May 2022

Childress County, Texas
Executive Summary

Connected
A CONNECTED NATION Initiative

Addressing Your Community's Unique Needs

CONNECTED NATION

connectednation.org

Overview

Childress County Overview

T oday, technology plays a pivotal role in how businesses operate, how institutions provide services, and where consumers choose to live, work, and play. A community's success has become dependent on how broadly and deeply it adopts technology resources, which include access to reliable high-speed networks; the digital literacy of residents; and the use of online resources for local business, government, and leisure.

As such, the Childress County Broadband Committee partnered with the Connected Nation Texas (CN Texas) Connected Community Engagement Program to conduct a study designed to determine the availability of broadband infrastructure; how county residents are adopting and using broadband services; and what action steps would have the greatest impact toward improving broadband access, adoption, and usage across every local sector.

Between September 2021 and January 2022, Childress County conducted a comprehensive survey of broadband technology access and adoption across the community that collected responses from 232 households. CN Texas staff also met with community officials to determine community needs and gather qualitative data for consideration in the study.

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

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

CHILDRESS COUNTY, TEXAS
QUICK FACTS
Population
6,664
Households
2,308
Median Household Income
$43,564
Poverty Rate
14.4%
Adults with a Bachelor's Degree or Higher
18.8%
Hispanic or Latino
29.1%
Households with Broadband Access[1]
94.93%

Source: https://data.census.gov/cedsci/profile?g=0500000US48075
[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 and last updated in January 2022. https://connectednation.org/texas/planning/

62.5% of households in Childress County report subscribing to fixed internet service

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

93.73% of households in Childress County have access to internet service at speeds needed to run many modern applications (100 Mbps downstream and 10 Mbps upstream). Statewide, **93.55%** of households have internet access at these speeds.

Nearly one-half of employed survey respondents in Childress County (**47%**) report teleworking in some capacity. Of those, **17%** telework every day, and an additional **27%** telework several days per week.

18.9% of households and 36.4% of businesses reported that they were dissatisfied with their current internet service. The top reasons for dissatisfaction were slow speeds, high prices, and unreliable connections.

Nearly 3 out of 4 households (**74.6%**) said they would like to have improved or additional options for home internet service.

Infrastructure
Results

Childress County Infrastructure

According to CN Texas broadband data initially released in January 2022, followed by additional public feedback, field validation, and provider input, most (94.93%) of Childress County households have access to broadband of at least 25/3 Mbps, the current definition of broadband set forth by the Federal Communications Commission (FCC). Broadband service in Childress County is distributed throughout the county.

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

BROADBAND INFRASTRUCTURE QUICK FACTS

Unserved Households (25/3 Mbps) **118**	
Households Served (10/1 Mbps) **96.14%**	
Households Served (25/3 Mbps) **94.93%**	
Households Served (50/5 Mbps) **94.42%**	
Households Served (100/10 Mbps) **93.73%**	

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

| PROVIDER	TECHNOLOGY	MAXIMUM DOWNLOAD SPEED (Mbps)	MAXIMUM UPLOAD SPEED (Mbps)
AT&T Southwest	DSL	25	2
	Fixed Wireless	10	1
Resound Networks	Fixed Wireless	100	10
Santa Rosa Telephone Cooperative Inc.	Fiber	1000	1000
	DSL	50	10
Suddenlink Communications	Cable	400	40
TGM Pinnacle Network Solutions	Fixed Wireless	50	5
T–Mobile	Fixed Wireless	25	3
Transworld Network Corp.	Fixed Wireless	15	5
Valor Telecommunications of Texas LP	DSL	200	200

Childress County Infrastructure

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

The first step in understanding the status of broadband infrastructure in Childress County and statewide 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 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 alone, a format that tends to overstate the service territory.

To access the map as a PDF, click here.
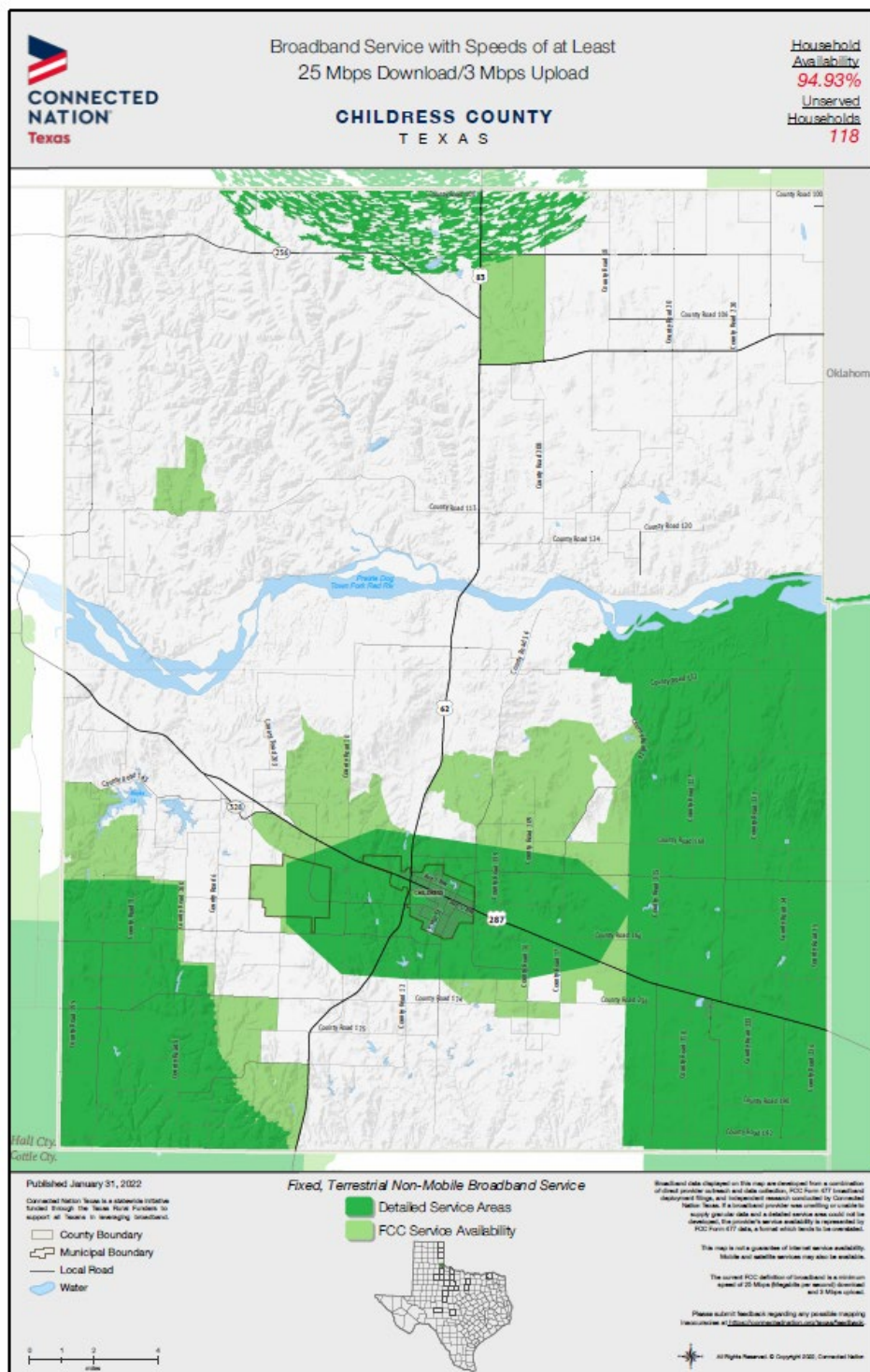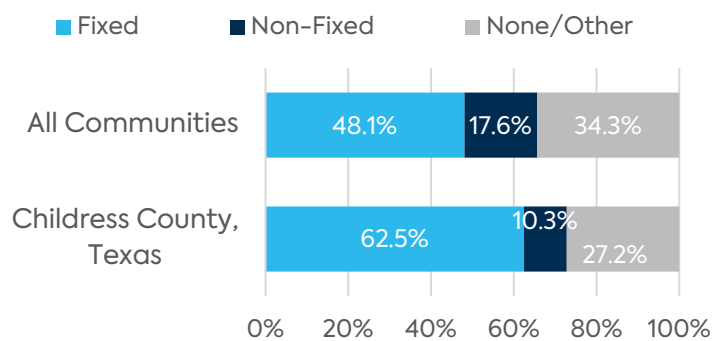

Broadband data published by CN Texas in 2022: https://connectednation.org/texas/mapping-analysis/

Household Survey Results

Household Survey Results

The following section provides an overview of results from a broadband survey conducted in Childress County between September 2021 and January 2022. Altogether, CN Texas received 232 completed surveys from households across the county; respondents provided insights into their internet connectivity or lack thereof. Data from Childress County are compared to data from hundreds of other rural Connected communities that participated in the program across Michigan, Ohio, Texas, and Pennsylvania to benchmark and identify areas for improvement.
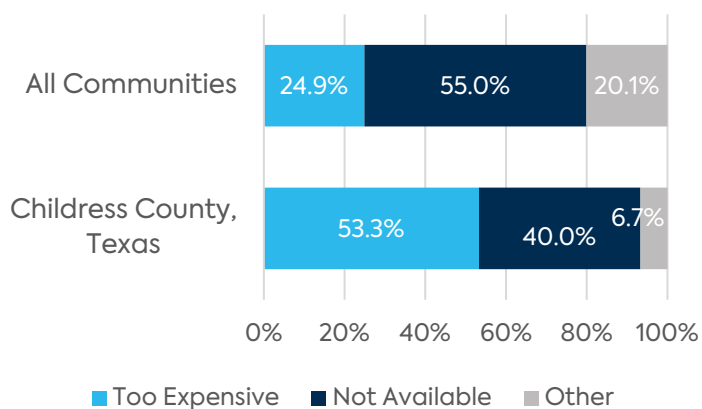
Home Broadband Adoption

Legend: ■ Fixed   ■ Non-Fixed   ■ None/Other

	Fixed	Non-Fixed	None/Other
All Communities	48.1%	17.6%	34.3%
Childress County, Texas	62.5%	10.3%	27.2%

(Axis: 0% 20% 40% 60% 80% 100%)

ADOPTION

In Childress County, 62.5% of households that took the survey subscribe to fixed broadband service delivered via a cable, DSL, fiber, or fixed wireless technology, while 10.3% indicate they have internet service delivered via dial-up, satellite, or a mobile wireless service. This leaves 27% of survey respondents without internet access at home, are unsure of their current connection, or provided no answer.

Primary Barrier

	Too Expensive	Not Available	Other
All Communities	24.9%	55.0%	20.1%
Childress County, Texas	53.3%	40.0%	6.7%

(Axis: 0% 20% 40% 60% 80% 100%)

Legend: ■ Too Expensive   ■ Not Available   ■ Other

Among those without a home internet connection, 53.3% said they did not have broadband because it was too expensive. An additional 40% say broadband is not available. Like many other communities, cost is a primary barrier to home broadband adoption.
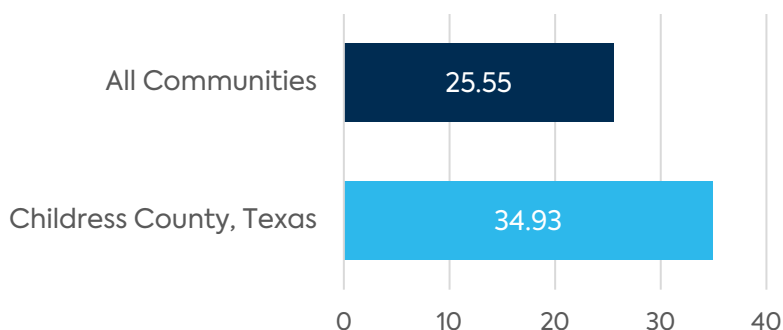
CONNECTION DETAILS

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 about $68.06 per month. This is lower than the monthly cost paid in other communities ($77.97). Two percent of the median household income in Childress County is $71.97 per month.

Average Monthly Cost

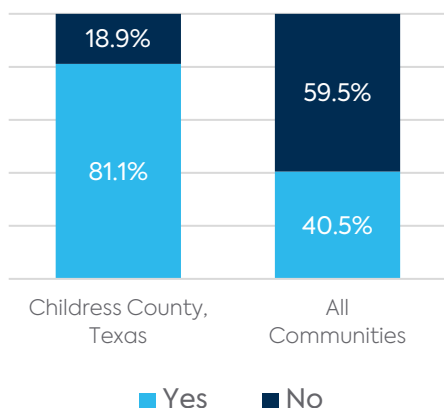|	
All Communities	$77.97
Childress County, Texas	$68.06
Childress County 2% Median Household Income	$71.97

$0 $25 $50 $75 $100
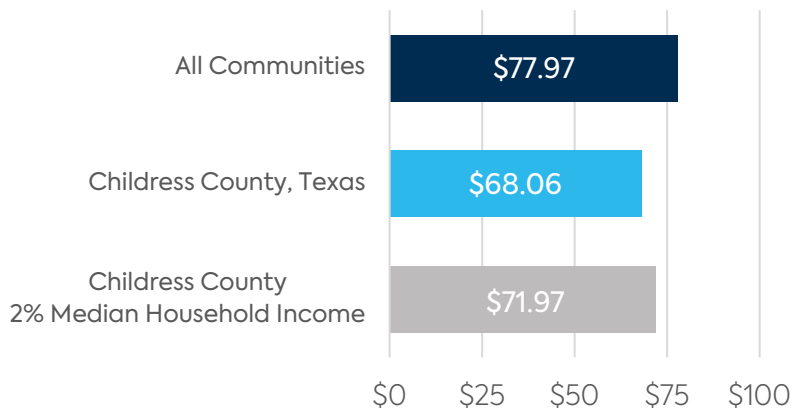
The FCC currently defines broadband as an internet connection with a download speed of at least 25 Mbps and upload speed of at least 3 Mbps. On average, respondents indicate that their connection's download speed is 34.93 Mbps, which is above the minimum defined speed.
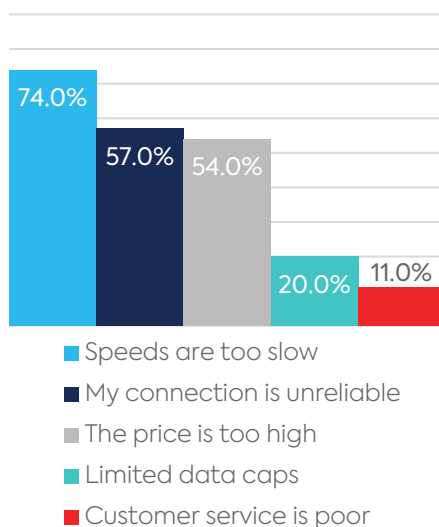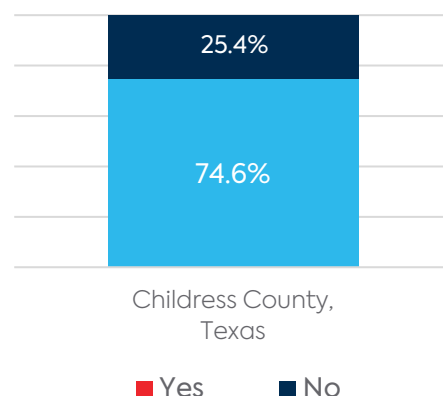
Average Speeds (Mbps)

All Communities	25.55
Childress County, Texas	34.93

0 10 20 30 40

Does Your Internet Meet Your Needs?

- Childress County, Texas: No 18.9%, Yes 81.1%
- All Communities: No 59.5%, Yes 40.5%

Legend: ■ Yes ■ No

Why Doesn't Your Internet Meet Your Needs?

- 74.0% Speeds are too slow
- 57.0% My connection is unreliable
- 54.0% The price is too high
- 20.0% Limited data caps
- 11.0% Customer service is poor

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

Are You Interested in More Choices at Home?

- Childress County, Texas: No 25.4%, Yes 74.6%

Legend: ■ Yes ■ No

Household Survey Results

Competition provides residents with choices for service, allowing households the ability to switch providers if their current service does not meet their needs. More than 4 out of 5 responding households (81.1%) indicate that their internet connection meets their needs. This is a much higher rate of satisfaction than among households in other communities (40.5%).

When asked why their connection does not meet their needs, 74% of dissatisfied households indicate that their speed is too slow; 54% say the price is too high, and 57% indicate that the connection is unreliable. Respondents could choose more than one reason for dissatisfaction.

Finally, one-quarter of all respondents (25.4%) indicate that they are interested in additional internet choices for their home.

MOBILE CONNECTIVITY

Almost 2 out of 3 households (64.1%) reported that they subscribe to mobile internet service that they access via a smartphone or similar mobile device. This is lower than what is reported in other Connected communities (71.0%).

Among these mobile-connected households, 22.9% report that they either rely on those mobile connections as their primary source of home internet connectivity or use their mobile service to connect other household devices to the internet.

Households Subscribing to Mobile Internet Service

	Childress County, Texas	All Communities
No	35.9%	29.0%
Yes	64.1%	71.0%

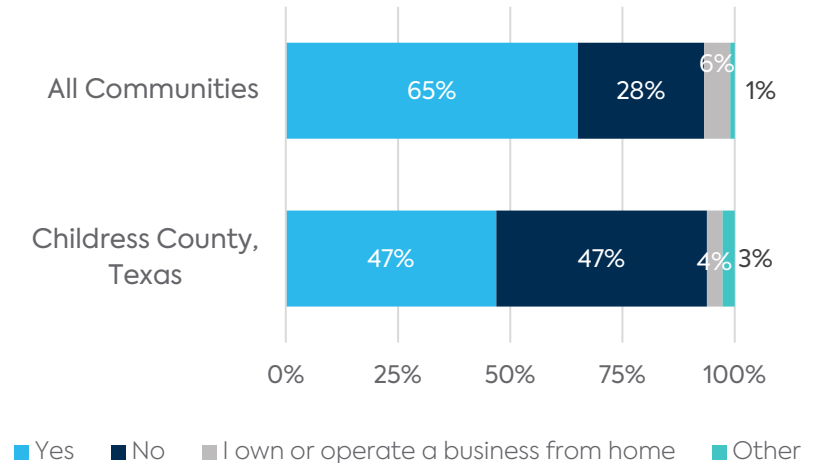■ Yes ■ No
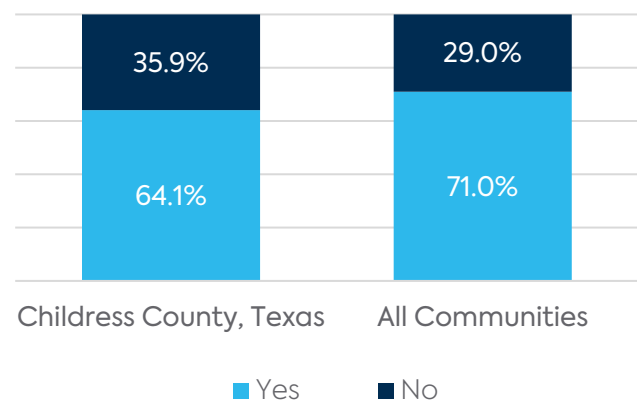
Household Survey Results

TELEWORK

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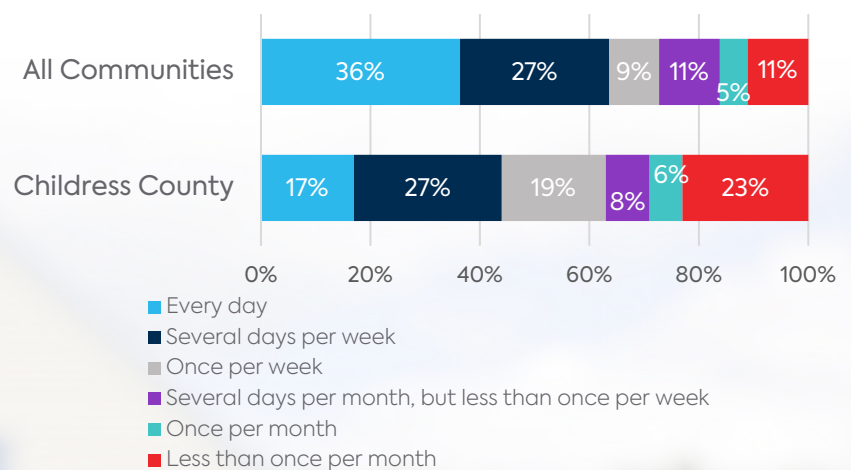
Teleworking is quickly becoming a critical part of growing a local economy because it represents an opportunity to attract and retain employees even when employees are not located in the same community as their employers. However, this only works if those employees have access to advanced broadband infrastructure.

Approximately 47% of employed respondents in Childress County telework in some capacity. Almost 1 in 5 (17% of this group) telework every day.

Do You Currently Telework?

	Yes	No	I own or operate a business from home	Other
All Communities	65%	28%	6%	1%
Childress County, Texas	47%	47%	4%	3%

How Frequently Do You Telework?

	Every day	Several days per week	Once per week	Several days per month, but less than once per week	Once per month	Less than once per month
All Communities	36%	27%	9%	11%	5%	11%
Childress County	17%	27%	19%	8%	6%	23%

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

Goal 1: Implement strategies that ensure broadband needs are being met in Childress County for residents and local organizations by improving internet connectivity and access to technology.

According to CN Texas January 2022 data, 93.73% of Childress County households have access to speeds of 100 Mbps download and 10 Mbps upload, and 94.93% of households have access to internet at the FCC's minimum definition of broadband, 25 Mbps download and 3 Mbps upload. This leaves 118 Childress County households unserved at the minimum speed of broadband, and 146 households that have less than 100/10 speed. The primary areas that are unserved are in rural areas outside of the Childress city limits. Some of these areas are slated for internet expansion by internet service providers (ISPs) who have already won bids to receive federal funds for deployment in those areas (see resource section for more information on funding programs). Increasing deployment beyond the city limits, as well as areas already receiving federal funds for expansion, will likely require creative problem solving. The low population density in those areas makes infrastructure investment a difficult business proposition for providers. By developing good relationships with ISPs, keeping open communication, and understanding the barriers and obstacles they face; helping to identify specific areas of opportunity for expansion; and investing in adoption and literacy programs for residents, Childress County can create an environment where providers are more likely to want to do business, and where public private partnerships can bring better outcomes for the community.

OBJECTIVE:
Collaborate with service providers to ensure that remaining unserved households are served — even where creative solutions may be required.

Action 1 – Maintain Childress County's emphasis on broadband solutions by creating a permanent Broadband Committee to advise the Commissioners Court on broadband access, adoption and use. During our CN community engagement, we gathered representatives from multiple sectors of the community to be advocates for improving connectivity. There is a lot going on in broadband right now. Having a dedicated group of citizens to stay on top of broadband news, policy updates, and funding opportunities is key for Childress County to stay informed.

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

- **Health Care:** Local physicians or hospital staff
- **Government:** County Judge, County Commissioners, Mayor, City Council, County IT Director
- **Education (K–12):** Superintendents, school IT directors

- **Education (Higher-Education):** Universities, community colleges, trade schools or workforce training
- **Public Safety:** County Sheriff's Office, Police Department, Fire and Rescue and surrounding Volunteer Fire Departments, Emergency Medical Services
- **Agriculture:** County Agriculture Agent, leading ag producers
- **Business:** Chamber of Commerce, economic development agency
- **Community At-Large:** A resident who is interested in broadband

RESPONSIBLE PARTIES:
- Community and business leaders
- County Judge
- County Commissioners
- Current Community Broadband Team:
    - Kim Jones, Childress County Judge
    - Carl Taylor, Childress ISD Superintendent
    - Ignacio Rodriguez, Childress ISD Technology Director
    - Holly Holcomb, Childress Regional Medical Center CEO
    - John Galligan, Childress Regional Medical Center Systems Security Officer
    - Kathy C. Williams, USDA County Executive Director
    - Summer Trosper, Childress Public Library Director
    - Mike Pigg, Childress County Sheriff

TIMELINE:
Childress County should transition its Community Broadband Team to a County Broadband Advisory Committee immediately.

Action 2 – <u>The County Broadband Advisory Committee should host meetings with ISPs working in the area and maintain open communications, especially with providers who have received federal funding for deployment in Childress County.</u> This meeting can help the Broadband Committee better understand providers' obstacles to expanded deployment in the region and help area providers better understand community goals and concerns.

Regular check-ins with providers are important to stay abreast of provider's construction and expansion progress or changes in plans, and to identify any obstacles or challenges they are facing. They are also good opportunities for communities to communicate their goals and objectives. The Broadband Committee should have specific concerns or geographical locations in mind to discuss during these meetings. A good starting point is checking the status of construction plans related to federal funds.

Childress County could be a desirable market for expansion. It has a high adoption rate, as only 6.5% of survey respondents do not subscribe to internet of some kind. Survey results indicated that 81.1% of Childress County households are satisfied with their internet service. This is a much higher level of satisfaction than other Connected communities. The primary reasons for dissatisfaction among households are slow speeds (74%), unreliable connections (70%), and high prices (54%). Despite high satisfaction levels, 74.6% of Childress County households indicate they would like to have additional options for home internet service. This is important because it shows ISPs that there is enough interest to expand services. Nearly two-thirds of Childress County businesses (63.6%) say their internet service meets their needs, while 36.4% say it does not. Dissatisfied business owners cite connection unreliability and slow speeds as their primary complaints.

The committee should maintain open communication with ISPs that have received federal funds to ensure the promised Connect America Fund (CAF) Phase II and Rural Digital Opportunity Fund (RDOF) expansion plans are going forward. The CAF winner for Childress County is AMG Technology Investment Group LLC (doing business as Nextlink), receiving $304,018 in federal dollars with plans to serve 45 locations. Childress County's RDOF winner is Resound Networks LLC (doing business as Resound Networks), which is receiving $164,363 with plans to serve 211 locations. The committee should have a clear understanding of where broadband build-out is planned, when completion is expected, what technology and speeds will be available, and what areas will be left out, so that it can focus efforts and maintain momentum.

Additional providers serving Childress County are: AT&T Southwest (www.att.com), Santa Rosa Telephone Cooperative Inc. (www.srcacess.net), Suddenlink Communications (www.suddenlink.com) TGM Pinnacle Network Solutions (www.pinnaclenetworksolutions.com), T-Mobile USA Inc. (www.twncomm.com), and Valor Telecommunications of Texas LLC (www.windstream.com). Maintaining good relations with area service providers is essential to understanding obstacles and opportunities, and to address broadband deployment shortcomings. This understanding can encourage creative problem solving, which can lead to finding solutions through public-private partnerships.

Public-private partnerships are arrangements between public entities, such as local governments, and private entities, such as service providers, to achieve a common goal. They are often, but not always, funding arrangements. Additionally, the county should strive to be an environment that is amenable to business. This means providing easy-to-use websites that allow providers and vendors quick access to relevant information, as well as fostering a business environment that rewards open communication and timely resolution of concerns.

Action 3 – <u>The County Broadband Advisory Committee should stay abreast of policy and funding news and explore funding opportunities to assist in broadband deployment.</u> An unprecedented amount of funds will soon be available to improve broadband access, adoption, and usage. The Childress County broadband committee should stay abreast of policy updates and funding opportunities. The Infrastructure Investment and Jobs Act of 2021 allocated $65 billion to states for

internet expansion. Much of Texas' minimum $100 million will go through grant programs created by the Texas Broadband Development Office (BDO). The BDO is currently gathering data to create a Texas Broadband Plan, an important first step to ensure the state gets the most infrastructure funds. The BDO will be responsible for coordination of data collection and creating eligibility of grants, but at the time of the writing of this report, it is unclear when much of these funds will be available. A list of current broadband funding can be found on the Connected Nation website: https://connectednation.org/current-broadband-funding. The Broadband Committee should stay on top of developments at the state and federal level to identify applicable opportunities and understand grant requirements.

In the meantime, there are funds available for broadband right now. The American Rescue Plan Act (ARPA) of 2021 created the Coronavirus State Fiscal Recovery Fund, which allocated funds to every county in the state of Texas to mitigate the economic effects of the coronavirus pandemic. Childress County received $1,419,105. Allowable uses of these funds are water, sewer, and broadband infrastructure improvements. The Final Rule, released by the U.S. Treasury in January 2022, gives even more leeway to communities to use their funds for broadband if a need is established. More information can be found here: https://home.treasury.gov/system/files/136/SLFRF-Final-Rule.pdf and in the resources. Allowable uses of ARPA funds for broadband include infrastructure, public Wi-Fi, and devices.

RESPONSIBLE PARTIES:
- County Judge
- County Commissioners
- County Broadband Advisory Committee
- Area internet service providers

Action 4 – The County Broadband Advisory Committee should pursue regional networking opportunities with adjacent communities that are also exploring broadband solutions. Neighboring counties, Hardeman and Foard, are undergoing broadband assessments and community engagements at the same time as Childress County. The County Broadband Advisory Committee should reach out to their counterparts in the surrounding counties to build relationships, compare notes, and share resources. In total, 24 counties in the region will be building broadband committees and assessing broadband needs with the Connected Nation Community Engagement Program. This is an excellent opportunity for community leaders to come together to improve broadband regionally. Your Broadband Solutions Manager (BSM) can help with making contacts. Committee members should also plan to attend Connected Nation networking events.

TIMELINE:
The County Broadband Advisory Committee should begin meeting and analyzing CN data, and schedule meetings with internet service providers within the next three months. Your BSM can assist you with scheduling initial meetings with ISPs working in your area.

RESOURCES:

BROADBAND FUNDING RESOURCES

- CAF Phase II — The Connect America Fund (CAF) Phase II is a federal funding program for service providers that auctioned off census blocks for internet deployment in 2018. 103 bidders won $1.49 billion over 10 years to provide fixed broadband and voice services to over 700,000 locations in 45 states. To be eligible, a census block could not have been already served with voice and broadband of at least 10/1 Mbps.

  Winning providers have six years to fulfill deployment:
  - 40% of the required number of locations in a state by the end of third year of support
  - An additional 20% in each subsequent year
  - 100% by the end of the sixth year of support
  - The exact deployment schedule is determined by the carriers themselves, not the FCC. (Source: https://www.fcc.gov/auction/903)

  Childress County CAF Winner: AMG Technology Investment Group LLC (Nextlink), 95 Parker Oaks Lane, Hudson Oaks, Texas 76087, Tel. 855-NXT-LINK (698-5465) https://nextlinkinternet.com/

- RDOF Phase I — The Rural Digital Opportunity Fund (RDOF) Phase I is a federal funding program for service providers that auctioned off census blocks for internet deployment in 2020. 180 bidders won $9.2 billion over 10 years to provide broadband to 5.2 million locations in 49 states and the Commonwealth of the Northern Mariana Islands. To be eligible, a census block could not have had service of at least 25/3 Mbps (based on Form 477 data), or have a provider already committed to providing service via the CAF II auction, the USDA ReConnect program, or state-specific programs.

  Winning providers have eight years to fulfill deployment:
  - 40% of the required number of locations in a state must be served by the end of third year of support, and an additional 20% by the end of the fourth and fifth years of support
  - By the end of year six, revised location totals will be announced
  - If there are fewer locations than originally estimated by the cost model, support recipients must serve the revised number of locations by end of year six. If there are more locations than originally estimated by the cost model, support recipients must serve the cost model–estimated number of locations by the end of year six and must serve the remainder of locations by the end of year eight
  - All support recipients must serve locations newly built after the revised location total, but before the end of year eight upon reasonable request
  - The exact deployment schedule is determined by the carriers themselves, not the FCC. (Source: https://www.fcc.gov/auction/904)

Childress RDOF Winner: Resound Networks, LLC, 100 N. Cuyler St., Pampa, Texas 79065, Tel. 1-800-806-1719, info@resoundnetworks.com, https://resoundnetworks.com/

- American Rescue Plan, Coronavirus State and Local Fiscal Recovery Funds, County Allocation
  https://home.treasury.gov/system/files/136/fiscalrecoveryfunds_countyfunding_2021.05.10-1a-508A.pdf
- American Rescue Plan, Coronavirus State and Local Fiscal Recovery Funds, Final Rule
  https://home.treasury.gov/policy-issues/coronavirus/assistance-for-state-local-and-tribal-governments/state-and-local-fiscal-recovery-funds
  https://home.treasury.gov/system/files/136/SLFRF-Final-Rule.pdf
- Current Broadband Funding
  https://connectednation.org/current-broadband-funding
- BroadbandUSA: Federal Funding Guide
  https://broadbandusa.ntia.doc.gov/resources/federal
- Guide to Federal Broadband Funding Opportunities in the U.S.
  https://www.internetsociety.org/resources/doc/2021/guide-to-broadband-funding-opportunities-in-us/

INTERNET SERVICE PROVIDER RESOURCES:
- Texas Broadband Providers by County
  https://connectednation.org/texas/planning/

BROADBAND READINESS RESOURCES:
- Smart Cities Readiness Guide
  https://rg.smartcitiescouncil.com/
- Becoming Broadband Ready TOOLKIT
  https://nextcenturycities.org/broadband-toolkit/
- Municipal Boards: Best Practices for Adoption Technology
  https://insights.diligent.com/boardroom-technology-local-government/municipal-boards-best-practices-for-adopting-technology

Goal 2: Ensure that all Childress County residents can access the benefits of broadband, regardless of income level.

Childress County households without internet access at home cited two main barriers: 40% said it was unavailable, and 53.3% said it was too expensive. Where internet is available, affordability is keeping people from subscribing.

OBJECTIVE:
Address affordability to improve access to broadband for Childress' low-income residents.

Action 1 – The Broadband Committee should share information with the community about all affordability programs and low-cost internet packages available to residents.
Programs are available to assist low-income residents with the cost of internet. There are two main federal programs, and ISPs often offer their own programs as well:

> Lifeline is a federal program administered through the Federal Communication Commission (FCC) Universal Service Administrative Co. that lowers the monthly cost of phone or internet services for eligible consumers. Consumers can get up to $9.25 off the cost of phone, internet, or bundled services each month. Households qualify based on income or participation in other federal or tribal assistance programs. More information can be found at https://www.texaslifeline.org/

> The Emergency Broadband Benefit Program (EBB) was created during the COVID-19 pandemic to help families and households that were struggling to afford internet service. On December 31, 2021, it was replaced by the Affordable Connectivity Program (ACP), which provides a $30 a month credit toward internet coverage ($75 a month for qualifying residents on tribal lands) and up to $100 for the purchase of a device. Households qualify based on income or participation in federal or tribal assistance programs. To receive the connected device discount, consumers must enroll in the ACP with a participating provider that offers connected devices (check here for participating providers: https://www.fcc.gov/emergency-broadband-benefit-providers). The internet company provides the discount. More information can be found at https://www.fcc.gov/broadbandbenefit and https://acpbenefit.org/.

Internet service providers often have low-cost options or offer subsidized programs with free internet. The Infrastructure Investment and Jobs Act of 2021 also required ISPs that receive federal grant money to offer low-cost service to eligible low-income households.

Free or low-cost internet programs available in Childress County by internet service providers are:
- AT&T: Access from AT&T and ACP information at https://www.att.com/internet/access/
- Resound Networks: ACP information can be found at https://resoundnetworks.com/
- Suddenlink Communications: ACP information can be found at https://www.suddenlink.com/affordable-connectivity-program
- TransWorld Network Corp.: ACP information can be found at https://www.twncomm.com/acp/

The Childress Broadband Advisory Committee should share this information with the community on public websites, in advertising, on community billboards, on social media, as handouts in utility bills, through direct mail or notices from schools to parents, or by any other creative means to get the word out to those most in need.

Action 2 – <u>Encourage area service providers to participate in ACP and/or offer other low-cost options</u>. For residents to benefit from the federal Affordable Connectivity Program (ACP), providers need to sign up; not all providers do. If providers in Childress County do not participate, the Broadband Advisory Committee should find out why, explain to them the need in the area, and ask ISPs to either participate in the ACP or offer their own low-cost options for residents.

Find out which providers participate here: https://acpbenefit.org/companies-near-me/

RESPONSIBLE PARTIES:
- Childress County Broadband Advisory Committee
- Area internet Service Providers

RESOURCES:
- Lifeline
  https://www.texaslifeline.org/
- Affordable Connectivity Program (ACP)
  https://www.fcc.gov/broadbandbenefit and https://acpbenefit.org/
- ACP participating providers
  https://www.fcc.gov/emergency-broadband-benefit-providers

Goal 3: Empower Childress County residents to get the most out of technology by increasing their access to the internet and the skills necessary to use it.

Libraries are community hubs. They are sources of information, education, and community engagement. They are also one of a community's main resources for technology services. Survey results indicate that the Childress Public Library has low speed, unreliable service, and only a few public computers. Libraries, like schools, need to have the fastest speeds available in the community because they are where those without internet at home go to get online and apply for jobs, where students come to study, and where many people are online at the same time.

Survey results also indicate that Childress County residents have a lower level of digital literacy than other Connected communities, indicating a need for digital skills training. Residents cite affordability of service and no computers at home as barriers to internet access.

OBJECTIVE:
Increase computer literacy for residents and greater access to high-speed internet by increasing internet speed, offering digital literacy training for residents, businesses, and public officials, and adding more public computers at the library.

Action 1 – <u>The Childress Public Library should research and pursue the best available internet access in the area.</u> Survey results show that the library reports a download speed of 35.38 Mbps, which is below other Connected communities. The library offers public Wi-Fi and public devices. It is a location where many people are online at the same time, using multiple devices. Survey results indicate that the internet service at the library is not meeting its needs, with the reasons cited as slow speeds and an unreliable connection. The library should make it a priority to pursue better and faster internet service. To make this possible, the library should investigate additional funding options.

Action 1A – <u>Ensure the Childress Public Library is taking advantage of the E-Rate program.</u> The Federal Communications Commission (FCC) has special funding for schools and libraries to help pay for internet costs. In Texas, most accredited public libraries are eligible for an 80% discount, with over a quarter eligible for *a 90% discount* . If the library is not currently using E-Rate, it should engage with its current provider (or find another provider) to assess E-Rate opportunities, to determine if it is maximizing the funds available to support internet services, and/or explore what opportunities might exist to bring greater services to the library through E-Rate.

Additional support should be sought from the city and county, as library services are vital community resources that are available to all area residents.

American Rescue Plan (ARPA) Coronavirus State and Local Fiscal Recovery Funds were allocated to each county and can be used for water, sewer, and broadband infrastructure. Allowable uses include broadband infrastructure, public Wi-Fi infrastructure, and the purchase of devices (see Resources and Treasury Final Rule for more information).

RESPONSIBLE PARTIES:
- Libraries and library boards
- Schools
- Broadband providers
- Local and county governments

RESOURCES:
- Texas State Library and Archives Commission – E-Rate overview
  https://www.tsl.texas.gov/ld/tech/erate
- E-Rate Resources page
  https://www.tsl.texas.gov/ld/tech/erate-resources

BENEFITS:
Most libraries experience service degradation during peak use times. Increased bandwidth will help to maintain service quality for library patrons who may use the library as their only source of broadband access.

Action 2 – <u>The Childress Public Library should increase the number of public computers it has available</u>. Childress Public Library has three public computers available for public use. Survey results indicate that 7.9% of surveyed households use a smartphone as their only way to go online, and 6.5% of respondents have no internet access at home at all. The reasons given were access and affordability. Two out of five of those without internet (40%) said it was not available at their address, and 53.3% said it was available but was too expensive. This demonstrates a strong need for public internet access. Only 18.2% of Childress County businesses offer free Wi-Fi at their establishments, so the library's free Wi-Fi is one of the few options available to residents — but only for those with their own portable devices.

Public Wi-Fi should be expanded and encouraged, but it should be noted that not every online application is available or best used on a smartphone. Access to computers is essential for residents to do schoolwork, use word processing or other software, and apply for jobs or services online. Computers are as essential to libraries as the books on its shelves, as they provide direct access to knowledge and information.

The library should pursue expanding the number of publicly available computers.

American Rescue Plan (ARPA) Coronavirus State and Local Fiscal Recovery Funds were allocated to each county and can be used for water, sewer, and broadband infrastructure. The purchase of devices (but not digital literacy training expenses) is an allowable use of ARPA broadband funds (see Resources and Treasury Final Rule for more information).

RESPONSIBLE PARTIES:
- Libraries and library boards
- Schools
- Broadband providers
- Local and county governments

Action 3 – <u>The Childress Public Library should offer digital skills training courses to residents and businesses</u>. Survey results indicate that Childress County residents have fewer digital literacy skills than other Connected communities across all skill levels. Survey respondents answered, "I need to learn" and, "I know a little" in most digital literacy categories, only citing proficiency for basic online skills. This is not surprising; in areas where internet speeds have been traditionally slow, communities have less interest in developing advanced online skills. This is an opportunity for the library to offer a wide range of courses, from basic to advanced digital literacy, for residents and businesses. Topics could include social media, cybersecurity, online learning, online bill paying, smart home devices, presentation software, spreadsheets, accounting and word processing, multimedia editing, or other topics the community shows interest in.

Additionally, classes in social media, web design, and online marketing should be offered to area businesses. Most survey respondents indicate that they interact online with local and non-local businesses daily or once a week. 62.4% of survey respondents interact with non-local businesses daily or at least once a week, 69% of survey respondents interact with local businesses daily or at least once a week, yet only 63.6% of local businesses surveyed indicated that they have a website. This is a great opportunity to help local businesses tap into the income potential of an online presence. The library can partner with the Chamber of Commerce or other business organizations for assistance and to encourage greater participation from area businesses. The courses can be tailored to the business community's interests.

RESPONSIBLE PARTIES:
- Chamber of Commerce/economic development organizations
- Libraries
- Community college
- Broadband providers
- IT/technology organizations

RESOURCES:
- Digital Learn – Free courses to learn anything about computers
  https://www.digitallearn.org/
- Digital Literacy Curriculum for K-12
  https://www.learning.com/easytech
- Free Applied Digital Skills – Google for Education
  https://applieddigitalskills.withgoogle.com/
- Live, Virtual Classes for Seniors
  https://seniorplanet.org/classes/

BENEFITS:
1. Provides entrepreneurial support
2. Eliminates knowledge gap
3. Promotes business growth and workforce development
4. Lowers startup costs
5. Assists in accelerating business development

Action 4 – Childress County should increase the number of public Wi-Fi locations available in the community. Survey response indicated that only a small number of area business offer free public internet (Wi-Fi). Public Wi-Fi is helpful for residents who do not have internet at home or are experiencing a temporary outage. It is also used by visitors to the area. Survey responses indicated that service reliability is a concern in the community; having free Wi-Fi readily available to the public could alleviate some of that frustration. It may also draw consumers into an establishment. Childress Public Library offers free Wi-Fi but has slow speeds that cannot easily accommodate a large number

of simultaneous users. Having Wi-Fi available in other public buildings could help alleviate some of the pressure for Wi-Fi use at the library.

The first step is to inventory the locations of free public Wi-Fi in the community and promote that list on city and county websites, in the newspaper or social media posts, and on bulletin boards or signs outside of businesses. The next step is to encourage public buildings to offer free Wi-Fi and to look for other areas of public domain to expand access. City parks, library parking lots, town squares, and shopping districts are all areas where expanded public Wi-Fi can be a draw for visitors and a benefit to residents. The upside is that it is often very inexpensive and only requires expanding current service. After looking for opportunities to expand Wi-Fi in public spaces, the Childress Broadband Advisory Committee could encourage private businesses that have the bandwidth for the speed and the space for visitors to offer free public Wi-Fi as well.

American Rescue Plan (ARPA) Coronavirus State and Local Fiscal Recovery Funds were allocated to each county and can be used for water, sewer, and broadband infrastructure. The purchase of Wi-Fi devices and related technology for public Wi-Fi hot spot infrastructure deployment are an allowable use of ARPA broadband funds (see Resources and Treasury Final Rule for more information).

ACTIONS:

1. Develop a community Wi-Fi inventory.
2. Conduct an analysis to identify key areas and organizations for the expansion of local wireless hotspots.
3. The local Chamber of Commerce and tourism groups should promote the hotspots to ensure maximum visibility in the community.

RESPONSIBLE PARTIES:
- Community and business leaders
- Civic leaders and organization members
- Citizens
- Local government
- Broadband providers
- Community anchor institutions

RESOURCES:
- Mapping Community Wi-Fi Access
  http://tech.ed.gov/stories/mapping-community-Wi-Fi-access/

BENEFITS:
Wireless hotspots in the community are a benefit to residents without broadband at home, as well as tourists traveling in the region.

Goal 4: Mitigate the impact of internet service outages

Community feedback in Childress County related that internet service outages lasting many hours were common and affected large segments of the population, including 911 systems, public safety, banks, and local businesses. Much of this is related to cuts to critical infrastructure, often due to construction or other disruptions along critical fiber lines.

This is a regional problem that affects multiple counties. A lasting solution would involve infrastructure investment to make networks less vulnerable and more redundant. Meanwhile, knowledge and resources exist to better understand the situation. Stakeholders could benefit from information sharing with their counterparts in other counties, who are dealing with the same situation and may have insights. Childress County should strive to better understand how construction affects outages along service routes, how non-redundant systems affect service reliability, and what can be done to mitigate the effects while pursuing larger infrastructure improvements to resolve it.

OBJECTIVE:
Understand infrastructure vulnerabilities to identify solutions.

Action 1 – Concerned stakeholders and critical facilities should assess their own infrastructure needs and vulnerabilities, strive to better understand critical networks, and open communication with service providers to pursue options for greater redundancy. Due to chronic service outages, essential networks should strive to be redundant. Based on the well-known and documented accounts of cuts to critical backhaul infrastructure, typically due to construction, it is essential that any vital services, public safety, health care, etc. explore additional backup services that could/would serve as cutover services if/when primary services experience outages. This is not simply service from a secondary provider, but service from a provider that offers an entirely different physical path. This will help restore critical services in less than an hour during primary service outages. Any entity that deems connectivity vital and mission-critical to the continuity of their services or business should consider their options and develop a plan that will allow for the mitigation of service disruptions.

Timeline: The Broadband Advisory Committee should immediately begin research to better understand the causes of chronic service outages and explore options to resolve them. The committee should plan to meet with area service providers within three months.

RESOURCES:
- Cybersecurity & Infrastructure Security Agency (CISA), resource list
  https://www.cisa.gov/emergency-communications

- 10 Keys to Public Safety Network Resiliency:
  https://www.cisa.gov/sites/default/files/publications/07202017_10_Keys_to_Public_Safety_Network_Resiliency_010418_FINAL508C.pdf

- ESInets Help Public Safety Agencies Move to Next generation 911 (NG911), IP-based Emergency Services IP Networks enable next-generation 911 services to flourish, Sept 27, 2019 https://statetechmagazine.com/article/2019/09/esinets-help-public-safety-agencies-move-ng911-perfcon

Goal 5: Identify funding opportunities for programs and projects that benefit Childress County using broadband and related technologies.

OBJECTIVE:
Ensure Childress County utilizes all available resources to improve quality of life and economic outcomes through technology.

Action 1 – Pursue grants for advancement of local community development using broadband technologies (e.g., workforce development, telehealth, digital literacy, etc.). In conjunction with the countywide Connected Engagement, Childress County has been allocated funding to pursue applicable grant opportunities. For specifics, please contact your Broadband Solutions Manager.

RESOURCES:

- Treasury Issues Final Rule for State and Local Fiscal Recovery Funds Program to Support the Ongoing COVID Program
https://home.treasury.gov/news/press-releases/jy0550

- 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

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

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

- 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