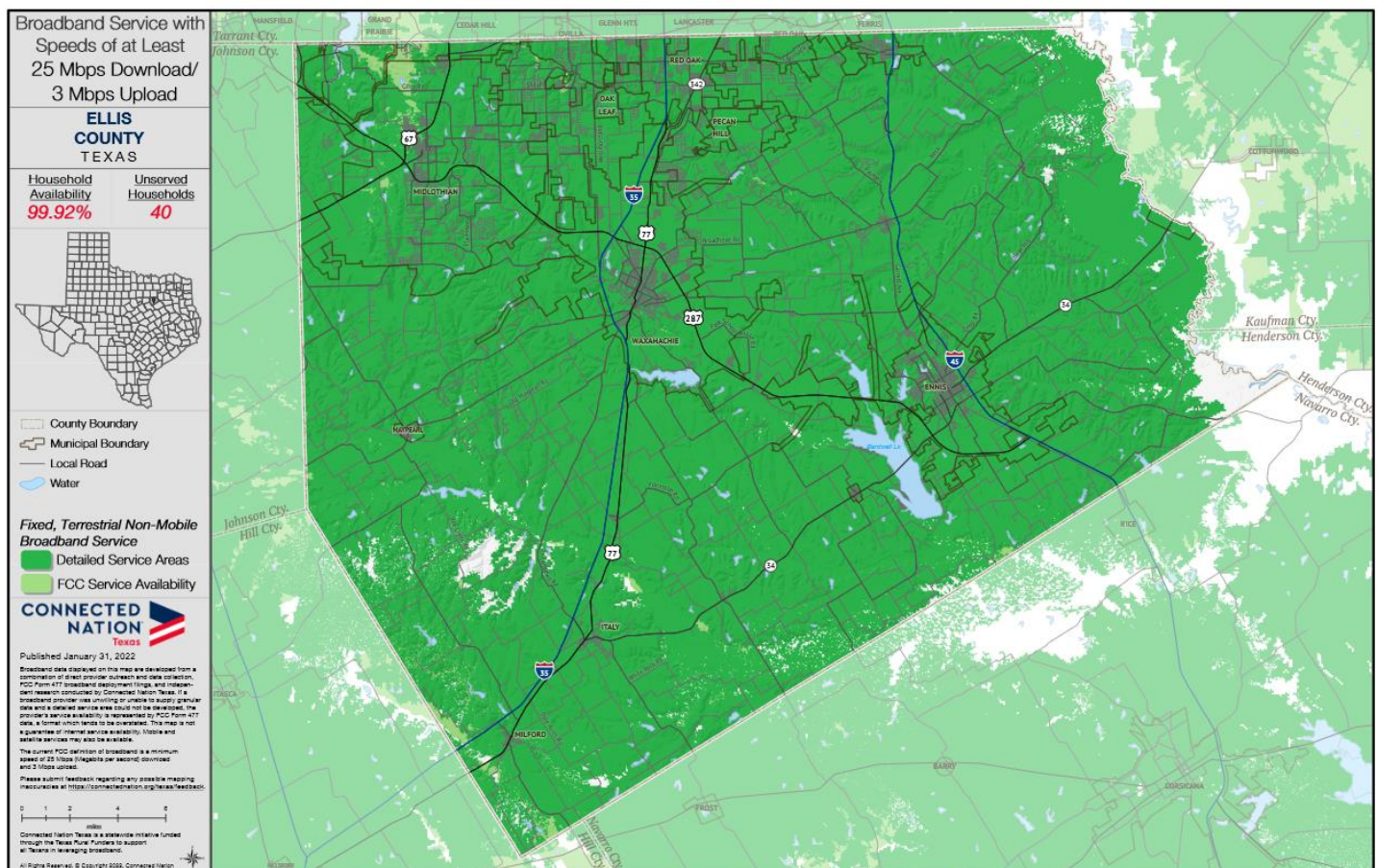
PROVIDER	TECHNOLOGY	MAXIMUM DOWNLOAD SPEED (Mbps)	MAXIMUM UPLOAD SPEED (Mbps)
AMA TechTel Communications	Fixed Wireless	25	3
AT&T Southwest	Fiber	1000	1000
AT&T Southwest	DSL	100	20
Backroads Broadband	Fixed Wireless	25	5
Cirra Networks	Fixed Wireless	50	10
Cito Fiber	Fiber	100	100
Digitex.com	Fixed Wireless	16	5
ECTISP, Inc.	Fixed Wireless	40	15
Legacy Internet	Fixed Wireless	30	6
Nextlink Residential	Fixed Wireless	100	100
Rise Broadband	Fixed Wireless	50	10
Shout Broadband	Fixed Wireless	50	5
Spectrum	Cable	940	35
T-Mobile	Fixed Wireless	25	3
United Cooperative Services	Fiber	1000	120
Valor Telecommunications of Texas LP	DSL	200	200
Wi-Five Broadband Internet	Fixed Wireless	18	2





Below is Ellis County's (25/3 Mbps) map. To access the full map, go to <https://connectednation.org/texas/county-maps/> and select Ellis County from the list. Portions of the county are served by ISPs offering slower advertised speeds and those areas are not shown on this map.

The first step in understanding the status of broadband infrastructure in Ellis County and statewide is having accurate maps. Accordingly, CN Texas works with ISPs to develop a variety of broadband maps at the state and county level. Data shown on this map are derived from a combination of direct ISP outreach and data collection, FCC Form 477 broadband deployment filings, and independent research conducted by CN Texas. If an ISP was unable or unwilling to supply granular data and a detailed service area could not be developed, the ISP's service is represented by Form 477 data alone – a format that tends to overstate the service territory. [The map is also available as a PDF.](#)







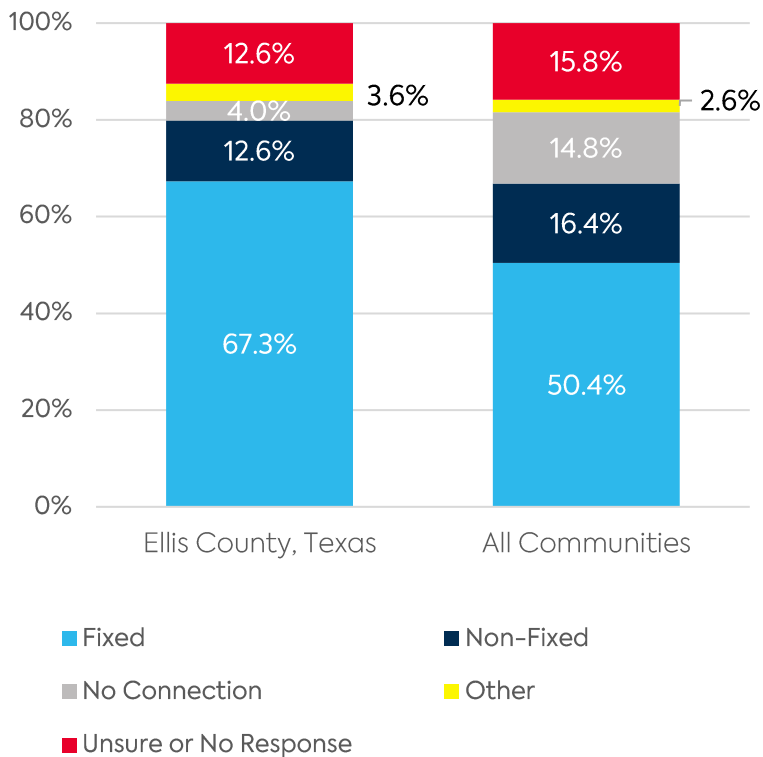
## Household Survey Results

# Household Survey Results



The following section provides an overview of results from a broadband survey conducted in Ellis County between August and December 2022. Altogether, CN Texas received 423 survey responses from households across the county; respondents provided insights into their internet connectivity or lack thereof. Data from Ellis County are compared to data from hundreds of other rural Connected communities that participated in the program across Michigan, Ohio, Texas, and Pennsylvania to benchmark and identify areas for improvement.

## Home Broadband Adoption

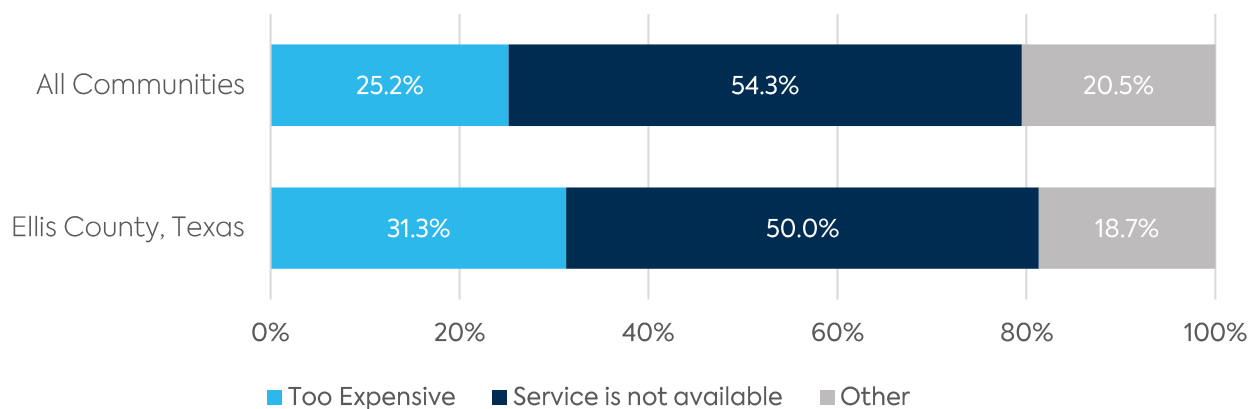


## ADOPTION

In Ellis County, 67.3% of households that took the survey subscribe to fixed broadband service delivered via a cable, DSL, fiber, or fixed wireless technology, while 12.6% indicate they have internet service delivered via dial-up, satellite, or a mobile wireless service. This leaves 4% without internet and 12.6% of survey respondents unsure of what service they have or provided no response.

Among those without a home internet connection, 31.3% said they did not have broadband because it was too expensive. An additional 50% say service is not available.

## Primary Barrier



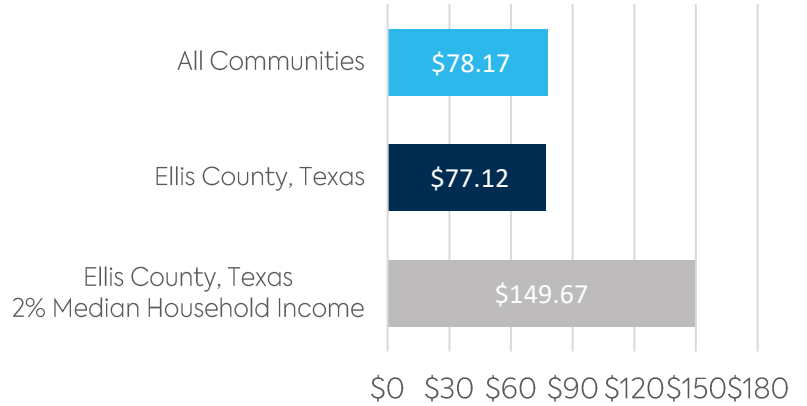




## CONNECTION DETAILS

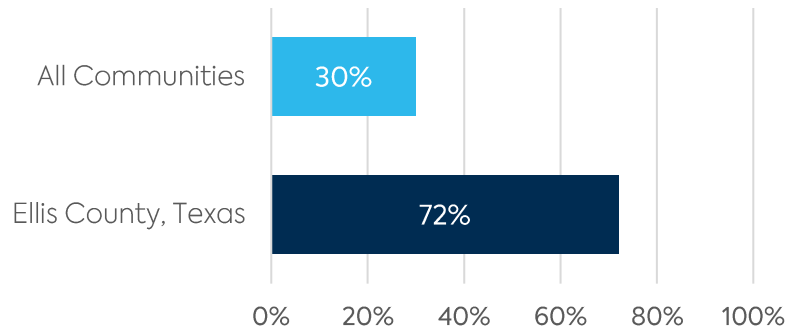
Two percent of monthly income is a recognized standard for measuring the affordability of a home internet connection. Respondents indicate that, on average, their internet connection costs about \$77.12 per month. This is slightly lower than the monthly cost paid in other communities (\$78.17). Two percent of the median household income in Ellis County is \$149.67 per month.

Average Monthly Cost

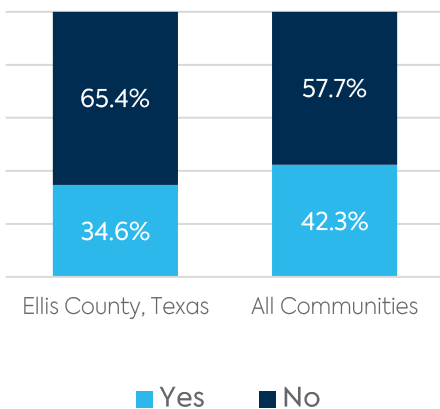


The FCC currently defines broadband as an internet connection with a download speed of at least 25 Mbps and upload speed of at least 3 Mbps. On average, respondents indicate that their connection's advertised download speed is 231.6 Mbps. In Ellis County, 72% of internet-connected households subscribe to download speeds faster than 25 Mbps.

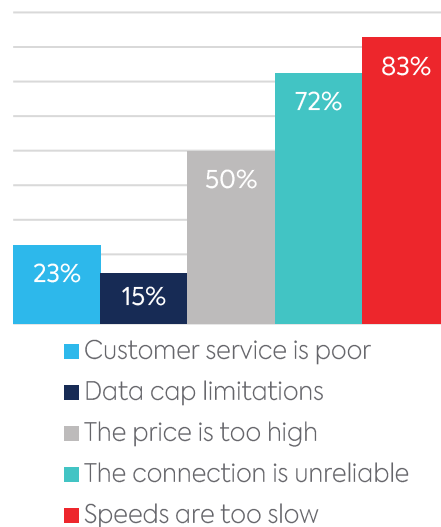
Percentage of Respondents with At Least 25/3 Mbps



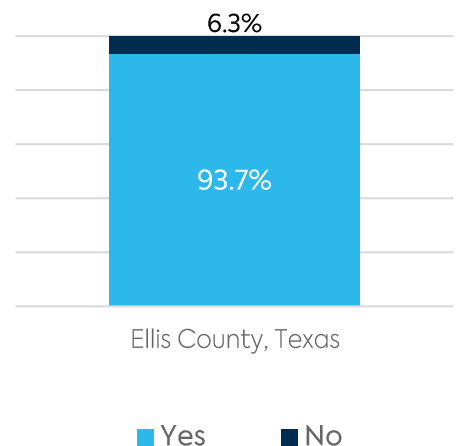
Does Your Internet Meet Your Needs?



Why Doesn't Your Internet Meet Your Needs?



Are You Interested in More Choices at Home?



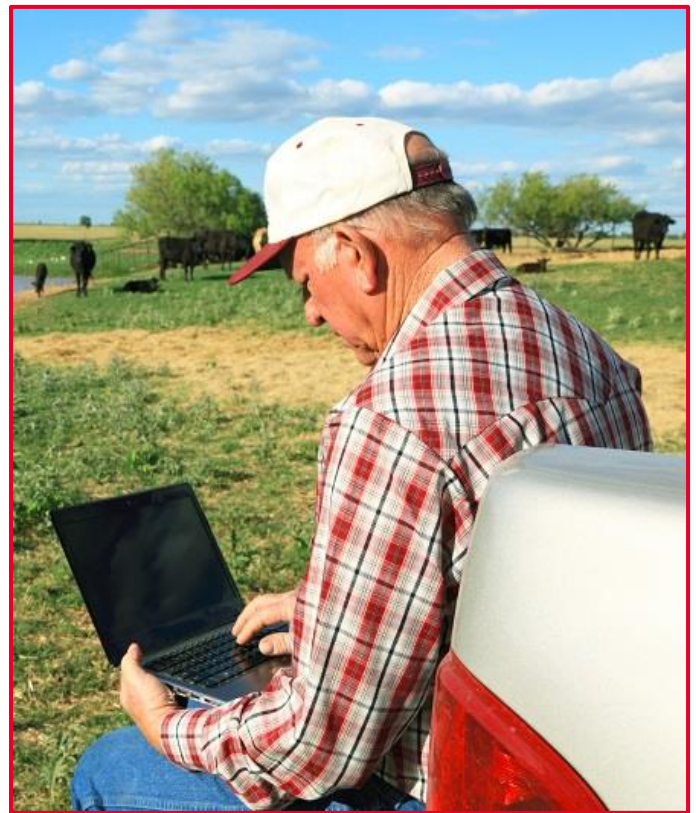
# Household Survey Results



Competition provides residents with choices for service, allowing households the ability to switch providers if their current service does not meet their needs. Less than 2 out of 5 (34.6%) responding households indicate that their internet connection meets their needs. This is a lower rate of satisfaction than among households in other communities (42.3%).

When asked why their connection does not meet their needs, 83% of dissatisfied households indicate that their speed is too slow, 72% report that their connections are unreliable, and 50% say that prices are too high. Respondents could choose more than one reason for dissatisfaction.

Finally, over 9 out of 10 respondents (93.7%) indicate that they are interested in additional internet choices for their home.

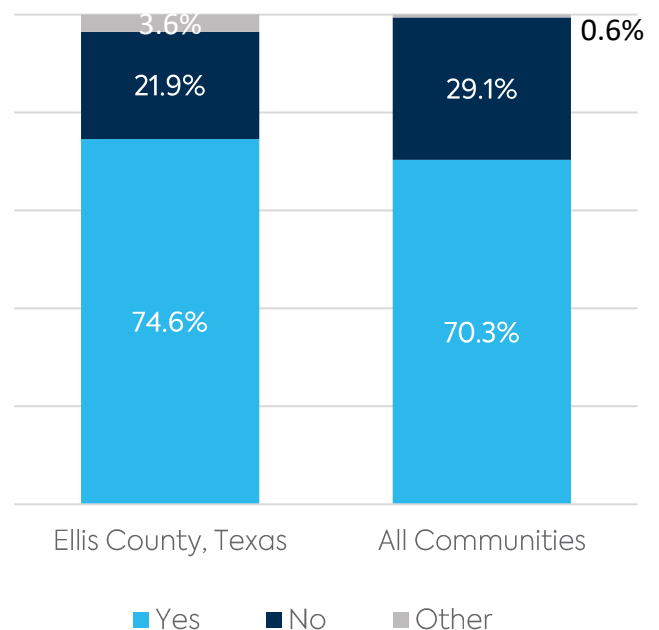


## MOBILE CONNECTIVITY

Roughly three-quarters of households (74.6%) reported that they subscribe to mobile internet service that they access via a smartphone or similar mobile device. This is less than what is reported in other Connected communities (70.3%).

Additionally, 18.6% 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







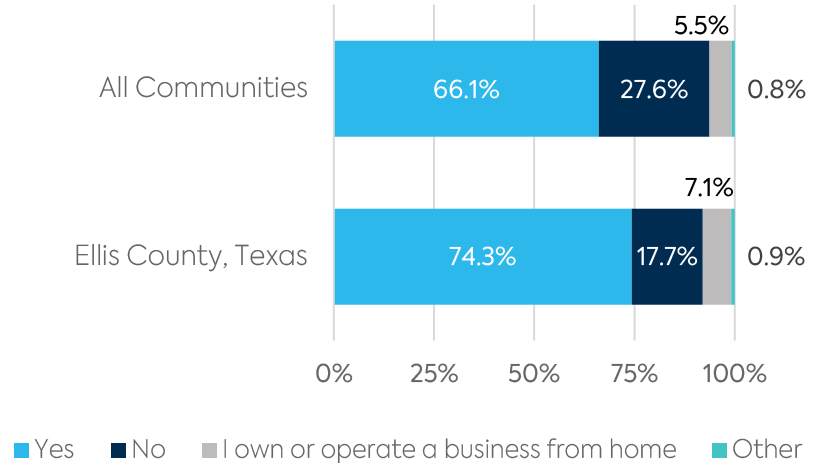
## TELEWORK

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.

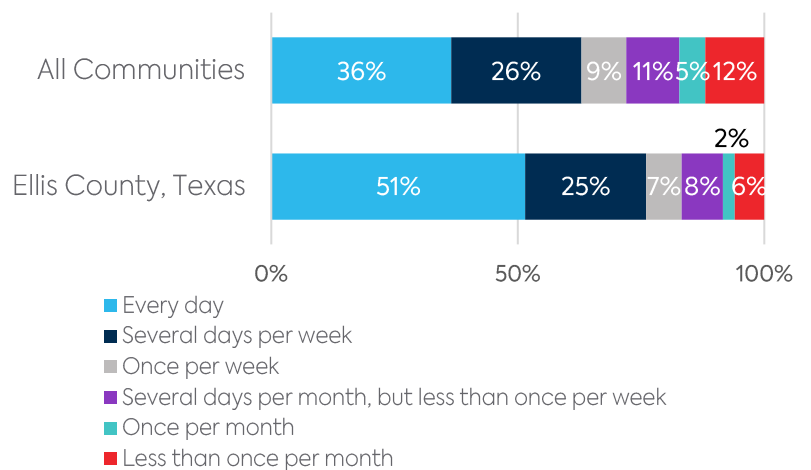
Teleworking is quickly becoming a critical part of growing a local economy because it represents an opportunity to attract and retain employees even when employees are not located in the same community as their employers. However, this only works if those employees have access to advanced broadband infrastructure.

Roughly 3 out of 4 employed respondents in Ellis County (74.3%) telework at least part of the time. About half of teleworkers (51%) work remotely every day, while approximately 32% telework at least once per week.

Do You Currently Telework?



How Frequently Do You Telework?





# Recommendations





**T**he following recommendations are presented to assist Ellis County in expanding broadband access and adoption throughout the community.

Ellis County broadband assessment results illustrate a community with higher-than-average broadband speeds, adoption rates, device ownership, and digital literacy. Looking long-term, Ellis County should capitalize on its broadband advancement by offering programs to residents, businesses, and community institutions that will boost economic growth, business retention, workforce and community development, academic achievement, public safety preparedness, and health care advancements. Equipped with survey data highlighting the broadband needs and wants of residents, the county can develop near- and long-term plans to address the findings. Although barriers to access, adoption, and usage will need to be addressed, Ellis County should emphasize digital equity for all and position itself to bridge the Digital Divide for all residents and businesses within the county.

## Goal 1: Focus on access to high-speed internet and digital equity for all in Ellis County

Objective: Ellis County should maintain focus on greater opportunities for residents, businesses, agriculture, education, and others.

**Action 1** – Establish central broadband leadership in Ellis County by making permanent the Technology Action Team formed during Connected Nation’s Connected engagement program.

Building on the success of the Ellis County broadband team, a permanent broadband team should be formed with a network of leaders who are passionate about improving broadband throughout the community. A standing group of leaders is already active in the broadband space; it’s a matter of making this team official. This will be especially important as grant opportunities arise. This team should serve as a local group of advisors for activity related to broadband and technology. Members of the broadband team should include representatives from a wide variety of community stakeholders, such as:

- Health care: Local physicians, health care providers
- Government: County judge, county commissioners
- Education (K-12): School superintendents, school/district IT directors
- Education (Higher-Education): University, community college, trade schools or workforce training
- Public Safety: County sheriff’s office, police departments, fire and rescue and surrounding volunteer fire departments, emergency medical services
- Agriculture: County Ag Agent, leading ag producers
- Business: Chambers of commerce (Ennis COC, Italy Texas COC, Midlothian COC, Waxahachie COC), economic development, business owners, managers
- Library: Library directors, librarians
- Community At-Large: Someone from the community who is interested in broadband



Broadband team responsibilities should include:

- Keeping abreast of state and national broadband policy initiatives and notable broadband news. Stay up to date on any publications, events, and policy briefs published by the Governor's Broadband Development Council (GBDC) and Broadband Development Office (BDO), as well as the National Telecommunications and Information Administration (NTIA), and other notable broadband developments via industry newsletters and focused research.
- Keeping the community informed of projects and progress and inviting community participation to maintain buy-in and high adoption rates. Getting community buy-in is essential to the long-term success and sustainability of community initiatives. The success of local initiatives requires community support, transparency, and engagement. Not only will this help keep the momentum going but it will show ISPs there is true interest in expanded service in the area, which will encourage greater investment in the region.
- Applying for applicable state and federal grant programs. The broadband team can play a leading role in learning about and coordinating responses to local, state, and federal broadband grant opportunities. The team can also seek funding from philanthropic, private, and corporate funders to support the recommendations in this report, as well as other connectivity priorities the county identifies as important.
- Ensuring digital engagement in all community sectors (telehealth, telework, education, commerce, etc.).
- Developing and maintaining relationships with local ISPs and partnering with some to expand broadband services.
- Attending workshops, webinars, meetings, and general training that discuss telecommunications, and broadband specifically.
- Providing digital literacy and digital skills assistance to the community's at-risk populations.
- Holding regular meetings. The team should meet at least once a month. 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.

## **Action 2 – Appoint a Broadband Team leader.**

The broadband team needs a point person, a champion for connectivity in the county. Whether paid or volunteer, part-time or full-time, this person will be the point of contact for broadband in the county. They will be the person who stays up to date on broadband policy news, new construction projects in the region, new laws, and funding opportunities, as well as maintains visibility to keep the community educated and engaged in internet adoption and expanded internet deployment.

**Timeline:** Establish an official broadband team and select a countywide team leader immediately.

**Responsible parties:** County Judge, Commissioners Court, Economic Director, and Community Broadband Team





## Resources

- [Governor's Broadband Development Council](#)
- [The Texas Statute](#)
- [The 2021 Governor's Broadband Development Council's Report](#)
- [The 2020 Governor's Broadband Development Council's Report](#)
- [The Texas Broadband Development Office](#)
- [The Texas Broadband Plan 2022](#)
- [Coronavirus State and Local Fiscal Recovery Funds, County Allocation](#)
- [Final Rule](#)
- [CN's list of Current Broadband Funding](#)
- [BroadbandUSA: Federal Funding Guide](#)
- [Guide to Federal Broadband Funding Opportunities in the U.S.](#)

## Broadband readiness:

- [Texas Broadband Providers by County](#)
- [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: Ensure that Ellis County residents have affordable access to the internet

Objective: Assist Ellis County's low-income residents by removing barriers to adoption.

In Ellis County, 67.3% of survey respondents have a fixed internet connection at home. Of those respondents without internet at home, 50% said internet was not available, and 31.3% said it was too expensive. Affordability is a key challenge for many, as the average monthly cost of internet service in Ellis County is \$77.12. Half of the households in the community earn less than the median income and thus may find broadband service unaffordable at this price. Two percent of the median household income is \$149.67. Some comments provided by the community include:

- We need better reliability with less costs.
- Upload speed is absolutely horrible, household income has been reduced as a part-time gamer and it causes family distress weekly due to lack of upload speed and no options for fiber optic.



Additionally, mobile device use is high in Ellis County – 74.6% of survey participants say they have a mobile broadband plan and device. Of this percentage, 18.6% say they use their mobile connection as a primary internet connection or use their mobile service to connect other household devices to the internet.

## **Action 1** – Promote resources about internet subsidy programs to residents to address affordability concerns.

There are two main federal internet subsidy programs to assist low-income residents with the cost of internet. Ellis County can ensure that eligible residents participate in these programs by promoting them and assisting residents with the enrollment process.

- [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 need to enroll in the ACP with a participating ISP that offers connected devices. The internet company will provide the discount to the consumer, then seek reimbursement. To find out which providers participate click [here](#). The [ACP tool kit](#) is a great resource that communities can use to promote the program to residents.
- [Lifeline](#) is a federal program administered through the Federal Communication Commission (FCC) Universal Service Administrative Company that lowers the monthly cost of phone or internet services for eligible consumers. Eligible 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.

ISPs often have their own low-cost options or subsidized programs offering internet for consumers at a reduced cost, so customers should always ask. The Bipartisan Infrastructure Law (BIL) of 2021 requires ISPs that receive federal grant money to offer low-cost service to eligible low-income households.

## **Action 2** – Share information with the community about the availability of public computers and free Wi-Fi at libraries.

Public Libraries can be a great resource for residents without internet at home. Ellis County is fortunate to have five public libraries with a total of 80 free public computers.

- Ennis Public Library – 16 computers
- Red Oak Library – 10 computers
- Ah Meadows Library – 20 computers
- Ferris Public Library – 6 computers
- Nicholas P Sims Library and Lyceum – 28 computers



The libraries, community organizations, schools, and other local partners should promote the availability of these computers, along with the hours of availability.

### **Action 3 – Develop a website to promote local broadband resources.**

The county should have a page on its website that serves 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 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 the different connectivity supports available.

## **Goal 3: Provide Ellis County residents and businesses with digital literacy training.**

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

### **Action 1 – Encourage all libraries in Ellis County to offer digital literacy classes either in person or virtually.**

The libraries are doing an excellent job offering open sources to the community for digital learning but being able to offer in-person or virtual training can expand opportunities. Having an instructor can relieve fears for new internet users and help answer questions quickly.

Workforce Solutions North Central Texas may be a useful resource for digital learning. Its website promotes resume writing tips and other online services. Additionally, [Connected Nation is currently offering in-person and online digital literacy classes in basic computer skills that libraries can promote to residents.](#)

### **Action 2 – Develop a strategy for improving the public libraries' digital resources and online presence.**

Increasing the libraries' online presence in the community will help promote digital literacy and help residents become more comfortable with receiving information via the internet. Improving the online presence of libraries could include more frequent usage of social media, electronic distribution of library surveys, and livestreaming of library events. Having a strategy will allow the libraries to ensure that they are meeting residents' needs and will allow the broadband team and other community partners to provide support and promote the opportunities in other places. This activity also promotes broadband adoption in the community, allowing for further inclusion in the digital economy.





**Action 3** – Ensure everyone has access and opportunities for digital learning by applying for federal and state funding opportunities.

Ellis County can take advantage of the \$2.75 billion [Digital Equity Act](#) (DEA) programs offered by NTIA. The objective of these three grant programs is to support the closure of the Digital Divide by expanding access to digital devices and digital training in underserved communities. The Digital Equity Competitive Grant Program is a \$1.25 billion grant program, and it will fund annual grant programs for five years to implement digital equity projects. Texas will also have DEA grant funding to administer for local digital equity programs.

**Responsible Parties:** Libraries and library co-ops, schools, broadband providers, local and county governments, the broadband team

**Timeline:** As soon as the broadband team is established, this work should start.

**Resources:**

- [Schools, Health, and Libraries Broadband Coalition report on broadband subsidies for anchor institutions](#)
- [How much internet speed do I need?](#)
- [Libraries play extended role in digital equity](#)
- [Community anchor institutions can help close the digital divide](#)
- [Libraries and the Internet](#)
- [National Digital Inclusion Alliance](#)
- [5 Reasons Why Libraries are Essential to Have](#)
- [How to Create a Public Computer Center](#)
- [Northland Public Library](#)
- [First –Ever National Study: Millions of People Rely on Library Computers for Employment, Health, and Education \(Bill and Melinda Gates Foundation\)](#)
- [Improving the Quality of Life in Rural America with Broadband Internet](#)

## **Goal 4: Work with internet providers to improve internet access and speeds.**

Objective: Provide coverage for gap areas in the county and improve service to customers.

Residents were vocal in their concern about reliability of internet service across the county. Some of the comments were:

- All the high-speed internet options available to us are unreliable and intermittent. We have two internet providers with service to our home because of the inconsistency and we need at least one reliable connection for work.



- Huge dead spots on Brown Street and around Felty Elementary.
- I can't believe I have had three internet companies, and none work well at my home.
- I desperately need improved internet service for my job. It is awkward that my subdivision is stuck at 24Mbps DSL while the next subdivision over has fiber.
- Our entire neighborhood has unreliable internet and limited options. It has been very difficult to do schoolwork through the years. We need better internet.
- Service is on and off reliability and speed. Trying to do school work, run a business, post online items to see are very frustrating.
- We would benefit greatly from a high-speed internet in this area of education, work, and entertainment perspectives.
- When we were looking to buy a house in or neighborhood, it never occurred to us to ask about the internet options before buying. We have considered moving because ours is so bad as we can't function as a household, and I work from home. Not exaggerating.

## **Action 1 – Build relationships with internet service providers (ISPs).**

Establishing relationships with ISPs can open conversations about increasing speeds where needed. Ellis County leaders talking with ISPs can bring attention to unserved/underserved areas, and partnerships can be developed to be inclusive of all areas. The county has assets such as towers for antennas or infrastructure, and ISPs have knowledge on how to run an internet business. Working together can benefit the community.

## **Action 1A – Consider public-private partnerships.**

Public-private partnerships (P3s) take many forms, depending on the needs and resources of each community. The strength of these partnerships is that each party brings something important to the table that the other lacks or cannot easily acquire. For example, Ellis County can offer infrastructure (e.g., publicly owned buildings, light poles, towers, other vertical assets for mounting fixed wireless or wirelines infrastructure) for the deployment of a network, and guarantee committed anchor tenants and funding sources.

1. Model 1: Private Investment, Public Facilitation — Make available public assets, share geographic information and systems data, and streamline permitting and inspection processes. Offer economic development incentives to attract private broadband investment.
2. Model 2: Private Execution, Public Funding — Identify revenue streams that can be directed to a private partner. Funding may include appropriated payments from the Coronavirus State and Local Fiscal Recovery Funds established by the American Rescue Plan Act of 2021, the Coronavirus Capital Projects Fund, Reconnect Loan and Grant Program, and several others listed on Connected Nation's website. New revenue streams are likely to become available from the FCC and/or state government.



3. Model 3: Shared Investment and Risk — Evaluate how to best use assets to attract private investment, evaluate funding new assets to attract private investment, evaluate building new broadband assets to businesses and/or homes for leasing to private ISPs.

## **Action 2** – Leverage the demand for broadband across the community to promote competition and investment in broadband services.

Ellis County can celebrate it has 98.78% of households connected at 100Mbps/10Mbps, but this may prevent much of the territory from accessing additional federal infrastructure funds. It will be vital to work with local ISPs to increase speeds where needed and provide coverage in gap areas. One of the most important tools that a community can use to drive competition is harnessing the demand for broadband capacity across the community and its institutions to leverage their purchasing power. The purchasing power should be leveraged to help promote greater competition in the broadband market and drive increased investment in backhaul and last mile broadband capacity.

## **Action 3** – Provide survey results to ISPs.

When meeting with ISPs, it is important to share the results of the survey and provide any other information about broadband access, adoption, and usage you have. Among surveyed households, 65.7% state their internet service does not meet their needs. Slow speeds and an unreliable connection are the top concerns, followed by pricing is too high. It is interesting to note Ellis County has at least 16 internet providers, but only three providers offer a fiber option and another handful offer speeds at or above 100/10 Mbps. Also, the competition is not evenly spread throughout the county as these comments reference:

- Parkside Estates subdivision in Midlothian only has 75Mbps AT&T DSL, and it is unreliable to work from home. Other neighborhoods have several fiber and cable options all around us and we have been skipped over. This neighborhood has been very underserved, and I have considered moving due to the limited single internet option available here.
- I live just outside of Maypearl proper, and only have access to Legacy satellite internet, when in town, they have Legacy Fiber internet.

**Responsible Parties:** The broadband team, local units of government, including telecommunication commissions/boards and IT professionals, ISPs, community anchor institutions, and large businesses.

**Timeline:** As soon as the broadband team is established, priorities should be set.

## **Resources:**

- [Connected Nation: What we do for you](#)
- [Promoting transparency and competition in broadband markets](#)
- [Broadband expansion will require cooperation](#)
- [The BEAD grant dilemma](#)





- [The era of the broadband public-private partnership: New trends and opportunities in the wake of COVID-19](#)
- [Competition in the broadband markets](#)
- [Texas Broadband Providers by County](#)