

# Library Hotspot Lending: Report to the Tocker Foundation Technology and Information Policy Institute January 2020

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## 1. Internet connectivity

As major educational, health, entertainment, and commercial transactions have migrated to the Internet, broadband access has become nearly essential in order to maneuver in American society. The Pew Research Center has documented on several occasions that people believe that having broadband access is important for employment, staying connected with friends and family, and accessing news and information (Anderson & Kumar, 2019; Horrigan & Duggan, 2015).<sup>1</sup>

In both urban and rural locations, libraries serve as critical information and Internet access points for communities in the 21st century. The 1996 Telecommunication Act recognized this when it created an “e-rate” program to provide discounted Internet services to schools and libraries. These important and publicly available sites are helpful to remediate inequities in Internet access and use around the country. The ‘digital divide’, as such inequities are commonly phrased, refers to the differences between households that have and those that lack broadband access and adoption. Access gaps may be due to deployment choices among Internet Service Providers, and they can be compounded by difficult terrain such as mountains or valleys. Adoption gaps are a function both of access availability as well as socio-economic factors including age, income, and education among others, that limit households’ abilities to purchase broadband service (Anderson, 2019).<sup>2</sup> Many libraries have launched programs to remediate the digital divide.

While in-library programs to help with Internet access and digital literacy have been around for decades, a new approach to facilitate library patrons’ Internet access has emerged with hotspot lending programs.<sup>3</sup> Library programs “lending out the Internet” to bridge the digital divide have been successfully implemented in many locations through cellular-based mobile hotspot devices. The majority of these programs currently exist in urban-based libraries and target populations lacking home-based broadband access. Mobile technology presents many unique opportunities for the same access in rural communities also suffering from a lack of available home-based broadband due both to affordability issues as well as simple absence of local ISP facilities.

<sup>1</sup> Anderson, M., & Kumar, M. (2019, May 7). Digital divide persists even as lower-income Americans make gains in tech adoption. *Pew Research Center*. Accessed at <https://www.pewresearch.org/fact-tank/2019/05/07/digital-divide-persists-even-as-lower-income-americans-make-gains-in-tech-adoption/>; Horrigan, J., & Duggan, M. (2015). Home broadband 2015. Retrieved from <http://www.pewinternet.org/2015/12/21/home-broadband-2015/>

<sup>2</sup> Anderson, M., & Kumar, M. (2019, May 7). Digital divide persists even as lower-income Americans make gains in tech adoption. *Pew Research Center*. Accessed at <https://www.pewresearch.org/fact-tank/2019/05/07/digital-divide-persists-even-as-lower-income-americans-make-gains-in-tech-adoption/>.

<sup>3</sup> Webber, S. (2019). The library’s role in bridging the digital divide. Urban Libraries Council. Accessed at <https://www.urbanlibraries.org/blog/the-libraries-role-in-bridging-the-digital-divide>.

## 2. Rural libraries and Internet services

Rurality is frequently accompanied by lower levels of both Internet availability and adoption. Census statistics from 2017 report that 23% of Americans do not have home Internet access, and the major factors include age, rural locations, and low income and/or education. In rural locations, broadband adoption rates are lower due to both a lack of providers and higher costs; as well, rural populations frequently have lower incomes. Rural libraries can serve purposes “beyond the book” as crucial community anchors. Adding mobile hotspot lending programs to rural library catalogs not only brings new patrons through library doors but also provides Internet connections after library hours are over, extending the benefits of the library into patron’s homes.

Texas joins many other states in having large land areas with minimal broadband services. Whether served by wireline (cable or DSL or fiber) or wireless (fixed wireless, satellite, cell) vendors, one encounters frequent complaints about access, costs and quality of service. In the 2019 Texas legislature, three bills have been introduced to redress aspects of the state’s rural broadband. As part of the background to these efforts, listening sessions at three rural locations (Bastrop, Amarillo, and Hewitt) in the state conducted by Glasshouse Policy in 2018 revealed deep dissatisfaction with existing services for accessing the Internet.<sup>4</sup> Broadband difficulties in rural Texas are replicated throughout the country.<sup>5</sup>

Because most libraries in Texas offer in-library computers, Internet access and even Wi-Fi, and because they are open to everyone at no cost, they are logical places for people to seek Internet access. In rural areas in particular, libraries are frequently the only public and free site for Internet access, and their broadband quality is often superior to what people may receive at home (if they have a broadband subscription).

Libraries have participated in many digital inclusion efforts around the country, and Texas libraries frequently offer digital literacy and training alongside their access services. They are excellent partners in efforts to extend electronic information services to the public. In our other studies (Strover, Whitacre, Rhinesmith, & Schrubbe, 2017)<sup>6</sup> many rural libraries in Maine and Kansas saw loaning hotspots as an extension of the normal services they already provide. That same research discovered that patrons use these devices to help their school-aged children complete homework, to augment their own education, to complete work certifications, to seek employment, and myriad other activities like managing large community events even as large as county fairs.

## 3. The Tocker Rural Hotspot Program

<sup>4</sup> See Glasshouse Policy (2019). Accessed at <https://us8.campaign-archive.com/?u=b9dcd1e494f868fa39cafc96&id=daef117687>.

<sup>5</sup> There are several grass roots efforts to produce better documentation regarding broadband access and coverage than that provided by the FCC. The agency has come under repeated criticism regarding its inaccurate broadband maps. See Johnson, R. (9/11/19) North Carolina looks to challenge FCC over broadband coverage. Accessed at <https://statescoop.com/north-carolina-fcc-challenge-broadband-maps/>

<sup>6</sup> Strover, S, Whitacre, B., Rhinesmith, C., & Schrubbe, A. (2017). At the edges of the National Digital Platform. *D-Lib Magazine*, 23(5/6). Accessed at <http://www.dlib.org/dlib/may17/strover/05strover.html>.

A grant from the Robin Hood Foundation had enabled an assessment of a hotspot lending program in partnership with the New York Public Library. This library, and its sister libraries systems in Queens and Brooklyn, provided mobile broadband access to 10,000 families in New York City. The aim of that assessment was to examine both program implementation and uses of home-based wireless broadband in populations who lack home-based broadband access. The assessment includes findings that detail changes in people's learning patterns, outcomes in health and educational information seeking, and increased access to other social services (Strover, 2019)<sup>7</sup>.

Simultaneously, we conducted the assessment of library-based mobile hotspot lending in rural libraries in two states (Maine and Kansas). Funded from the Institute of Museum and Library Services (IMLS), the project, "At the Edges of the National Digital Platform: Rural Library Hotspot Lending Programs" examines how 24 rural libraries in Kansas and Maine address the challenges of Internet connectivity through hotspot lending programs (Strover, Whitacre, Rhinesmith, & Schrubbe, 2019)<sup>8</sup>. This work also investigates libraries' role in local digital environments. A project blog details this research (<http://sites.utexas.edu/imlsedgesgrant/>).

We developed a "[best practices](#)" guide for rural hotspot lending which most recently has contributed to new lending projects in parts of rural Oklahoma. We also contributed to the Benton Foundation's online series on topics related to rural libraries, and worked with the Texas State Library and Archives agency in fall, 2017 to offer a webinar on hotspot lending programs based on our research experiences in New York, Maine and Kansas. Through conversations with participants of the hotspot lending program in rural Kansas, we heard telling examples of why rural hotspot lending programs are vital to communities. In particular these devices bridge gaps in access to health care, education, and employment. (Detailed information may be accessed from: <http://sites.utexas.edu/imlsedgesgrant/bringing-internet-access-to-rural-areas-through-a-library-hotspot-program/>)

Based on our experiences in these other sites, we wanted to partner with Texas libraries in order to pilot hotspot programs. We believe libraries, as anchor institutions, have an outside role to play for digital inclusion in rural regions. The Tocker Foundation agreed, and offered funding for a small program with six Texas libraries, providing five hotspots at each site. In addition to the technology and cellular contracts to the hotspots, TIPI provided "tech support" to the librarians.

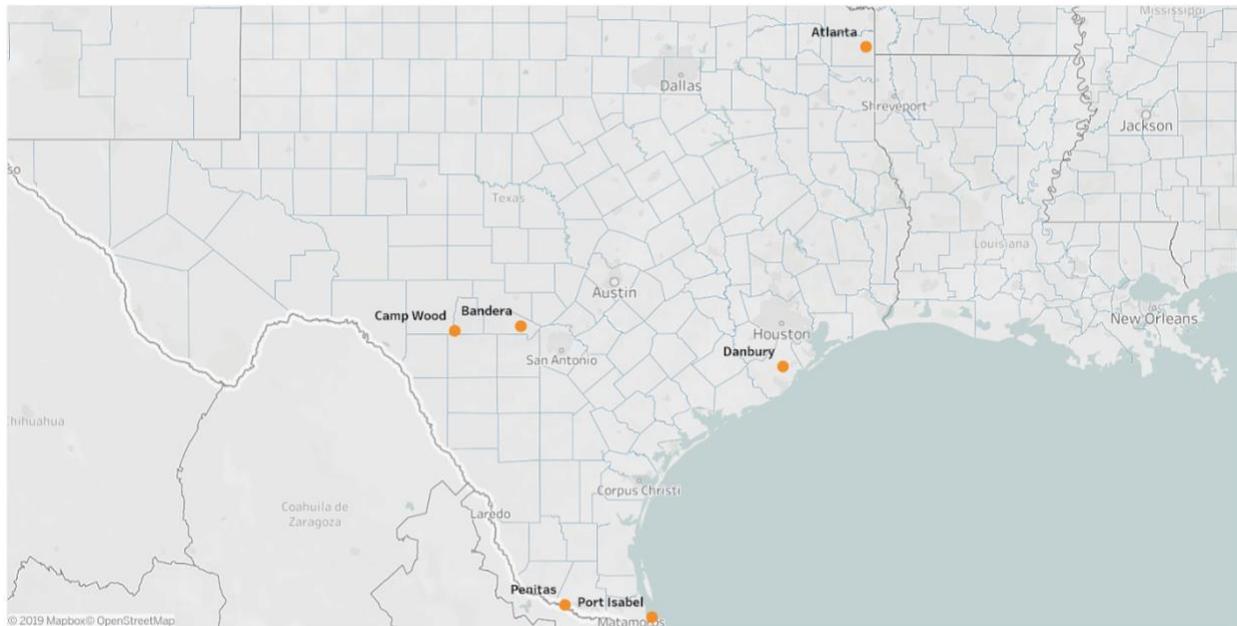
Over 70 libraries applied to participate in the hotspot lending programs and 6 libraries were selected: Atlanta Public Library, Bandera Public Library, Camp Wood Public Library, Danbury Community Public Library, Peñitas Public Library, and Port Isabel Public Library. These libraries were selected because they conform to Tocker's definition of rurality, namely that they serve populations of under 11,000. Another consideration for selection included whether the location was serviced by Sprint's network because we hoped to use a low-cost service provided by Mobile Beacon, and MB works with Sprint. Our pilot sites also served diverse communities, and we wanted to investigate the possible role of race and ethnicity and location in the operations. In general terms, the Port Isabel and Peñitas libraries service a predominantly Hispanic population while the TexArkana location of Atlanta includes a large African American

<sup>7</sup> Strover, (2019). Public libraries and 21<sup>st</sup> century digital equity goals. *Communication Research and Practice*. 5(2), 188-205. <https://doi.org/10.1080/22041451.2019.1601487>

<sup>8</sup> Strover, S., Whitacre, B., Rhinesmith, & C. Schrubbe, A. (2019). The Digital inclusion role of rural libraries: social inequalities through space and place. *Media, Culture & Society*. Accessed at <https://doi.org/10.1177%2F0163443719853504>

population, and Bandera and Camp Wood are predominantly non-Hispanic White. The six sites are spread throughout Texas. Our map (Figure 1) indicates the community locations.

Figure 1 Tocker Foundation and TIPI Hotspot Lending Program Library Sites



Five of the chosen libraries' hotspot connectivity receive service through Mobile Beacon and one library, Camp Wood, is serviced through AT&T. The only cellular service provider for Camp Wood is AT&T and we were able to leverage the University of Texas' rate for the five devices at this library. The AT&T service rate is about \$38 per device per month. The other five libraries get Mobile Beacon's rate of \$10 per device per month. AT&T donated the actual devices while TIPI purchased the devices from Mobile Beacon for the other sites.

To implement the hotspot lending programs, we assembled binders (Appendix III) with all of the information and paperwork they would need. For easy consumer handling, we also provided storage containers for the hotspots that included user guides for the devices. The goal was to have the program ready-to-go so that the only labor for the libraries was to barcode and enter the devices into their own lending software. The binders contained a troubleshooting guide, an Internet safety guide, a list of all the important information about each device, contact information for us, flyers to advertise the program, and 200 User Agreements and 200 Surveys to send with each device checkout. The libraries were also given access to our website (<http://sites.utexas.edu/taketheinternethome/>) and were given digital copies, in both Word and PDF formats, of all of the contents of the binder. The Appendix includes some of the materials we compiled to assist the libraries.

## Hotspot Services and Implementation

The hotspots themselves have unlimited data and can offer 3G or 4G service. We believe unlimited service is essential, because a lending program means that multiple people may check out the hotspot, and it is possible for one person to use up an entirely data allocation available on a limited plan. This would impair the service's attraction to people subsequently

trying to use that same device: with the data limit exhausted, the hotspot's utility would be limited.

We do not have access to the monthly usage of the Mobile Beacon devices, but we know that the AT&T devices are averaging over 100 Gigabytes per month per device - with one device using as much as 243 Gigabytes in February.

The Technology and Information Policy Institute provided information and backup for collaborating libraries and constituted a managing and troubleshooting arm of the program. Our personnel trained librarians in how to use the hotspots and share the best practices we have learned from various libraries around the country. We provided publicity materials and offered suggestions on community and school outreach. Our research suggests that while the hotspots themselves are relatively trouble-free and easy to manage, it is useful to identify someone a librarian can call for advice or if a problem develops; we found monthly calls with hotspot librarians can create a 'community of practice' among the librarians so that they can assist each other or contribute new ideas about uses and problem-solving.

We delivered hotspots to the participating libraries with instructional materials and provided "acceptable use" policies language for them to adapt as needed. Subsequent conference calls allowed participants to share experiences and best practices. The libraries agreed to ask all patrons who borrowed the hotspots to complete a short two-page survey on the experience.

## Managing the Program

In terms of practical issues, the program anticipated the possibility of defective devices and the possibility of theft and tried to help the libraries with policies in the event of either.

The program lost:

- 1 device from Bandera,
- 2 from Camp Wood (although one was returned and I believe they were hopeful about the possibility of a return of the 2<sup>nd</sup>), and
- 1 from Peñitas

To encourage the return of a device that was past due, we contacted either Mobile Beacon or AT&T to temporarily shut off service at the request of the librarians. Camp Wood made three requests to shut off service, Bandera made one, and Peñitas made two to encourage the return of overdue devices.

In total, three defective devices were replaced. Replacement required about two-three weeks to order the replacement, receive it, and then send it along to the library. Troubleshooting the devices is a fairly simple process, and Mobile Beacon's support team has been very helpful and easy to work with for TIPI and for the librarians. Doing a factory reset of the devices was the first step to troubleshooting and solved many connectivity issues. Beyond that, if the device continued to malfunction, Mobile Beacon is able to reset the connection on their end. If the hotspot can no longer connect to the tower then typically it needs to be replaced.

## Survey Results

At this writing 359 people have returned surveys. We asked that people complete the two-page survey on their first visit, and if they cAs heck out the hotspot again, to simply complete the final two questions on a repeat survey. The returned and “repeated” surveys included the following:

Table 1 Number of Surveys Returned and Repeated (N=359)

LOCATION	SURVEYS RETURNED	SURVEYS REPEATED
Atlanta	54	47
Bandera	154	105
Camp Wood	28	27
Danbury	26	19
Port Isabel	42	35
Penitas	55	37

Table 2 Descriptive Demographics of Hotspot Users (N=359)

	(%)
Sex	
Male	29.5
Female	70.5
Age (Median)	52
Education	
Less than high school	3.6
High school, GED, or equivalent	27.9
Some college / Associates Degree	33.1
College Degree	21.1
Post College Degree	14.3
Hispanic	37.7
Race/Ethnicity	
African American	6.1
Caucasian/ White	68.8
American Indian	1.2
Asian	1.2
Other	22.7

Employment	
Employed, full time	46.2
Employed, part time	12.5
Not employed	10.4
Student	4.4
Retired	22.5
Disabled	4
Income	
Under \$25,000	36.6
\$25,000 - \$49,999	29.3
\$50,000 - \$74,999	9.8
\$75,000 - \$124,999	8.9
\$125,000 or more	2.9
Prefer not to answer	12.6
Number of children Per Household	
0	54.6
1	19.4
2	13.9
More than 3	11.8

As Table 2 indicates, the hotspot users were primarily Caucasian (69%), followed by African American (6%). Several people (23%) chose an “other” category. Nearly 40% of the users identified as Hispanic.

In terms of education, 4% did not complete high school, 28% did complete HS, and 33% completed some College, with another 35% completing college or a post-graduate degree. About half the sample did not have children in the household (55%). About 30% lived as the only adult in the household and another 51% lived in two-adult households. The median age was 52. A little under half the respondents said the “head of household” was employed full time (46%), and 13% were employed part time. In terms of income, 37% made under \$25,000 per year, and 29% reported incomes of \$25,000 to \$50,000 per year. Finally, 23% were retired, and 4% indicated they were disabled.

This duplicates some of our findings from rural library users in Maine and Kansas in that the sample is somewhat older and fairly well educated.

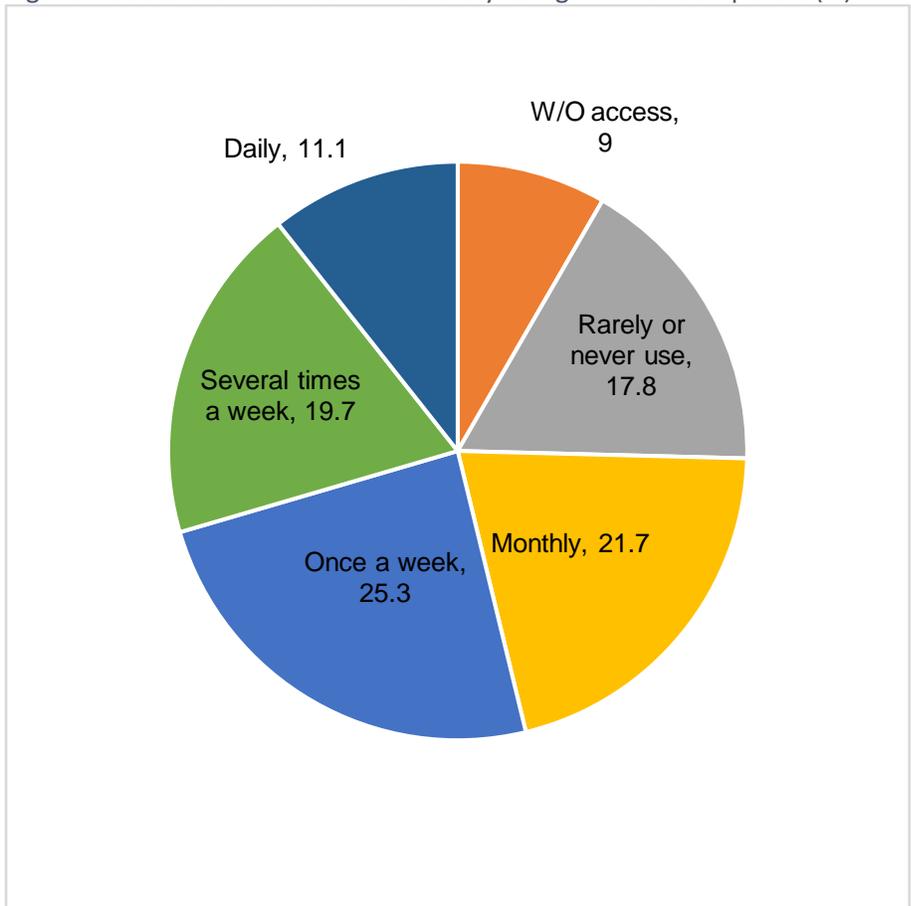
Most of the people completing the survey were women (71%). That said, it was clear from other survey responses that other people in a household typically used the hotspot. About 19% of the sample lived with one child, 14% had two children, and 12% had three or more children living with them.

**Satisfaction with the Program and Using the Hotspots**

On a scale of 1-10 in terms of satisfaction with the library hotspot program, the mean rating was **9.1** - in other words, people were very satisfied.

People checking out the hotspots were routine library users: About three-quarters of our respondents visited the library daily or weekly (74%). In fact, the library was generally a popular place for Internet access. Figure 2 indicates how frequently people use the library for Internet access.

Figure 2 Get to the Internet at the Library Using Wi-Fi or Computers (%)



About 56% of the respondents use the library for Internet purposes on a daily or weekly basis. Using the library might be the most viable option for the many people who said they do not have access to a home Internet subscription - 56%!

As another effective option when they do not have the Hotspot, many people indicated they do have a mobile data plan (62%), and half of them report using that type of access on a daily basis (Table 3).

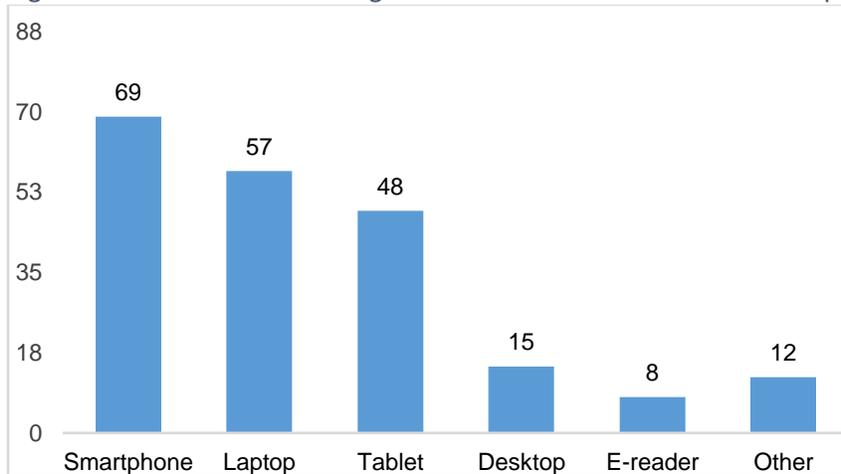
Table 3 When you do not have the library hotspot, how do you get the Internet? (%) (N=359)

PLACES	W/O access	Never or rarely	Monthly	Once a week	Several times a week	Daily

At a friend's house	38.4	25.2	12.6	13.1	8.3	2.4
WiFi at public places	20.2	24.8	16.1	17.9	15.1	5.9
WiFi at a retail place	18.9	26.9	16.4	17.9	17.4	3.5
At work	43.7	13.2	5.3	8.4	9.5	20
At home with Internet subscription	57.7	9.3	3.6	7.7	5.7	16
At school	61.1	11.1	2.11	7.4	8.4	10
<b>Using a mobile data plan</b>	9.7	8.3	5.3	7.9	<b>18.9</b>	<b>50</b>

Hotspot users also had various in-home technologies they linked with the hotspots (Figure 3). Nearly two-thirds of the Hotspot users own smartphones or laptop computers and used them with hotspot, while only a small number of them did the same with desktop computers or e-readers. Some of the “other” devices include Roku, Chromecast, and game set-ups.

Figure 3 Which of the Following Devices Did You Connect to the Hotspot? (%)



\*Note: We allowed multiple responses to types of technologies used with the hotspot.

Likewise, most of the respondents (80%) did pay for monthly smartphone service while only 20% reported that they did subscribe to [fixed] “home broadband.” A minority, 21%, reported that they subscribe to cable television with no Internet service. A very small percentage, only 8%, reported purchasing a newspaper subscription.

Most people indicated the cost of home broadband is too high (64%), and many (59%) reported that phone-based Internet access using applications was a good substitute for wireline services. This indicates significant dependency on smartphones as a primary means of Internet access with the hotspot.

The respondents report that the Internet is important in their lives: over 82% agreed or strongly agreed that the Internet is “very important” to them. Further, over 42% of the sample disagreed

that they “could drop their mobile phone plan” when they experienced a financial crisis (Table 4).

Table 4 underscores respondents’ feelings or life experiences related to the significance of an Internet connection as well as related capabilities made possible with a mobile device. While people are somewhat less concerned about fixed line access or the functionality of their devices to connect the Internet (for example, about 60% responded that a mobile phone can be a good substitute for a computer), greater concern was expressed regarding the cost of Internet connection. As mentioned earlier, 64% agree or strongly agree that the cost of a home broadband service from a cable or phone company is too high. This suggests these respondents struggle to get *affordable* connectivity. Having a device such as a computer or phone was a less important factor than the recurring costs of connectivity. Working around uneven broadband access – 55% agreed they are always searching for free WiFi access and 60% indicated they curtail their use of Internet without the Hotspot – means they miss out on certain things.

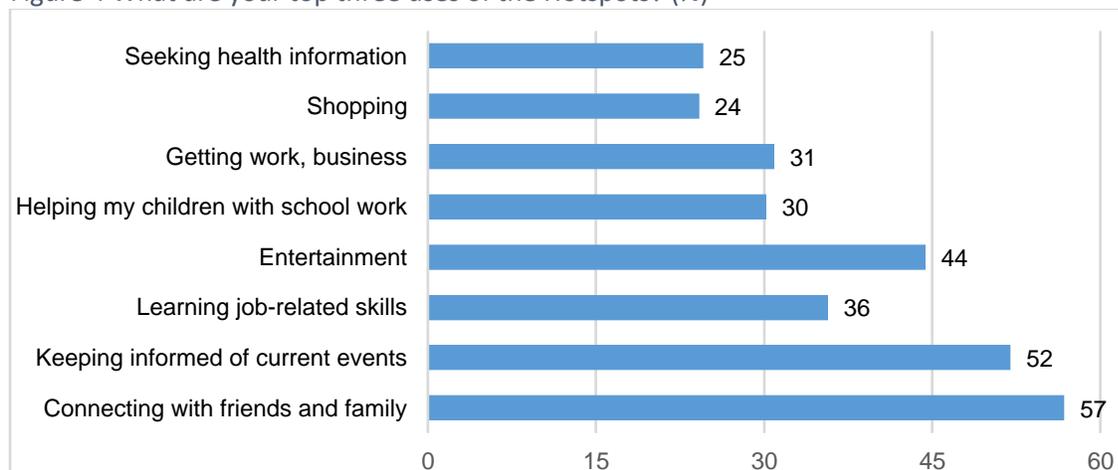
Table 4 How Much Does Each of the Following Statements Describe Your Feelings or Life Experiences? (%) (N=359)

	Disagree	Neutral	Agree
a. The Internet is very important in my life	6.2	11.6	82.2
b. The apps on my phone are a good substitute for using a computer to get to the Internet	19	21.9	59.1
c. My computer is too old to use the Internet	60.1	18.4	21.5
d. I use the Internet less often when I don't have the Hotspot	21.5	19	59.5
e. The cost of a home broadband service from a cable or phone company is too high for me	14.4	21.8	63.8
f. When I have a financial crisis, one of the first things I do is drop my mobile phone plan	42.4	24.4	33.2
g. I feel like I am always searching for free WiFi access	20.2	24.4	55.4
h. I get nervous when I can't go online as often as I want	48.1	24.7	27.2

## Benefits

Figure 4 reports our participants’ “top 3” hotspot uses. Over half of the participants said they use the hotspot to connect with their friends and family or to get information about current events. To a lesser degree, hotspot users also perused the Internet for job or school-related work or for entertainment. These results are roughly parallel to what we found in Kansas and Maine.

Figure 4 What are your top three uses of the Hotspots? (%)



\*Note: We allowed up to three responses.

People indicated that the “single greatest benefit” of the hotspot were Internet access and convenience. Other responses include the following:

- 25% of respondents said that “the Internet” was the single greatest benefit of the hotspot
- 21% the convenience of the hotspot
- 11% work for their job or to find a job
- 11% consistent and reliable signal and reception
- 10% speed
- 8% connecting with family and friends
- 8% completing their own schoolwork
- 7% cost
- 7% entertainment

Finally, in an open-ended item many people expressed gratitude for the program. While there were a few occasions and locations where the cell signal was inadequate, it appears that overall, the hotspots worked well for these respondents. We share some of the responses here and in Appendix IV.

A great idea for rural libraries to provide the hotspots.

Love the library hotspot they just need more especially for people that cannot afford the internet or Wi-Fi at home. Thank you for this great help from the public library, it also makes my job easier when I cannot stay late at work to get things done, and get my personal things done on my personal computer.

I live out of the city limits in a town of 6000. rural service is unreliable with current carrier. Service with this device is 2-3 bar of 4 and does not drop connected devices. Provides good service.

I hope that this program is continued - it was a huge entertainment asset to me; however, I know others would use it for better purposes.

This is a great program to offer the community. It was very user friendly and worked perfectly for my needs. I hope this program can continue for others that do not have access to the internet. Thank you!

Didn't work. Wasn't helpful. -> Actually, it worked flawlessly the first 5 minutes streaming Internet television then stopped. (Probably throttled down by carrier to prevent excessive "free" data use) After those first few minutes it wasn't worth my time to keep trying.

My girls and I are homeless for the most part at the moment and having access to the internet keeps us connected enough to be able to pay bills and do homework. So happy this is an option.

Really appreciate that the library offers this service. I have no internet and have to drive 10 miles to access it

The library's lending program is very convenient, reliable, and simple to setup and use. Thank you for this service!

## Appendix I: Testimonials

Sharon-

I wanted to provide you with some more thoughts on the success of the Hotspots. While a few people just can't afford to pay for their own internet, most people are using it because they have no other choice available to them. Those that have tried dishes on their roofs have been frustrated with slow speeds. We have had nothing but excellent results with the current Hotspots, some people even using it to stream Netflix. I am not sure how a rural library with a limited budget could afford to take on this program, to provides so much benefit to so many people. Our circulation of the four remaining Hotspots (sorry about losing one) now exceeds 100 users since we went live with them on August 29<sup>th</sup>. That means in just eight months, the Hotspot is mostly always in the hands of a patron who appreciates their access to the world. When returned, it immediately leaves the library to the next person on the wait-list. We still get a new, first-time user about every two weeks.

To say that this program has been anything but a tremendous success in our community would be an understatement. Many thanks to you and Richelle for your oversight and to the Tocker Foundation for making this possible. I hope that when you have your meeting with Tocker, that they will be willing to fund the program for a second year. Even if this means excluding the original member libraries, it will be a real benefit to any library lucky to be chosen for the program. Thank you for the opportunity to provide you with some feedback. Sent along another 20+ evaluations more than a week ago, so hope they arrived safely. Mike [Bandera Library]

## Hotspot Access in Texas Rural Libraries

### “Take the Internet Home” Survey

<p>1. Overall, how satisfied with the library hotspot program are you? 1= very unsatisfied 10= extremely satisfied</p>	<p>2. How likely are you to recommend the hotspot program to a friend? 1 = very unlikely 10 = extremely likely</p>
<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10

<p>3. What is your race?</p>	<p>4. What is the employment status of the head of your household?</p>	<p>5. What is your annual household income?</p>	<p>6. What is the highest level of education of any adult in your household?</p>
<input type="checkbox"/> African American <input type="checkbox"/> Caucasian/White <input type="checkbox"/> American Indian <input type="checkbox"/> Asian <input type="checkbox"/> Other _____	<input type="checkbox"/> Employed, full time <input type="checkbox"/> Employed, part time <input type="checkbox"/> Not employed <input type="checkbox"/> Student <input type="checkbox"/> Retired <input type="checkbox"/> Disabled	<input type="checkbox"/> Under \$25,000 <input type="checkbox"/> \$25,000 - \$49,999 <input type="checkbox"/> \$50,000 - \$74,999 <input type="checkbox"/> \$75,000 - \$124,999 <input type="checkbox"/> \$125,000 or more <input type="checkbox"/> Prefer not to answer	<input type="checkbox"/> Did not graduate high school <input type="checkbox"/> High school, GED, or equivalent <input type="checkbox"/> Some college / Associates Degree <input type="checkbox"/> College Degree <input type="checkbox"/> Post College Degree

7. Do you consider yourself Hispanic?  Yes  No

8. How many children k-12 live with you? \_\_\_\_\_

9. How many adults live in your household? \_\_\_\_\_

10. What is your sex?  Male  Female

11. What year were you born? \_\_\_\_\_

12. How far do you drive to get to the library? \_\_\_\_\_

13. How many people in your household use the Internet? \_\_\_\_\_

14. How often do you come to the library?  Daily  Weekly  Monthly  A few times/year  Never

15. Which of the following devices did you connect to the hotspot? Select all that apply.

- Desktop computer
- Laptop
- Smartphone
- Tablet (e.g. iPad)
- E-Reader (e.g. Kindle)
- Other \_\_\_\_\_

16. Which of these services do you pay for or subscribe to now?

- Home broadband Internet (Cable, DSL)
- Cell phone without any data (only calling/texting or SMS)
- Cell phone with data plan (can stream content, search for info)
- Landline telephone
- Cable television, no Internet
- Local newspaper or newsletter

17. Please mark your TOP 3 uses of the device.

- |   |  |
|---|--|
| <input type="checkbox"/> Learning job-related skills<br><input type="checkbox"/> Connecting with family and friends<br><input type="checkbox"/> Keeping informed of current events<br><input type="checkbox"/> Seeking Health Information<br><input type="checkbox"/> Other _____ | <input type="checkbox"/> Helping my child with school work<br><input type="checkbox"/> Shopping<br><input type="checkbox"/> Entertainment (e.g. Netflix, app games, music, etc)<br><input type="checkbox"/> Getting work, business |
|---|--|

PLEASE CONTINUE TO NEXT PAGE

18. Please indicate how much each of the following statements describes your feelings or your life experiences.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
A. The Internet is very important in my life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. The apps on my phone are a good substitute for using a computer to get to the Internet.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. My computer is too old to use the Internet.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. I use the Internet less often when I don't have the Hotspot.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. When I have a financial crisis, one of the first things I do is drop my mobile phone plan.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. The cost of a home broadband service from a cable or phone company is too high for me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. I feel like I am always searching for free WiFi access.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. I get nervous when I can't get online as often as I want.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

19. When you do not have the library hotspot, how do you get the Internet?

	Don't have access	Can access but rarely or never use	Monthly	Once a week	Several times a week	Daily
At a friend's house	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WiFi at public places, like a park	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WiFi at a retail place, like a coffee shop, hotel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
At work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
At with Internet subscription, like DSL, cable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
At the library using WiFi or computers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
At school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using a data plan on my mobile device	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please check this box if you have checked out the hotspot device from the library previously

20. What would you say the single greatest benefit of having the hotspot was for you/your household?

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21. Please share any additional comments here. Thank you! \_\_\_\_\_

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## Appendix III: Binder Materials



# **CAMP WOOD PUBLIC LIBRARY**

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**Hotspot Access in  
Texas Rural Libraries**  
**“Take the Internet Home”**





# TAKE THE INTERNET HOME WITH YOU!

## Check out a mobile hotspot device today!

Now you can use your library card to check out a mobile hotspot device - just like a book. These pocket sized devices are easy to use and can connect up to 10 devices, such as your smart phone, laptop, and tablet, to cellular Internet. Use the device to surf the Internet, help your children do their homework, connect to health and banking services, and much, much more! The device and service are already paid for, you just need to come in to the library to check it out!



Free unlimited  
Internet access  
wherever you  
go!

Visit the library  
to check out a  
device today!

3G/4G Speeds

What are you  
waiting for?!

## CAMP WOOD PUBLIC LIBRARY

106 S. Nueces St.  
Camp Wood, TX 78833

(830) 597-3209

[campwoodlibrary.org](http://campwoodlibrary.org)

Mon Closed  
Tues-Fri 11am - 5pm  
Sat noon - 5pm  
Sun Closed

## Hotspot Access in Texas Rural Libraries

### "Take the Internet Home"

#### DEVICE LOAN AGREEMENT

#### Patron Copy

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*Device Due Date:* \_\_\_\_\_

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The Library has chosen to loan you the device with the device number set forth above (the "Device") so you and/or your household can access the Internet from home. You understand that your household's use of the Device is subject to the terms and conditions set forth in this Device Loan Agreement, and by accepting the Device, you and your household agree to the following terms and conditions:

1. I need to have a valid library card with no outstanding fines in order for my household to be eligible for this offer, and I agree to present documentation required to obtain a library card.
2. I understand that the Device should be returned to the Library on the due date.
3. If the Device is lost or not returned within two weeks after the due date, I will be charged a fine of \$ \_\_\_\_; the wireless service to the Device will be terminated and the Device will become unusable; and my library card privileges may be blocked until the Device is returned in working order or the fine is paid.
4. I understand that when accessing the Internet through the Device, my household and I are accessing the Internet through AT&T's network and not the Library's network. My household's use of the Device is subject to AT&T's Acceptable Use Policy, Privacy Policy, and Terms of Use, all of which are available on AT&T's website (currently located at <https://www.att.com/legal/general-policies.html>). Please read these documents before using the Device.
5. I understand that the Library is not responsible for any files, data, or personal information accessed/transmitted using the Device.
6. It is my responsibility to monitor and determine which websites and content is appropriate for myself and my household.
7. Device remains Library's property at all times. The Library may ask that I return the Device at any time.
8. I will know where the Device is at all times and I will not disassemble the Device or attempt to repair the Device or make any changes to the Device that could impair future patrons' use of the device.
9. I will not use the device to break any laws and understand I may be legally responsible for my use of the Device.
10. I will take care of the Device and use reasonable efforts to avoid damaging the Device. If the Device is lost, stolen, damaged, or rendered inoperable, I agree to contact the Library where the Device was borrowed. I understand that the Library may choose not to replace or repair the Device at its sole discretion.
11. I understand that the Library may use any appropriate means to collect the Device and amounts owed to the Library due to failure to return Device by the Device Due Date.
12. I agree to return the Device, its case, and all its contents, to the Library in good working condition.
13. I agree that the Library, its funders, and other third parties selected by the Library may use any and all information collected about the usage of the Device that I have borrowed to research, track and analyze the results and the effectiveness of the Library Hotspot program.
14. I understand that I will be asked to complete a brief, voluntary survey to help the Library and future libraries understand mobile hotspot lending programs. By borrowing the Device, I consent to the Library contacting me about my use and my household's experience with the hotspot lending program.

## Device #3

### CONNECT TO THE HOTSPOT'S WiFi

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- Power on the hotspot: press and hold the (2) power button to power on and to turn the device off. If the (3) LED is lit blue then the device is on and ready
- Make sure WiFi is enabled on the device you would like to connect (smartphone, computer, tablet, etc.)
- Select the WiFi name that is displayed on the hotspot's (1) LCD screen. Quick press the (2) power button to switch the display
- Enter the WiFi password exactly as it is shown on the screen. The password is case-sensitive.
- Your device should now be connected to the hotspot's WiFi network
- If the battery dies you will need to charge the hotspot by connecting the provided cable to the (4) USB Type C port and plugging it in to a wall outlet.  
**Do NOT leave the device plugged in for extended periods. Only charge the device until the battery is charged and then unplug the device.**





## Nighthawk LTE Mobile Hotspot MR1100

### Additional Resource

For a more complete manual, FAQs, and troubleshooting for the Nighthawk LTE Mobile Hotspot Router, visit <https://www.netgear.com/images/InstallationGuides/mobile/MR1100ATT/MR1100ATT-USERS-MANUAL.pdf>

### Updating the Device

Updates to the device may be necessary periodically and the device will display an alert. If so, please contact Richelle or follow these steps:

1. From a computer that is connected to the device (through WiFi or tethering) launch a web browser (Safari, Chrome, etc.)
2. Enter <http://attwifimanager>
3. On the login page enter the password (attadmin) for the device
4. Click the Start Install button
5. After the update completes, the device restarts.



1) LCD Screen: indicates signal strength, WiFi Name, Wi-Fi Password, number of devices connected, and data usage.

2) Power Button: long press to turn on and off; short press to wake screen and switch display.

3) LED indicator: slow blue blink means the device is ready; fast blue blink means the device is transferring data; slow amber blink means the device is not ready

4) USB Type A port: can be used to connect directly to a smartphone as a power bank.

5) USB Type C port: use the cord that came with the package to recharge the battery or for a tethered Internet connection without WiFi for a computer.

6) Ethernet port: can be used as a wireless router

### How to Connect to the Hotspot's WiFi

- 1) Make sure that the hotspot is powered on (LED is lit)
- 2) Check to make sure that WiFi is enabled on the device you would like to connect (smartphone, laptop, desktop computer, tablet, E-reader, etc.)
- 3) Select the WiFi name that is displayed on the hotspot
- 4) Enter the WiFi password exactly as it is shown on the hotspot's screen. The password is case-sensitive.
- 5) Your device should now be connected to the hotspot's WiFi network

### Tips and Troubleshooting

- Most users will only need to use the 5) USB Type C port to charge the device
- The better the signal, the longer the battery life
- If the device gets too hot it will not charge
- If the device stops charging over time, let Richelle know, the battery may need to be replaced
- If a patron has trouble with the device at home, check the AT&T coverage map: <https://www.att.com/maps/wireless-coverage.html>  
Or, suggest placing the device near a window

# Franklin R910 Mobile Hotspot

## Additional Resource

For a more complete manual, tips, and troubleshooting for the Franklin R910 Mobile Hotspot:  
[https://support.sprint.com/global/pdf/user\\_guide\\_sfranklinr910\\_mobile\\_hotspot/r910\\_user\\_guide\\_en.pdf](https://support.sprint.com/global/pdf/user_guide_sfranklinr910_mobile_hotspot/r910_user_guide_en.pdf)

## Updating the Device

Updates to the device may be necessary periodically and the device should update automatically. If so, please contact Richelle.

## Service End Date

The grant provides for a one-year service contract. The contract for these devices started on August 18, 2018 and will end on August 15, 2019. We anticipate that the libraries will be able to keep the devices at the end of the one year but we cannot promise and we will not know for sure until the conclusion of the grant.



1) LCD Screen: indicates signal strength, WiFi Name, Wi-Fi Password, number of devices connected, and data usage.

2) Navigate the menus using the arrow buttons.

3) Select the option you wish to view by selecting the check mark button.

4) Power Button: located on the side of the device, press and hold power button to turn device on and off. While plugged in the Power Button will be red and then turn green to indicate that it is fully charged.

5) USB Type A port: insert the charger and plug into wall outlet to charge. DO NOT leave the device plugged after it is fully charged. This will degrade the battery life over time.

## How to Connect to the Hotspot's WiFi

- 1) Make sure that the hotspot is powered on.
- 2) Check to make sure that WiFi is enabled on the device you would like to connect (smartphone, laptop, desktop computer, tablet, E-reader, etc.)
- 3) Select the WiFi name that is displayed on the hotspot.
- 4) Enter the WiFi password exactly as it is shown on the hotspot's screen. The password is case-sensitive.
- 5) Your device should now be connected to the hotspot's WiFi network.

## Tips and Troubleshooting

- The better the signal, the longer the battery life.
- If the device gets too hot it will not charge.
- If the device stops charging over time, let Richelle know, the battery may need to be replaced.
- If a patron has trouble with the device at home, check the Sprint coverage map: <http://coverage.sprint.com/>  
Or, suggest placing the device near a window.
- These devices do well with a little bit of patience, try turning the device off and wait a minute before turning it back on.

## Appendix IV: Open-Ended Comments

A great idea for rural libraries to provide the hot spots.

Es ? ? Con Hotspot ?. Gracias por seu servicio

I was really unsatisfied that I had to bring it back early. When the hotspot was in working order, I was very satisfied with it! I hope that whatever issues you are having are resolved soon. Thank you.

I became more aware of what a hotspot is and we might look into trying to get one for our home.

Love the library hotspot they just need more especially for people that cannot afford the internet or Wi-Fi at home. Thank you for this great help from the public library, it also makes my job easier when I cannot stay late at work to get things done, and get my personal things done on my personal computer.

Thanks!

Hotspot does not always have a good signal. It also goes up and down. Where we live hotspot never got over 2 bars.

Thank you for offering these devices here

Great!

Thanks to the library for this program. Have Verizon, but this is much better, will be talking to sprint. Thank you.

loved it!

It worked great! Thanks for having that option available for us to check out. We appreciate it very much.

I live out of the city limits in a town of 6000. rural service is unreliable with current carrier. Service with this device is 2-3 bar of 4 and does not drop connected devices. Provides good service

The hotspot device is pretty good. But it is only as good as the signal strength on your phone. I give it a 5 on the Rictor scale.

My home is problematic for internet service. I have to move to several places inside/outside to pick a good signal. The problem happens with my AT&T service phone as well as with the library device.

Thanks for letting me try it out.

Would like affordable internet

I hope that this program is continued - it was a huge entertainment asset to me; however, I know others would use it for better purposes.

Very convenient

This is a great program to offer the community. It was very user friendly and worked perfectly for my needs. I hope this program can continue for others that do not have access to the internet. Thank you!

Great program for us "rural" folks - easy to use, maintains a good charge and good signal throughout entire house with no cords!

Great resource

Will check out the device one more time when I travel if can verify sprint coverage/service to be improved.

They work great as long as the Sprint tower is working - I found that out this last time I checked it out from library :(

Didn't work. Wasn't helpful. -> Actually, it worked flawlessly the first 5 minutes streaming Internet television then stopped. (Probably throttled down by carrier to prevent excessive "free" data use) After those first few minutes it wasn't worth my time to keep trying.

Love it thanks!

Thank for having "hot spot"

We use Hughesnet. The hot spot is a great alternative to satellite service. I would certainly consider dropping satellite service and going with the hotspot permanently if we experience any more outages or disruptions in Hughesnet's service, if the price is right and the data limits are in the same or better range, the hotspot would be a viable solution for us.

Works well

This hotspot was great! We traveled to Austin and had internet access at all times. My family was very impressed that I had access to this through the library

My girls and I are homeless for the most part oat the moment and having access to the internet keeps us connected enough to be able to pay bills and do homework. So happy this is an option.

It's a necessity for those living in rural areas without access to internet and those who need data on occasion

There is no good antenna service in Pueblo de palmas we need antenna near our area for internet

Very thankful for Penitas Library to have Wi-Fi devices for public

Great - thank to you poor your hotspot

I was very satisfied that the library has these devices for free for the community. Thank you

Great options of service very thankful that we have this service

Es excelente esta programa de ???? Este ??? De Hotspot

Thanks

Grateful that the hotspot device is available to community

Great

This is a great sounding program. I am eager to check it out and see how well it functions. Thank you!

Great program to help people out

Is a good idea because somebody person don't have to much money for pay internet connection. Thank you for support and have nice day. =)

Plz keep their grant. It's excellent.

Awesomeness!

Assist with (hotspot) applications for government entities, school form, etc.

Having used the service for a week, I am very satisfied and grateful for the service. Thank you PI Library!

Good program

Great service

Great!

Great service

Great program!!

Grand service. Great library.

Great program

This is a great service

This is my third time checking out a hotspot. I really appreciate the service. Thank you.

I want to know how to get one of these w/o having a sprint telephone

Thank you :)

I just appreciate Bandera library offering these hotspots for people that really need access to the internet but for whatever reason can't access it otherwise

I'm a senior citizen and it helps so in bad weather and other times

Great use <3

Great that the library has the hotspot. Wish could be able to have it for more than just a week. Or at least more of them.

Love it! Great item - thanks

Great quality

Thank you so much for this treasure

This is an excellent service that is provided by the library

Its definitely useful to communicate and participate in distant activities

It's a great thing to offer, much appreciated for the week of strong streaming

Glad the library has these hotspots available

This is a blessing

It didn't work last time much but wanting to try again so I can stream the Netflix I pay for

Works well

Great signal and connectivity!

We are grateful to be able to use this hotspot! We are able to submit work projects smoothly and use video streaming uninterrupted :)

Hotspot 4 seems to work intermittently. Have had issues w/#4 in the past

This is the best thing that happened for the public and especially myself and at the same time we are helping the person of interest

I had an interview online; the hotspot did an amazing job with the video to connect with the company during the interview. The hiring person was in Chicago I was in Texas. We interviewed per online video.

Thank you for this opportunity you have gave us

It's a great help having at home. All of our kiddos can do homework w/o leaving

This hotspot been very helpful for the school project

Thank you for giving us this item to use, it is a heaven sent you gave us

This is a great program. Please keep it going.

This is a great service Please keep it up

Really appreciate the "loaner" hotspot - esp. when consistent-fast internet is needed to do tasks such as F.I.T programs. Thank you!

We appreciate being able to have this available

Thank you for the service of the hotspot it is in great need not just for myself but for the whole community

Thanks so much for the use of the hotspot. Will definitely use again

Thank you for doing this. I hope this program stays here. It is so much help.

Would like the hotspot for 2 weeks not 1

Turned off at random intervals device #5

Bandera Library and the folks who care for it are amazing!

Hotspot is very easy to setup and use, hotspot is convenient, there is no cost burden. Very pleased with friendly help and general treatment by library staff!

This hotspot (#6) seems not to hold charge very long. Still very useful, especially on trip

Hotspot 5 worked great! Hotspot 4 has intermittent issues going in and out

Looking forward to the focus group and helping keep the program going for the community

Love this opportunity for "real" internet!

I use it for games and art - sometimes searching

Really appreciate that the library offers this service. I have no internet and have to drive 10 miles to access it

This program is very beneficial to my family! Thank you!

The library's lending program is very convenient, reliable, and simple to setup and use. Thank you for this service!

Works well

What a wonderful program

I appreciate that the library has these hotspots I can use. I don't have reliable internet where I live

Not sure why the screen turned blank white on me, was working fine I put it in its box and when I came home from work it wasn't working any more that was Oct 30.

This did not have service. I was in the Biuins TX area

It was wonderful being able to work online with my personal needs, and to do it at home, thank you  
NA

Disappointed in performance of hotspot. We have a browser that works better. Like 2 mi past city limits on Highway 77 W

Very much appreciated. We stay in Atlanta part time and cannot justify full time home subscription  
The hotspot Wi-Fi was easy to set up it worked in my area with no problems. Thank you

My devices connected to the hotspot but the hotspot could not pick up any service so that the internet was inaccessible. However, both my phone and laptop connected so someone with service could probably use this freely.

Glad the library has this service

It is wonderful to be able to have access to this hotspot for free, thank you

Glad this is available in my area, and its free to us users. Thank you.

Excellent program and much appreciated

Outstanding library and employees

Thank you for this program. I cannot afford internet, plus where I live we are only allowed satellite internet which is horrible! My neighbors have it and the price they pay for the horrible access is not worth it!

I think this is good for families who do not have internet or can afford it. Help students get lessons.

Suggest having alternate list allowing immediate hotspot unit for short [suggest 3 days] use of unit.

User would be allowed on alternate list for a charge of \$5 for each 3-month period

Very thankful for our library

Hotspot did not work where I live, very frustrating! We don't live too far out of city limits in the country and can hardly get Internet

Wish the waiting list was not so long

Thank you for providing this service to our community

This is a very good service to be able to use, I and the children are very excited to be able to have a hotspot service. Thank you!

Awesome program. Thank you!

This is awesome! Thank you!

I have recommended your service to others

Great service to be able to borrow when you know you are going to be on a trip or on the go a lot

Thank you!

It's a good device, slow compared to library, but for use outside city limits it's a good thing!

Thanks for this program

Its awesome love it.

I love this but do have concerns over hotspot issues

We can enjoy family movie night with the hot spot. We don't have to go somewhere for WiFi. This is such a great service/grant that I'd be willing to pay \$5-\$10 for a weeks use. Thank you.

Thanks for providing this program!

It is a great service offered by the wonderful folks a Bandera Library

Glad to hear the program has been extended. Thank you!

I love the hot spot and I think it should be at the Bandera and all the libraries in the country.

Love this program and opportunity it gives to us out here in the country!

Using hotspots is simple, reliable, safe and free!

I appreciate not having to drive 10 miles to library to get to a WiFi connection.

Hotspot #6 did not work well at all. Unable to stream audio/video. VERY SLOW - even loading simple websites. - frustrating

Very reliable, secure, high speed - valuable in rural areas, like my homestead. Thank you Bandera Library!

Somethings better than nothing