THROCKMORTON & SHACKELFORD COUNTIES, TEXAS

Broadband Plan Summary

September 2021

CONNECTED NATION℠
Texas

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Texas

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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 depends 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 Throckmorton County and Shackelford County Broadband Teams to conduct a study designed to determine the availability of broadband infrastructure; how residents are adopting and using broadband services; and what steps would help improve broadband access, adoption, and use across local community sectors.

Pursuant of this goal, between February 2021 and May 2021, Throckmorton and Shackelford Counties conducted a comprehensive survey of broadband technology access and adoption across nine community sectors. In total, the survey yielded responses from 101 households in Throckmorton County and 131 households in Shackelford County. The assessment was designed to identify issues and opportunities to close the local Digital Divide.

Both Throckmorton and Shackelford Counties are in a good position to improve broadband access, adoption, and use throughout the community. Understanding how to partner with local providers and keeping up with grant expenditures, including the likes of American Rescue Plan funds, is imperative to long-term success. Many recommendations in this action plan are inexpensive or cost nothing at all but will contribute greatly to community development.

The following provides a summary of the community broadband assessment as well as recommendations for improving broadband and technology access, adoption, and use. The community action plan brings specific attention to broadband expansion, specifically through community adoption and infrastructure advancements. This action plan takes into account federal allocations and the need for each community to centralize broadband leadership. With greater broadband adoption among community residents comes greater quality of life, economic advancement, and general opportunity.

Throckmorton & Shackelford County Quick Facts

	Throckmorton	Shackelford
Population	1,501	3,265
Number of Households	668	1,317
Median Household Income	$40,000	$46,935
Poverty Rate	16.8%	13.3%
Bachelor's Degree or Higher	21.7%	30.5%
Homeownership Rate	72.9%	79.6%
Hispanic or Latino Population	13.2%	11.5%
Households Served with Broadband[1]	71.51%	25.41%

Source: U.S. Census 2019: Throckmorton County: https://data.census.gov/cedsci/profile?g=0500000US48447.

Shackelford County: https://data.census.gov/cedsci/profile?g=0500000US48417.

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[1] 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/

THROCKMORTON & SHACKELFORD
COUNTIES, TEXAS
EXECUTIVE SUMMARY

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KEY FINDINGS – THROCKMORTON COUNTY

- More than seven out of ten households in Throckmorton County (71.5%) have access to internet service at speeds that the FCC defines as "broadband" (25 Mbps download and 3 Mbps upload). Statewide, 96.5% of households have broadband access at these speeds.

- **Only 60.08%** of households in Throckmorton County have access to internet service at speeds needed to run many modern applications (100 Mbps downstream and 10 Mbps upstream). Statewide, 92.05% of households have internet access at this speed.

- **Over one-quarter (26.4%)** of households either use non-fixed internet connections[2] such as dial-up, satellite, or mobile-only services, or do not subscribe to the internet at all.

- For households that said they do not subscribe to home internet service, the **top barrier was lack of available service**.

- **Nearly one-half (48%)** of internet-connected households reported that they were dissatisfied with their current internet service. The top reasons for dissatisfaction were **slow speeds** and **unreliable connections**.

- **More than nine out of ten households (90.4%)** said they would like to have improved or additional options for home internet service.

- **The average internet speed reported by households in Throckmorton County (19.12 Mbps) is significantly lower than** connections in other Connected communities (33.8 Mbps) surveyed and is slower than the FCC's definition of broadband (25/3 Mbps).
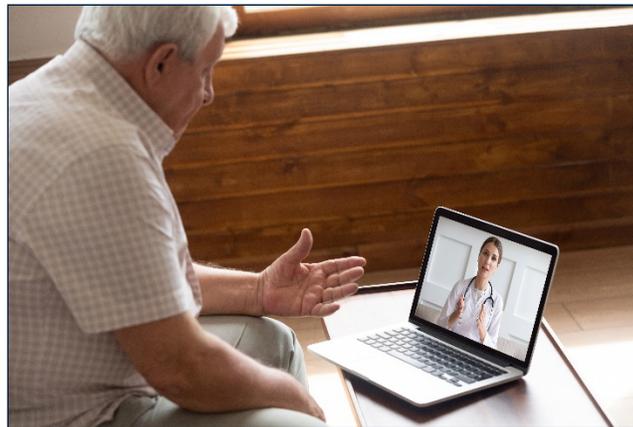
28.49%

Percentage of homes that do not have access to broadband in Throckmorton County

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[2] These non-fixed types of internet services, while providing basic access, can often be plagued by connection latency, have costly monthly data plans, or can be impacted by weather, terrain, large expanses of open water, and other environmental factors.

THROCKMORTON & SHACKELFORD
COUNTIES, TEXAS
EXECUTIVE SUMMARY

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KEY FINDINGS – SHACKELFORD COUNTY

- Only 25.4% of households in Shackelford County have access to internet service at speeds that the FCC defines as "broadband" (25 Mbps download and 3 Mbps upload). Statewide, 96.5% of households have broadband access at these speeds.

- **Only 19.8%** of households in Shackelford County have access to internet service at speeds needed to run many modern applications (100 Mbps downstream and 10 Mbps upstream). Statewide, 92.05% of households have internet access at this speed.

- Almost one-half of households either use non-fixed internet connections[3] such as dial-up, satellite, or mobile-only services, or do not subscribe to home internet service at all.

- For households that said they do not subscribe to home internet service, the **top barrier was the cost of internet service**, followed by **a lack of available service.**

- **Nearly three out of five internet-connected households (57%)** reported that they were dissatisfied with their current internet service. The top reasons for dissatisfaction were **slow speeds** and an **unreliable connection**.

- **More than nine out of ten households (93.8%)** said they would like to have improved or additional options for home internet service.

- Almost **two-thirds** of households in Shackelford County (63%) report have mobile broadband. Having both fixed and mobile broadband connections is critical for households to ensure voice and data options are available to users as needed or desired.

74.59%

Percentage of homes that do not have access to broadband in Shackelford County

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[3] Non-fixed internet connections include dial-up, satellite, and mobile-only services. These non-fixed types of internet services, while providing basic access, can often be plagued by connection latency, have costly monthly data plans, or can be impacted by weather, terrain, large expanses of open water, and other environmental factors.
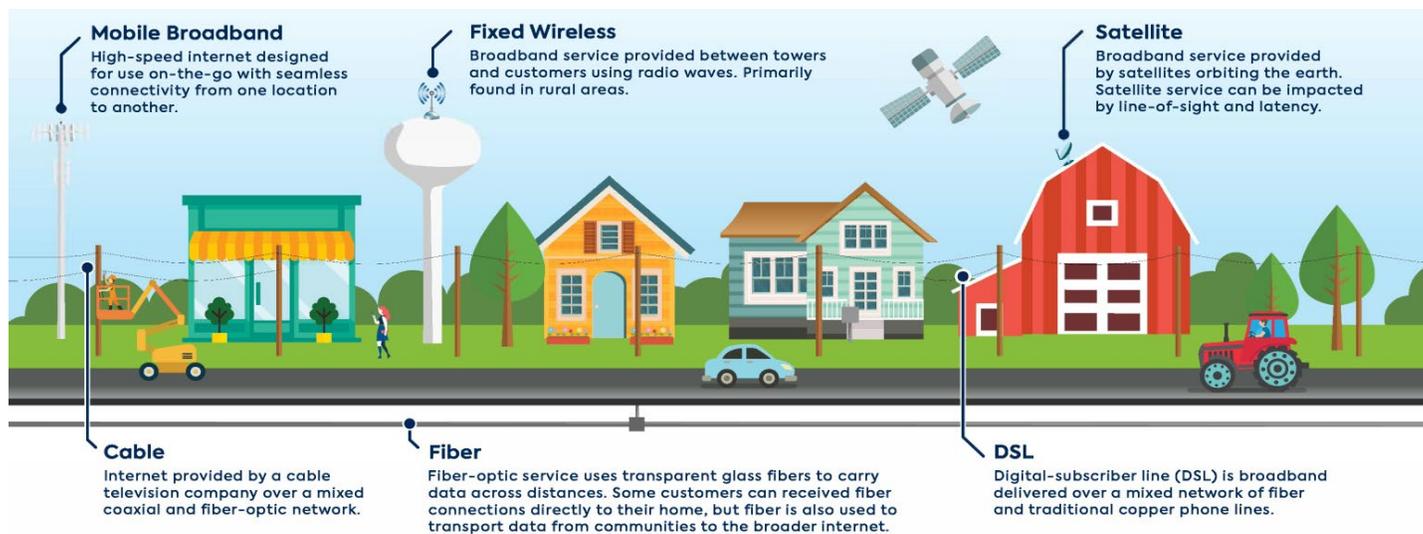
INFRASTRUCTURE
RESULTS
02

INFRASTRUCTURE

Broadband access refers to the infrastructure that enables a high-speed internet connection. There are two primary types of broadband connections: fixed and mobile. Fixed broadband is delivered to a user via several technology platforms including cable, digital subscriber line (DSL) over phone line, fiber optics, and fixed wireless. Fixed broadband is designed for stationary use at a fixed location such as a home, business, or institution. From one location, however, fixed broadband service is often broadcast as a Wi-Fi network to connect nearby devices.

Broadband – Quick Facts		
	Throckmorton	Shackelford
Unserved Households (25/3 Mbps)	205	1,020
Households served (10/1 Mbps)	71.61%	98.05%
Households served (25/3 Mbps)	71.51%	25.41%
Households served (50/5 Mbps)	64.53%	19.87%
Households served (100/10 Mbps)	60.08%	19.79%

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

The first step in understanding the state of broadband infrastructure in Throckmorton and Shackelford Counties – and the rest of Texas – is having accurate maps. Accordingly, CN Texas works with providers to develop a variety of broadband maps at the state and county level. Data shown on these maps are derived from a combination of direct provider outreach and data collection, FCC Form 477 broadband deployment filings, and independent research conducted by CN Texas. If a provider were unable or unwilling to supply granular data and a detailed service area could not be developed, the provider's service is represented by Form 477 data, a format that tends to overstate the service territory. The broadband maps are then developed with additional public feedback, field validation, and provider input.


Mobile Broadband
High-speed internet designed for use on-the-go with seamless connectivity from one location to another.

Fixed Wireless
Broadband service provided between towers and customers using radio waves. Primarily found in rural areas.

Satellite
Broadband service provided by satellites orbiting the earth. Satellite service can be impacted by line-of-sight and latency.

Cable
Internet provided by a cable television company over a mixed coaxial and fiber-optic network.

Fiber
Fiber-optic service uses transparent glass fibers to carry data across distances. Some customers can received fiber connections directly to their home, but fiber is also used to transport data from communities to the broader internet.

DSL
Digital-subscriber line (DSL) is broadband delivered over a mixed network of fiber and traditional copper phone lines.

INFRASTRUCTURE – THROCKMORTON COUNTY

Below is the list of internet service providers in Throckmorton County. There are five providers, as shown on the table below:
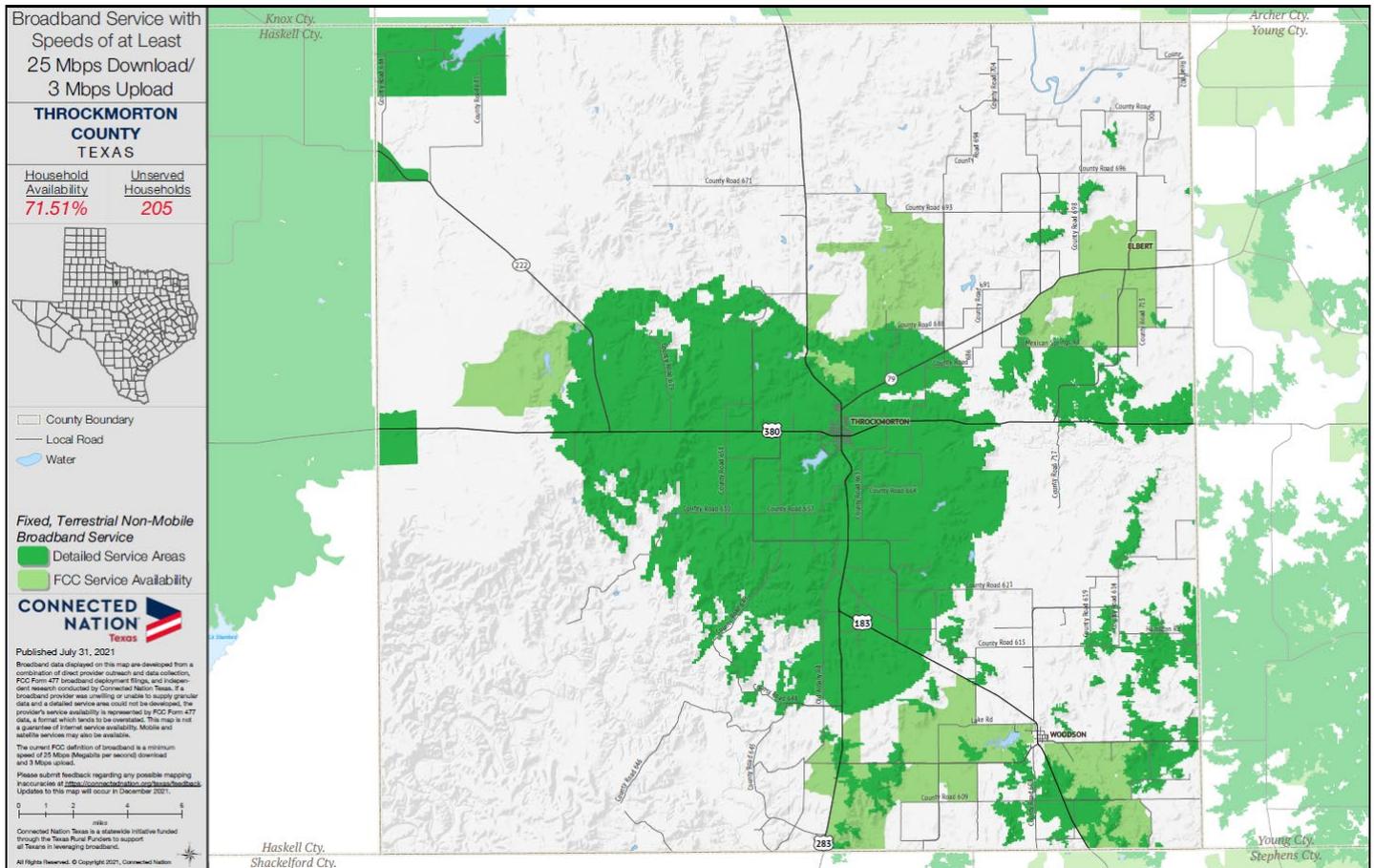
Internet Service Providers in Throckmorton County

PROVIDER	TECHNOLOGY	MAXIMUM DOWNLOAD SPEED (Mbps)	MAXIMUM UPLOAD SPEED (Mbps)
Brazos Telephone Cooperative, Inc.	DSL	30	30
New Source Broadband	Fixed Wireless	50	7
Nextlink Residential	Fixed Wireless	100	20
Santa Rosa Telephone Cooperative, Inc.	Fiber	1000	100
Valor Telecommunications of Texas LP	DSL	100	100
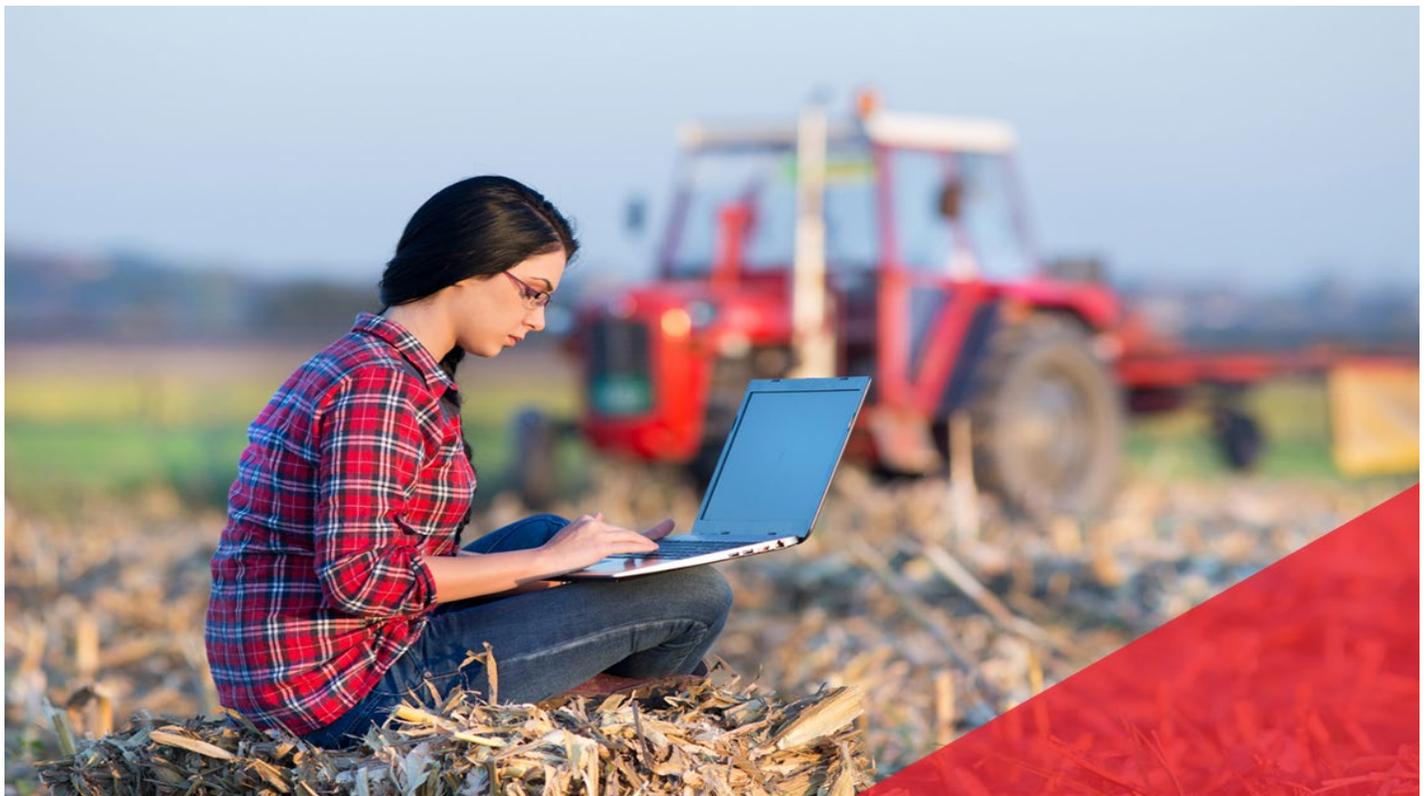
Below is Throckmorton County's (25/3 Mbps) broadband availability map. Other portions of the county are served by internet service providers (ISPs) offering slower advertised speeds. You can find additional maps showing broadband availability in Throckmorton County and other parts of the state here.

INFRASTRUCTURE – SHACKELFORD COUNTY

According to CN Texas broadband data collected in July 2021, with additional public feedback, field validation, and provider input: only one-quarter (25.4%) of Shackelford County households have access to broadband at least 25/3 Mbps, the current definition of broadband as set forth by the Federal Communications Commission (FCC). There are eight providers, as shown in the table below:

### Internet Service Providers in Shackelford County

PROVIDER	TECHNOLOGY	MAXIMUM DOWNLOAD SPEED (Mbps)	MAXIMUM UPLOAD SPEED (Mbps)
AMA TechTel Communications	Fixed Wireless	25	3
AT&T Southwest	DSL	18	1
	Fixed Wireless	10	1
New Source Broadband	Fixed Wireless	50	7
Nextlink Residential	Fixed Wireless	100	20
Suddenlink Communications	Cable	25	5
Taylor Telecom	Fiber	1000	1000
	DSL	25	3
TRANSWORLD NETWORK CORP	Fixed Wireless	15	5
Valor Telecommunications of Texas LP	DSL	200	200
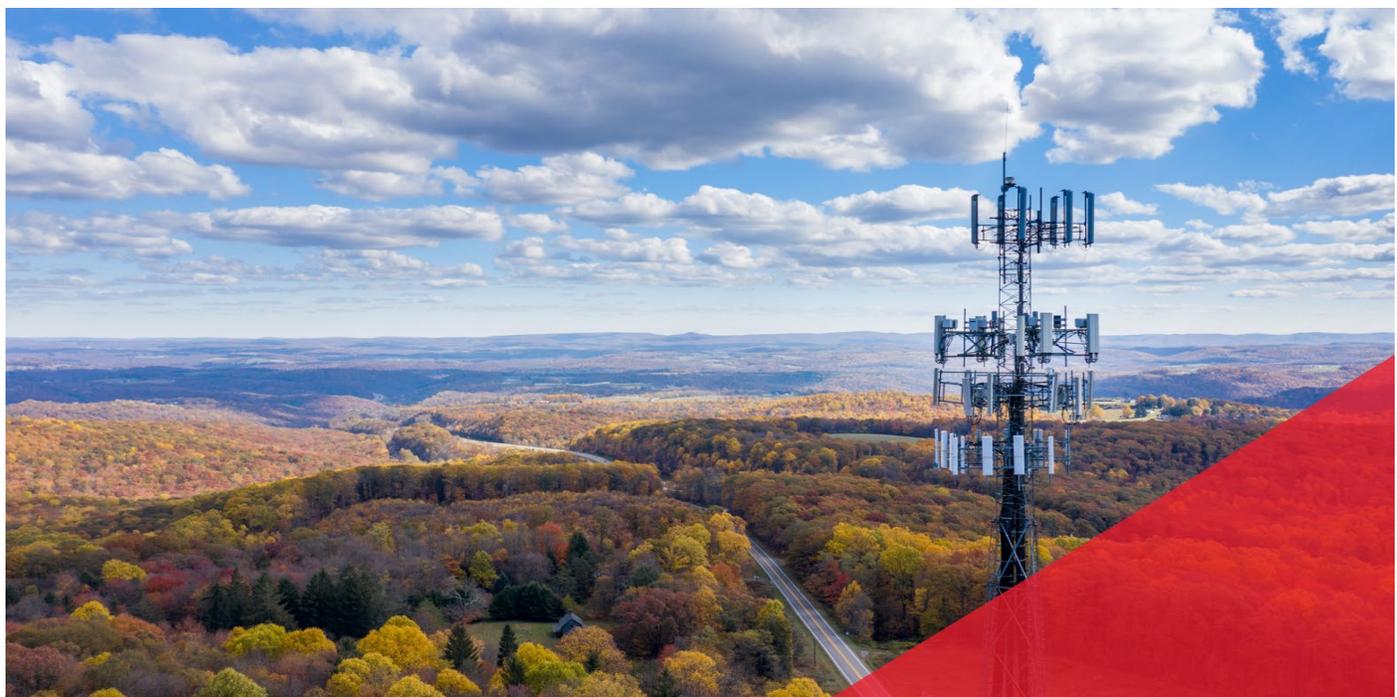
Below is Shackelford County's (25/3 Mbps) broadband availability map. Other portions of the county are served by internet service providers (ISPs) offering slower advertised speeds. You can find additional maps showing broadband availability in Shackelford County and other parts of the state here.
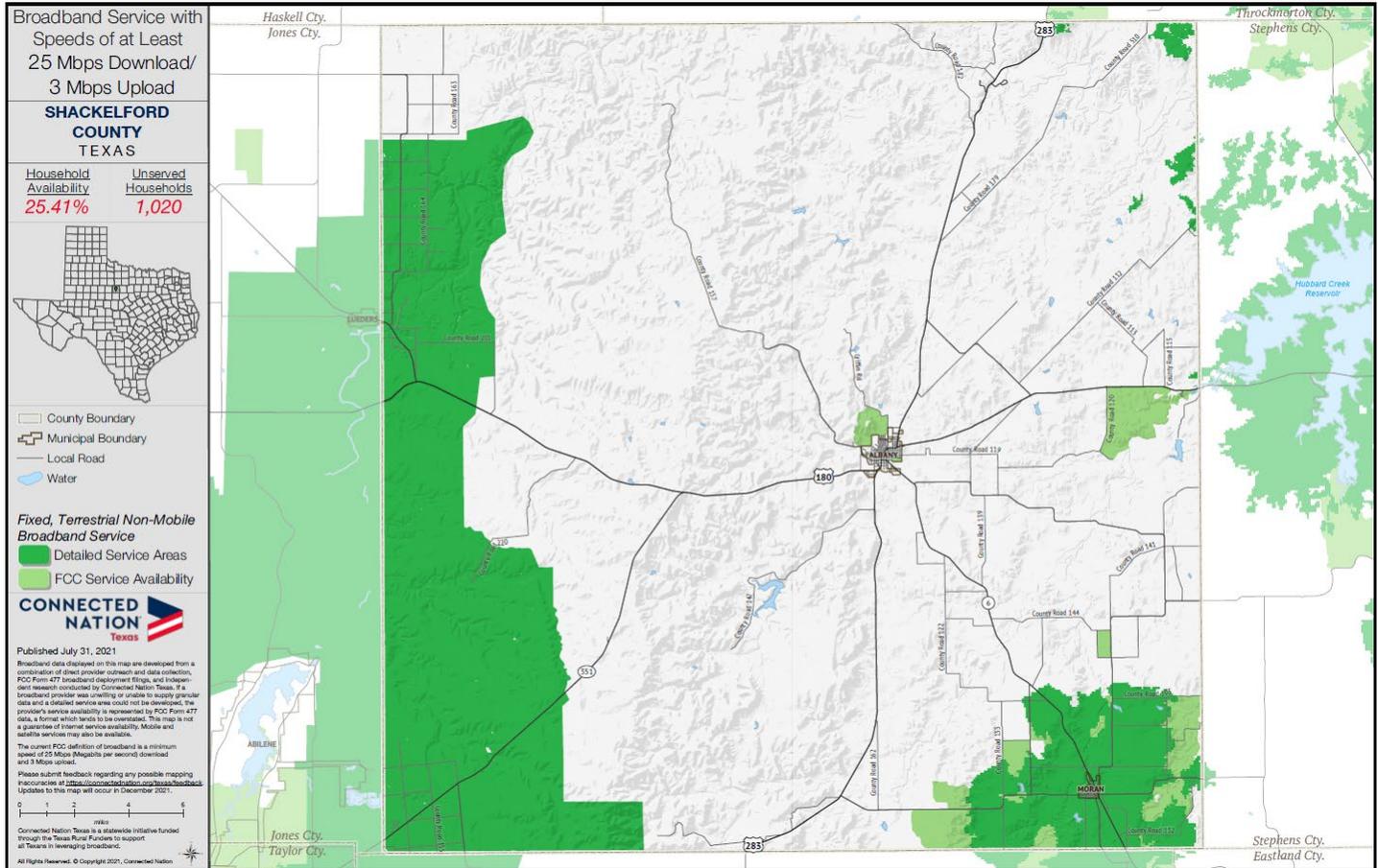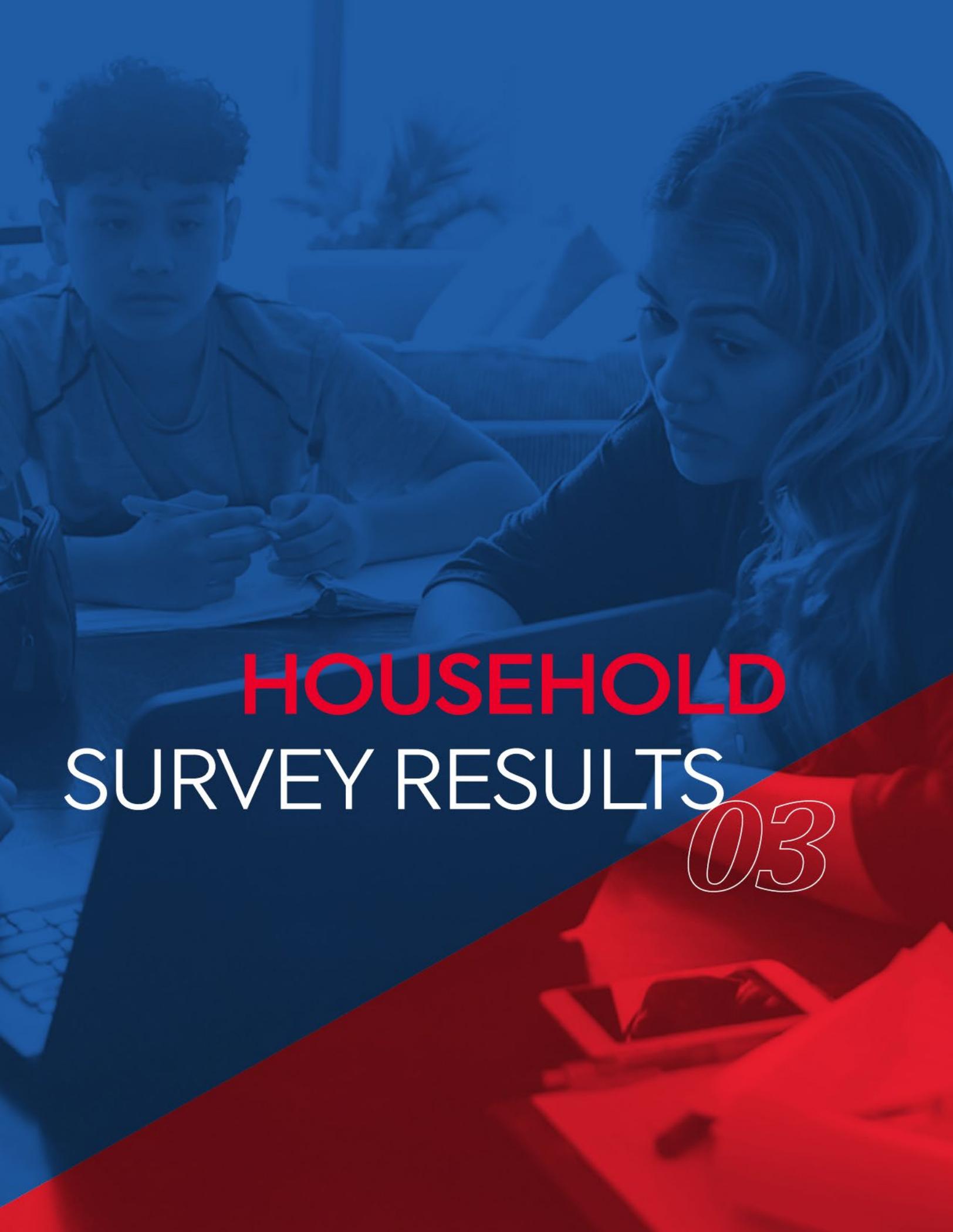
HOUSEHOLD
SURVEY RESULTS

03

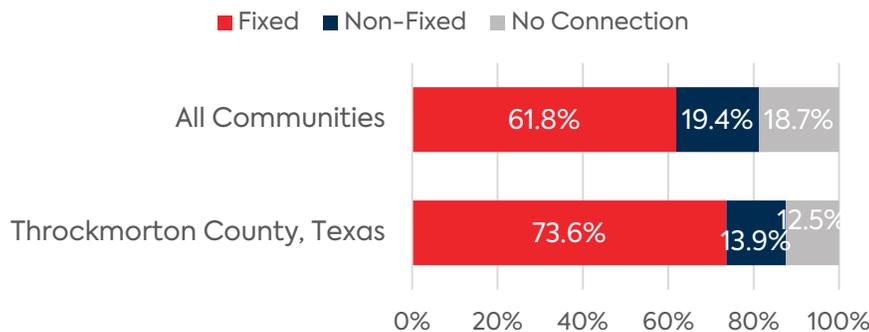## HOUSEHOLDS: DETAILED FINDINGS – THROCKMORTON COUNTY

The following section provides an overview of results from a broadband survey conducted in Throckmorton County between February 2021 and May 2021. Altogether, CN Texas received 101 completed surveys from households across the county, and respondents provided insights into their internet connectivity, or lack thereof. Data from Throckmorton County are compared to data from other rural Connected participating communities across Michigan, Ohio, Texas, and Pennsylvania to benchmark and identify areas for improvement.

Throckmorton Households – Quick Facts	
Fixed Home Broadband Adoption[4]	73.6%
Average Monthly Cost of Internet	$80.24
Average Download Speed	19.12 Mbps
Households Satisfied with Service	52.0%

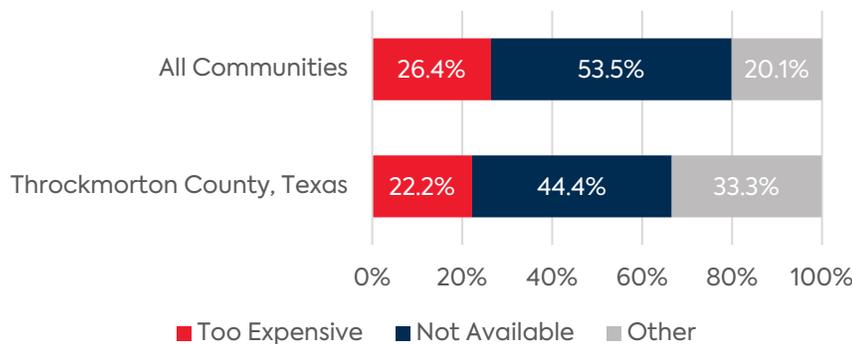Source: Throckmorton County Household Survey conducted by CN Texas

ADOPTION

Home Broadband Adoption

Legend: ■ Fixed ■ Non-Fixed ■ No Connection

- All Communities: 61.8% | 19.4% | 18.7%
- Throckmorton County, Texas: 73.6% | 13.9% | 12.5%

In Throckmorton County, 73.6% of households that took the survey subscribe to fixed broadband service delivered via a cable, DSL, fiber, or fixed wireless technology. Just 13.9% of respondents indicate they have internet service, but it is delivered via dial-up, satellite, or a mobile wireless service. This leaves 12.5% of households without internet access at home.

Primary Barrier to Home Broadband Adoption

- All Communities: 26.4% | 53.5% | 20.1%
- Throckmorton County, Texas: 22.2% | 44.4% | 33.3%

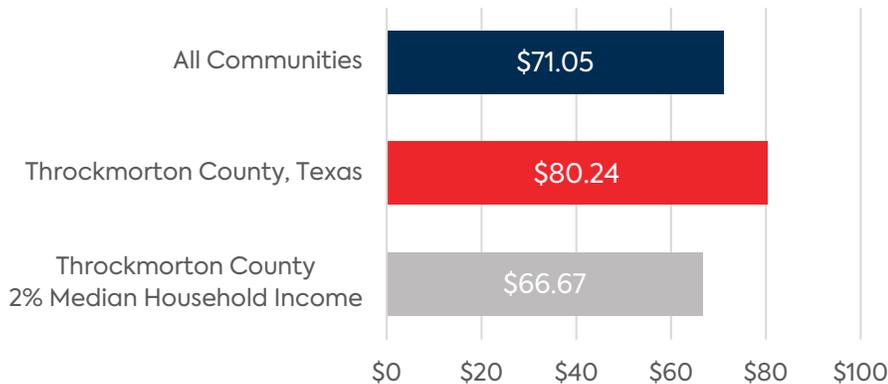Legend: ■ Too Expensive ■ Not Available ■ Other

Among those without a home internet connection, 44.4% said they did not have broadband because it was not available to them, while 22.2% indicate that it was too expensive. Like in many communities, cost and availability are the two primary barriers to home broadband adoption.

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[4] Fixed home broadband connections are those provided by cable, DSL, fiber, or fixed wireless technology.

CONNECTED NATION Texas

CONNECTION DETAILS

Average Monthly Cost for Home Internet Service

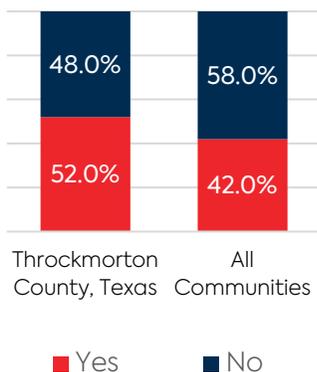|	
All Communities	$71.05
Throckmorton County, Texas	$80.24
Throckmorton County 2% Median Household Income	$66.67

$0 $20 $40 $60 $80 $100

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 $80.24 per month. This is $9.19 higher than monthly costs in other communities. Two percent of the median household income in Throckmorton County is $66.67 per month.

Average Download Speed (Mbps)
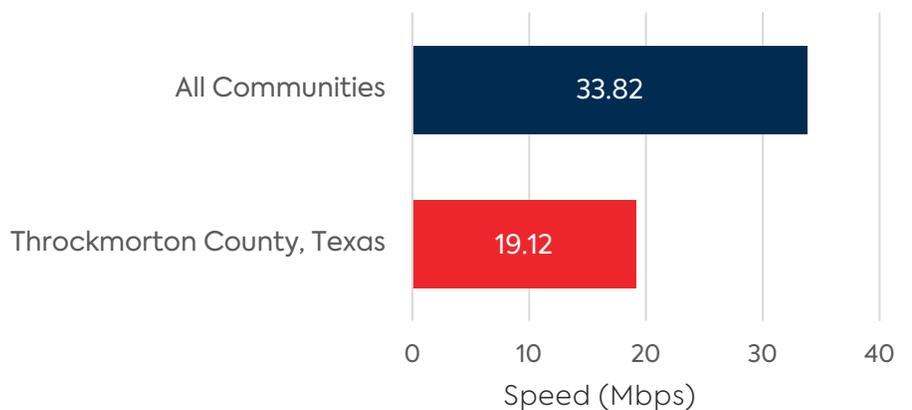
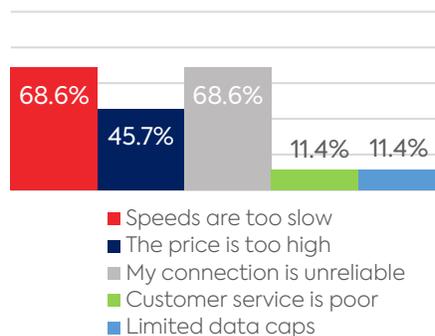|	
All Communities	33.82
Throckmorton County, Texas	19.12

0   10   20   30   40

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 19.12 Mbps, which is significantly lower than the speed of household connections in other communities.
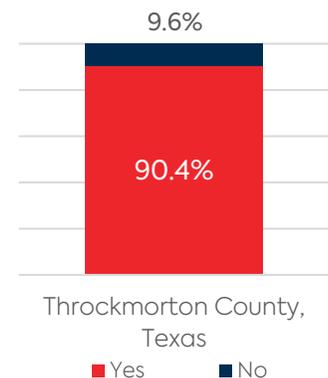
Does Your Internet Connection Meet Your Needs?

Throckmorton County, Texas: Yes 52.0%, No 48.0%
All Communities: Yes 42.0%, No 58.0%

■ Yes   ■ No

Why Does Your Connection Not Meet Your Needs?

68.6% — Speeds are too slow
45.7% — The price is too high
68.6% — My connection is unreliable
11.4% — Customer service is poor
11.4% — Limited data caps

■ Speeds are too slow
■ The price is too high
■ My connection is unreliable
■ Customer service is poor
■ Limited data caps

Are You Interested in Additional Internet Choices at Home?

Throckmorton County, Texas: Yes 90.4%, No 9.6%

■ Yes   ■ No

Competition provides residents with choices for service, allowing households the ability to switch providers if their current service does not meet their needs. 48% of respondents indicate that their internet connection does not meet their needs. This is a lower rate of dissatisfaction to households in other communities. When asked why their connection does not meet their needs, 63.6% of households indicate that the speed is too slow. Almost one-half say the price is too high (45.7%) and over two-thirds indicate that the connection is unreliable (68.6%); (respondents could choose more than one reason). Finally, over 9 out of 10 indicate that they are interested in additional internet choices for their home.

MOBILE CONNECTIVITY

More than three out of five Throckmorton County households (61.5%) report that they subscribe to mobile internet service which they access via a smartphone or similar mobile device. This is over 10 percentage points less than reported in other Connected communities.

Additionally, 10.4% of mobile-connected households rely on their mobile connection at home as their primary source of internet connectivity, while 16.7% use their mobile service to connect other household devices to the internet.

Households Subscribing to Mobile Internet Service

|	Throckmorton County, Texas	All Communities
No	38.5%	27.0%
Yes	61.5%	73.0%

■ Yes ■ No
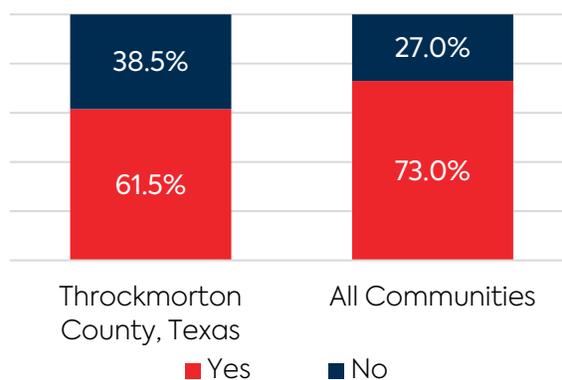
10.4%

Percentage of households with mobile internet service who use that connection as their primary home internet source

TELEWORK

Teleworking, or telecommuting, refers to working outside of the conventional workplace and communicating with it by way of telecommunications or computer-based technology. Teleworkers often do not register on typical measures of economic or workforce activity. Economic development strategies traditionally involve the attraction or retention of employers. The COVID- 19 lockdowns helped to accelerate adoption of teleworking temporarily – and in some instances for the long-run. However, this only works if those employees have access to advanced broadband infrastructure. Approximately 58% of employed respondents in Throckmorton County indicate that they telework at least part of the time. This is more than residents in other communities. It is important to note COVID-19 pandemic likely had a dramatic impact in the teleworking data.

Do You Currently Telework for Your Job?
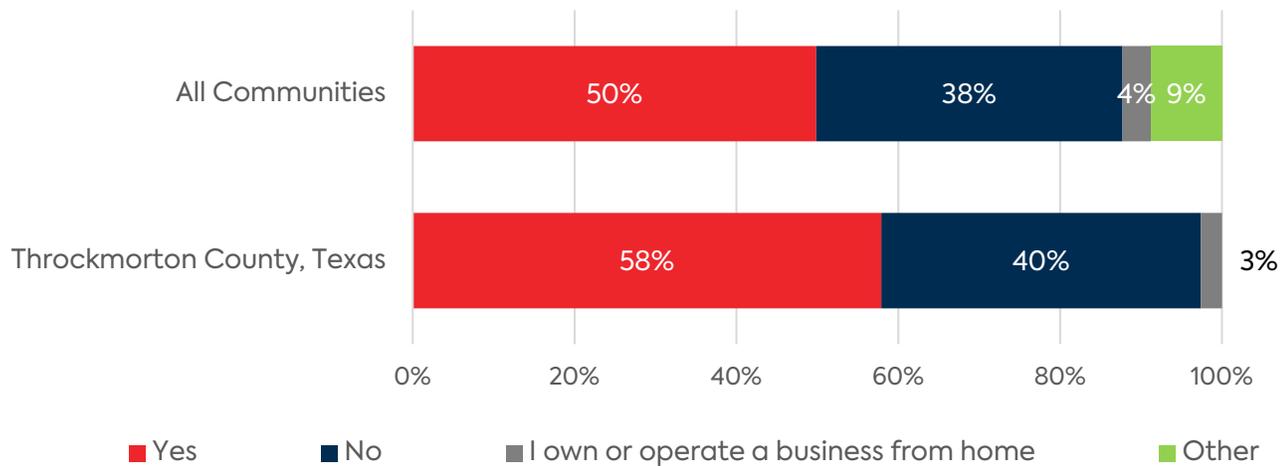
How Frequently Do You Telework?
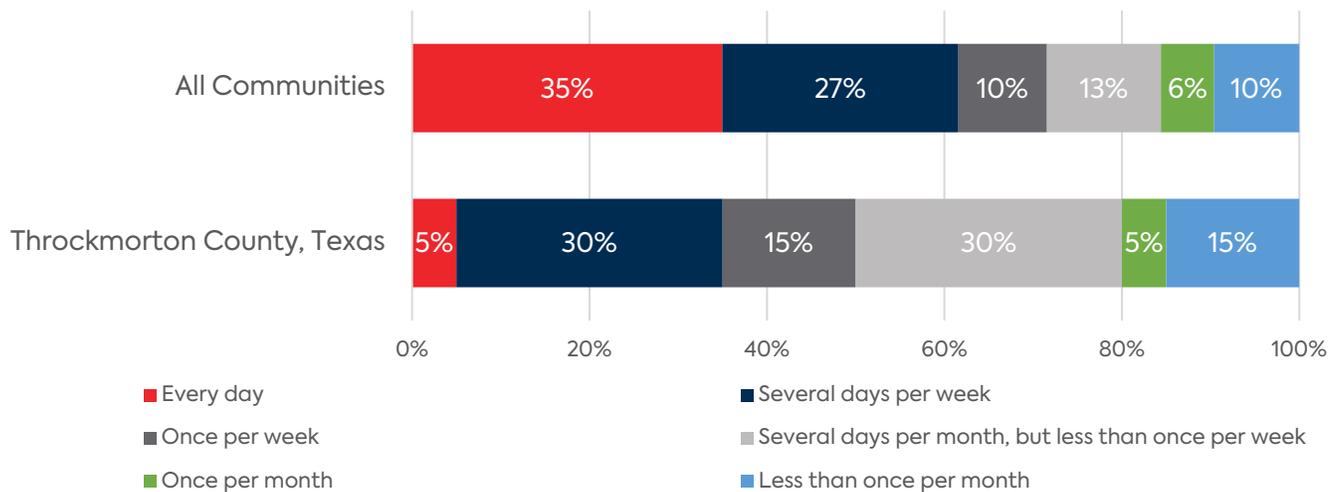
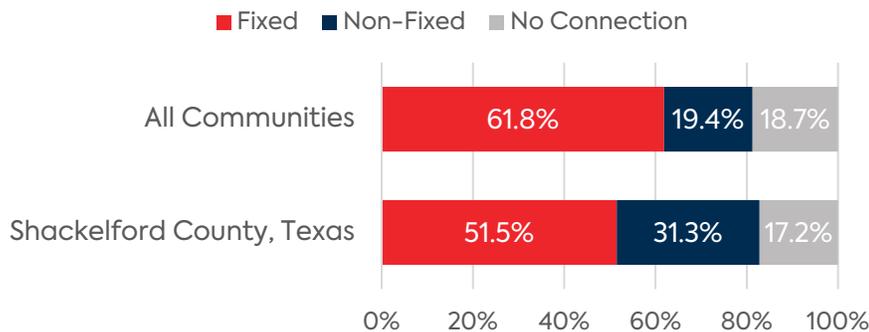## HOUSEHOLDS: DETAILED FINDINGS – SHACKELFORD COUNTY

The following provides an overview of results from a broadband survey conducted in Shackelford County between February 2021 and May 2021. Altogether, CN Texas received 131 completed surveys from households across the county, and respondents provided insights into their internet connectivity, or lack thereof. Data from Shackelford County are compared to data from dozens of other rural Connected participating communities across Michigan, Ohio, Texas, and Pennsylvania to benchmark and identify areas for improvement.

Shackelford Households – Quick Facts	
Fixed Home Broadband Adoption	51.5%
Average Monthly Cost of Internet	$72.31
Average Download Speed	16.18 Mbps
Households Satisfied with Service	43.0%

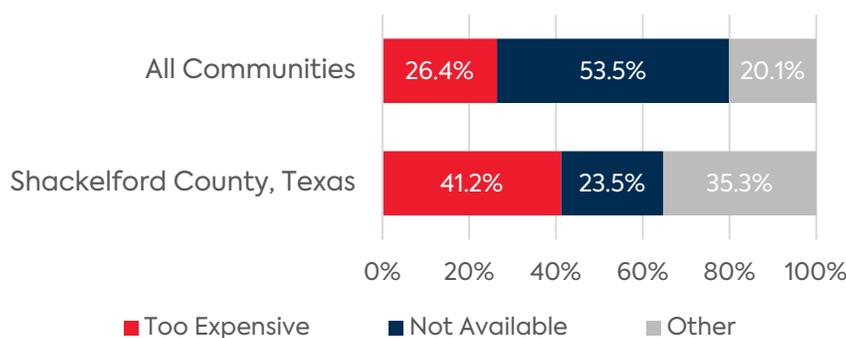Source: Shackelford County Household Survey conducted by CN Texas

ADOPTION

Home Broadband Adoption

Legend: ■ Fixed ■ Non-Fixed ■ No Connection

	Fixed	Non-Fixed	No Connection
All Communities	61.8%	19.4%	18.7%
Shackelford County, Texas	51.5%	31.3%	17.2%

In Shackelford County, 51.5% of households that took the survey subscribe to fixed broadband service delivered via a cable, DSL, fiber, or fixed wireless technology. Another 31.3% of respondents indicate they have internet service, but it is delivered via dial-up, satellite, or a mobile wireless service. This leaves 17.2% of households without internet access at home.

Primary Barrier to Home Broadband Adoption

	Too Expensive	Not Available	Other
All Communities	26.4%	53.5%	20.1%
Shackelford County, Texas	41.2%	23.5%	35.3%

Legend: ■ Too Expensive ■ Not Available ■ Other
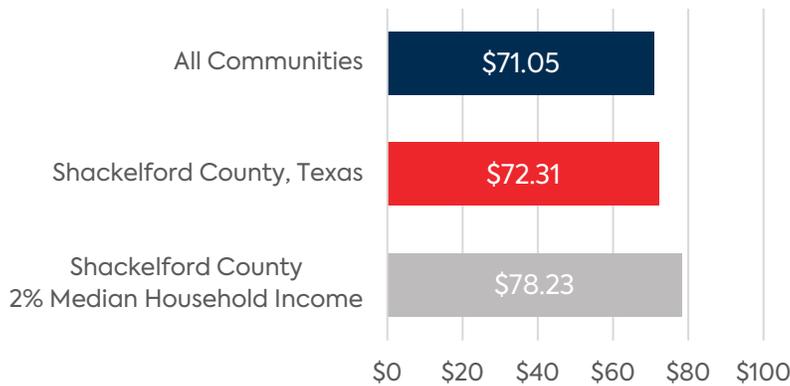
Among those without a home internet connection, 23.5% said they did not have broadband because it was not available to them, while 41.2% indicate that it was too expensive. In Shackelford County and many other communities, cost and availability are the two primary barriers to home broadband adoption.

CONNECTION DETAILS

Average Monthly Cost for Home Internet Service

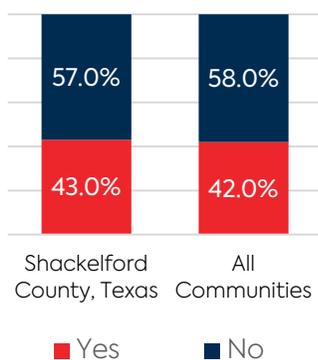| Category	Amount
All Communities	$71.05
Shackelford County, Texas	$72.31
Shackelford County 2% Median Household Income	$78.23

Scale: $0 $20 $40 $60 $80 $100

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 $72.31 per month. This is $1.26 more than in other communities. Two percent of the median household income in Shackelford County is $78.23 per month.

Average Download Speed (Mbps)
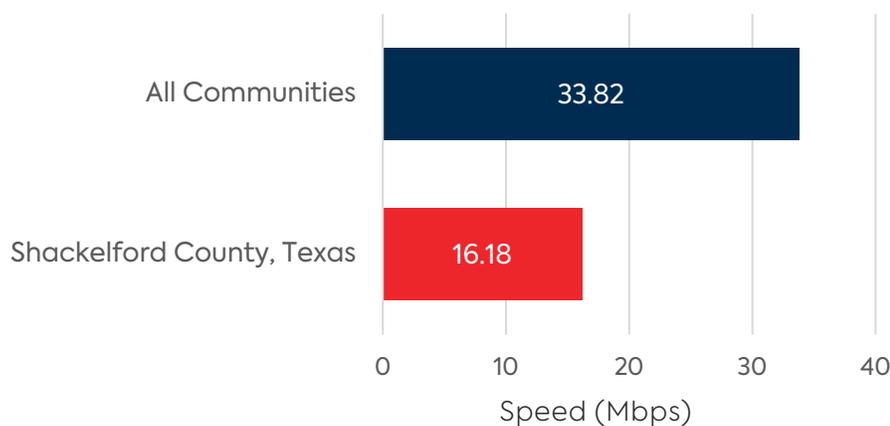
Category	Speed
All Communities	33.82
Shackelford County, Texas	16.18

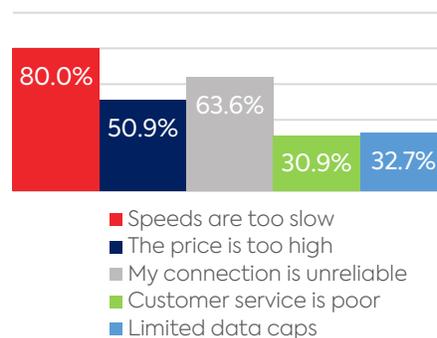Scale: 0 10 20 30 40
Speed (Mbps)

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 16.18 Mbps, which is less than one-half the speed of household connections in other communities and considerably lower than the FCC's designated speed of broadband.

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Does Your Internet Connection Meet Your Needs?

	Shackelford County, Texas	All Communities
No	57.0%	58.0%
Yes	43.0%	42.0%

- Yes
- No

Why Does Your Connection Not Meet Your Needs?

- Speeds are too slow: 80.0%
- The price is too high: 50.9%
- My connection is unreliable: 63.6%
- Customer service is poor: 30.9%
- Limited data caps: 32.7%

Are You Interested in Additional Internet Choices at Home?

Shackelford County, Texas
- Yes: 93.8%
- No: 6.2%
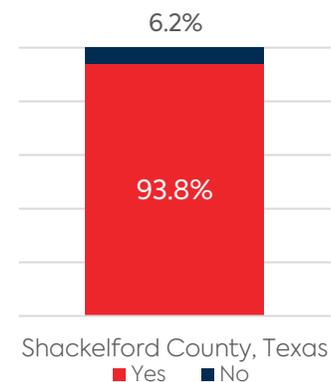
Competition provides residents with choices for service, allowing households the ability to switch providers if their current service does not meet their needs. More than one-half (57%) of respondents indicate that their internet co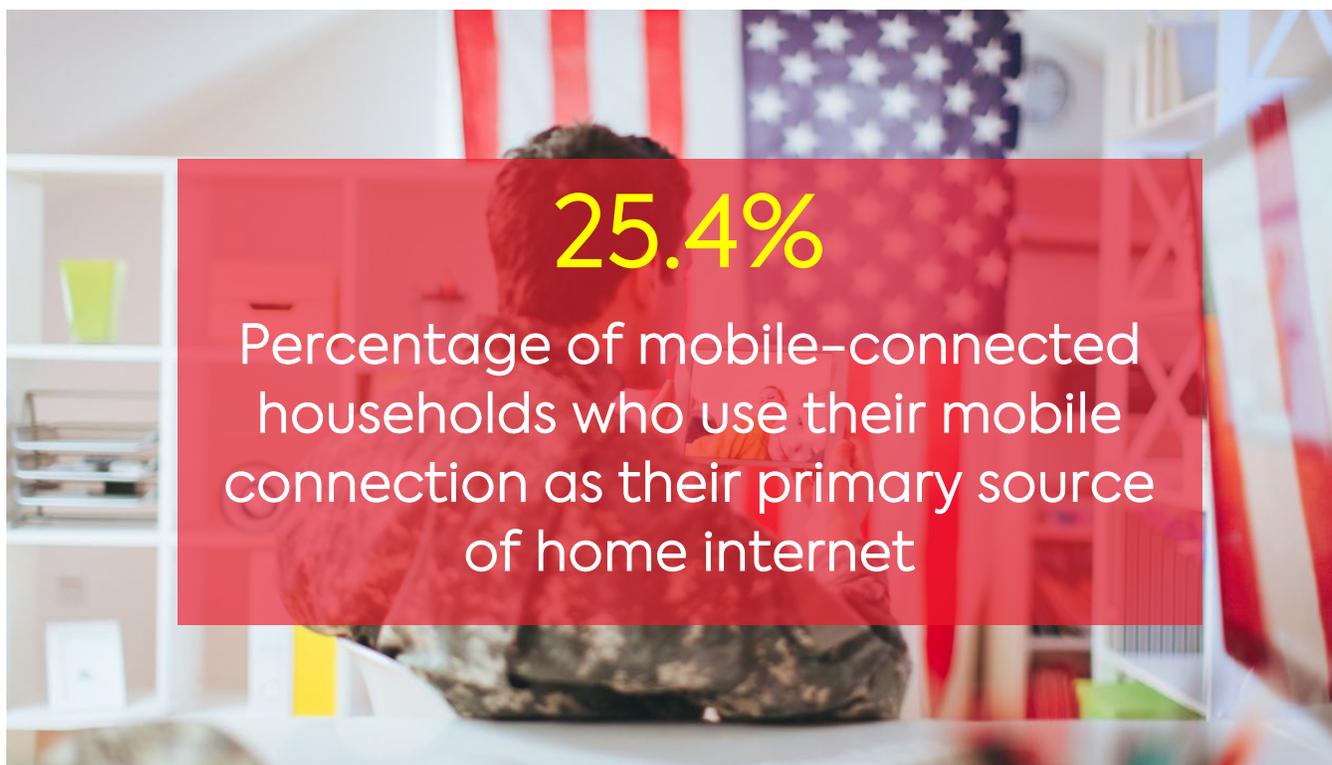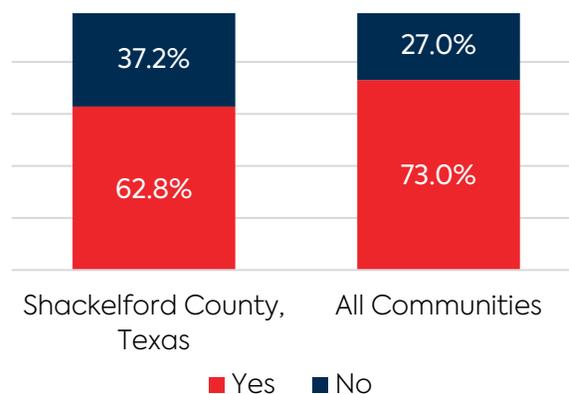nnection does not meet their needs. This nearly the same rate of dissatisfaction to households in other communities. When asked why their connection does not meet their needs, 80% of households indicate that the speed is too slow, 63.6% indicate that the connection is unreliable, and 50.9% say the price is too high (respondents could choose more than one reason). Finally, more than 9 out of 10 (93.8%) indicate that they are interested in additional internet choices for their home.

MOBILE CONNECTIVITY

Nearly two-thirds (62.8%) of Shackelford County households report that they subscribe to mobile internet service which they access via a smartphone or similar mobile device. This is slightly less than reported in other Connected communities.

Of those mobile subscribers, 25.4% report that they rely on their mobile connection as their primary source of internet connectivity at home. An additional 14.3% use mobile service to connect other household devices to the internet.

Households Subscribing to Mobile Internet Service

Shackelford County, Texas	All Communities
No: 37.2%	No: 27.0%
Yes: 62.8%	Yes: 73.0%

■ Yes ■ No

25.4%
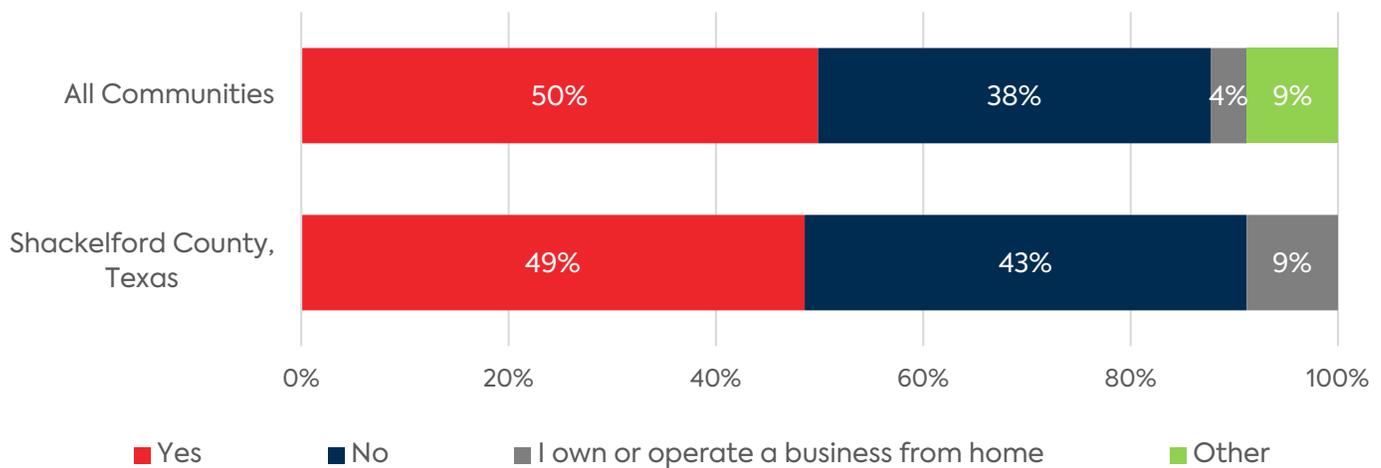Percentage of mobile-connected households who use their mobile connection as their primary source of home internet
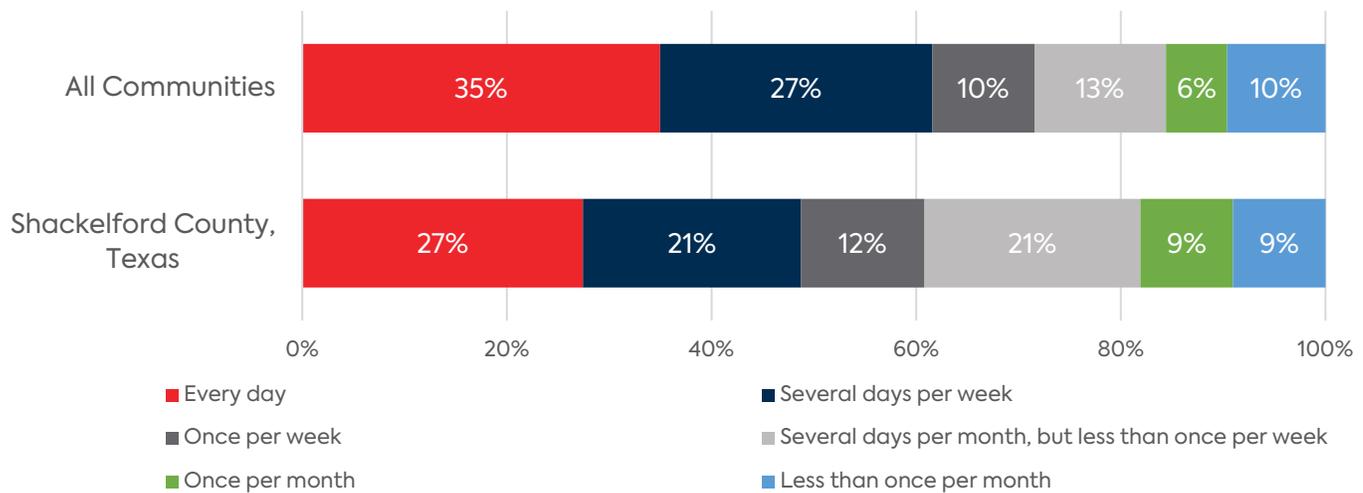
TELEWORK

Teleworking, or telecommuting, refers to working outside of the conventional workplace and communicating with it by way of telecommunications or computer-based technology. Teleworkers often do not register on typical measures of economic or workforce activity. Economic development strategies traditionally involve the attraction or retention of employers. While this is a critical part of growing a local economy, telework represents an opportunity to attract or retain employees even though their employer may not be located within the community, but only if those employees have access to advanced broadband infrastructure. Nearly one-half (49%) of employed residents in Shackelford County indicate that they telework at least part of the time.

Do You Currently Telework for Your Job?

	Yes	No	I own or operate a business from home	Other
All Communities	50%	38%	4%	9%
Shackelford County, Texas	49%	43%	9%	

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	35%	27%	10%	13%	6%	10%
Shackelford County, Texas	27%	21%	12%	21%	9%	9%

RECOMMENDATIONS
04

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RECOMMENDATIONS

The following recommendations are presented to assist Throckmorton and Shackelford Counties in expanding broadband access and adoption throughout the community.

Goal 1: Identify a single point of contact to organize and lead broadband initiatives in Throckmorton and Shackelford Counties.

To ensure the success of the community action plan and to equip Throckmorton and Shackelford Counties with the necessary tools for broadband growth, the communities will centralize broadband expansion and improvement efforts in a single entity: a broadband liaison. Ideally this broadband liaison will 1) promote broadband and technology access, adoption, and use; 2) serve as the go-to resource for broadband and technology needs; 3) seek ways to educate and empower the community regarding broadband and related technology; 4) take priority action on recommendations from the community action plan and implement other programs that are necessary and beneficial to the growth of the community; 5) monitor federal grant applications and expenditures. Throckmorton and Shackelford Counties should each appoint a broadband liaison. The Commissioners Court in each County will need to independently appoint a specific individual as liaison to ensure he/she has full power to act on behalf of the county on matters pertaining to broadband, funding, and community partnerships. Throckmorton and Shackelford Counties, while similar, have unique broadband needs that highlight the importance of a County-specific broadband liaison. For example, 72% of households in Throckmorton County have access to broadband at speeds of 25/3 Mbps. In contrast, 25% of households in Shackelford County have access to broadband at speeds of 25/3 Mbps.

Should Throckmorton and Shackelford Counties be unable to appoint individual broadband liaisons, the communities should pursue appointment of a joint staffer to serve in this capacity. Community-specific leadership is the primary goal with dual-county partnership serving as an alternative.

Ultimately, it should be noted that both Throckmorton and Shackelford Counties will find it very difficult to achieve broadband advancement and implement the goals set forth in this action plan without first identifying community leadership. Without a broadband liaison to serve as the tactical lead on broadband projects, both counties will struggle with organization and a clear infrastructure development plan.

Objective: Designate a local leader to oversee broadband improvement projects, grant applications, and community relations with internet service providers in Throckmorton and Shackelford Counties.

Actions:

Action 1 – The Commissioners Court in Throckmorton County and Shackelford County should appoint broadband liaisons- one for each community. The broadband liaison will serve the County on broadband matters. The liaison should be knowledgeable on broadband, understand the demographics of Throckmorton or Shackelford County, and be prepared to work collaboratively with community organizations. The liaison should receive appointment, or approval, from the Commissioners Court. It is important for the local government to take ownership in this appointment as the liaison will be the leading voice and decision-maker on broadband matters.

<u>Officials who should appoint the broadband liaison:</u>
<u>Shackelford County:</u>
Judge Robert Skelton
Commissioners: Steve Riley, Ace Reames, Lanham Martin, Cody Jordan

<u>Throckmorton County:</u>
Judge Trey Carrington
Commissioners: Trey Wells, John Johns, Lance Sullivan, Joe Edd Chandler

Action 2 – Community leaders should identify an agreed-upon list of duties the broadband liaison will be responsible for in his/her official capacity. The liaison should establish an office within the Chambers of Commerce (Throckmorton Chamber, Albany Chamber). The Chambers already conducts critical work in each community, connecting residents to vital resources and promoting economic opportunities.

Responsibilities of the broadband liaison could include:
- Serve as the go-to resource for broadband information within the immediate community
- Educate county leaders and residents on broadband programs, opportunities, and benefits
- Monitor grant expenditures within each county. Report concerns to Commissioners Court
- Stay up to date on current broadband grant programs at the state and federal level and apply to programs as they become available (See the Internet Society and Connected Nation references below)
- Work with community organizations and internet service providers on broadband initiatives

Action 3- The broadband liaison should identify county stakeholders and representatives from regional organizations and broadband providers who can augment his/her work as the central authority on broadband. These partnerships should be used to further the community's broadband agenda and ensure this action plan is adopted in a timely fashion.

Community stakeholders and regional organizations:
- West Central Texas Council of Governments
- Other "Connected Communities": Fisher, Jones, others to come
- Rep. David Spiller's Office
  - Robyn Wertheim
- Congressman Arrington's Office
  - Kaley Mathis
- Chambers of Commerce: Throckmorton, Albany
- Throckmorton City Council
- Internet Service Providers
- Workforce Solutions of West Central Texas

Action 4– The liaisons from Throckmorton County and Shackelford County should meet at least once a month to discuss ongoing broadband projects in each community. It is paramount that the counties recognize the value of partnership in the broadband sphere. Broadband expansion and improvement projects can be expensive, time-consuming, and competitive, making a dual-county partnership valuable for all parties. Not only will the partnership be marketable to broadband providers, but it will bolster general broadband opportunities.

Responsible Parties:
Local units of government; Broadband providers; Community and regional organizations

Timeline:
Throckmorton County and Shackelford County officials should convene within six weeks of this action plan to discuss appointment of a single broadband liaison. The liaison should be appointed within 14 weeks of this plan.

Resources:

Texas Broadband Providers by County
https://connectednation.org/texas/planning/

Current Broadband Funding
https://connectednation.org/current-broadband-funding

Guide to Federal Broadband Funding Opportunities in the U.S.
https://www.internetsociety.org/resources/doc/2021/guide-to-broadband-funding-opportunities-in-us/

Texas County Maps: Connected Nation
https://connectednation.org/texas/county-maps/

Goal 2: Increase broadband availability and speeds in Throckmorton and Shackelford Counties through strategic partnerships.

To understand what broadband looks like in a community, it is important to properly define it. Defined simply, broadband is high-speed internet access that is always on. Broadband is understood to be faster than traditional dial-up service and includes several high-speed transmission technologies such as fiber and cable. For the Federal Communications Commission (FCC), broadband capability requires consumers to have access to advertised download speeds of at least 25 Mbps and advertised upload speeds of at least 3 Mbps. This is often written simply as 25/3 Mbps. Taking this information and applying it to Throckmorton and Shackelford Counties, it is important to look at maps, specifically maps that indicate broadband availability. According to CN Texas broadband data collected in July 2021, only 25% of households in Shackelford County are served at the 25/3 Mbps threshold. This leaves 1,020 homes unserved. In Throckmorton County, 71.51% of homes are served at the 25/3 Mbps threshold with 205 homes unserved.

Looking at the survey results for Throckmorton and Shackelford County, 49% of employed survey respondents in Shackelford County and 58% of employed respondents in Throckmorton County indicated they telework in some capacity. Teleworkers need reliable and fast internet connections to fulfill professional obligations. Looking beyond telework, reliable and fast internet is essential to connectivity and functionality. For Throckmorton and Shackelford Counties, the issue is not a lack of broadband use, it is a lack of broadband availability to meet the needs of community members. Improving broadband speeds and connectivity will come with associated costs, making partnerships with community organizations, internet service providers, and financial supporters advantageous for the community and its residents.

Objective: Promote greater broadband access, adoption and use in Throckmorton and Shackelford Counties through broadband infrastructure projects (improvements and expansions).

Actions:

Action 1 – To effectively understand the broadband funding landscape in Throckmorton and Shackelford Counties, community leaders should meet with internet service providers who have already been allocated federal money, including recipients of funding through the Connect America

Fund (CAF) and the Rural Digital Opportunity Fund (RDOF). The community should meet with local Internet Service Providers (ISPs) to assess the status of ongoing or upcoming infrastructure improvement and expansion projects. As community leaders consider expanding and improving broadband infrastructure, the goal should be to pursue strategic projects that are not needlessly redundant (i.e., expand access where RDOF and CAF winners are already working).

Shackelford County:
RDOF (RDOF Phase I Auction Winning Bids): Resound Networks (539 locations, $668,932.50)
CAF (CAF Phase II Auction Winning Bids): Nextlink, 3 locations, $13,150.00
ISPs: AMA TechTel Communications, Nextlink, Brazos Telephone Coop, New Source Broadband, Rise Broadband, AT&T, Taylor Telecom, Transworld, Windstream

Throckmorton County:
RDOF (RDOF Phase I Auction Winning Bids): Nextlink (98 locations, $98,775.90), Resound Networks (37 locations, $38,339.80)
CAF (CAF Phase II Auction Winning Bids): Nextlink (112 locations, $1,051,611.00)
ISPs: Nextlink, Brazos Telephone Coop, New Source Broadband, Santa Rosa, Windstream

Action 2 –   During meetings with providers, community leaders should discuss the role the county or a city could play (through financial backing or strategic partnership) to speed up or ensure project completion or start a new project altogether. Ultimately, Throckmorton and Shackelford Counties should play a strategic role in ongoing or planned projects that will widely benefit the most residents.

Both Throckmorton and Shackelford Counties have been allocated Coronavirus State and Local Fiscal Recovery Funds. Throckmorton has been allocated $291,000 and Shackleford has been allocated $634,000. Should Throckmorton County or Shackelford County choose to spend any of these federal funds on broadband, it is important that they are prepared, informed, and equipped to begin working with reliable partners.

Action 3 – Both Throckmorton and Shackelford Counties should establish and maintain relationships with regional organizations and elected officials. Additionally, the county should engage in regional broadband planning efforts with the express intent of improving broadband access, adoption, and use among residents and surrounding communities. Not only will residents benefit from broadband improvement inside Throckmorton and Shackelford County lines, but they will reap the benefits of broadband advancements in surrounding communities economically, technologically, and socially.

Regional Organizations and Elected Officials to Partner With:
- West Central Texas Council of Governments

- Other "Connected Communities:" Fisher, Jones, others to come
- Rep. David Spiller
    - Robyn Wertheim
- Congressman Arrington's Office
    - Kaley Mathis
- Chambers of Commerce: Throckmorton, Albany
- Throckmorton City Council

Action 4– As community leaders and broadband liaisons from Throckmorton and Shackelford Counties meet with broadband providers and discuss federal grant monies and community infrastructure, leaders should consider the value of public-private partnerships (PPP). Public-private partnerships take many forms and allow both parties (in this case the county and a broadband provider) to leverage an asset that the other does not have or cannot easily acquire. The community can offer infrastructure (publicly owned building rooftops, light poles, towers and other vertical assets for mounting infrastructure) for deployment of a network, as well as committed anchor tenants. Private-sector partners bring network-building and operations experience. Elements to consider include competition, enhanced service, risk avoidance, and redundancy. It is also important for the community to consider all legal obligations when entering partnership negotiations.

Examples of PPPs
- Model 1: Private Investment, Public Facilitation: Make available public assets like fiber and conduit, share geographic information systems data, streamline permitting and inspection processes, offer economic development incentives to attract private broadband investment.
- Model 2: Private Execution, Public Funding: Identify revenue streams that can be directed to a private partner, issue RFP for private turnkey execution.
- Model 3: Shared Investment and Risk: Evaluate using assets to attract private investment, evaluate funding new assets to attract private investment, evaluate building new fiber assets to businesses and/or homes for leasing to private ISPs.

Responsible Parties:
Local units of government; Broadband providers; Community and regional organizations.

Timeline:
Community leaders should begin meeting with internet service providers within three months of receiving this plan. While Throckmorton and Shackelford Counties do not have to allocate funding or spend federal dollars within that same three months, the community should outline the scope of broadband infrastructure projects (ongoing and planned) within that timeline.

Resources:

Shackelford County Broadband Map (CN Texas)
https://cn-maps.hatfieldmedia.com/US/TX/v4/tx_shackelford-county_25x3.pdf

Throckmorton County Broadband Map (CN Texas)
https://cn-maps.hatfieldmedia.com/US/TX/v4/tx_throckmorton-county_25x3.pdf

Glossary of Terms (CN Texas)
https://cn-maps.hatfieldmedia.com/US/TX/v4/tx_throckmorton-county_25x3.pdf

Texas Broadband Providers by County
https://connectednation.org/texas/planning/

Auction 904: Rural Digital Opportunity Fund
https://www.fcc.gov/auction/904

Connect America Fund Phase II FAQs
https://www.fcc.gov/consumers/guides/connect-america-fund-phase-ii-faqs

Coronavirus State and Local Fiscal Recovery Funds
https://home.treasury.gov/policy-issues/coronavirus/assistance-for-state-local-and-tribal-governments/state-and-local-fiscal-recovery-funds

Coronavirus State and Local Fiscal Recovery Funds, County Allocation
https://home.treasury.gov/system/files/136/fiscalrecoveryfunds_countyfunding_2021.05.10-1a-508A.pdf

Guide to Federal Broadband Funding Opportunities in the U.S.
https://www.internetsociety.org/resources/doc/2021/guide-to-broadband-funding-opportunities-in-us/

Current Broadband Funding
https://connectednation.org/current-broadband-funding

BroadbandUSA: Federal Funding Guide
https://broadbandusa.ntia.doc.gov/resources/federal

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An introduction to effective public–private partnerships for broadband investments
https://broadbandusa.ntia.doc.gov/sites/default/files/publication-pdfs/bbusa_effective_public_private_partnerships.pdf

Goal 3: Increase online engagement in Throckmorton and Shackelford Counties through free digital literacy workshops.

For those unfamiliar with the term, digital literacy seems like a complex concept, but put simply, it is an individual's ability to interact and exchange information via digital platforms efficiently and successfully. As the name suggests, digital literacy necessitates a level of competency and skill. Digital literacy then is an understanding of the digital environment and all the software, social media platforms, and lingo that come along with it. For rural Americans, digital literacy can be stunted by many things including lack of devices, engagement opportunities, and general infrastructure. By providing training workshops focused on digital readiness and inclusion, a community can equip its citizens for digital immersion and advancement for the here and now and into the future. Digital literacy and inclusion focuses not just on access to devices and broadband internet, but the skills needed to engage on these platforms. It is important for community residents and leaders to be digitally engaged to stay informed and connected.

Objective:
Implement digital literacy and digital skills workshops in each community with an emphasis on social media and website skills/training to ensure all residents and community leaders are equipped to access and use digital devices and services.

Actions:
Action 1 – Not only should residents feel comfortable engaging online, but they should seek out the benefits offered by online platforms and tools. As such, the aforementioned broadband liaisons should identify regional and community partners who possess resources and expertise in producing free digital literacy and digital skills workshops. Workshops should address topics ranging from workforce skills to online safety. The intention is to equip residents and community leaders with the digital skills necessary to engage online.

Workshop topics to consider:
- Navigating social media
- How to use Microsoft Office Suite
- Online safety Tips and Tricks
- How–To Teleconference

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Community partners to consider:
- Community institutions and businesses who would directly benefit from greater online engagement (i.e., banks, telehealth providers, online schools)
- Libraries: Depot Public Library, Shackelford County Library
- IT Director: School and County level
- Broadband Providers
- Chambers of Commerce: Throckmorton and Albany
- Throckmorton City Council
- West Central Texas Council of Governments

Action 2 - Curriculum should be developed using publicly available programs, such as AARP, Digital Learn, and Drive (resources linked below), and county-sourced information. Workshops should take place at local facilities, such as the library or school gym, and be promoted through local media.

Media outlets for marketing:
- Throckmorton Tribune
- KJTV Fox 34
- The Albany News

Action 3 – The broadband liaisons should identify community partners for the workshops. Partners can include financial supporters, guest speakers/presenters, and curriculum developers. Specifically, the broadband liaisons should consider inviting ISPs to sponsor or attend the workshop, as a successful community event could translate to more business for the provider. Additionally, the liaisons should utilize public officials (i.e., sheriff, county commissioners) and local business owners to lead workshops on topics such as cybersecurity and social media. The digital engagement workshops should be a community effort. Not only should the curriculum meet the needs of the residents and community leaders, but residents and leaders should likewise contribute content and resources according to their specialty within the community.

Action 4 – The community should host workshops designed specifically to get community organization, businesses, and community leaders engaged online through websites and social media. In an increasingly digital society, it is paramount that community leaders use digital platforms to keep residents engaged. Websites and social media are an integral component of modern communication and real-time updates. For government entities, public safety institutions, K-12 schools, community organizations, and businesses, an online presence is no longer a luxury but a necessity. Furthermore, community workshops should work to ensure community officials and leaders have the digital know-how and confidence to engage online.

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Responsible Parties:
Media outlets; Broadband providers; Community anchor institutions: schools; libraries; Local units of government

Timeline:
Throckmorton and Shackelford Counties should implement digital inclusion and literacy programs by the end of Q1 2022. Curriculum building and resource gathering can begin immediately to ensure a timely start to community workshops. Every six months, the community should evaluate the status of available curriculum to determine if updates are needed.

Resources:

> Texas Broadband Providers by County
> https://connectednation.org/texas/planning/
>
> The complete guide to digital skills
> https://www.futurelearn.com/info/blog/the-complete-guide-to-digital-skills
>
> AARP Joins with Nonprofit to Teach Tech to Older Adults
> https://www.aarp.org/about-aarp/info-2021/oats-senior-planet.html
>
> Digital Learn: Use a computer to do almost anything!
> https://www.digitallearn.org/
>
> What we do for you: Digital Inclusion
> https://connectednation.org/digital-inclusion/
>
> What we do for you: Drive your learning
> https://connectednation.org/driving-your-learning/
>
> Five Digital Inclusion Trends in the United States
> https://www.ntia.doc.gov/blog/2018/five-digital-inclusion-trends-united-states

Goal 4: Improve long-term quality of life for Throckmorton and Shackelford County residents through broadband internet offerings.

Through the Connected program, Throckmorton County and Shackelford County evaluated their respective community broadband environments, analyzing internet needs and wants of residents and evaluating rates of broadband access, adoption, and use among key community sectors. The broadband assessment is intended to inform a community action plan that will help improve

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resident's quality of life, increase economic development, and lead to overall community development and prosperity. Broadband is an integral part of everyday life, and it is important for both counties to ensure residents have the resources, skills, and opportunity to engage online in pursuit of social, economic, and professional growth.

Objective:
Demonstrate the importance (personal, professional, and economic benefits) of broadband in a digitally inclusive and evolved community.

Action 1: County leaders should identify key advocates in each of the following areas who will work in tandem with the broadband liaisons to educate the general community about the short- and long-term benefits of broadband adoption.

- Economy → Economic Development, Commissioners Court
- Telehealth → Shackelford County Health Clinic, Kindred at Home, Above and Beyond Counseling
- Telework → Chambers of Commerce, Workforce Solutions of West Central Texas, School Superintendents (Jonathan Scott, Dr. Michelle Cline, Casey Adams, Dr. John Denson)
- Communication → Broadband Providers

Promote e-commerce as the gateway to the global economy: As businesses and community organizations expand their online presence, they expand their customer pool and ultimately increase profit. By utilizing websites and social media to market services and sell products, businesses can take part in a larger digital economy. As Throckmorton and Shackelford County businesses succeed in the global market, the benefit will be sown directly in the community through increased employment, increased wages, and greater economic success.

Showcase physical health and time-saving benefits of telehealth services: The future of medicine is online. For communities who lack large hospitals, general practitioners, surgical attendees, and medical specialists, telehealth is a natural substitute. Online medical services allow communities to speak with top-of-the-line doctors, dentists, surgeons, dermatologists, veterinarians through a click of a button. These online services are not only important in times of emergency, but they allow residents flexibility when meeting with medical professionals. No longer do you have to take off work to drive to the clinic, but rather you can step outside your office building and speak to your physician through your phone and then return to your desk.

Highlight economic and practical advantages of telework: Americans have long valued flexible work schedules including work from home and part-time shifts. The COVID-19 pandemic further showcased just how important it is for homeowners and renters alike to be able to reliably connect

to the internet to fulfill their professional obligations. By teleworking, an employee can reside in rural Throckmorton County or Shackelford County but be employed by a company in Dallas, Houston, Lubbock, or another state entirely. Ultimately, this can be used as a marketing tool by the community: live here, enjoy a lower cost of living, but do not give up your online job! Telework expands employee and employer options which in turn can lead to greater economic success. The key to telework is adequate digital skills to engage online and a reliable internet connection.

Expand the use of digital communication for personal and professional networking: Broadband is what allows a grandmother to FaceTime her grandchildren who live seven states away in the middle of a global pandemic. Broadband is what empowers communication today; it is what connects people and allows them to stay engaged, informed, and close despite time and space. As technology and society continues to evolve, broadband will continue to be the common thread in all things communication. Broadband will be how companies communicate (be it Zoom calls, Microsoft Teams Conferences) or how families stay connected.

Action 2: The broadband liaison should integrate discussions of quality of life into digital literacy and digital skills workshops. Information about upcoming workshops should be readily accessible and widely publicized. This includes advertising about upcoming workshops through social media, on government websites, in local newspapers, and other local outlets (i.e., advertisements in the water bill, flyers at the local park, and school announcements). General discussion about the benefits of broadband on the community's overall wellbeing and development should be added to Commissioners Court meetings, City Council Meetings, and other already established county-wide meetings.

Responsible Parties:
Residents; Local units of government; Community organizations; Businesses; Internet service providers.

Timeline:
With greater broadband adoption and use comes greater quality of life. As such, Throckmorton and Shackelford Counties should implement short and long-term solutions designed to encourage digital engagement. Immediate actions, including disseminating information about the importance of broadband, should begin within 1 month of this action plan. Long-term solutions including infrastructure development and improvements should be contracted, scheduled, and in-progress or completed no later than 2025.

Resources:

Improving the Quality of Life in Rural America With Broadband Internet
https://bonfire-ec.com/improving-the-quality-of-life-in-rural-america-with-broadband-internet/

Implementing Productive Teleworking with Business-Quality Mobile Communications
https://tango-networks.com/wp-content/uploads/2021/01/Tango-Networks-Trend-Advisor-Productive-Teleworking-with-Mobile-Communications-v15May2020.pdf

How Better Broadband Access Will Help Telemedicine Reach Its Full Potential
https://intouchhealth.com/how-broadband-will-help-telemedicine-reach-its-full-potential/

Texas Broadband Providers by County
https://connectednation.org/texas/planning/

The Benefit that Broadband Internet Offers for Ecommerce
https://www.newsanyway.com/2020/02/26/the-benefits-that-broadband-internet-offers-for-ecommerce/

INTERACTIVE MAP LINK:

https://connectednation.org/texas/shackelford-throckmorton/interactivemap

CONNECTED SURVEY RESULTS:

https://connectednation.org/texas/wp-content/uploads/sites/19/2021/07/Shackelford-County_Portal-Results_07122021.pdf

https://connectednation.org/texas/wp-content/uploads/sites/19/2021/07/Throckmorton-County_Portal-Results_07122021.pdf