

# TYLER COUNTY, TEXAS

Executive Summary of  
Technology Action Plan  
October 2021



# TYLER COUNTY, TEXAS EXECUTIVE SUMMARY AND RECOMMENDATIONS



## OVERVIEW

Today, technology plays a pivotal role in how businesses operate, how institutions provide services, and where consumers choose to live, work, and play. The success of a community has become dependent on how broadly and deeply the community adopts technology resources, which includes access to reliable, high-speed networks; the digital literacy of residents; and the use of online resources locally for business, government, and leisure.

The Connected Nation Texas (CN Texas) Connected Program partnered with the Tyler County Broadband Team to conduct a study designed to determine the availability of broadband infrastructure; how its residents are adopting and using broadband services; and what steps would have the greatest impact toward improving broadband access, adoption, and use across every sector locally.

Pursuant of this goal, between February 2021 and May 2021, Tyler County conducted a comprehensive survey of broadband technology access and adoption across the community that collected responses from 401 households. CN Texas staff also met with community officials to determine community needs and to gather qualitative data for consideration in the study. Overall, the assessment was designed to identify issues and opportunities to close the local Digital Divide.

The following provides a summary of that assessment, as well as recommendations for improving broadband and technology access, adoption, and use.

### Tyler County – Quick Facts

Population	19,798
Number of Households	7,362
Median Household Income	\$44,497
Poverty Rate	16.5%
Bachelor's Degree or Higher	13.4%
Homeowner Rate	84%
Hispanic or Latino Population	7.7%
Households with Broadband Access <sup>1</sup>	36.01%

Source: U.S. Census 2019 ACS and 2020 Decennial Census  
<https://data.census.gov/cedsci/profile?q=0500000US48457>

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<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, July 2021 <https://connectednation.org/texas/planning/>.



## KEY FINDINGS

- The average internet speed reported by households in Tyler County (29.44 Mbps) is **above the speed that the FCC defines as “broadband”** (25 Mbps download and 3 Mbps upload).
- **31.38%** of households in Tyler County have access to internet service at speeds needed to run many modern applications (100 Mbps downstream and 10 Mbps upstream). Statewide, 88.6% of households have internet access at this speed.
- Tyler County households paid more for access to the internet on average (**\$84.11**) compared to all Connected communities (\$71.05).
- **Nearly two-thirds of households (64%) and 60% of businesses** reported that they are dissatisfied with their current internet service. The top reasons for dissatisfaction are slow speeds and unreliable connections.
- **Nearly 9 out of 10 households (89.8%)** said they would like to have improved or additional options for home internet service.

## INFRASTRUCTURE

According to CN Texas broadband data initially released in July 2021 — followed by additional public feedback, field validation, and provider input: most households in Tyler County do not have access to broadband at least 25/3 Mbps, the current definition of broadband set forth by the Federal Communications Commission (FCC). This table shows the percent of all households in Tyler County that have access to internet service at each speed tier.

### Broadband – Quick Facts

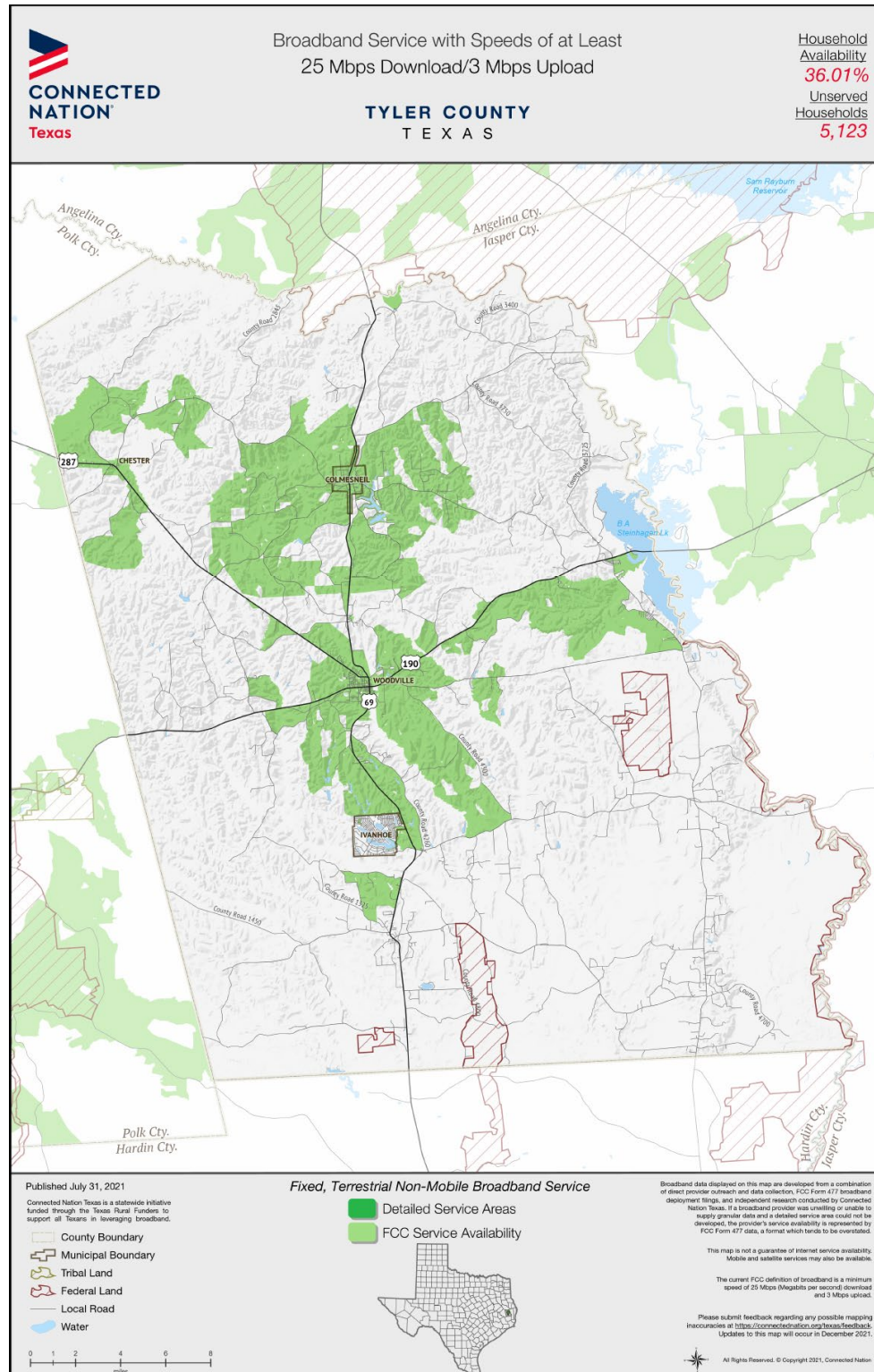
Number of Unserved Households	5,123
Households served (10/1 Mbps)	91.32%
Households served (25/3 Mbps)	36.01%
Households served (50/5 Mbps)	32.73%
Households served (100/10 Mbps)	31.38%

Broadband data collected by CN Texas in 2021  
<https://connectednation.org/texas/mapping-analysis/>



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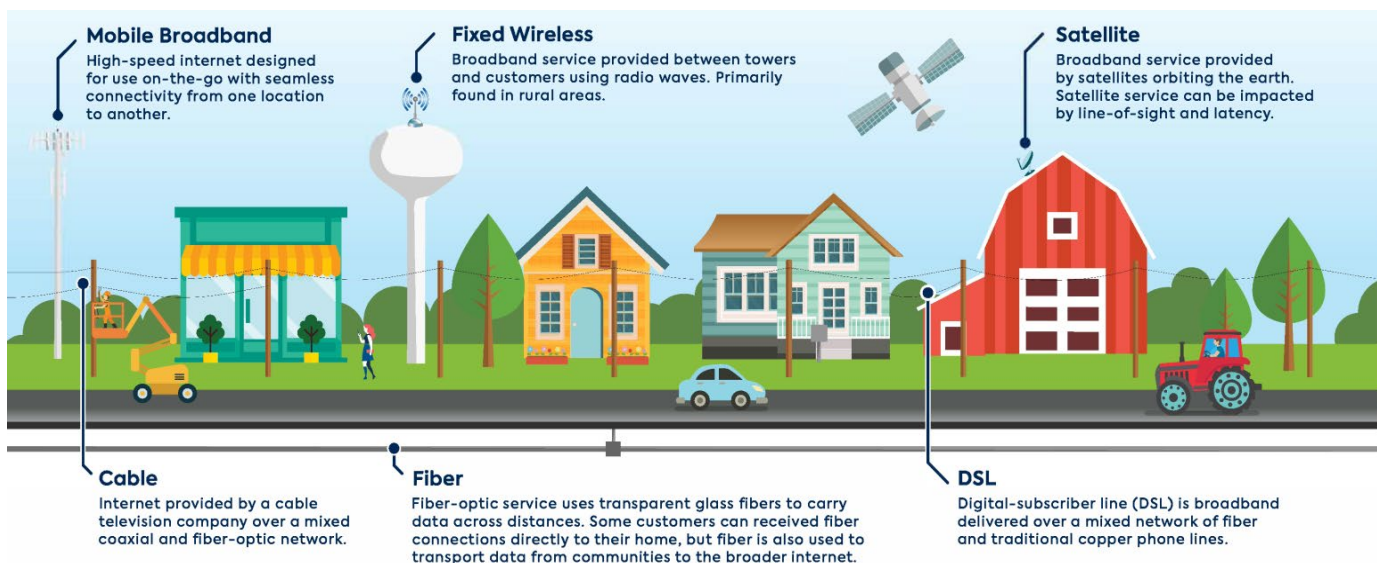
As shown in the map below, broadband service in Tyler County is concentrated in the central portion of the county. The full PDF map of residential broadband availability can be found [here](#).



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Other portions of the county are served by internet service providers (ISPs) offering slower advertised speeds.

PROVIDER	TECHNOLOGY	MAXIMUM DOWNLOAD SPEED (Mbps)	MAXIMUM UPLOAD SPEED (Mbps)
AT&T Southwest	DSL	18	1
	Fixed Wireless	10	1
Eastex Net	Fiber	100	100
	DSL	25	3
Lake Livingston Telephone Company, Inc.	DSL	30	3
NDemand	Fixed Wireless	10	3
NewWave	Cable	300	10
Valor Telecommunications of Texas LP	DSL	200	200
	Fiber	200	200



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## HOUSEHOLDS – DETAILED FINDINGS

The following provides an overview of results from a broadband survey conducted in Tyler County between February 2021 and May 2021. Altogether, CN Texas received 401 completed surveys from households across the county, and respondents provided insights into their internet connectivity, or lack thereof. Data from Tyler County are compared to data from across other rural Connected participating communities across Michigan, Ohio, Texas, and Pennsylvania to benchmark and identify areas for improvement.

### Households – Quick Facts

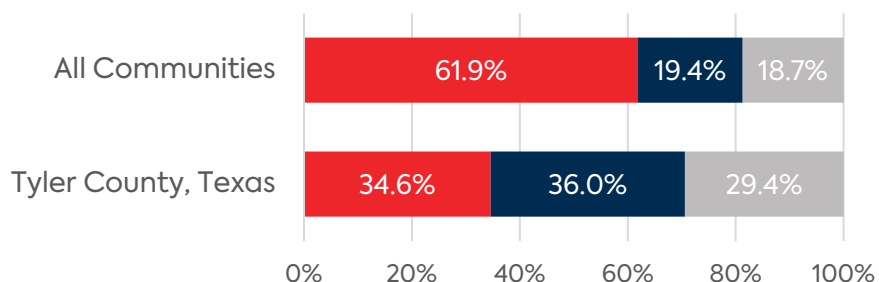
Fixed Home Broadband Adoption <sup>2</sup>	34.6%
Average Monthly Cost of Internet	\$84.11
Average Download Speed	29.44 Mbps
Households Satisfied with Service	36.0 %

Source: Tyler County Household Survey conducted by CN Texas

## ADOPTION

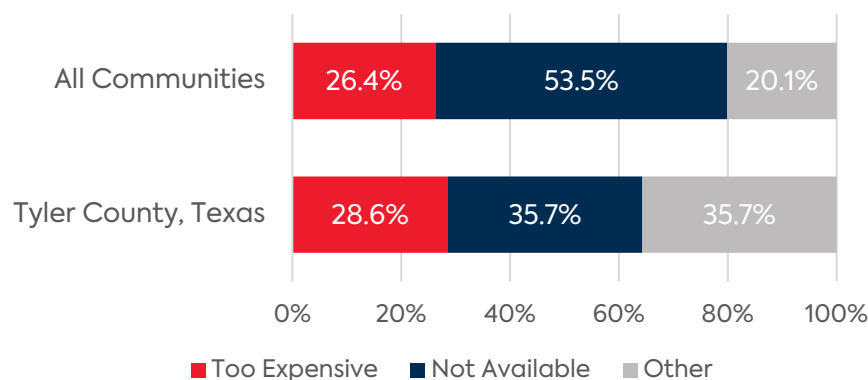
### Home Broadband Adoption

■ Fixed ■ Non-Fixed ■ No Connection



In Tyler County, 34.6% of households that took the survey subscribe to fixed broadband service delivered via a cable, DSL, fiber, or fixed wireless technology. More than one-third of respondents (36%) indicate they have internet service delivered via dial-up, satellite, or a mobile wireless service. This leaves nearly three out of ten survey respondents (29.4%) without internet access at home.

### Primary Barrier to Home Broadband Adoption



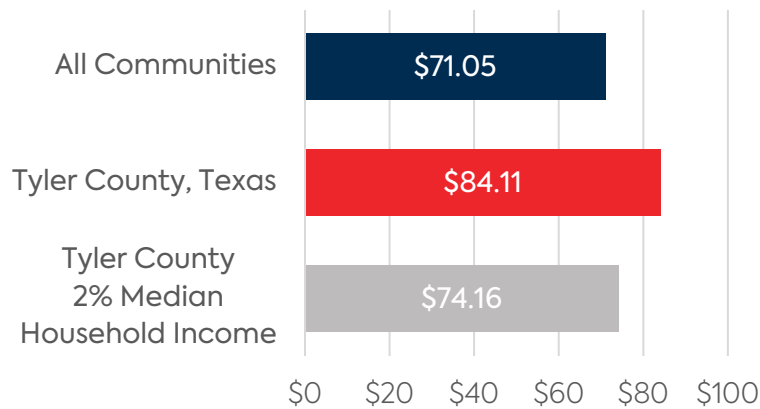
Among those without a home internet connection, 35.7% said they did not have broadband because it was not available to them, while more than one out of four (28.6%) indicate that it was too expensive. Like in many communities, cost and availability are the two primary barriers to home broadband adoption.

<sup>2</sup> Fixed home broadband connections are those provided by cable, DSL, fiber, or fixed wireless technology.

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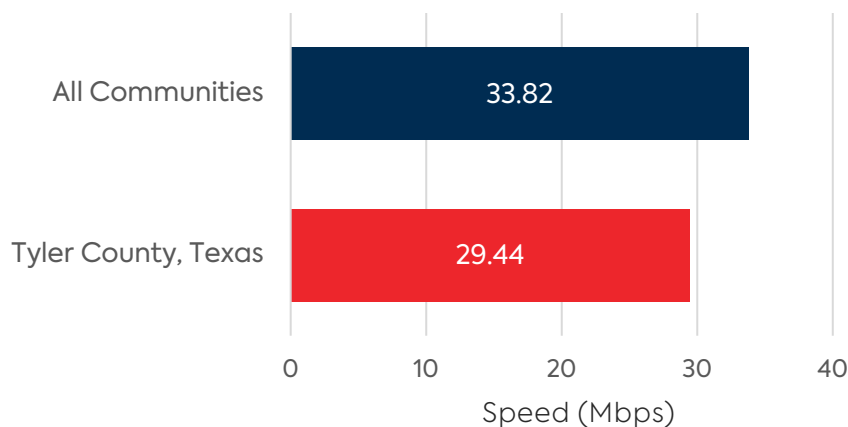
## CONNECTION DETAILS

Average Monthly Cost for Home Internet Service



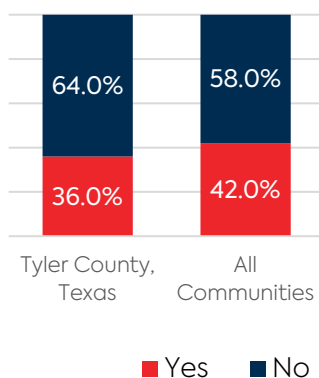
A recognized standard for measuring the affordability of a home internet connection is 2% of monthly income. Respondents indicate that, on average, their internet connection costs about \$84.11 per month. This is higher than monthly costs in other communities (\$71.05). In Tyler County, 2% of the median household income is \$74.16 per month. These results show that the average cost of service is unaffordable for many in the county.

Average Download Speed (Mbps)

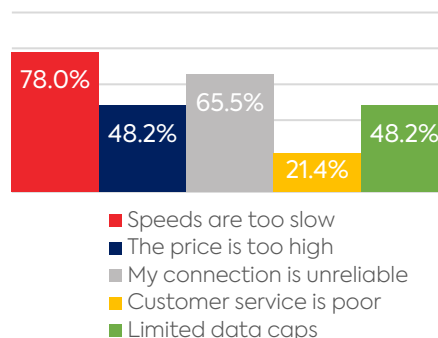


The FCC currently defines broadband as an internet connection with a download speed of at least 25 Mbps and upload speed of at least 3 Mbps. On average, respondents indicate that their connection's download speed is 29.44 Mbps, which is lower than household connections in other communities, but above the defined speed of broadband, which is 25 Mbps.

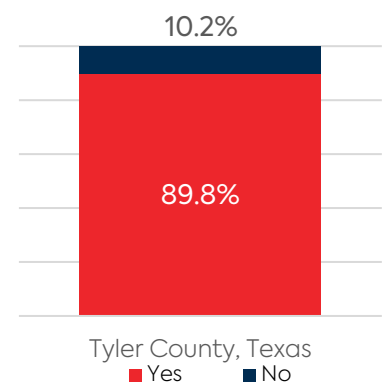
Does Your Internet Connection Meet Your Needs?



Why Does Your Connection Not Meet Your Needs?



Are You Interested in Additional Internet Choices at Home?





# TYLER COUNTY, TEXAS EXECUTIVE SUMMARY AND RECOMMENDATIONS

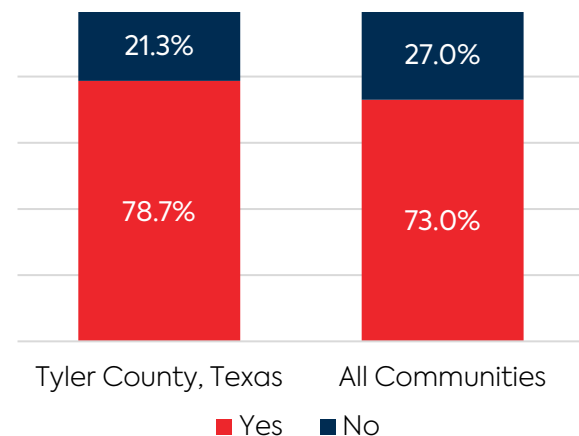
Competition provides residents with choices for service, allowing households the ability to switch providers if their current service does not meet their needs. Nearly two-thirds of respondents (64%) indicate that their internet connection does not meet their needs. This is a higher rate of dissatisfaction than among households in other communities (58%). When asked why their connection does not meet their needs, 78% of dissatisfied households indicate that the speed is too slow. 48.2% say the price is too high, and 65.5% indicate that the connection is unreliable (respondents could choose more than one reason). Finally, nearly nine out of ten respondents (89.8%) indicate that they are interested in additional internet choices for their home.

## MOBILE CONNECTIVITY

Almost four out of five Tyler County households (78.7%) report that they subscribe to mobile internet service, which they access via a smartphone or similar mobile device. This is higher than reported in other Connected communities (73.0%).

Additionally, more than one-half of households with a mobile connection (51%) report that they rely on that mobile service as their primary source of internet connectivity at home or to connect other household devices to the internet.

Households Subscribing to Mobile Internet Service



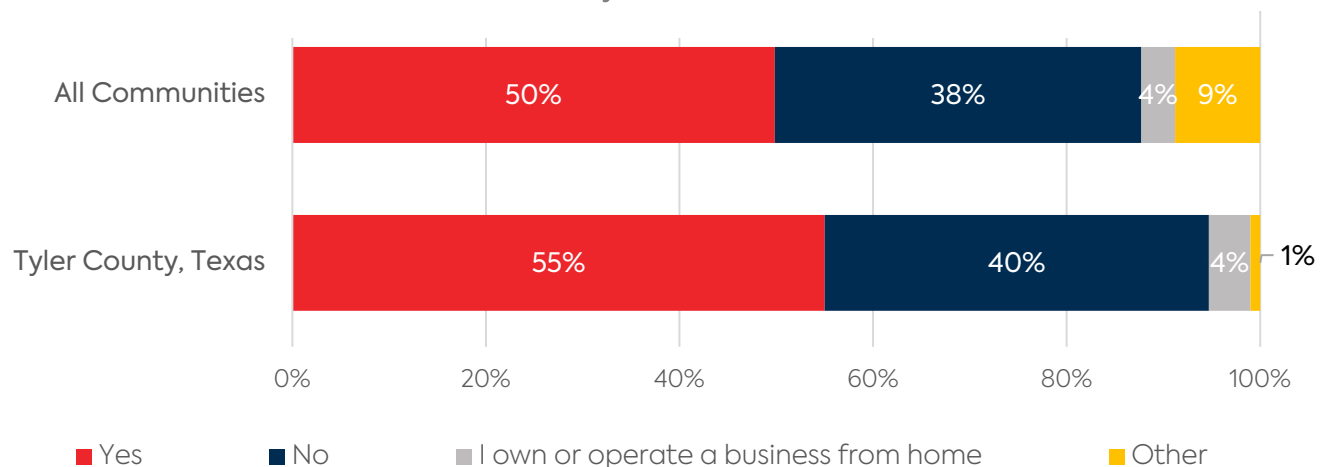
# TYLER COUNTY, TEXAS EXECUTIVE SUMMARY AND RECOMMENDATIONS

## TELEWORK

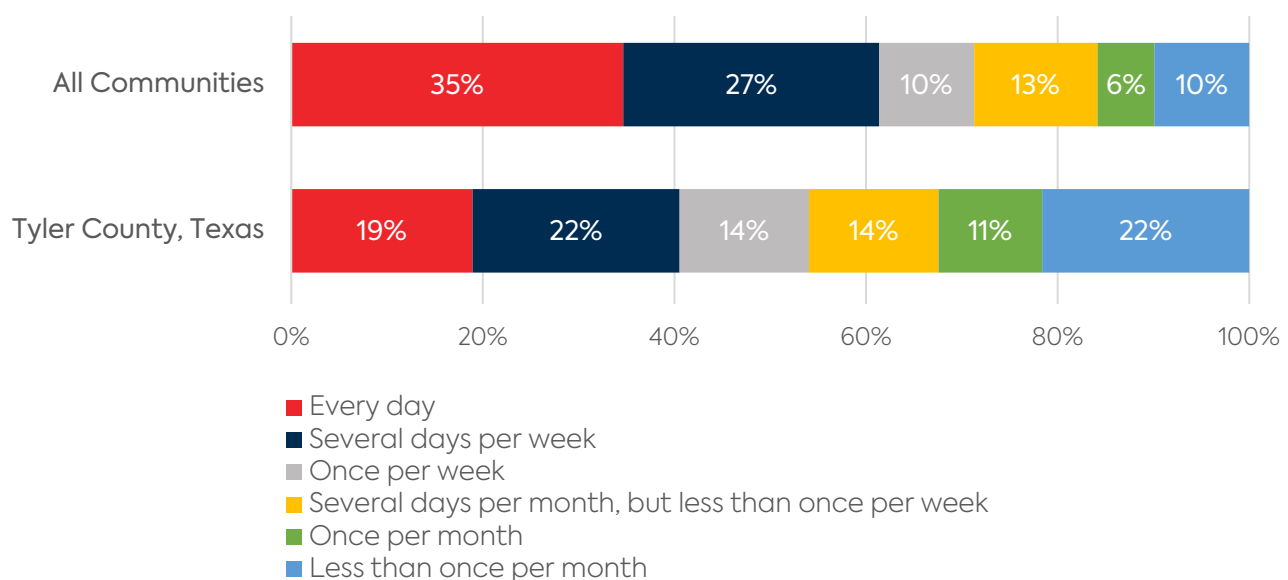
Teleworking, or telecommuting, refers to working outside of the conventional workplace by way of telecommunications or computer-based technology. The COVID-19 pandemic forced many organizations to allow staff to telework. In Tyler County, the lack of broadband access was a significant barrier to organizations being able to operate virtually if needed. Teleworking is quickly becoming a critical part of growing a local economy because it represents an opportunity to attract or retain employees even though their employer may not be located within the community. However, this only works if those employees have access to advanced broadband infrastructure.

Approximately 55% of employed respondents in Tyler County telework at least part of the time. This is more than residents in other communities, though teleworkers in Tyler County work from home less frequently than teleworkers in other communities.

**Do You Currently Telework For Your Job?**



**How Frequently Do You Telework?**



## RECOMMENDATIONS

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

### Goal 1: Prioritize broadband as an essential resource to drive economic opportunity in Tyler County

#### Objective:

Only one-third of Tyler County households have access to broadband speeds of 25 Mbps download and 3 Mbps upload, which is the FCC definition of broadband. Even fewer have access to speeds of 100/10 Mbps. Committing county resources to improve broadband access, adoption, and use will emphasize the importance of broadband for the residents.

With Rural Development Opportunity Fund (RDOF) money potentially covering unserved areas, Tyler County can change the broadband landscape for its residents, businesses, K-12, and agricultural entities, and potentially increase economic development in the area.

- Charter Communications may receive up to \$12,462,845 for new broadband services
- LTD Broadband may receive up to \$225,552

#### Actions:

**Action 1** – Establish an advocate to handle the business of broadband in Tyler County. Currently, there is no office or person to call to discuss broadband. Money is coming in from the America Rescue Plan and the Rural Opportunity Development Fund, and could potentially come from the Infrastructure Investment and Jobs Act, which includes the Digital Equity Act. Broadband vendors will need to understand the county's processes to do business, and relationships will need to be established.

Duties of the Advocate include:

- Deploying Requests for Quotes (RFQs) for services needed regarding broadband.
- Reporting to Judge Blanchette and the County Commissioners on updates of broadband activity in the county. This includes activity generated from RDOF as well as other grants, loans, and subsidies the County may seek.
- Establishing relationships with current internet service providers and negotiating services the County needs.
- Establishing relationships with RDOF winners, which include Charter Communications and LTD Broadband.
- Facilitating community meetings and collaborating with local anchor institutions on broadband-related matters.

- Establishing a relationship with Tyler County's U.S. Congressman Brian Babin and his staff. Federal legislators can be an important advocate when applying for federal grants, loans, and subsidies. Representative Babin has an office in the Tyler County Courthouse in Woodville and should be used as a resource whenever possible. His office number is 409-331-8066.

**Action 2** – Adding a line item in the budget will assure that attention is being given to broadband and provide checkpoints as internet service is being delivered to the county. When an office for the advocate is established, salary and an operating budget will be needed.

A dedicated broadband advocate can focus on broadband and engage with local providers and RDOF winners. This will also bring additional eyes and community knowledge to the process which will benefit the entire community. Working with providers helps avoid duplication of efforts, and ensures that essential services are provided to the community.

#### **Responsible Parties:**

The broadband advocate should be established immediately by Judge Blanchette and the Commissioners Court.

#### **Resources:**

Connected Nation – Connected Nation supports communities in broadband planning, deployment, and digital inclusion: <https://connectednation.org/what-we-do-for-you/>.

Governors Start 2021 by Expanding Access to Broadband:  
<https://www.nga.org/news/commentary/governors-expanding-access-broadband-2021/>

## **Goal 2: Reduce the cost and minimize barriers to broadband deployment in Tyler County**

#### **Objective:**

To reduce the cost of deployment in Tyler County and minimize the barriers to broadband deployment, the county should make an inventory of local assets that can be used for infrastructure deployment. By inventorying and sharing this data with providers, the county can reduce the costs associated with a network buildout. Even with RDOF money coming into Tyler County, it could be years before better access and speeds are available. These are some practical solutions that can be implemented to help right now.

#### **Actions:**

**Action 1** – Deploy an RFQ for a vertical asset inventory list and identify potential barriers to broadband deployment in Tyler County



Conducting an asset inventory, including a field validation audit, can help expand services in a community as well as validate areas where service may or may not be available. A field validation audit can provide granular mapping to more accurately visualize the broadband landscape, while an asset inventory audit can place the county in a position to develop public-private partnerships with local providers.

Assets include:

- Anchor tenants
- Antennas
- Building rooftops
- Light poles
- Towers the cities or County may own.

Barriers include:

- Road easements
- Pole owner leases
- Tyler County policies and regulations

Counties have assets to provide and broadband providers need to deploy their services.

**Action 2** – Tyler County needs to update its county webpage for bids and proposals to make it easier to do business with the County.

Making it easier for vendors and citizens to do business in Tyler County may speed up broadband deployment.

Tyler County already lists current RFQs/RFPs at <http://www.co.tyler.tx.us/page/tyler.BidsProposals>, so this would be a natural place to include additional information such as:

- Whom to contact for broadband information in the County.
- Downloadable forms vendors will need to fill out.
- Any regulations vendors will need to follow, such as a “dig once policy.” A dig once policy requires public or private excavators to coordinate with local authorities to install fiber or conduit whenever ground is broken on a public right-of-way.

**Action 3** – Discuss with local providers the need to expand broadband services and determine why areas have not already received service. If providers are unwilling to offer higher speed plans, new providers should be given the opportunity.

With increased resources and competition in Tyler County, providers may be willing to discuss providing services to under-resourced areas and increasing internet speeds to locations with service, but inadequate speeds.

Some questions to consider asking providers include:

- Is there an installation fee for residential service and, if so, what is that fee?

- What are the maximum download and upload speeds offered on your network for residential service?
- Are the speeds guaranteed or “best effort”?

Connected Nation can provide you with a list of sample questions for providers, at your request.

## Responsible Parties:

The Broadband Advocate and Judge Blanchette should organize the initiatives

## Resources:

Connected Nation – Connected Nation supports communities in broadband planning, deployment, and digital inclusion: <https://connectednation.org/what-we-do-for-you/>.

Examples of one Texas town meeting residents’ broadband needs: <https://ilsr.org/how-mcallen-texas-quietly-built-residents-a-free-wi-fi-network-over-the-summer/>

Governors Start 2021 by Expanding Access to Broadband:  
<https://www.nga.org/news/commentary/governors-expanding-access-broadband-2021/>

Removing barriers to broadband expansion: <http://www.connectmycommunity.org/wp-content/uploads/2016/09/Local-Policy-Guide.pdf>

Examining state broadband programs: <https://www.pewtrusts.org/en/research-and-analysis/reports/2020/02/how-states-are-expanding-broadband-access>

Becoming Broadband Ready: <https://nextcenturycities.org/becoming-broadband-ready/>

American Library Association – PLA, AT&T team up to bring digital literacy training to families:  
<http://www.ala.org/news/press-releases/2021/05/pla-att-team-bring-digital-literacy-training-families>

## Goal 3 – Expand free or low-cost Wi-Fi throughout the community for all residents

### Objective:

With only one-third of the county having fixed broadband at home, it is important to have places in the community for residents to access the internet and learn digital skills.

## Actions:

**Action 1** – Identify gaps and develop a plan to improve the availability of public computers in the community. A plan of action should include the development of new public computer centers, the installation of additional equipment within existing facilities, and the expansion of access to existing facilities (e.g., longer hours at the library, centers open on the weekends, etc.), where possible.

Expanding access to public Wi-Fi can be done at:

- Libraries – The Allan Shivers Library & Museum does have some free Wi-Fi, but computers shut off at 4:45 pm Mondays – Fridays and are only available until 1:45 pm on Saturdays. This may leave a lot of people without opportunity after work or school.
- Public schools
- Coffee shops
- Public government buildings such as the Woodville Community Center
- Tyler County Chamber of Commerce
- Senior centers

**Action 2** – Intentionally expand Wi-Fi and/or hotspots to the under-resourced populations at a discounted rate or free of charge. By partnering with local organizations the County can identify groups most impacted by the lack of public computer access.

## Responsible Parties:

The Broadband Advocate and Judge Blanchette should organize the initiatives.

Local providers and RDOF recipients.

Superintendents from Woodville ISD, Warren ISD, Ivanhoe ISD, Colmesneil ISD, and Chester ISD.

Tyler Chamber of Commerce, local non-profit organizations, and social service providers.

## Resources:

Becoming Broadband Ready: <https://nextcenturycities.org/becoming-broadband-ready/>

American Library Association – PLA, AT&T team up to bring digital literacy training to families:  
<http://www.ala.org/news/press-releases/2021/05/pla-att-team-bring-digital-literacy-training-families>

AARP Joins with Nonprofit to Teach Tech to Older Adults: [AARP](#)

Connected Nation Initiative: <https://www.driveyourlearning.org/>

Telehealth information: <https://connectednation.org/telehealth/>

Digital Learn Curriculum: [Public Library Association](#)

## Goal 4 – Provide the agriculture community access to high-speed internet

### Objective:

The agriculture industry is going through a technological revolution requiring producers to implement the latest technology to remain competitive. These technologies typically require robust connectivity, which is generally least available in America's rural communities. The survey responses indicate the agriculture sector is active on the internet, but they have poor access and speeds.

### Actions

**Action 1** – By recognizing the need of today's agricultural producers for high-speed internet, a group of producers could form a special committee to address agriculture needs, such as:

- Forming a cooperative partnership with broadband providers to bring services to their operations. Landowners may have assets or infrastructure that could be utilized for fixed wireless broadband.
- Working directly with RDOF winners making sure farms, ranches, and all agricultural operations have internet coverage for their entire acreage.
- Providing information on available grants and subsidies to help bring internet to agricultural areas and staying on top of information that will be coming from the newly created state broadband office.

**Action 2** – The agriculture special committee should establish relationships with current providers to encourage them to deliver needed internet services to the ag community, such as better wireless services that would allow them to rely less on their mobile services. RDOF money will be important for Tyler County, but some results may be six years away. By partnering with local providers now, the ag community can make sure providers understand their needs. Agricultural facilities may also have vertical assets that they can share with provider companies.

This is a good time to seek out those conversations since competition between internet providers in Tyler County will increase which will prompt current providers to negotiate their offerings.



## Responsible Parties:

The broadband advocate can form this special committee of local producers and host conversations to develop a plan for better internet access. Local internet providers will be very important in this process. The local Ag-extension office would be an important resource. Jacob Spivey is the local County Extension Agent and County Coordinator, Mr. Spivey's telephone number is 409-283-8284.

## Resources:

Local internet providers and RDOF winners, Charter Communications and LTD Broadband.

Texas Grant Watch: <https://texas.grantwatch.com/grant-search.php>

## Goal 5: Ensure that all K-12 students have access to high-speed internet inside the classroom and at home

### Objective:

Resources such as E-Rate, the Emergency Connectivity Fund, and TEACT should be utilized to their fullest for students in Tyler County. Closing the digital divide for rural students allows for equity, access, and opportunity equal to their counterparts in more urban school districts.

### Actions:

**Action 1** – Each school district should look closely into a better internet rate when possible.

Although the survey shows only 36% E-Rate participation by Tyler County school districts, after reviewing this information through Connect K-12, it appears Region 5 ESC has filed on behalf of all 5 school districts. Each school district would be wise to understand their pricing. Chester ISD and Colmesneil ISD districts are meeting or exceeding a bandwidth of 1Mbps/student, which is the FCC's goal/recommendation. The remaining three districts: Spurger ISD, Woodville ISD, and Warren ISD, have less bandwidth and therefore slower service per student. However, when you look more closely at monthly costs, they vary quite a bit. For example, Chester ISD, only has 194 students and pays \$1,450/monthly for 1 Gbps service. Whereas Spurger ISD, just 30 miles away, has 401 students and pays \$1,400 for only 200Mbps service. Chester ISD is getting much better service for only \$50 more a month. Spurger ISD should be eligible for a similar rate. Being able to compare rates can help ISDs negotiate. Local providers may offer better rates and speeds for less money.

E-Rate reimbursement levels are based on socioeconomic need, per the Free & Reduced Lunch program percentages in each school district.

**Action 2** – School districts should understand the broadband opportunities available to them, TEACT offers free help.

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TEACT is a statewide initiative led by the Texas Education Agency (TEA) to support local education agencies that seek to provide home-based broadband internet access to their students. The information below is copied from <https://www.omniapartners.com/publicsector/resources/state-specific-resources/tea-connect-texas-program>:

- TEACT **facilitates the acquisition of fixed lines** through bulk purchase at the State level, taking advantage of discounted rates which Region 4 is negotiating on behalf of Texas school systems
- TEACT **facilitates the fixed line installation process** for LEAs by working as a liaison between the LEAs, the ISPs and eligible families to ensure successful and expedited access to service
- TEACT provides a robust **implementation and customer support team** for LEAs who want to participate in a home-based broadband roll-out program in their district but who may not have the available personnel or resources to administer such a program themselves

E-Rate Information from Connected Nation: <https://connectk12.org/>.

1. [Chester ISD](#)
2. [Colmesneil ISD](#)
3. [Spurger ISD](#)
4. [Woodville ISD](#)
5. [Warren ISD](#)

**Action 3** – Each superintendent of Woodville ISD, Warren ISD, Spurger ISD, Colmesneil ISD, and Chester ISD, along with the IT directors and librarians, should review the funds they are currently using and apply for all available funds. These funds may include E-Rate, Emergency Connectivity Fund, and TEACT.

## Responsible Parties:

Superintendents of each listed public school district. The IT department of each ISD, and the school librarians.

## Resources:

Explore school district connectivity and pricing: <https://connectk12.org/districts/140776>

Emergency Connectivity Fund – Although applications are closed, this information was sent out to County leaders when it opened. Opened June 29, 2021, Closed August 13, 2021:

<https://www.pwbts.net/emergency-connectivity-fund/>

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TEA Connect Texas (TEACT) – TEACT will partner with districts and low-cost, high-speed internet providers to connect students to the internet who have access to existing broadband infrastructure:

<https://tea.texas.gov/sites/default/files/covid/Operation-Connectivity-LEA-Briefing-Webinar-PPT.pdf>

<https://www.omniapartners.com/publicsector/resources/state-specific-resources/tea-connect-texas-program>

AT&T offers community investments to bring broadband to more Americans:

[https://about.att.com/story/2021/digital\\_divide.html](https://about.att.com/story/2021/digital_divide.html)

Texas Grant Watch: <https://texas.grantwatch.com/grant-search.php>

U.S. Department of Education approves Texas' American Rescue Plan Elementary and Secondary School Emergency Relief (ARP ESSER):

<https://freestonecountytimesonline.com/u-s-department-of-education-approves-texas-plan-for-use-of-american-rescue-plan-funds-to-support-k-12-schools-and-students-distributes-remaining-4-1-billion/>