EXECUTIVE SUMMARY
Technology Plan

Lampasas & San Saba Counties, Texas

November 2021

CONNECTED NATION

CELEBRATING 20 YEARS OF SERVICE

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OVERVIEW

01

OVERVIEW

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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 it adopts technology resources. This can include access to reliable high–speed networks; the digital literacy of residents; and the local use of online resources for business, government, and leisure.

The Connected Nation Texas (CN Texas) Connected Program partnered with Lampasas and San Saba Counties 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 have the greatest impact toward improving broadband access, adoption, and usage across sectors.

Pursuant of this goal, between April and August 2021, Lampasas and San Saba counties conducted a comprehensive survey of broadband technology access and adoption across the community. Lampasas County collected responses from 483 households, and San Saba collected 36 residential responses. CN Texas staff also met with local officials to determine community needs and gather qualitative data for consideration in the study. Overall, the assessment was designed to identify issues and opportunities to close the Digital Divide.

Lampasas & San Saba Counties, Texas
QUICK FACTS

Lampasas	San Saba
Population	
21,627	5,730
Households	
7,807	2,082
Median Household Income	
$60,772	$45,083
Poverty Rate	
11.1%	14.0%
Adults with a Bachelor's Degree or Higher	
19.9%	14.1%
Hispanic or Latino	
4,179	1,749
Households with Broadband Access[1]	
95.16%	76.84%

Source:
https://data.census.gov/cedsci/profile?_g=0500000US48281
https://data.census.gov/cedsci/profile?g=0500000US48411
[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/

To highlight key findings, CN Texas created an interactive map. It provides data on broadband availability in the community overlayed with survey data from the recent broadband assessment. To access the map, click HERE.

Across five months of data collection, Lampasas County collected a total of 539 surveys from nine different community sectors. This is a survey completion rate of 62%. San Saba County collected 57 surveys across eight community sectors for a 21% completion rate.

	Lampasas County		San Saba County	
	Goal	Actual	Goal	Actual
Residential	750	483	200	36
Agriculture	45	12	40	2
Business	40	29	15	4
Government	10	3	6	7
Healthcare	3	1	2	2
Higher Education	0	1	0	0
K–12	5	7	4	3
Library and Community Institution	5	1	3	1
Public Safety	8	2	5	2

While these survey results provide quality insight into the broadband environment of two central Texas communities, it should be noted that the results are not statistically significant. The following executive summary and community action are based on data compiled from the U.S. Census, community feedback, and survey responses. This report provides an analysis of broadband needs and wants of residents, businesses, and community institutions, and directly highlights the needs for further digital engagement across all community sectors. Looking ahead, both communities should focus on the benefits of improved broadband access and adoption.

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95.16%

of households in
Lampasas County have
access to broadband as of
July 2021

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

80.58% of households in Lampasas 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.

Lampasas County households **pay more** on average for access to the internet **($82.51)** than other Connected communities ($71.79).

About **71% of residents and 65.4% of businesses** reported that they were dissatisfied with their current internet service. The top reasons for dissatisfaction were slow speeds and unreliable connections.

More than 9 out of 10 residents **(92.7%)** said they would like to have improved or additional options for home internet service.

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76.84%

of households in San Saba County have access to broadband as of July 2021

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

More than 3 out of 4 households in San Saba County **(75.97%)** 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.

San Saba County households **pay more** on average for access to the internet **($85.40)** than other Connected communities ($71.79).

About **60% of residents and 100% of businesses** reported that they are **satisfied** with their current internet service.

Four out of five residents **(80%)** said they would like to have improved or additional options for home internet service.

INFRASTRUCTURE
RESULTS
02

INFRASTRUCTURE:
Lampasas County

According to CN Texas, broadband data initially collected in July 2021 with additional public feedback, field validation, and provider input, the majority of households in Lampasas County have access to broadband at speeds of 25/3 Mbps or more, the current definition of broadband set forth by the Federal Communications Commission (FCC). Broadband service in Lampasas County covers much of the county, with unserved areas between the main thoroughfares.

Below is the list of internet service providers (ISPs) in Lampasas County.

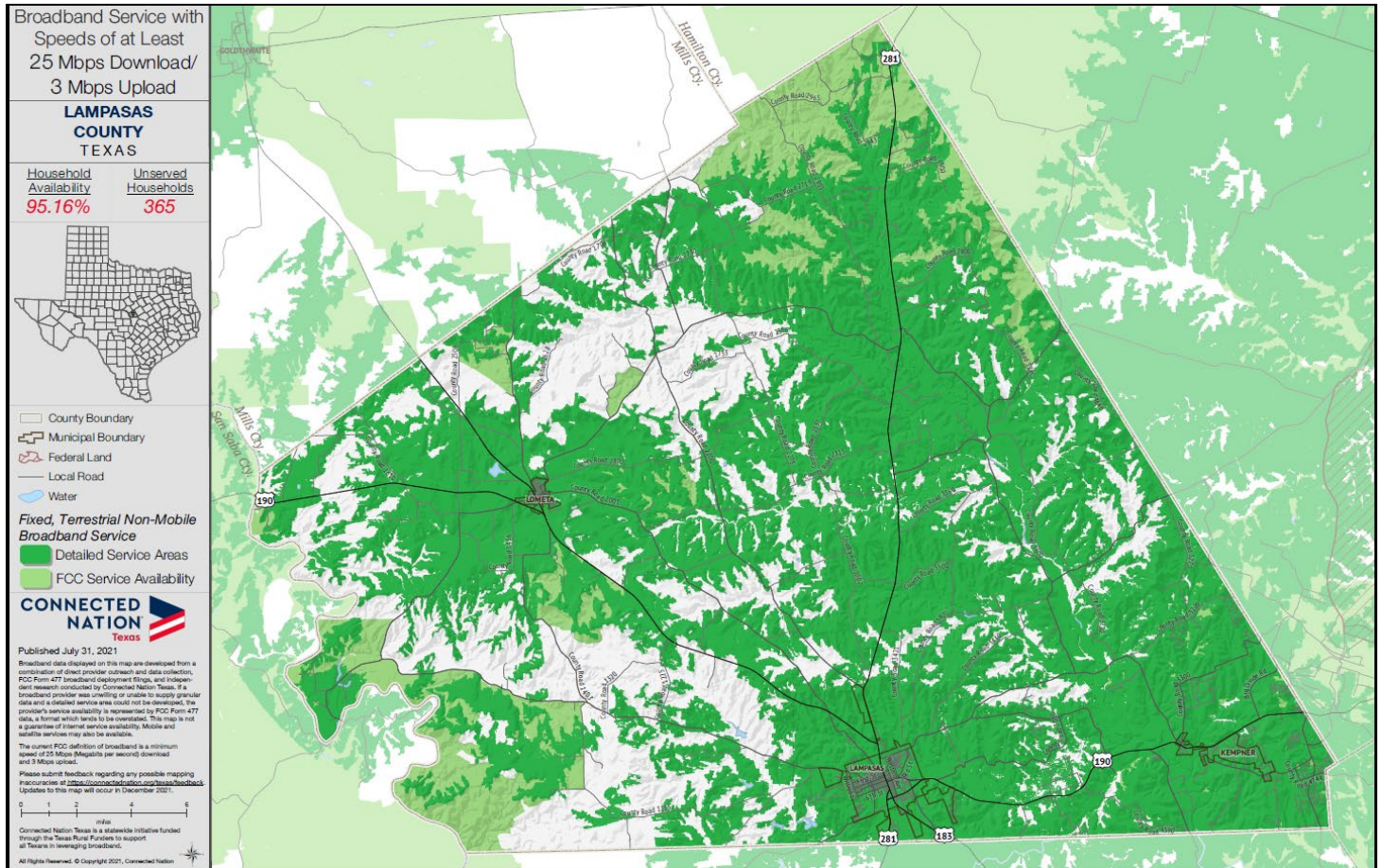| BROADBAND INFRASTRUCTURE QUICK FACTS |
| :---: |
| Unserved Households (25/3 Mbps) **365** |
| Households Served (10/1 Mbps) **97.49%** |
| Households Served (25/3 Mbps) **95.16%** |
| Households Served (50/5 Mbps) **82.42%** |
| Households Served (100/10 Mbps) **80.58%** |

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

PROVIDER	TECHNOLOGY	MAXIMUM DOWNLOAD SPEED (Mbps)	MAXIMUM UPLOAD SPEED (Mbps)
AMA TechTel Communications	Fixed Wireless	50	3
AT&T Southwest	DSL	18	1
	Fixed Wireless	10	1
Central Texas Tel Coop Inc.	Fiber	1000	100
CenturyLink	Fiber	940	940
	DSL	100	10
Charter Communications Inc	Cable	940	35
Nextlink Residential	Fixed Wireless	100	20
Rise Broadband	Fixed Wireless	25	3
Suddenlink Communications	Cable	25	5
Texas Broadband (R5)	Fiber	275	75
	Fixed Wireless	45	15
Western Broadband	Fixed Wireless	15	1.5

Below is Lampasas County's 25/3 Mbps map. To access the full map, go to https://connectednation.org/texas/county-maps/ and select Lampasas County from the list. Please note other portions of the county are served by internet service providers (ISPs) offering slower advertised speeds and are not shown on this map.

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

The first step in understanding the status of broadband infrastructure in Lampasas County and Texas as a whole is having accurate maps. Accordingly, CN Texas works with providers to develop a variety of broadband maps at a state and county level. Data shown on this map 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 was 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.

INFRASTRUCTURE:
San Saba County

According to CN Texas, broadband data collected in July 2021, with additional public feedback, field validation, and provider input, a little over three-quarters of households in San Saba County have access to broadband at speeds of at least 25/3 Mbps, the current definition of broadband set forth by the FCC. Broadband service in San Saba County is scattered through San Saba and Richland Springs, as well as various parts of the county.

Below is the list of internet service providers in San Saba County.

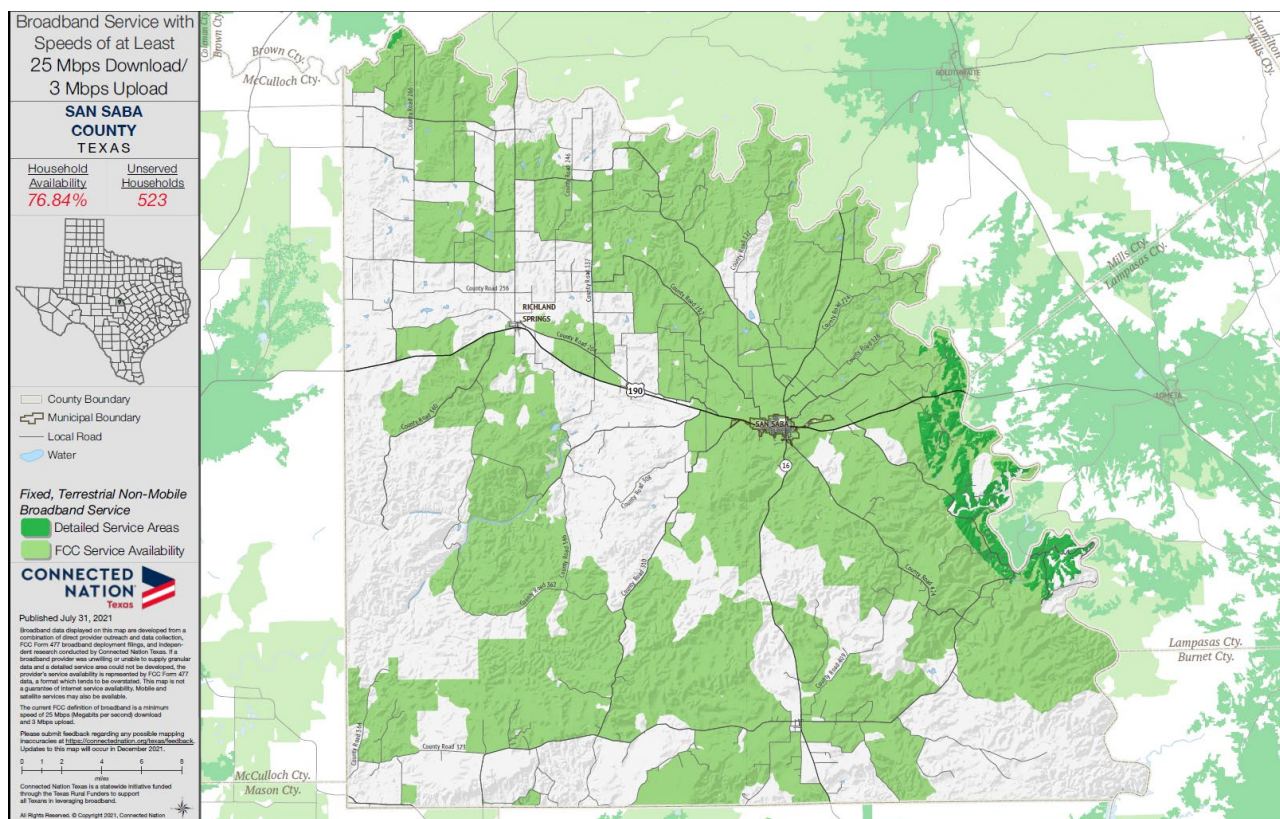| BROADBAND INFRASTRUCTURE QUICK FACTS |
|:---|
| Unserved Households (25/3 Mbps) **523** |
| Households Served (10/1 Mbps) **77.07%** |
| Households Served (25/3 Mbps) **76.84%** |
| Households Served (50/5 Mbps) **76.06%** |
| Households Served (100/10 Mbps) **75.97%** |

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

PROVIDER	TECHNOLOGY	MAXIMUM DOWNLOAD SPEED (Mbps)	MAXIMUM UPLOAD SPEED (Mbps)
Central Texas Tel Coop Inc.	Fiber	1000	100
Hill Country Telephone Cooperative Inc.	Fiber DSL	1000 50	1000 10
Nextlink Residential	Fixed Wireless	100	20
Texas Broadband (R5)	Fixed Wireless	45	15

Below is San Saba County's (25/3 Mbps) map. To access the full map, go to https://connectednation.org/texas/county-maps/ and select San Saba County from the list. Please note other portions of the county are served by internet service providers (ISPs) offering slower advertised speeds and are not shown on this map.

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

The first step in understanding the status of broadband infrastructure in San Saba County and Texas as a whole is having accurate maps. Accordingly, CN Texas works with providers to develop a variety of broadband maps at a state and county level. Data shown on this map is 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 was 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.

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365 & 523

Lampasas and San Saba County households cannot access broadband, respectively.

What Is Broadband?

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.
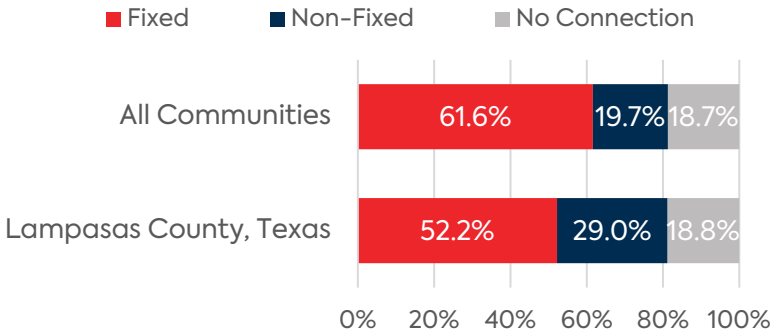
HOUSEHOLD
SURVEY RESULTS
03

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HOUSEHOLD
QUICK FACTS

Fixed Home Broadband Adoption
52.2%

Average Monthly Internet Cost
$82.51

Average Download Speed
17.52 Mbps

Households Satisfied with Service
29%

The following provides an overview of results from a broadband survey conducted in Lampasas County between April and August 2021. Altogether, CN Texas received 483 completed surveys from households across the county. Respondents provided insights into their internet connectivity, or lack thereof. Data from Lampasas County are compared to data from across hundreds of other rural, participating Connected communities across Michigan, Ohio, Texas, and Pennsylvania to benchmark and identify areas for improvement.

Home Broadband Adoption

Legend: ■ Fixed ■ Non-Fixed ■ No Connection

	Fixed	Non-Fixed	No Connection
All Communities	61.6%	19.7%	18.7%
Lampasas County, Texas	52.2%	29.0%	18.8%

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

Primary Barrier

	Too Expensive	Not Available	Other
All Communities	26.0%	53.6%	20.4%
Lampasas County, Texas	20.8%	50.0%	29.2%

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

Legend: ■ Too Expensive ■ Not Available ■ Other

ADOPTION

In Lampasas County, 52.2% of surveyed households subscribe to fixed broadband service delivered via a cable, DSL, fiber, or fixed wireless technology. Over one-quarter of respondents (29%) indicate they have internet service delivered via dial-up, satellite, or a mobile wireless service. This leaves about 1 in 5 (18.8%) survey respondents without internet service at home.
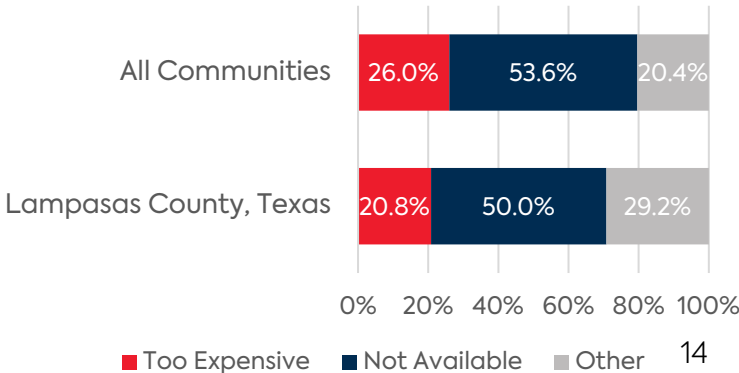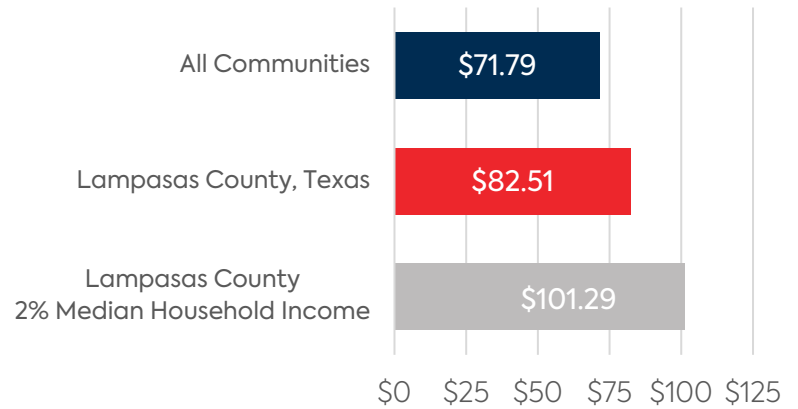
Among those without a home internet connection, 50% said they did not have broadband because it was not available to them, while 20.8% indicate that it was too expensive. Other barriers include a belief that households do not need internet service, or the ability to access internet service elsewhere. Like in many communities, cost and availability are the two most commonly cites barriers to home broadband adoption.
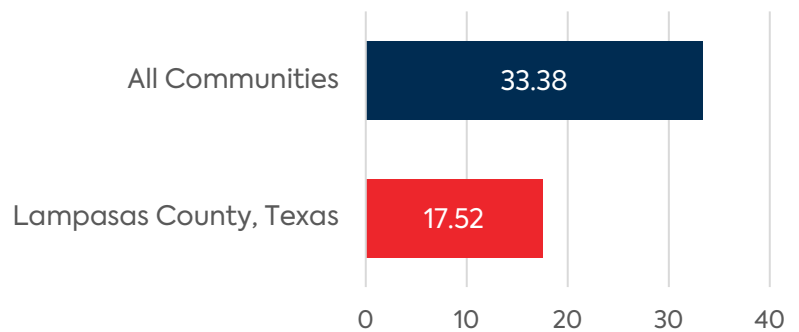
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CONNECTION DETAILS

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 $82.51 per month. This is higher than the monthly cost in other communities ($71.79). Two percent of the median household income in Lampasas County is $101.29 per month.

Average Monthly Cost

All Communities: $71.79
Lampasas County, Texas: $82.51
Lampasas County 2% Median Household Income: $101.29
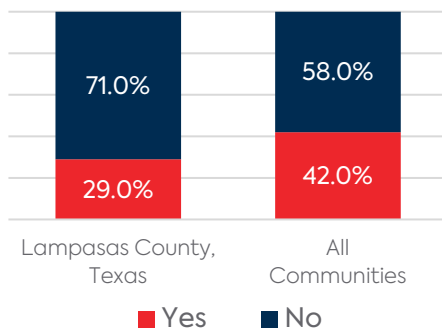
$0 $25 $50 $75 $100 $125

The FCC currently defines broadband as an internet connection with a download speed of at least 25 Mbps and an upload speed of at least 3 Mbps. On average, respondents indicate that their connection's download speed is 17.52 Mbps, which is below the minimum defined speed.
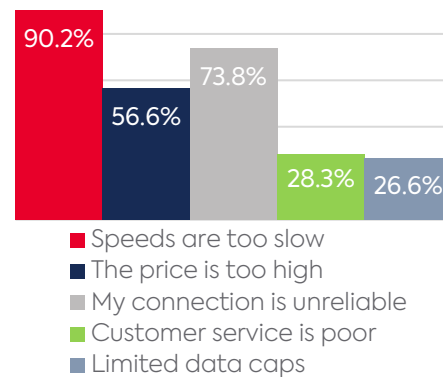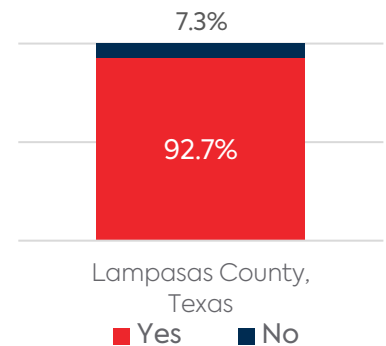
Average Speeds (Mbps)

All Communities: 33.38
Lampasas County, Texas: 17.52

0 10 20 30 40

Does Your Internet Meet Your Needs?

Lampasas County, Texas: No 71.0%, Yes 29.0%
All Communities: No 58.0%, Yes 42.0%

■ Yes ■ No

Why Doesn't Your Internet Meet Your Needs?

Speeds are too slow: 90.2%
The price is too high: 56.6%
My connection is unreliable: 73.8%
Customer service is poor: 28.3%
Limited data caps: 26.6%

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

Are You Interested in More Choices at Home?

No: 7.3%
Yes: 92.7%

Lampasas County, Texas

■ 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. Over two-thirds (71%) of residents indicate that their internet connection does not meet their needs. This is a higher rate of dissatisfaction than among households in other communities (58.3%).

When asked why their connection does not meet their needs, 90.2% of dissatisfied households indicate that their speed is too slow. More than one-half (56.6%) say the price is too high, while over 7 out of 10 (73.8%) indicate that the connection is unreliable. Respondents could choose more than one reason for dissatisfaction.

Finally, 92.7% of all respondents indicate that they are interested in additional internet choices for their home.
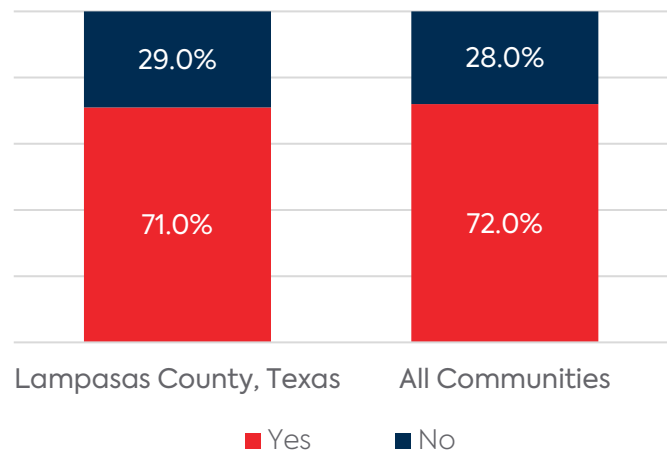
MOBILE CONNECTIVITY

More than 7 out of 10 households (71%) report that they subscribe to mobile internet service that they access via a smartphone or similar mobile device. This is on par with what is reported in other Connected communities (72.0%).

Additionally, 34.7% of mobile-connected households report that they rely on their mobile connection as their primary source of internet connectivity at home, or use their mobile service to connect other household devices to the internet.

Households Subscribing to Mobile Internet Service

	Lampasas County, Texas	All Communities
No	29.0%	28.0%
Yes	71.0%	72.0%

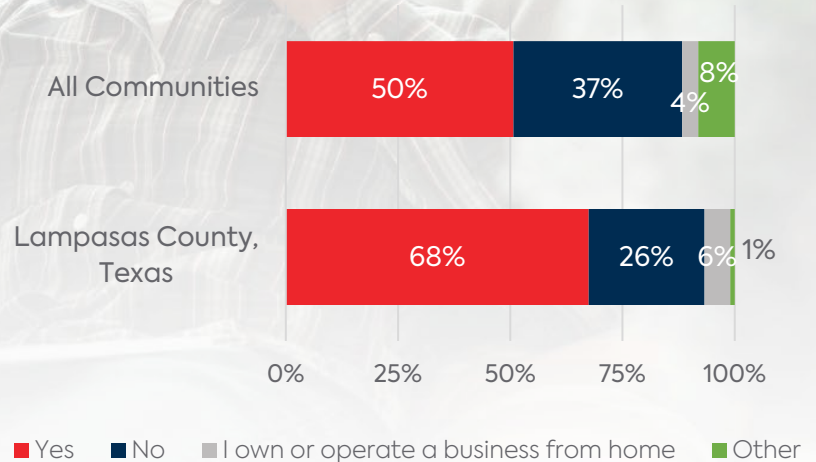■ Yes ■ No

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Texas

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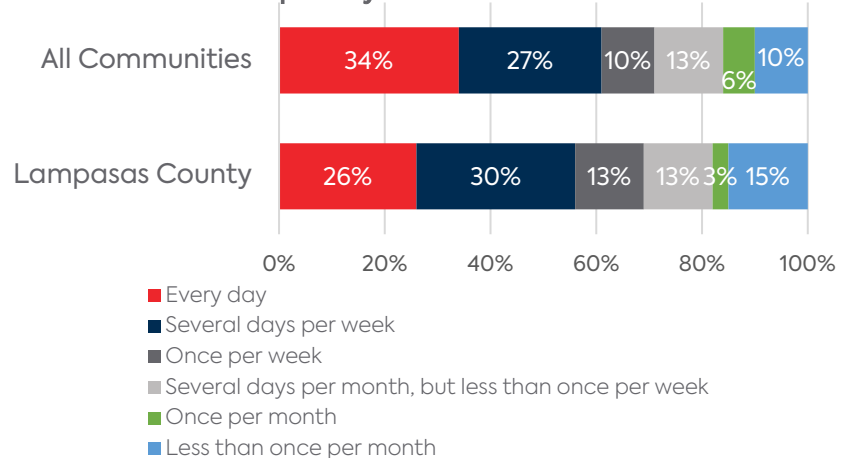
Teleworking is quickly becoming a critical part of growing a local economy because it represents an opportunity to attract or retain employees, even when employees are not located in the same community as their employers. However, this only works if those employees have access to advanced broadband infrastructure.

Approximately 68% of employed respondents in Lampasas County telework in some capacity. More than 1 in 4 of these teleworkers (26%) said they work remotely every day.

Do You Currently Telework?

	Yes	No	I own or operate a business from home	Other
All Communities	50%	37%	4%	8%
Lampasas County, Texas	68%	26%	6%	1%

How Frequently Do You Telework?

	Every day	Several days per week	Once per week	Several days per month, but less than once per week	Once per month	Less than once per month
All Communities	34%	27%	10%	13%	6%	10%
Lampasas County	26%	30%	13%	13%	3%	15%

HOUSEHOLD SURVEY RESULTS:
San Saba County

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Texas

HOUSEHOLD QUICK FACTS

Fixed Home Broadband Adoption	**80.8%**
Average Monthly Internet Cost	**$85.40**
Average Download Speed	**11.06 Mbps**
Households Satisfied with Service	**60%**

Home Broadband Adoption

Legend: ■ Fixed ■ Non-Fixed ■ No Connection

All Communities: 61.6% | 19.7% | 18.7%
San Saba County, Texas: 80.8% | 11.5% | 7.7%

Primary Barrier

All Communities: 26.0% | 53.6% | 20.4%
San Saba County, Texas: 66.7% | 33.3%

Legend: ■ Too Expensive ■ Not Available ■ Other

The following provides an overview of results from a broadband survey conducted in San Saba County between April and August 2021. Altogether, CN Texas received 36 completed surveys from households across the county. Respondents provided insights into their internet connectivity, or lack thereof. Data from San Saba County are compared to hundreds of other rural, participating Connected communities across Michigan, Ohio, Texas, and Pennsylvania to benchmark and identify areas for improvement.
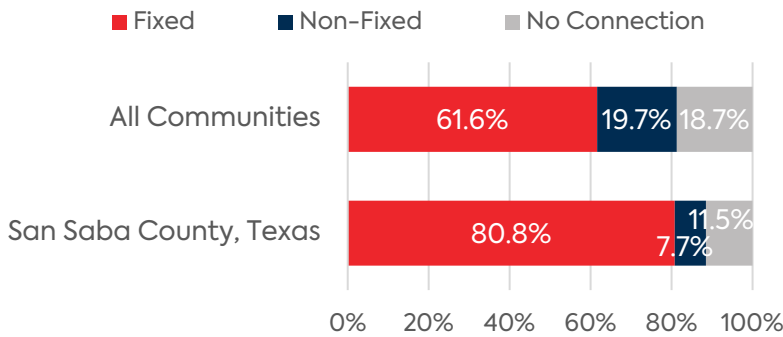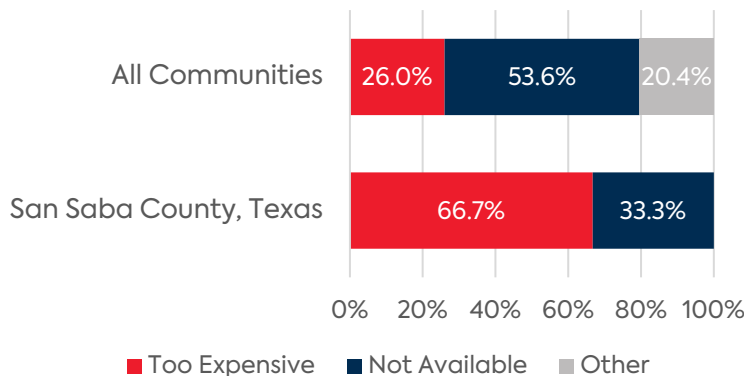
ADOPTION

In San Saba County, 80.8% of surveyed households subscribe to fixed broadband service delivered via a cable, DSL, fiber, or fixed wireless technology. 7.7% indicate they have internet service delivered via dial-up, satellite, or a mobile wireless service. This leaves more than 1 in 10 (11.5%) survey respondents without internet access at home.

Among those without a home internet connection, 66.7% said they did not have broadband because it was too expensive, while 33% indicate that it was not available. Like in many communities, cost and availability are the two most commonly cites barriers to home broadband adoption.
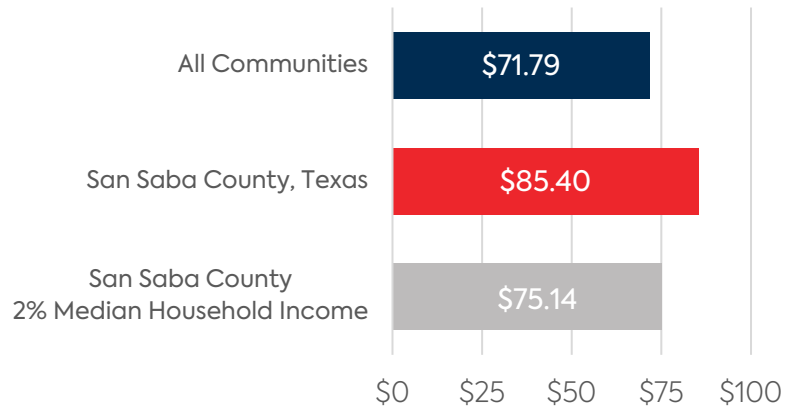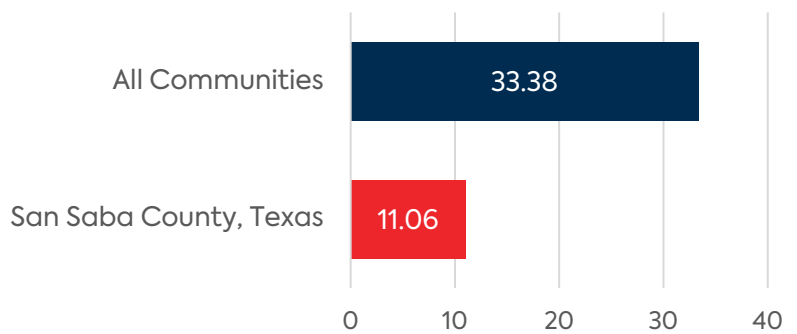
CONNECTION DETAILS

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 $85.40 per month. This is higher than the monthly cost in other communities ($71.79). Two percent of the median household income in San Saba County is $75.14 per month.

Average Monthly Cost

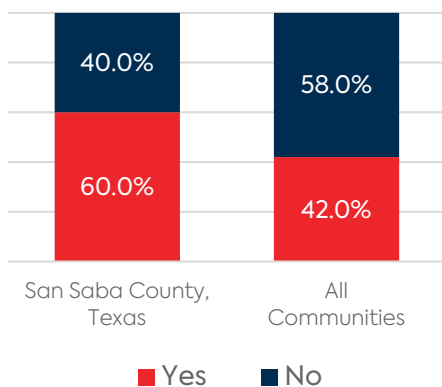|	
All Communities	$71.79
San Saba County, Texas	$85.40
San Saba County 2% Median Household Income	$75.14

$0 $25 $50 $75 $100

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 11.06 Mbps, which is below the minimum defined speed.
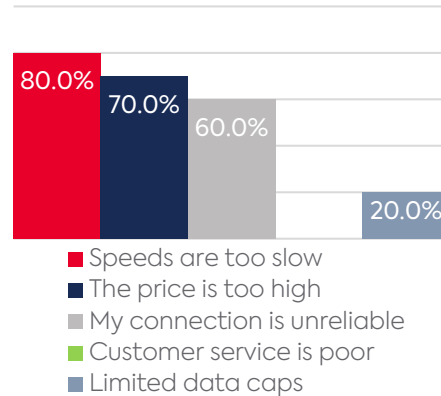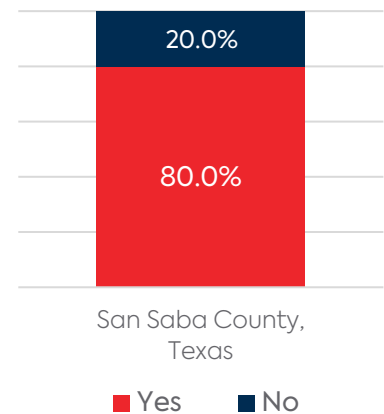
Average Speeds (Mbps)

All Communities	33.38
San Saba County, Texas	11.06

0   10   20   30   40

Does Your Internet Meet Your Needs?

San Saba County, Texas: No 40.0%, Yes 60.0%
All Communities: No 58.0%, Yes 42.0%

Legend: ■ Yes ■ No

Why Doesn't Your Internet Meet Your Needs?

Speeds are too slow: 80.0%
The price is too high: 70.0%
My connection is unreliable: 60.0%
Limited data caps: 20.0%

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

Are You Interested in More Choices at Home?

San Saba County, Texas: No 20.0%, Yes 80.0%

Legend: ■ Yes ■ No

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Competition provides residents with choices for service, allowing households the ability to switch providers if their current service does not meet their needs. Two out of five responding households (40%) indicated that their internet connection does not meet their needs. This is a lower rate of dissatisfaction than among households in other communities (58.3%).

When asked why their connection does not meet their needs, 80% of dissatisfied households indicate that their speed is too slow. Seven out of 10 (70%) say the price is too high, and 60% indicate that the connection is unreliable. Respondents could choose more than one reason for dissatisfaction with their current service.

Finally, 80% of all respondents indicate that they are interested in additional internet choices for their home.

MOBILE CONNECTIVITY

Fewer than 3 out of 5 respondents (57%) report that they subscribe to mobile internet service, which they access via a smartphone or similar mobile device. This is lower than other Connected Communities (72.0%).

Additionally, 25.1% of mobile-connected households report that they rely on their mobile connections as their primary source of internet connectivity at home, or use mobile service to connect other household devices to the internet.

Households Subscribing to Mobile Internet Service

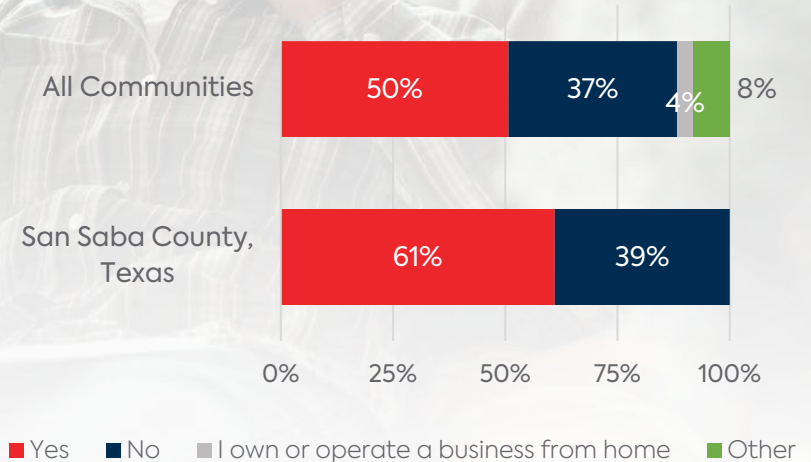|	San Saba County, Texas	All Communities
No	43.0%	28.0%
Yes	57.0%	72.0%

■ Yes ■ No
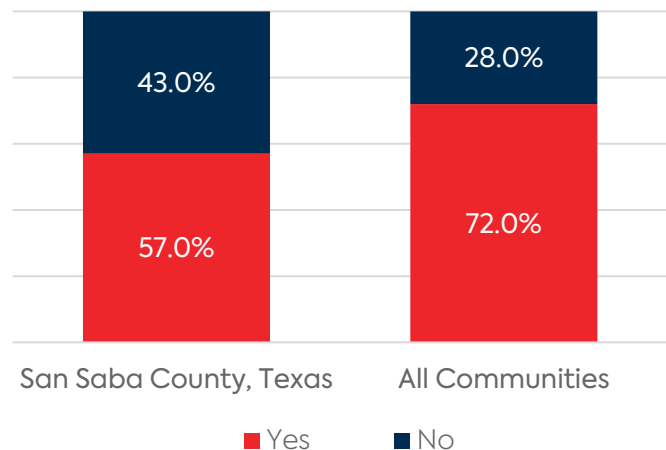
TELEWORK

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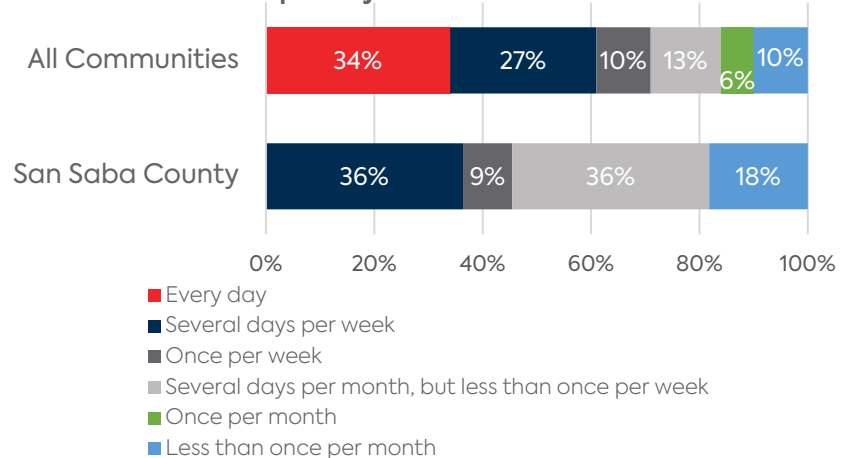
Teleworking is quickly becoming a critical part of growing a local economy because it represents an opportunity to attract or retain employees even when employees are not be located in the same community as their employer. However, this only works if those employees have access to advanced broadband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

More than 3 out of 5 employed respondents in San Saba County (61%) telework in some capacity. More than one-third of these teleworkers (36%) said they work remotely several days per week.

Do You Currently Telework?

All Communities	Yes 50%	No 37%	4%	Other 8%
San Saba County, Texas	Yes 61%	No 39%

0%   25%   50%   75%   100%

■ Yes   ■ No   ■ I own or operate a business from home   ■ Other

How Frequently Do You Telework?

| All Communities | 34% | 27% | 10% | 13% | 6% | 10% |
| San Saba County | 36% | 9% | 36% | 18% |

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

■ 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

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RECOMMENDATIONS
04

T he following recommendations are presented to assist Lampasas and San Saba Counties in expanding broadband access and adoption in each of their communities.

Goal 1: Improve healthcare in Lampasas and San Saba Counties by increasing telehealth services and expanding access to medical assistance.

According to the most recent data from the U.S. Census Bureau, the median age in the state of Texas is 35.1. In Lampasas County, the median age is 43.1, with 18.5% of the population being 65 years or older. In San Saba County, the median age is 42.4, with 23.1% being 65 years or older. According to Texas Health and Human Services (THHS), nearly 20% of all Texans will be 65 and older by the year 2050. THHS goes on to say, "This increase of the older adult population will likely mean an increase in the need for all types of health and human services, such as healthcare, home care, personal care and long-term care." Older populations tend to have multiple, essential medical needs. As Texans age, it is imperative that they have access to quality medical services in a timely manner.

In total, three healthcare entities responded to the broadband survey: Aveanna Healthcare in Lampasas County, and Baylor Scott & White Clinic and Everetts Pharmacy, both in San Saba County. Further research revealed additional clinics and healthcare entities in each community, such as AdventHealth Rollins Brook (Rollins Brook Community Hospital). None of these facilities offer acute trauma care or extensive specialty services such as sports medicine, neurology, or hematology, to name a few. In communities where 1 in 5, or even 1 in 4, residents are over the age of 65, readily accessible and advanced medical care is a necessity. Broadband makes access to reliable healthcare as simple as the click of a button. Patients can speak with specialists, order prescriptions, and receive medical advice and treatment from the comfort of their own homes. Furthermore, telehealth allows local clinics, pharmacies, and community institutions to opportunity to expand their service offerings. Clinics can partner with larger hospitals to offer remote care for local patients. A patient can arrive at the neighborhood clinic and meet virtually with a physician at a larger facility who offers advanced or specialty services. Using telehealth technology, rural clinics and community institutions can continue to play a vital role in providing medical assistance to residents.

Objective:

Leverage broadband and related technology advancements to increase access to reliable healthcare in Lampasas and San Saba Counties, ensuring adults over the age of 65 can access, adopt, and use telehealth services.

Actions:

Action 1 – Community leaders should meet with medical providers throughout each county to assess current telehealth offerings and discuss the importance of such medical practices. For clinics and offices that offer *no* telehealth services, the goal is to introduce such services. In contrast, clinics and offices that currently offer telehealth are encouraged to increase accessibility of services among at-risk populations. It is important to highlight that telehealth is more than a patient holding a cell phone to speak with a physician. Telehealth is a bridge to advanced care and varied medical specialties from a team of doctors across the state, all delivered in the comfort of one's home. It also augments services already being provided in Lampasas and San Saba Counties. Advanced screenings, specialized care, and improved quality of life are possible with telehealth. Clinics, hospitals, pharmacies, and local institutions all present opportunities for telehealth expansion. Armed with supportive data and this action plan, community leaders should meet with clinic directors to spur the introduction <u>and</u> expansion of telehealth services in Lampasas and San Saba Counties. Regional and statewide medical providers and partners are key to expanding telehealth programs in both communities.

What does telehealth look like on the local level? The good news is that other communities have already invented the wheel, so neither Lampasas nor San Saba County has to be the first. A prime example of using telehealth for preventive and primary care is in Milam County. Texas A&M Health and Science Center partnered with OnMed to install a medical pod at the Milam County Sheriff's Office. The pod gives residents real-time access to licensed clinicians, such as Certified Nursing Assistants and Nurse Practitioners. The pod is outfitted with equipment that can measure vitals and temperature. Residents can also get prescriptions through the pod. Another example of a rural community bridging the telehealth gap is Pottsboro, Texas, in Grayson County. The Pottsboro Library partnered with the University of North Texas Health Science Center to create a special telemedicine room at the local library. Residents can schedule an appointment though UNT Health Science Center and attend the appointment virtually using this private room. According to the library's website: "Starting January 2021, Pottsboro Area Library will offer a dedicated, private appointment space for community members to connect with healthcare providers from HSC. ... Our providers can help manage chronic conditions such as diabetes or high blood pressure, conduct wellness screenings and offer acute visits for issues such as allergies, sinus infection, and other illnesses and minor injuries."

Action 2 – As with any new initiative, the important next step is raising awareness about telehealth services in those populations that would benefit most. For example, older, disabled, immuno-compromised, and at-risk populations should receive targeted outreach to ensure they are aware of

new healthcare options in their community. Medical providers should send newsletters to their patients, local newspapers should run informational articles, county utilities should put the information in their monthly bills, and businesses should advertise with flyers. The promotion of new, helpful programs should be a communitywide effort.

Action 3- Accessing telemedicine services is only part of the equation. If an individual — regardless of age — cannot operate a laptop, cell phone, or tablet, the benefits of telehealth will be largely lost on that person. Additionally, if an individual does not see the relevance or benefits of telehealth services, that person is unlikely to take part in virtual medical visits. Stated simply, if someone does not have the skills or desire to take advantage of telehealth, that individual will not receive the benefits. Therefore, for this action item to be successful, residents should be educated on (1) the skills necessary to participate in telehealth and (2) the importance of virtual healthcare services.

Action 3A – As new telehealth services are introduced, community partners should host monthly workshops designed to increase patients' comfort and familiarity with virtual platforms. The workshops should focus on the skills necessary to navigate a telehealth visit as well as the benefits of a virtual medical check-up.

Workshop topics can include:
- Telehealth 101: What is it, and why is it for me
  - "Getting Started with Telemedicine" handout has been linked in the below resources
- Zoom 101: Digital skills for engaging online
- Virtual vs. In-Person: Knowing when to see a doctor in person
- Online Safety: Protect your personal information online
  - "5 Tips" handouts have been linked in the below resources

Community partners that can sponsor and host workshops:
- Local clinics and hospitals
- Veterinarian offices
- Dentist offices
- Pharmacies
- Public, community institutions such as schools, libraries
  - Lampasas: Lampasas ISD, Lometa ISD, Lampasas Public Library
  - San Saba: San Saba ISD, Cherokee ISD, Richland Springs ISD, Rylander Memorial Library

Responsible Parties:

Local units of government, community residents; community anchor institutions (schools, libraries, healthcare clinics)

Timeline:

Lampasas County and San Saba County should begin meeting with medical providers within two months of receiving this plan. Expanding telehealth services is a priority for residential health. This initiatve will likely require partnerships with regional, state, or private medical institutions, making timely conversations important.

Resources:

Texas Department of Health and Human Services: Aging
https://www.hhs.texas.gov/services/aging

Connected Nation Interactive Map
https://gis.connectednation.org/portal/apps/webappviewer/index.html?id=9e10c6120228435ca35c759fac3d805e

New telehealth station launching in Milam County
https://www.kbtx.com/2020/07/07/new-telehealth-station-launching-in-milam-county/

Telehealth station in Milam County first of its kind in Texas, bridging accessibility gap in rural areas
https://www.kxxv.com/brazos/telehealth-station-in-milam-county-first-of-its-kind-in-texas-bridging-accessibility-gap-in-rural-areas

Pottsboro Library teaming with UNT medical school for telemedicine program
https://www.kxii.com/2020/12/23/pottsboro-library-teaming-with-unt-medical-school-for-telemedicine-program/

Pottsboro Area Library: Check out telehealth at your local library!
https://pottsborolibrary.com/health/

US Census: San Saba County
https://data.census.gov/cedsci/profile?g=0500000US48411

US Census: Lampasas County
https://data.census.gov/cedsci/profile?g=0500000US48281

Getting Started with Telemedicine
https://connectednation.org/wp-content/uploads/2020/11/Getting-Started-with-Telemedicine.pdf

Common Terms Associated with Telehealth and Telemedicine
https://connectednation.org/wp-content/uploads/2020/11/Common-Terms-Associated-with-Telehealth-and-Telemedicine.pdf

5 Tips for Securing your Mobile Device for Telehealth
https://connectednation.org/wp-content/uploads/2020/11/Tips-for-Securing-your-Mobile_updated.pdf

5 Tips for Securing your Desktop for Telehealth
https://connectednation.org/wp-content/uploads/2020/11/5-tips-desktop_updated.pdf

Goal 2: Increase online engagement in Lampasas and San Saba Counties through free digital literacy and communication workshops.

In 2021, Lampasas and San Saba Counties partnered with Connected Nation Texas to better understand the broadband landscape of their communities. In Lampasas County, survey results reveal that, among other community sectors, 81% of residents subscribe to broadband services, 73% of agriculture producers subscribe, and 96% of businesses subscribe. In San Saba County, 89% of residents subscribe to broadband services, and 100% of agriculture producers and businesses subscribe. While these are strong subscription rates, broadband adoption is only part of the equation. It's important to understand how a community is using the internet to ensure they are making the most of it. Ultimately, if used correctly, broadband should contribute to quality of life among all community residents.

Looking specifically at digital communication trends, survey results reveal that businesses and community institutions are leaving certain tools and resources untapped.

- Lampasas County: 59% of businesses report never using Instagram or LinkedIn. 27% of businesses report never using video conferencing, and 22% say they never update their website. In the public safety sector, 50% report updating Twitter less than once a month, while the other 50% say they never update Twitter. 50% said they email daily, while the other half report using email less than once a week.
- San Saba County: 100% of businesses report never using Instagram, while another 67% do not use LinkedIn. 33% of businesses report never using videoconferencing, or only updating their website monthly. In the public safety sector, digital communication is slim to none. 50% of respondents indicated they use emails and text daily, and videoconferencing and Facebook

monthly. All other metrics, such as website updates, Twitter, Instagram, and LinkedIn were listed as "never."

Objective:

Plan and host community workshops designed to increase broadband adoption and usage among community residents by highlighting the quality of life offered by broadband use.

Actions:

Action 1 – Lampasas and San Saba County leaders should identify key advocates in each of the following areas who can educate the general community about the short- and long-term benefits of broadband adoption and use. Industry leaders can speak to the importance of broadband in their line of work, as well as discuss the myriad uses. The more that residents, businesses, and community institutions understand the positive benefits of broadband, the greater the likelihood of adoption and use.

Highlight economic and practical advantages of **telework**: According to survey results, 68% of employed survey respondents telework in Lampasas County, while 61% do so in San Saba County. In Lampasas County, 26% of that group said they telework every day, with an additional 30% teleworking multiple days per week. In San Saba County, 36% indicated they telework multiple days per week, and an additional 9% said they telework once per week. By teleworking, an employee can reside in Lampasas or San Saba County but be employed by an entity in Dallas, Houston, Lubbock, or another state entirely. Telework offers greater flexibility in work schedules and expands the number of job opportunities for rural Texans, while also increasing the number of potential applicants for employers. The key to telework is adequate digital skills to engage online, and a reliable internet connection.

Showcase physical health and time-saving benefits of **telehealth** services: The future of medicine is online. For communities that lack large hospitals, general practitioners, surgical attendees, and medical specialists, telehealth is a natural substitute. Online medical services allow residents to speak with top-of-the-line doctors, dentists, surgeons, dermatologists, veterinarians, and medical specialists through the click of a button. Online services are not only important in times of emergency, but they allow residents flexibility when meeting with medical professionals for regular care. In both counties, medical facilities are already using videoconferencing services on a daily to weekly basis. Telehealth is a natural continuation of medical care and can be especially important in rural communities where access to life-saving treatment is often multiple cities away.

Promote importance of emergency preparedness in **public safety** sector (911, interoperable networks): With reliable broadband comes increased public safety capabilities for EMS and police, fire departments. Not only can first responders communicate reliably with each other using mobile

devices in the field, but they can communicate with other agencies at the local, state, and federal level. With a state prison in San Saba, it is paramount for first responders and emergency personnel to

have full broadband coverage in case of emergency. Additionally, local sheriff's departments, fire departments, and jails will all benefit from reliable connectivity, both fixed and mobile.

Demonstrate scholastic resources and achievements available through **online learning** (K–12, higher education): Digital platforms connect teachers, administrators, and students alike with new and innovative curriculum and learning techniques. With reliable broadband throughout the county, students can connect to online, educational platforms from the school building or their kitchen table.

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. Nearly 3 out of 5 Lampasas businesses (59%) and 100% of San Saba businesses currently have websites, according to survey feedback. With an active and invested Chamber of Commerce and EDC, Lampasas and San Saba County businesses can access local resources designed to improve their online presence.

Community Advocates to Consider:
- Telework → Lampasas County Chamber of Commerce and Visitor Center, Lampasas EDC, San Saba Chamber of Commerce, San Saba EDC
- Telehealth → Aveanna Healthcare, Baylor Scott & White Clinic, Advent Health Rollins Brook, Local Pharmacies, Jail Infirmary
- Public Safety → Emergency Management Staff, Lampasas County Sheriff's Office, San Saba County Sheriff's Office, Lampasas Fire Department, San Saba County VFDs, Lampasas Police Department, San Saba Police Department,
- Online Learning → Superintendents and school principals (Lampasas ISD, Lometa ISD, San Saba ISD, Cherokee ISD, Richland Springs ISD)
- E-Commerce → Lampasas County Chamber of Commerce and Visitor Center, Lampasas EDC, San Saba Chamber of Commerce, San Saba EDC

Action 2 – Once the industry-specific leaders have been identified, the community should develop and host free workshops. Ultimately, the goal is for residents and community institutions (businesses, police departments, clinics, schools, etc.) to increase their online presence and general digital communication skills. Workshop classes should be based on the topics in Action 1.

Workshop curriculum should be curated using material created by the counties and publicly available programs, such as Digital Learn and Grow with Google (resources linked below). Classes should be offered at local facilities, such as the school gym or community center. The intention of the workshops

is for residents to learn more about broadband and how it relates to their personal and professional life. If successful, residents will be equipped with new ways to use the internet and smart devices.

Workshop topics can include:
- Navigating social media
- Online safety tips and tricks hosted by the local IT Director or Police Department
- How to do a telehealth visit
- Dos and Don'ts of telework
- "Network and Webs" where participants meet local business owners and create their own websites

Action 2A – Ask local community members, stakeholders, and businesses to lead the workshops based on their expertise and skillsets. It's important for the community to feel this is a collective effort and an open forum for discussion and questions. The more people who share their knowledge on a topic, the more others can learn.

Action 2B – For broadband to be accessible to the entire community, it needs to be presented in a way that all residents can understand. According to the U.S. Census Bureau, 19% of the Lampasas County population is Hispanic or Latino and 11.4% of residents speak a language other than English at home. In San Saba County, 30.5% of the population is Hispanic or Latino and 23% of residents speak a language other than English at home. Therefore, all materials pertaining to broadband workshops and digital skills should be available in English and Spanish.

Action 3 – 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 should become commonplace in Lampasas and San Saba Counties, with elected officials and local stakeholders openly highlighting the importance of internet access, adoption, and usage.

Responsible Parties:

Residents; local units of government; community organizations; businesses; internet service providers

Timeline:

Community workshops should be available no later than the end of Q2 2022. Curriculum should be reviewed and updated every 3-4 months.

RECOMMENDATIONS

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/

US Census: San Saba County
https://data.census.gov/cedsci/profile?g=0500000US48411

US Census: Lampasas County
https://data.census.gov/cedsci/profile?g=0500000US48281

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/

Grow with Google
https://grow.google/

GCFLearnFree.org® program
GCFLEanfree.org

Goal 3: Increase broadband availability and speeds in Lampasas and San Saba Counties through strategic partnerships.

To understand a community's broadband, 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 Lampasas and San Saba Counties, it is important to review maps that indicate broadband availability. According to CN Texas broadband data published in July 2021, 95% of homes in Lampasas County are served at the 25/3 Mbps threshold. This leaves 365 homes unserved. In San Saba County, 76.8% of homes are served at the 25/3 Mbps threshold, with 523 homes unserved.

Looking at the survey results for Lampasas and San Saba Counties, 68% of respondents in Lampasas County and 61% in San Saba County indicated they telework in some capacity. Teleworkers need reliable and fast internet connections to fulfill professional obligations. Beyond telework, reliable and fast internet is essential to connectivity and functionality on a daily basis for residents in these communities. Because improving broadband speeds and connectivity will come at a cost, local leaders should pursue partnerships with community organizations, internet service providers, and financial supporters to help make the enhancements more affordable.

Objective:

Promote greater broadband access, adoption, and usage in Lampasas and San Saba Counties through broadband infrastructure projects (improvements and expansions).

Actions:

Action 1 – To effectively understand the broadband funding landscape in Lampasas and San Saba Counties, community leaders should meet with internet service providers (ISPs) that 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 also meet with local 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).

Lampasas County:

RDOF Phase I Auction Winning Bids: Nextlink (635 locations, $489,127.30), LTD Broadband (6 locations, $9,697.00), NexTier Consortium (9 locations, $12,900.00), Resound Networks (686 locations, $218,872.80)
CAF Phase II Auction Winning Bids: Nextlink (644 locations, $1,435,876.80)
ISPs: AMA TechTel Communications, AT&T Southwest, Central Texas Tel Coop, CenturyLink, Charter Communications, Nextlink Residential, Rise Broadband, Suddenlink, Texas Broadband (R5), Western Broadband

San Saba County:

ISPs: Central Texas Tel Coop, Hill Country Telephone Coop, Nextlink Residential, Texas Broadband (R5)

Action 2 –   During meetings with providers, community leaders should discuss the role the county — or cities within each county — could play (through financial backing or strategic partnership) to speed up a project's timeline, ensure its completion, or start a new project altogether. Ultimately, Lampasas and San Saba Counties should play a strategic role in ongoing or planned projects that will widely benefit the most residents.

Both counties have been allocated Coronavirus State and Local Fiscal Recovery Funds. Lampasas County has been allocated $4,162,138, and San Saba County has been allocated $1,176,113. Should Lampasas or San Saba County choose to spend any of these federal funds on broadband, it is important that county officials are prepared, informed, and readily equipped to begin working with reliable partners.

Action 3 – In addition to speaking with providers about planned and ongoing projects, an important piece of the puzzle is understanding infrastructure. Ultimately, infrastructure is what facilitates a broadband connection. As Lampasas and San Saba Counties seek to bring better connectivity to residents, it's important to know what providers serve the community, and where their infrastructure is located. Accordingly, Lampasas and San Saba Counties should consider conducting a field validation study. This would entail mapping infrastructure assets and provider service boundaries. Such work would allow the community to accurately assess and map known broadband speeds and delivery platforms.

Action 4 – Both Lampasas and San Saba Counties should establish and maintain relationships with regional organizations and elected officials. Additionally, the counties should engage in regional broadband planning efforts, with the express intent of improving broadband access, adoption, and usage among residents and surrounding communities. Not only will residents benefit from broadband improvement inside county lines, they will reap the benefit of broadband advancements in surrounding communities economically, technologically, and socially.

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

- Other "Connected Communities:" Burnet, Blanco, Llano, Bastrop, Milam
  - Communities that have also conducted broadband surveys and planning efforts
- Elected Officials (districts overlap county lines)
  - U.S. Congressman Roger Williams, U.S. Congressman August Pfluger
  - State Rep. Brad Buckingham, State Rep. Shelby Slawson, State Sen. Dawn Buckingham
- Chambers of Commerce: Lampasas and San Saba
- EDC: Lampasas and San Saba

Action 5 - As community leaders and broadband liaisons from Lampasas and San Saba Counties meet with broadband providers to discuss federal grant monies and community infrastructure, they should consider the value of public-private partnerships (PPPs). PPPs 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 network deployment, as well as committed anchor tenants. Private-sector partners bring network-building and operations experience. Elements to consider include competition, enhanced service, risk avoidance, redundancy, etc. The community should consider all legal obligations when evaluating partnership negotiations.

Examples of PPPs
- Model 1: Private Investment, Public Facilitation — Make available public assets such as 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 current assets — and funding new assets — to attract private investment, evaluate building new fiber assets to businesses and/or homes for leasing to private ISPs.

Action 6 – Following meetings with providers, the broadband council should identify state and federal grant programs that could further the community's broadband agenda. Broadband grants focus not only on infrastructure expansion and improvement but on device acquisition, digital literacy, improving connectivity in community organizations, and other related areas. In a time when broadband is at the forefront of state and federal legislative conversation, it is important for the broadband council to make the most of available funds. Grant lists have been linked in the below resources.

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 Lampasas and San Saba Counties do not have to allocate funding or spend federal dollars within that same three months, the communities should outline the scope of broadband infrastructure projects (ongoing and planned) within that timeline.

Resources:

Lampasas County Broadband Map (CN Texas)
https://cn-maps.hatfield.marketing/US/TX/v4/tx_lampasas-county_25x3.pdf

San Saba County Broadband Map (CN Texas)
https://cn-maps.hatfield.marketing/US/TX/v4/tx_san-saba-county_25x3.pdf

Glossary of Terms (CN Texas)
https://connectednation.org/glossary-of-terms/

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

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