NEWTON COUNTY, TEXAS

Technology Action Plan Summary

October 2021

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Texas

OVERVIEW

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

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

Pursuant of this goal, between January 2021 and April 2021, Newton County conducted a comprehensive survey of broadband technology access and adoption across the community that collected responses from 514 households. CN Texas staff also met with community officials to determine community needs and to gather qualitative data for consideration in the study. Overall, the assessment was designed to identify issues and opportunities to close the local Digital Divide.

Newton County – Quick Facts	
Population	12,217
Number of Households	4,979
Median Household Income	$40,101
Poverty Rate	24.4%
Bachelor's Degree or Higher	9.7%
Homeowner	84.6%
Hispanic or Latino Population	2.8%
Households Served with Broadband[1]	37.53%

Source: U.S. Census Bureau's 2020 Decennial Census and 2019 ACS 5-year estimates
https://data.census.gov/cedsci/profile?g=0500000US48351

In summary, Newton County has low broadband availability at 37.53% and three internet service providers. This means that competition is limited, but there is reason to be optimistic about opportunities for increasing availability. For example, two internet service providers could potentially receive a total of approximately $9 million from the Federal Communication Commission's Rural Opportunity Development Fund to deploy broadband service. Additionally, Deep East Texas Council of Governments (DETCOG) has received a $9,000,000 grant to build a broadband network in the northern part of Newton County.

The following provides a summary of the technology assessment performed by CN Texas as well as recommendations for improving broadband and technology access, adoption, and use. Many recommended actions are of low-cost to the County and should be engaged in immediately to help the community accelerate deployment opportunities.

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[1] The current FCC definition of broadband is a minimum of 25 Mbps download and 3 Mbps upload. This data is derived from Connected Nation Texas, July 2021. https://connectednation.org/texas/planning/

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KEY FINDINGS

- Almost **two-thirds** of the residents either use non-fixed internet connections[2] such as dial-up, satellite, and mobile-only services or are not adopting broadband at all.

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

- The average internet speed reported by households in Newton County **(9.87 Mbps)** is significantly lower than connections in other Connected communities **(34.1 Mbps)** and is below the current FCC definition of broadband (minimum speed of 25 Mbps download and 3 Mbps upload).

- About **94% of businesses** that participated in the survey reported that they subscribe to fixed or non-fixed internet service. At the same time, 67% reported that they were dissatisfied with their service, with **slow speeds** being the leading reason for their dissatisfaction.

- In responding to the question about the primary reason why government offices do not or cannot subscribe to broadband, 100% of government agencies in Newton County reported that **security risks were the leading reason for not adopting broadband.**

- **Nearly all households (99%)** said they would like to have improved or additional options for home internet service.

- Only **25.35%** of households in Newton County have access to internet service at speeds needed to run many modern applications (100 Mbps downstream and 10 Mbps upstream). Statewide, 88.5% of households have internet access at this speed.

37.53%

Of households in Newton County have access to home broadband service.

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

INFRASTRUCTURE

The first step in understanding the state of broadband infrastructure in Newton County and the rest of Texas 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 these maps are derived from a combination of direct provider outreach and data collection, FCC Form 477 broadband deployment filings, and independent research conducted by CN Texas. If a provider were unable or unwilling to supply granular data and a detailed service area could not be developed, the provider's service is represented by Form 477 data, a format that tends to overstate the service territory.

Broadband – Quick Facts	
Unserved Households (25/3 Mbps)	3,421
Households served (10/1 Mbps)	91.61%
Households served (25/3 Mbps)	37.53%
Households served (50/5 Mbps)	32.37%
Households served (100/10 Mbps)	25.35%

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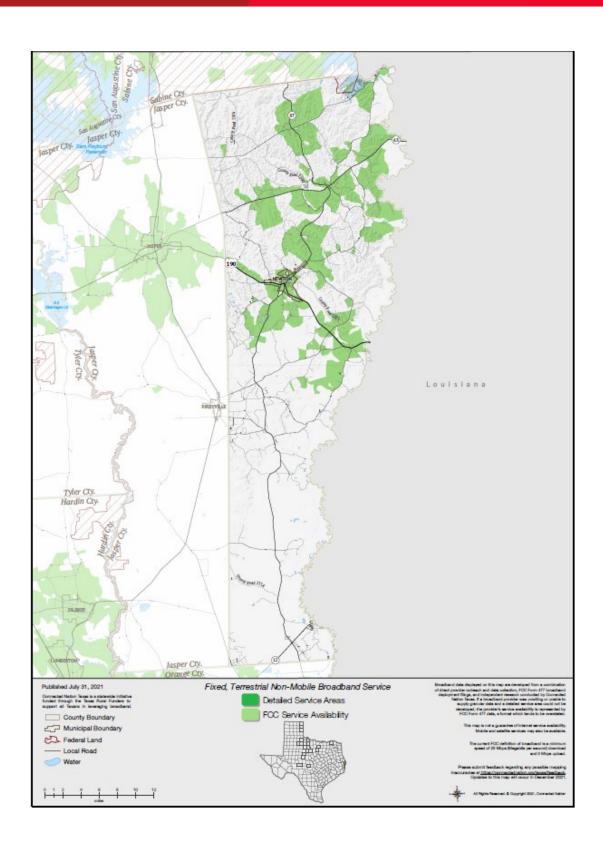https://connectednation.org/texas/mapping-analysis/.

According to CN Texas broadband data collected in July 2021 – with public feedback, field validation, and provider input – most households in Newton County (3,421 households) do not have access to broadband at 25/3 Mbps, the current definition of broadband as set forth by the Federal Communications Commission (FCC). Broadband service in Newton County is concentrated around the City of Newton and sparsely available across central Newton County. Three internet service providers in Newton County were identified via the data collection process, as shown in the table below:

Internet Service Providers in Newton County

PROVIDER	TECHNOLOGY	MAXIMUM DOWNLOAD SPEED (Mbps)	MAXIMUM UPLOAD SPEED (Mbps)
Southwestern Bell Telephone Company, L.P.	DSL	25	3
	Fixed Wireless	10	1
Telecommunications Management, LLC dba NewWave	Cable	300	10
Valor Telecommunications of Texas, LLC	DSL	200	200
	Fiber	200	200

Below is Newton County's (25/3 Mbps) map. The full map is available in PDF format here. Other portions of the county are served by internet service providers (ISPs) offering slower advertised speeds.

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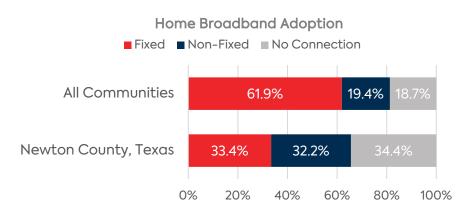NATION℠
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HOUSEHOLDS – DETAILED FINDINGS

The following provides an overview of results from a survey conducted in Newton County between January 2021 and April 2021. Altogether, CN Texas received 514 completed surveys from households across the county, and respondents provided insights into their internet connectivity, or lack thereof. Data from Newton County are compared to data from dozens of other Connected participating communities across Michigan, Ohio, Texas, and Pennsylvania to benchmark and identify areas for improvement.

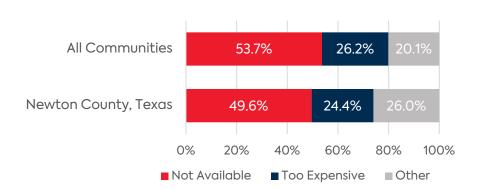| Households - Quick Facts	
Fixed Home Broadband Adoption[3]	33.4%
Average Monthly Cost of Internet	$81.30
Average Download Speed	9.87 Mbps
Households Satisfied with Service	34.0 %

Source: Newton County Household Survey conducted by CN Texas

ADOPTION

Home Broadband Adoption

■ Fixed ■ Non-Fixed ■ No Connection

	Fixed	Non-Fixed	No Connection
All Communities	61.9%	19.4%	18.7%
Newton County, Texas	33.4%	32.2%	34.4%

(0% – 100%)

In Newton County, 33.4% of households that took the survey subscribe to fixed broadband service delivered via a cable, DSL, fiber, or fixed wireless technology. Also, 32.2% of respondents indicate they have internet service, but it is delivered via dial-up, satellite, or a mobile wireless service. This leaves just over one-third (34.4%) of survey respondents without internet access at home.

Primary Barrier to Home Broadband Adoption

	Not Available	Too Expensive	Other
All Communities	53.7%	26.2%	20.1%
Newton County, Texas	49.6%	24.4%	26.0%

(0% – 100%)

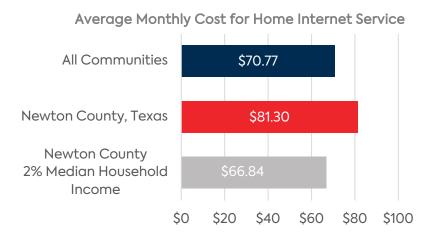■ Not Available ■ Too Expensive ■ Other

Among those without a home internet connection, 49.6% said they did not subscribe because internet service was not available to them, while nearly one-quarter (24.4%) indicate that it was too expensive. Like in many communities, cost and availability are the two primary barriers to home broadband adoption.
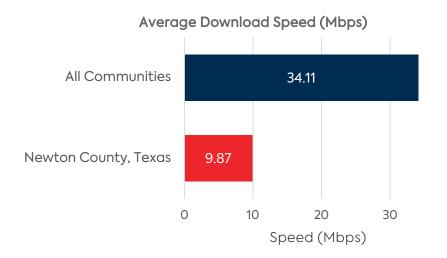
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[3] Fixed home broadband connections are those provided by cable, DSL, fiber, or fixed wireless technology.

CONNECTION DETAILS

Average Monthly Cost for Home Internet Service

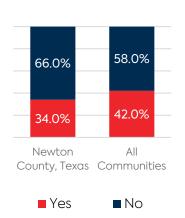| Category	Cost
All Communities	$70.77
Newton County, Texas	$81.30
Newton County 2% Median Household Income	$66.84

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 $81.30 per month. This is higher than monthly costs in other communities ($70.77). Two percent of the median household income in Newton County is $66.84 per month, significantly lower than this reported average cost.

Average Download Speed (Mbps)

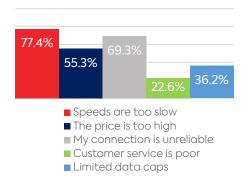| Category	Speed
All Communities	34.11
Newton County, Texas	9.87

Speed (Mbps)

The FCC currently defines broadband as an internet connection with a download speed of at least 25 Mbps and upload speed of at least 3 Mbps. On average, respondents indicate that their connection's download speed is 9.87 Mbps, which is much lower than household connections in other communities and well below the defined download speed of broadband which is 25 Mbps.
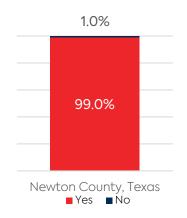
Does Your Internet Connection Meet Your Needs?

	Newton County, Texas	All Communities
No	66.0%	58.0%
Yes	34.0%	42.0%

Why Does Your Connection Not Meet Your Needs?

- Speeds are too slow: 77.4%
- The price is too high: 55.3%
- My connection is unreliable: 69.3%
- Customer service is poor: 22.6%
- Limited data caps: 36.2%

Are You Interested in Additional Internet Choices at Home?

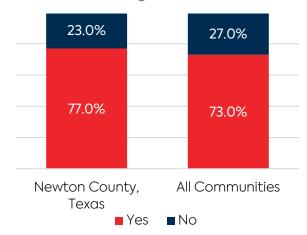Newton County, Texas
- Yes: 99.0%
- No: 1.0%

Competition provides residents with choices for service, allowing households the ability to switch providers if their current service does not meet their needs. Nearly two-thirds of respondents (66%) indicate that their internet connection does not meet their needs. This is a higher rate of dissatisfaction than among households in other communities (58%). When asked why their connection does not meet their needs, 77.4% of households indicate that the speed is too slow. About 55.3% say the price is too high, and nearly 69.3% indicate that the connection is unreliable (respondents could choose more than one reason). Finally, nearly every respondent (99%) indicated that they are interested in additional internet choices for their home.
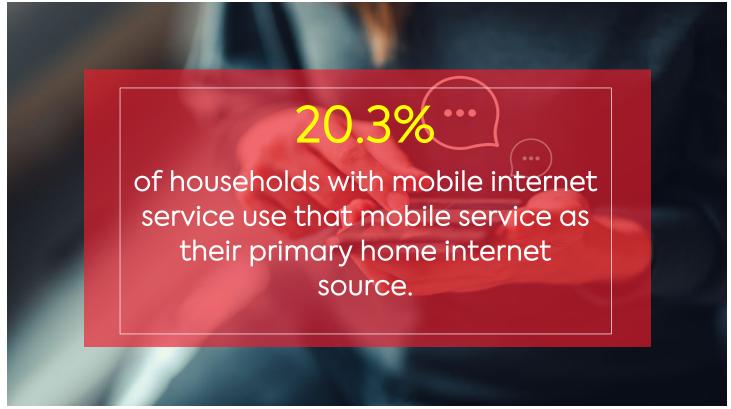
MOBILE CONNECTIVITY

Over three-quarters of Newton County households (77%) report that they subscribe to mobile internet service which they access via a smartphone or similar mobile device. This is slightly higher than reported in other Connected communities (73.0%).

Additionally, about 58.2% of mobile-subscribing households report that they rely on their mobile connection at home as their primary source of internet connectivity or use mobile service to connect other household devices to the internet.
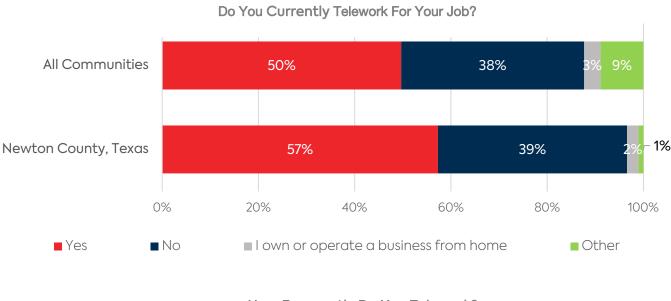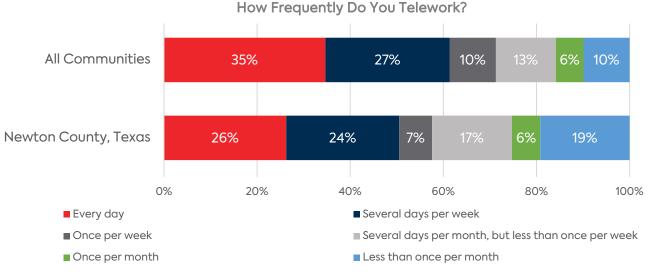
Households Subscribing to Mobile Internet Service

	Newton County, Texas	All Communities
No	23.0%	27.0%
Yes	77.0%	73.0%

■ Yes   ■ No

20.3%

of households with mobile internet service use that mobile service as their primary home internet source.

TELEWORK

Teleworking, or telecommuting, refers to working outside of the conventional workplace and communicating with it by way of telecommunications or computer-based technology. The COVID-19 pandemic forced many organizations to allow staff to telework. In Newton County the lack of broadband access was a significant barrier to organizations being able to operate virtually if needed. Teleworking is quickly becoming a critical part of growing a local economy because it represents an opportunity to attract or retain employees even though their employer may not be located within the community. However, this only works if those employees have access to advanced broadband infrastructure. Approximately 57% of residents in Newton County indicate that they telework at least part of the time. This is more than residents in other communities. It is important to note that most of the data from other communities were collected prior to COVID-19.

Do You Currently Telework For Your Job?

	Yes	No	I own or operate a business from home	Other
All Communities	50%	38%	3%	9%
Newton County, Texas	57%	39%	2%	1%

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

How Frequently Do You Telework?

	Every day	Several days per week	Once per week	Several days per month	Once per month	Less than once per month
All Communities	35%	27%	10%	13%	6%	10%
Newton County, Texas	26%	24%	7%	17%	6%	19%

- 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

9

RECOMMENDATIONS

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

Goal 1: Enact Strategies to Advance Deployment of Fixed Broadband Infrastructure

Broadband data collected in July 2021 show that only 37.5% of households in Newton County have access to broadband. The data collected by Connected Nation Texas show that almost two-thirds of the residents either use non-fixed internet connections such as dial-up, satellite, and mobile-only services, or are not adopting broadband at all. These non-fixed types of internet services, while providing basic access, can often be plagued by connection latency, have costly monthly data plans, or can be impacted by weather, terrain, large expanses of open water, and other environmental factors.

Objective:

Newton County should promote fixed broadband deployment strategies for more reliable and accessible services to residents. Access and adoption of the Internet need to be addressed. Survey results suggest unreliability and cost are critical issues within all community sectors – residents, agriculture, healthcare, and businesses specifically. The Rural Development Opportunity Fund money will be helpful to many in Newton County, but residents and businesses still could be without service for 6-8 years given the time providers have to fulfill their contracts. Interim and permanent solutions need to be discussed.

Actions:

Action 1 – Appoint a point of contact to handle broadband issues and needs in Newton County. Judge Weeks should appoint the point of contact with input from the Commissioners Court. This point of contact should establish relationships with all broadband stakeholders to help bring broadband into the county and ensure duplication of work and effort does not occur. RDOF money will potentially be awarded to Charter Communications, LLC and LTD Broadband, LLC totaling up to $8,944,893. DETCOG potentially has been awarded $9,000,000 to construct a rural broadband network in northern Newton County. This relationship between Newton County and providers allows Newton County leadership a more active voice in how money is invested for the betterment of their residents. The point of contact should focus attention on making sure funds are spent efficiently. They will develop a document of specific needs and issues surrounding broadband. The point of contact will understand the scope of work providers are planning in Newton County. The point of contact will update the court on funding opportunities by the federal government and potentially the State government.

Action 2 – Updating Newton County's website to instruct internet service providers how to do business in the county can delete barriers and streamline the process. This minimizes barriers to providers bringing fixed broadband into the county by making critical county information easily accessible. Newton County already has a procurement bid notice page at http://www.co.newton.tx.us/page/newton.ProcurementBidNotices, and this would be a good place to include all vendor information and any electronic forms vendors need. Other websites and social media sites can share the link such as:

- o   Newton Chamber of Commerce, http://www.co.newton.tx.us/page/newton.chamberofcommerce
- o   The City of Newton, https://www.newtontexas.org/

Action 3 - **Develop and release a Request for Proposals (RFP) for an asset inventory.** The point of contact should guide the development of the RFP. This audit will help identify Newton County assets that can be shared and leveraged in partnership with providers. Examples of assets that can be shared include:

- o Anchor tenants
- o Building rooftops
- o Light poles,
- o Towers and other vertical assets for mounting infrastructure

Developing public-private partnerships benefits both parties. The community can offer infrastructure and the providers bring network-building and operations experience. For example, offering assets to house Wi-Fi equipment promotes fixed broadband in the county.

Action 4 – **Facilitate provider meetings.** Local internet service providers should be given an opportunity to discuss why services are deemed expensive and unreliable and offer suggestions on improvements for their customers. A market analysis can be performed to identify potential broadband providers and understand potential service offerings, and respective rates. Information learned may be educational for county staff to understand barriers that providers' experience. If providers are not willing to work with the County, new providers should be given opportunities to work in Newton County. Providers can share their biggest barriers such as:

- Rights-of-Way
- Leasing Pole Attachments
- Permits

Responsible Parties:

- Judge Weeks should appoint the point of contact with input from the Commissioners Court.
- The point of contact will be responsible for updating the website with needed content. Oversight will be by Judge Weeks.
- The point of contact should be responsible for deploying an RFP with guidance from the Commissioners Court and Judge Weeks.
- Judge Weeks, county commissioners, and local internet service providers scheduled to do work in the County or wanting to do work in the County can be included in the discussion. Also, RDOF providers, Charter Communications and LTD Broadband, should be included.

Resources:

- Removing barriers to broadband expansion: http://www.connectmycommunity.org/wp-content/uploads/2016/09/Local-Policy-Guide.pdf
- Example of a county with online resources: https://onlinepermits.mcallen.net/Portal/default.aspx
- Becoming Broadband Ready: https://nextcenturycities.org/becoming-broadband-ready/ –
- Examining state broadband programs: https://www.pewtrusts.org/en/research-and-analysis/reports/2020/02/how-states-are-expanding-broadband-access

- List of available federal funds: https://www.grants.gov/web/grants/search-grants.html
- List of available funds as collected by Connected Nation: https://connectednation.org/current-broadband-funding/
- Removing barriers to broadband expansion: http://www.connectmycommunity.org/wp-content/uploads/2016/09/Local-Policy-Guide.pdf
- Example of a county with online resources: https://onlinepermits.mcallen.net/Portal/default.aspx
- How to write federal grants and a list of available grants – https://www.grants.gov/web/grants/search-grants.html

GOAL 2: Promote Free Wi-Fi Available via Local Businesses, Government Offices, and Anchor Institutions

Objective:

While the County works on long-term solutions, entities such as local businesses, government facilities, and anchor institutions should allow public access to Wi-Fi which will advance broadband adoption and use in Newton County.

Actions:

Action 1 – **The County should promote currently-available free internet services in public places that are easily accessible for use by the community.** Leadership should collaborate to promote local businesses and organizations that offer free Wi-Fi to the public. This includes Newton County Public Library and the Newton County Courthouse. There are sectors of the population that are priced out of Wi-Fi services; therefore, the County should have adequate places residents can have access to the internet.

Public schools are providing free public Wi-Fi, but this can be extended past school hours when more convenient for parents and the community. Public schools are currently closed through the summer for maintenance, but schools should try to stay open to the public when they can. This also allows staff who may not have internet connections at home access to the internet.

Action 2 – **Expand access to broadband by increasing the number of publicly-available free Wi-Fi hotspots in Newton County.** Offer hotspots or access points around town. This includes:

- Restaurants
- Coffee shops
- Book stores
- Libraries
- Hotels
- Hospitals
- Other community centers

Action 3 – Offer digital learning skills training opportunities at libraries with public computers and Wi-Fi. Offering these training opportunities, both in English and Spanish, can attract more patrons to the libraries.

This activity also promotes broadband adoption in the community, allowing for further inclusion in the digital economy, especially under-resourced populations and seniors. Some available training options include:

- https://www.driveyourlearning.org/ - offered by Connected Nation
- https://www.digitallearn.org/ – digital curriculum offered by the Public Library Association
- https://www.aarp.org/about-aarp/info-2021/oats-senior-planet.html#:~:text=Senior%20Planet%20programs%20are%20designed,to%20anyone%20of%20any%20age. – AARP joins with Nonprofit to teach tech to older adults.

Responsible Parties:

County Judge Weeks, Superintendent Michelle Barrows, Superintendent Dr. Keith Jones, Newton County Public Library librarian Stephanie Ducote, and the Newton Chamber of Commerce should partner to address the various Wi-Fi projects.

Resources:

- 5 Reasons Why You Should Offer Free Wi-Fi to Your Customers: Spectrio
- Examples of one Texas town meeting residents' broadband needs: https://ilsr.org/how-mcallen-texas-quietly-built-residents-a-free-wi-fi-network-over-the-summer/

Goal 3: Educate Government Personnel and Public Safety Entities How to Safely Use the Internet

Objective:

Provide a level of confidence for government and safety personnel to engage with the internet. The Connected Nation Texas study showed that local government entities did not have confidence in internet use.

Actions:

Action 1 – Perform assessments of the county's hardware and software, as well as county readiness to address cybersecurity issues. The point of contact should work with local IT experts to perform a cybersecurity self-assessment in the county. The Department of Homeland Security offers free downloadable self-assessments to local governments called Cyber Resilience Reviews (CRR). They also provide an onsite 6-hour session with trained DHS representatives. The CRR is a no-cost, voluntary, non-technical assessment to evaluate an organization's operational resilience and cybersecurity practices. The benefit of performing these assessments is to bring awareness and confidence to the state of local cyber security. CRR resources are available via https://us-cert.cisa.gov/resources/assessments.

Action 2 – Participate in the annual cybersecurity compliance training. All local government officials, staff, and contractors who have access to government computers or databases must participate in annual cybersecurity courses. Texas House Bill 3834, effective June 14, 2019, requires all elected officials and most local government employees to complete an annual cybersecurity training program that has been certified by the Texas Department of Information Resources (DIR). House Bill 1118, which became effective on May 18, 2021, added a penalty for non-compliance with the training. The Texas Association of Counties (TAC) offers free cybersecurity courses each year. Below are the steps to enrolling counties for training when the training window opens:

1. The Commissioners Court should approve enrolling county employees.
2. Complete the enrollment form and submit it to securitytraining@county.org or fax at (512) 477-1324.
3. Fill in the user import template with employees' information and submit it by email so that all required employees can be enrolled in the training course.

Information is available at https://www.county.org/Education-Training/State-Mandated-Cybersecurity-Course.

Action 3 – Hire a security expert to assess vulnerabilities if any issues a detected as a result of Action 1 (self-assessment). The county should hire a security expert to help address any vulnerabilities detected during the self-assessment. This recruitment process may need to grow through the RFP process.

Action 4- Encourage residents to participate in internet safety training. The point of contact should provide information on internet safety via the County's website to encourage responsible internet use in the community. Examples of freely-available resources include:

- Goodwill Foundations Internet Safety Training: https://edu.gcfglobal.org/en/internetsafety/,
- Common Sense Media Privacy and Internet Safety: https://www.commonsensemedia.org/privacy-and-internet-safety

Action 5 – Assess Local Government Cybersecurity Insurance Needs

Discuss with all local government entities the provisions that current insurance policies may have in case of a cyber-related incident. These conversations can help identify risks to the community and may warrant further discussion with insurance providers about coverage options that could help pay for damages and recovery from a cyberattack.

Resources:

- Downloadable self-assessment tools provided by DHS: https://us-cert.cisa.gov/resources/assessments.
- Texas Association of Counties Annual Cybersecurity Compliance Training: https://www.county.org/Education-Training/State-Mandated-Cybersecurity-Course
- GCFLearnFree Internet Safety: https://edu.gcfglobal.org/en/internetsafety/
- Cybersecurity for Remote Workers Staff Awareness E-learning Course- This low-cost non-technical course helps employees remain safe, and understand what to do if and when they experience a cyber-attack or phishing scam: https://www.itgovernance.co.uk/shop/product/cyber-security-for-remote-workers-staff-awareness-e-learning-course
- Email Security and Privacy Awareness Course – This free one-hour course helps raise awareness of email data security and privacy: https://blog.mailfence.com/email-security-and-privacy-course/
- Information Security and Cyber Security Staff Awareness E-Learning Course – This low-cost course is aimed at employees who process information, use information technology in their daily job, or use the Internet to conduct business: https://www.itgovernance.co.uk/shop/product/information-security-and-cyber-security-staff-awareness-e-learning-course

- Wizer Security Awareness Training: This free security awareness training includes everything you need to train your employees how to protect themselves against cybersecurity attacks, it is 100% free with over 20 free videos, quizzes, employee progress reports, and certificates: https://www.wizer-training.com/
- Phishing Staff Awareness E-Learning Course – This is low-cost phishing awareness training: https://www.itgovernance.co.uk/shop/product/phishing-staff-awareness-e-learning-course