Results of ECC Broadband Availability and Adoption Toolset (BAAT) Program for Jefferson County NY

June 9, 2021



ECC Technologies, Inc. 2136 Five Mile Line Road Penfield, NY 14526

The information in this proposal was gathered for the exclusive use of Jefferson County and the Development Authority of the North Country for the purposes of planning.



Results of ECC Broadband Availability and Adoption Toolset (BAAT) Program for Jefferson County NY

June 9, 2021

Contents

1. Introduction	4
1.1 Demand Aggregation and Assessment	4
2. Highlights	5
2.1 Overall Response Counts	5
2.2 Internet Access without Broadband	7
2.3 Key Uses of Broadband	7
2.4 Value of Broadband	8
2.5 Commercial	8
2.6 Service Provider Opportunities	8
2.7 Community Support	9
2.8 Access to the BAAT Program	9
2.9 Summary	9
3. Responses	10
Residential With Internet	15
Residential with No Internet	20
Non-Residential with Internet	31
Non-Residential No Internet	35
Household Demographics	40
Non-Residential Firmographics	44
General Track – All Respondents	48
4.0 How the BAAT Program Works	51



5. Site Analytics	53
5.1 Speed Tests.	53
5.2 Survey Results	
5.3 Internet Site	
Traffic Sources	56
Appendix	57
Appendix A. Respondent Comments	58

Figures

Figure 1: Jefferson County BAAT Program Landing Page	4
Figure 2: Residential vs Non-Residential Responses	6
Figure 3: What Type of Internet Access Do You Have?	13
Figure 4: Can the Respondent Purchase the Speed They Need?	18
Figure 5: Reason for Not Purchasing Internet Access	21
Figure 6: Issues with Medical Care	23
Figure 7: Issues with Working from Home	25
Figure 8: Issues with School Work	27
Figure 9: Current Speed Purchased	33
Figure 10 Example BAAT Respondents Mapped	51
Figure 11 Site Visits Jan 14, 2021 to April 15, 2021	54
Figure 12 Top devices by visits	54
Figure 13 top Browsers and O/S's by Visits	55
Figure 14 Site Referrals by Date	55
Figure 15 Referral Sources (exclude direct & social)	56



1. Introduction

ECC Technologies worked with the Development Authority of the North Country [DANC] and Jefferson County to develop and deploy ECC's Broadband Availability and Assessment Toolkit in the County. This report summarizes the program and the results of the program.

1.1 Demand Aggregation and Assessment

ECC's Broadband Availability and Adoption Toolset (BAAT) is a web-based application that will allow documentation of demand for broadband services within Jefferson County, with marketing component, data, and mapped responses all captured within one portal.

The BAAT includes a Speed test component, which helps in the assessment of the identification of "speeds" of non-mobile respondents who are online via DSL, broadband, or those who are accessing the device via a mobile device.

The BAAT program allows customized questions in the assessment section for both residential and business respondents, as well as respondents with service vs. those without. The BAAT allows for near real-time reporting to be produced on survey responses, including geographic locations.

SPECIAL THANKS

Thanks to the Jefferson County team who enthusiastically supported the project and a special thanks to Laurie Marr of the Development Authority of the North Country who worked tirelessly to promote this project and make it a success.



FIGURE 1: JEFFERSON COUNTY BAAT PROGRAM LANDING PAGE



2. Highlights

The initial question on the survey assessment is a required component and requests the physical address of the respondent. This is required because it allows for the ECC team to geolocate and map the responses. While any response can be mapped, the key purpose of mapping during the BAAT program is to evaluate the physical location of responses to ensure input from all locations within the County.

The focus of this section is on respondents who have limited or no access to the Internet.

2.1 Overall Response Counts



	Count	Percent
Complete	1,292	89.8%
Partial	147	10.2%
Disqualified	0	0
Totals	1,439	

Over the course of the BAAT program, there were an average of about 15.5 responses per day. Most of the responses – 94.5% - were from residential respondents with only 5.5% from commercial and other non-residential entities.

Through this survey, residents had a variety of methods with which to communicate with ECC or with the County including direct email, a "Contact Us" from on the site, and a dedicated phone number. Contained within the questionnaire is the capability for a respondent to input criteria into the survey form.

Appendix A includes direct feedback from respondents to the Jefferson County BAAT campaign and contains nearly 300 comments.



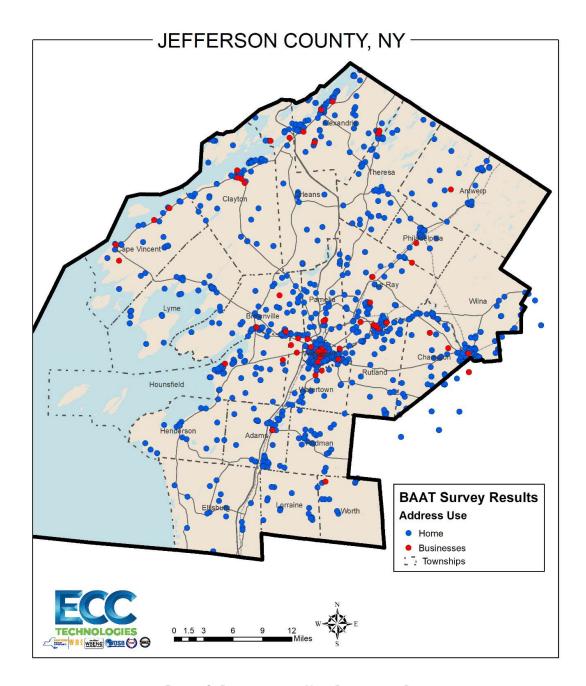


FIGURE 2: RESIDENTIAL VS NON-RESIDENTIAL RESPONSES



2.2 Internet Access without Broadband

The responses in this section include those who do not have Internet access, or who utilize DSL, dialup, cellular hotspot, or satellite services.

A total of **204 respondents or 21.6%** reported having no access to broadband, or access via DSL or dialup services. This number increases if internet access via satellite and cellular hot spot are added. The total jumps to **375 or 34.8%** - almost half of the respondents.

Adoption of Internet access often hinges on affordability for a user. In Jefferson County, almost 40% of these respondents are paying **more than \$75** per month for access. A total of 309 or about 30% of respondents reported being unable to purchase the speed they required while another 23.8% or 252 respondents, indicated they did not know if they could purchase the throughput, they required.

There were 67 responses to the question asking why the respondents had no internet access. Almost three quarters – 73.1% of the responses – reported that broadband was simply unavailable.

2.3 Key Uses of Broadband

Three questions were asked relating to personal uses of broadband: were there issues relating to accessing health care [thinking in terms of telehealth and remote care], work, or school.

About 65% reported not having issues accessing health care based on either location or cost. This percentage differs from some other BAAT campaigns in other areas of the country, and probably reflects the availability of health care facilities and providers within the county, and proximity to larger teaching hospitals and trauma care.

Jefferson County results mirrored Lewis County results on the next two questions: when examining working from home, about 30% of the responses said that no one in the household worked from home – however of the remaining group, 65% of the total reported having trouble completing work from home – a total of 40 households – due to Internet access issues.

The numbers were slightly different for the question about difficulties with schoolwork resulting from 69% of the respondents reporting school age children would NOT be the primary users of broadband in the home. Further, while not discounting single parent households, 55% of respondents reported having fewer than three individuals in the household. Of the remaining answers however, **38 households or 59.4% reported issues related to schoolwork.**



2.4 Value of Broadband

A multi-tiered question asked respondents to express their perception of the value of the Internet access to different parts of their life.

The highest responses from those who do not currently have broadband— **over 80%** - responded that Internet Access was *Very Important* to **stay in touch** and to **stay informed**.

Quality of life value of Internet access was more than 58%, and questions about healthcare, livelihood and education all registered above 40%. When adding in the category of *Somewhat Important* all categories exceeded 60% apart from the question regarding education.

When considering that specific question, almost 27% said the importance of Internet Access to pursue an education was Not Important or Not Applicable. When reviewing this question more closely, an extremely high level of respondents reported having a minimum of a high school education. Over 80% of the respondents have a two-year college degree or higher.

2.5 Commercial

Five respondents out of 75 reporting non-broadband Internet access, is a commercial enterprise.

2.6 Service Provider Opportunities

The ability to recruit new providers into the County is enhanced by the results of the BAAT campaign. **Almost 80%** of those who have limited, or no Internet access believe it is Important or Very important to have **a choice of providers**.

Almost **98% of these said they would purchase Internet** – another 54% added video or TV access, and a little more than 20% added home phone service.

These numbers, when extrapolated across all areas of the County with limited Internet access, help a service provider in developing an economic model to determine if they can offer these services in a profitable and sustainable manner.

The offset? One question specifically asked the reporting member of the households how much they would be willing to pay for new or improved service. There is a strong contrast between what households are paying today for service, which is NOT broadband, vs. what they perceived as a reasonable price to pay for new or improved service.

A little more than **2 out of every 5 responses indicated a monthly charge from \$25-\$50** would be their pick as a reasonable price. Thirty respondents or 46.2% **indicated** that a range from



\$50 to \$100 would be acceptable while 4 individuals indicated there willingness to spend more than \$100.

2.7 Community Support

A surprising response was to the question regarding being a "Champion" for improved broadband. Only **one fifth or 20.7%** of the respondents, who have limited or no Internet access, **responded "Yes"** when asked if they would be willing to be a champion for improved internet access.

2.8 Access to the BAAT Program

The success of any BAAT campaign ultimately rests with the client. The high percentage of responses from those with limited or no Internet access attests to the hard work of the teams from the Development Authority of the North Country and Jefferson County.

Many BAAT campaigns have high recognizance rates from activities in churches and schools. With COVID impacting both institutions, Laurie and the team turned to other opportunities. More than 22.5% of this group found the notification about the survey through Facebook and social media. Another 36.4% learned of the survey through direct contact from the County or from a newspaper article.

2.9 Summary

When combined with the Jefferson County infrastructure inventory which includes additional analysis related to the FCC assessment of broadband availability and other metrics, the results of the BAAT survey produce a compelling picture. The response maps do not indicate geographic disparity in responses and appear to accommodate towns and villages as well as the rural parts of the county.

There is a strong interest in reviews of the speed tests. These tests are evaluated separately from the overall survey to examine geographic locations where sub broadband speeds can be observed. On a consistent basis, it is difficult to correlate the results between the speed test and the survey. This results from many online responses which are completed at work or from a cellular phone where the speed test results are not relevant in context.

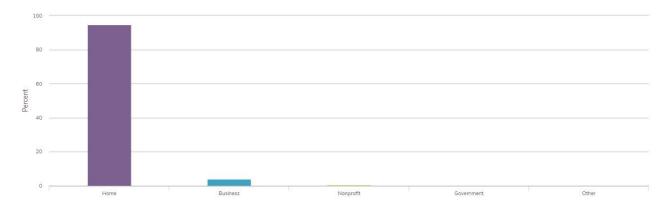
The high percentage of completed responses from all groups indicate a strong interest in broadband as an issue within the County. Significant value will be gained as the population learns more about the advantages of broadband in supporting health care and improved access to community services.



3. Responses

1. Is this address for your home or business? All Responses.

This question represents the first logical branch in the assessment. The response is binary and is interpreted as "Home" or residential or not home ("Business", "Nonprofit", "Government", "Other"). The result of the response to this question is held pending the answer to the following question. The respondent is directed to a "What Type of Access…" question depending on this response.



Value	Count
Home	1,345
Business	58
Nonprofit	9
Government	6
Other	6
Total Responses	1,424



2. What type of Internet Access do you have at this home address?

This question is the second logical question and is for residential respondents. In conjunction with the previous question, all responses are now segregated into:

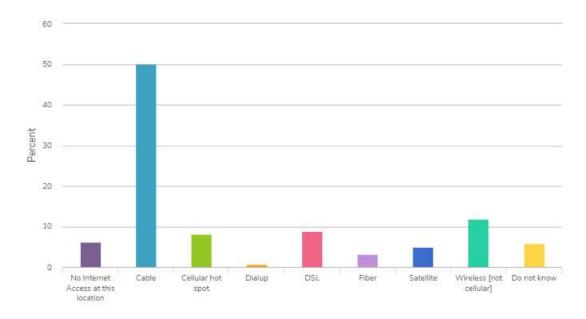
- Residential with Internet Access (this question)
- Residential without Internet Access (this question)
- Non-Residential with Internet Access (next question)
- Non-Residential without Internet Access (next question)

The next several questions following this one will take each of the listed above through several questions focused specifically to the group. Following the last question in the group-specific series, all residential subscribers will then be taken through a limited number of demographic questions; likewise, non-residential subscribers are walked through a small series of firmographic questions.

At the end of the survey, all respondents are asked for comments, and for their willingness to be a "Champion" for Broadband. Those answering "Yes" or "Tell me more" are asked for contact information allowing DANC or Jefferson County personnel to follow up with them and solicit their help and support.



2. What type of Internet Access do you have at this home address? (cont.)



Value	Percent	Responses
No Internet Access at this location	6.2%	80
Cable	50.1%	646
Cellular hot spot	8.2%	106
Dialup	0.7%	9
DSL	8.9%	115
Fiber	3.1%	40
Satellite	5.0%	65
Wireless [not cellular]	11.9%	154
Do not know	5.8%	75
		Totals: 1,290



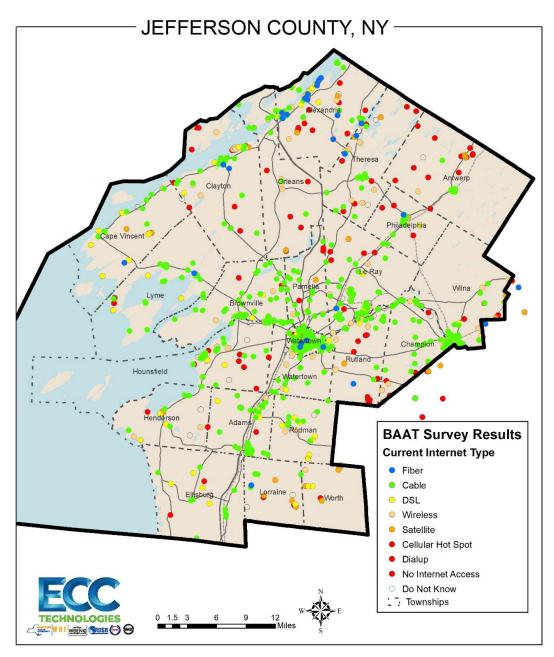
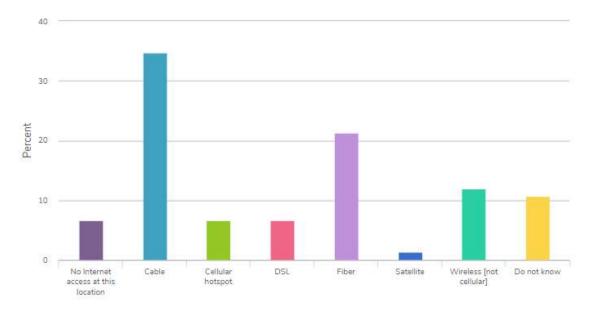


FIGURE 3: WHAT TYPE OF INTERNET ACCESS DO YOU HAVE?



3. What type of Internet Access do you have at this non-residential address?

As previously discussed, this is a binary question with the ultimate results being "No" to indicate the lack of Internet access at the address, or the selection of any other response, to indicate the availability of Internet at the address. This will direct the survey to a commercial with internet or commercial without internet track.



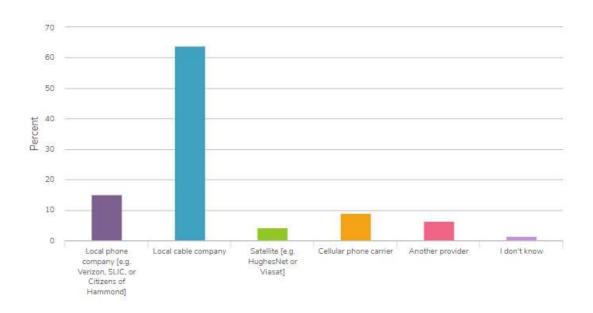
√alue	Percent	Responses
No Internet access at this location	6.7%	5
Cable	34.7%	26
Cellular hotspot	6.7%	5
DSL	6.7%	5
Fiber	21.3%	16
Satellite	1.3%	1
Nireless [not cellular]	12.0%	9
Do not know	10.7%	8

Totals: 75



Residential With Internet

4. Who is your current Internet service provider?

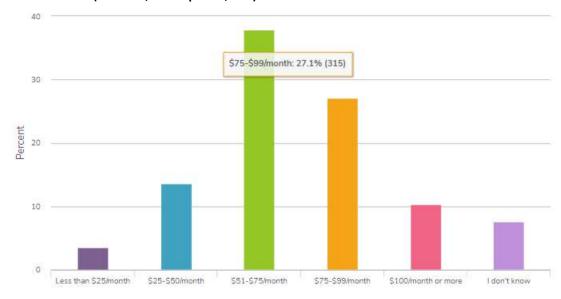


Value	Percent	Responses
Local phone company [e.g. Verizon, SLIC, or Citizens of Hammond]	15.2%	176
Local cable company	63.9%	740
Satellite [e.g. HughesNet or Viasat]	4.2%	49
Cellular phone carrier	9.0%	104
Another provider	6.3%	73
I don't know	1.4%	16

Totals: 1,158



5. How much are you paying per month for Internet access only? Please do not include additional bundled services (cable TV, home phone, etc.).

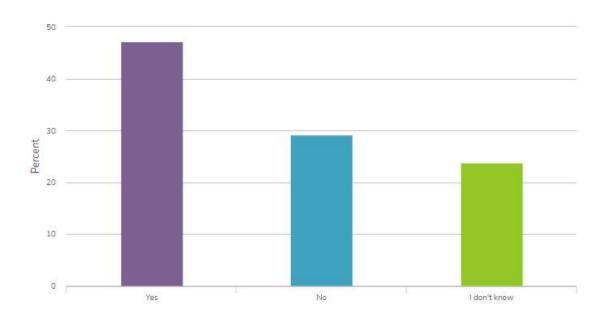


Percent 3.5%	Responses
3.5%	- 11
M MERINE	41
13.6%	158
37.9%	441
27.1%	315
10.3%	120
7.6%	89
	37.9% 27.1% 10.3%

Totals: 1,164



6. Are you able to purchase the speed of broadband service that you need?



Value	Percent	Responses
Yes	47.1%	499
No	29.2%	309
I don't know	23.8%	252

Totals: 1,060



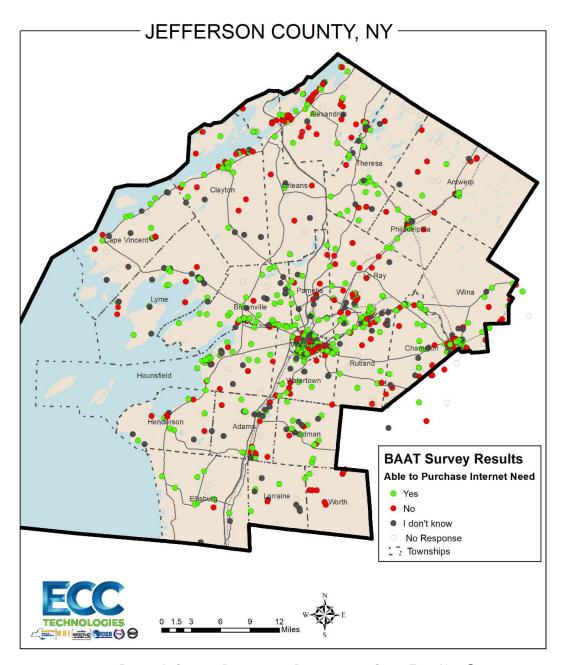
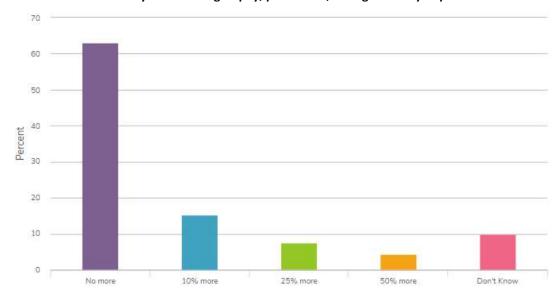


FIGURE 4: CAN THE RESPONDENT PURCHASE THE SPEED THEY NEED?



7. How much more would you be willing to pay, per month, for significantly improved service?



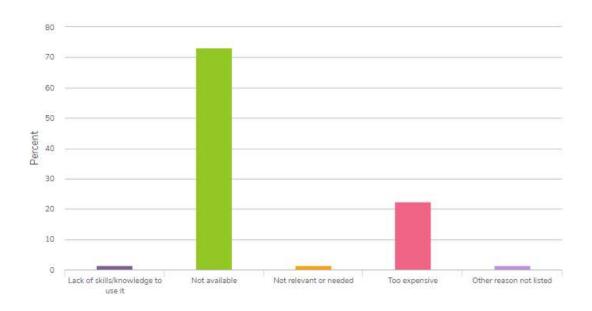
Value	Percent	Responses
No more	63.1%	678
10% more	15.3%	164
25% more	7.5%	81
50% more	4.3%	46
Don't Know	9.9%	106

Totals: 1,075



Residential with No Internet

8. Please tell us the main reason you do not have Internet access.



Value	Percent	Responses
Lack of skills/knowledge to use it	1.5%	1
Not available	73.1%	49
Not relevant or needed	1.5%	1
Too expensive	22.4%	15
Other reason not listed	1.5%	1

Totals: 67



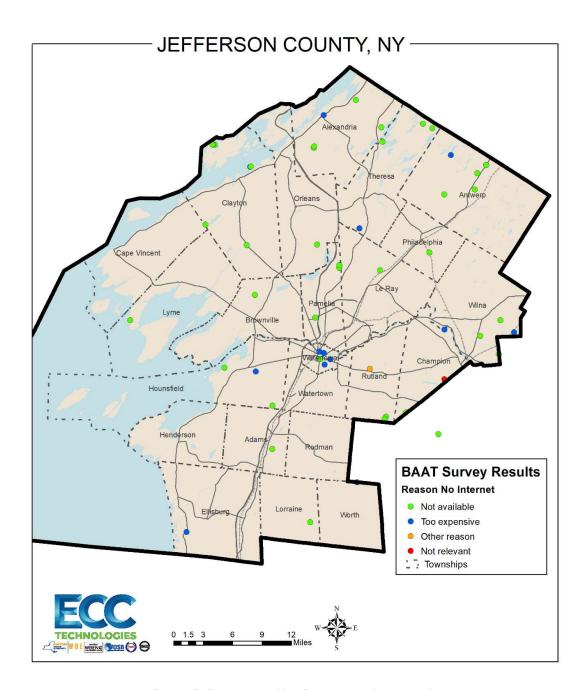
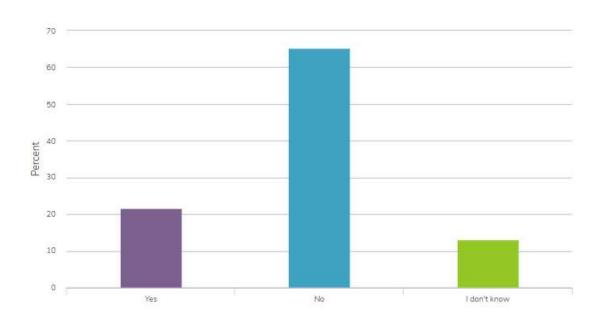


FIGURE 5: REASON FOR NOT PURCHASING INTERNET ACCESS



9. Do you have problems getting medical care for yourself or your family based on location or cost?



Value	Percent	Responses
Yes	21.7%	15
No	65.2%	45
I don't know	13.0%	9

Totals: 69



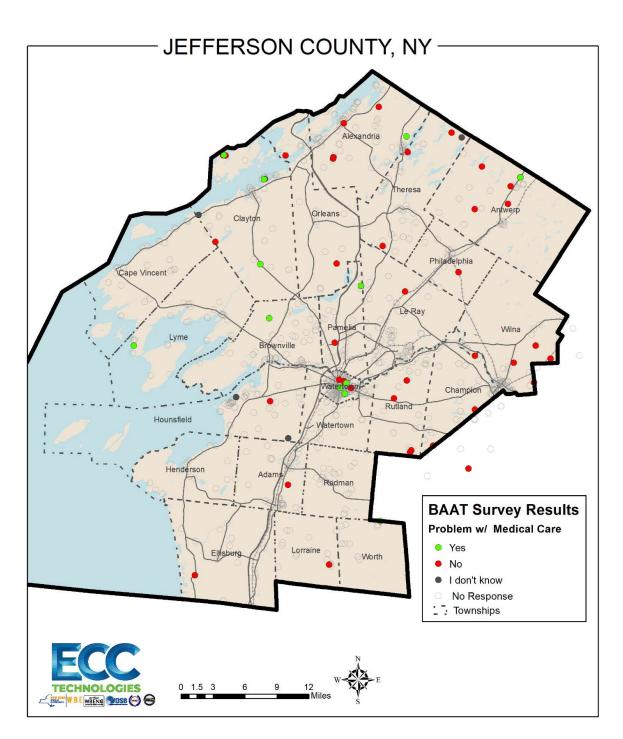
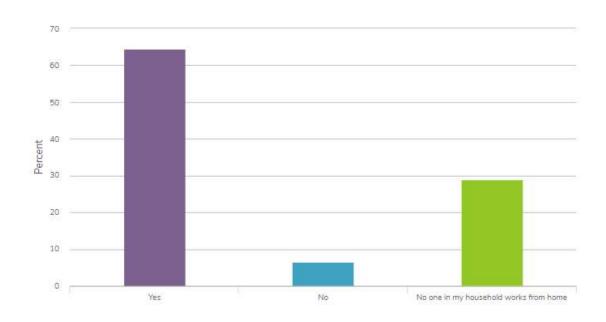


FIGURE 6: ISSUES WITH MEDICAL CARE



10. Does anyone in your household have trouble completing work associated with their job [working from home] due to a lack of Internet access?



Value	Percent	Responses
Yes	64.5%	40
No	6.5%	4
No one in my household works from home	29.0%	18

Totals: 62



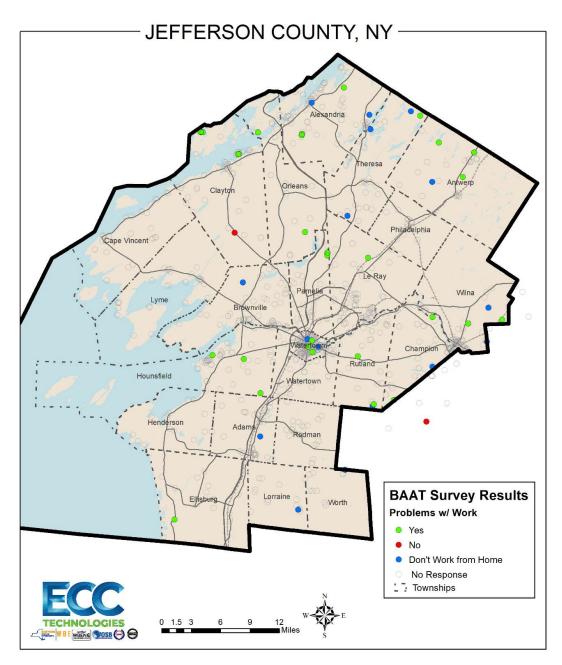
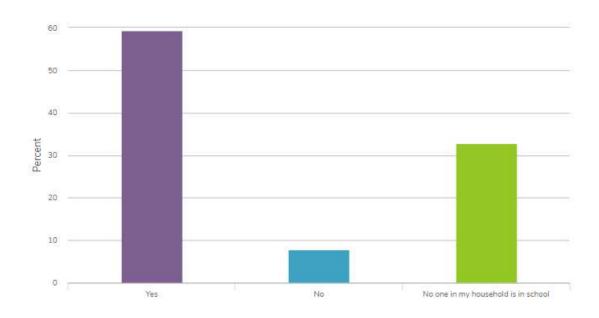


FIGURE 7: ISSUES WITH WORKING FROM HOME



11. Does anyone in your household have trouble completing schoolwork [either homework or attending virtual school] due to a lack of Internet access?



Value	Percent	Responses
Yes	59.4%	38
No	7.8%	5
No one in my household is in school	32.8%	21

Totals: 64



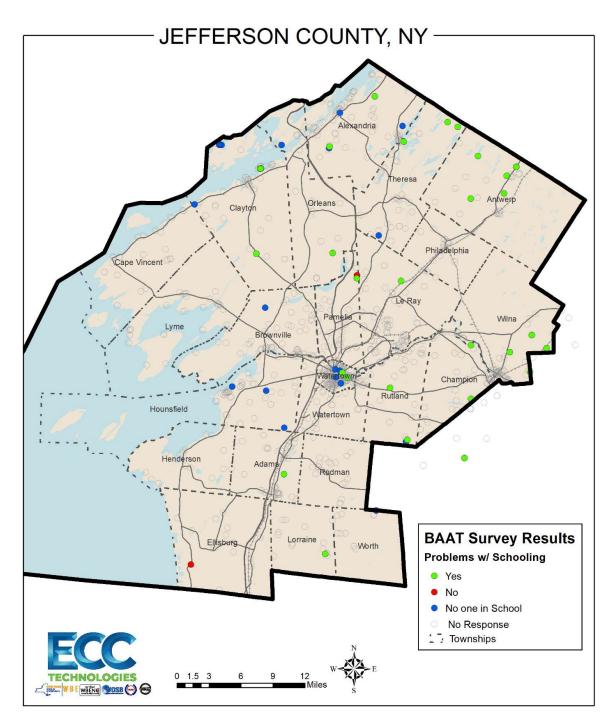
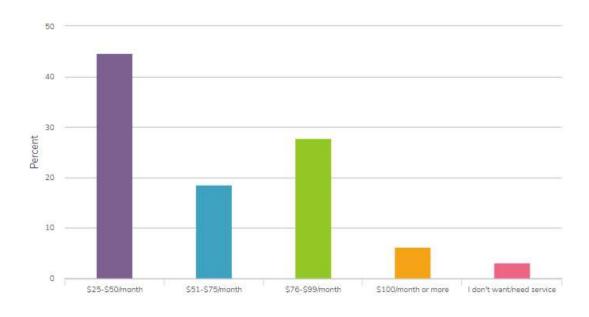


FIGURE 8: ISSUES WITH SCHOOL WORK



12. How much would you be willing to pay for new or significantly improved Internet/broadband service?

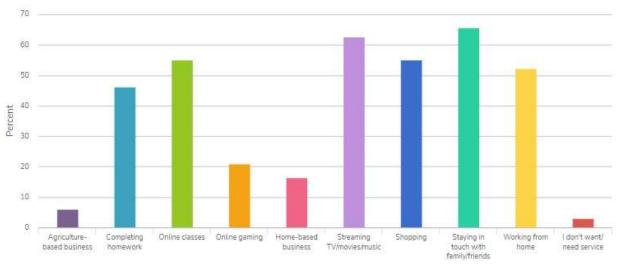


Value	Percent	Responses
\$25-\$50/month	44.6%	29
\$51-\$75/month	18.5%	12
\$76-\$99/month	27.7%	18
\$100/month or more	6.2%	4
I don't want/need service	3.1%	2

Totals: 65



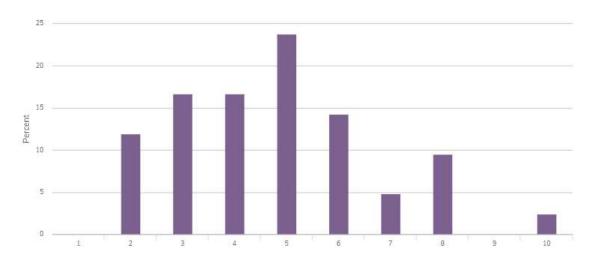
13. For what uses would you subscribe to a broadband service? (Please check all that apply.)



Value	Percent	Responses
Agriculture-based business	6.096	4
Completing homework	46.3%	31
Online classes	55.2%	37
Online gaming	20.9%	14
Home-based business	16.4%	11
Streaming TV/movies/music	62.7%	42
Shopping	55.2%	37
Staying in touch with family/friends	65.7%	44
Working from home	52.2%	35
I don't want/ need service	3.0%	2



14. How many devices would you possibly connect to the Internet?



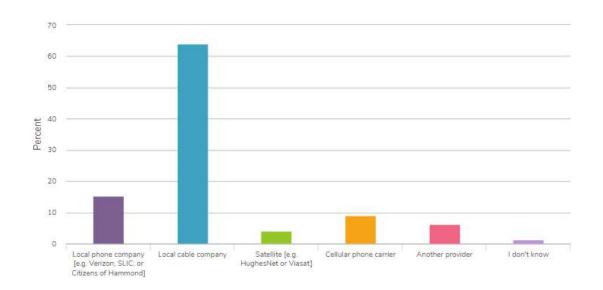
The above figure represents the count of devices, within the household, that the respondent would potentially connect to the Internet – these devices might include computers, cellular telephones, household appliances, smart TV's, Roku and similar devices, smart lighting, security systems and more.



[The remainder of this page intentionally blank.]

Non-Residential with Internet

15. Who is your current Internet service provider?

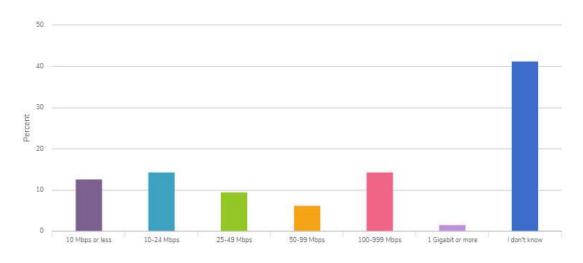


Value	Percent	Responses
Local phone company [e.g. Verizon, SLIC, or Citizens of Hammond]	15.2%	176
Local cable company	63.9%	740
Satellite [e.g. HughesNet or Viasat]	4.2%	49
Cellular phone carrier	9.0%	104
Another provider	6.3%	73
I don't know	1.4%	16

Totals: 1,158



16. What is the current download speed or throughput at your location?



5	120
Percent	Responses
12.7%	8
14.3%	9
9.5%	6
6.3%	4
14.3%	9
1.6%	1
41.3%	26
	12.796 14.396 9.596 6.396 14.396 1.696

Totals: 63



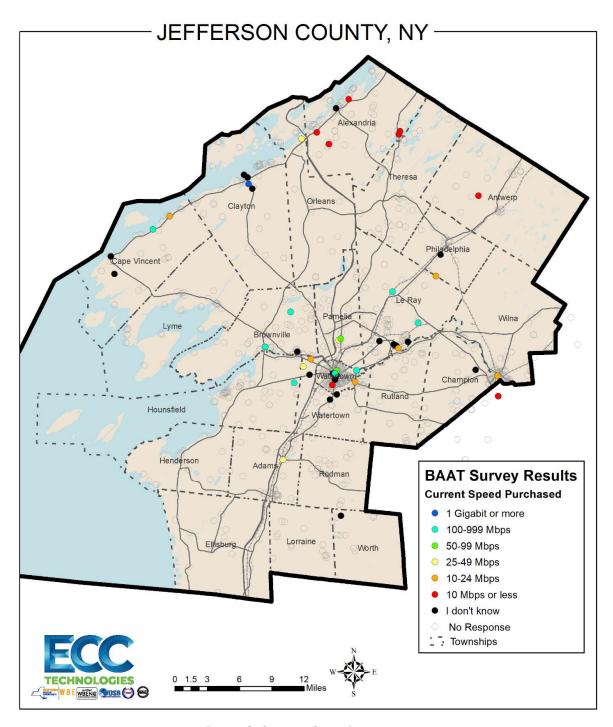
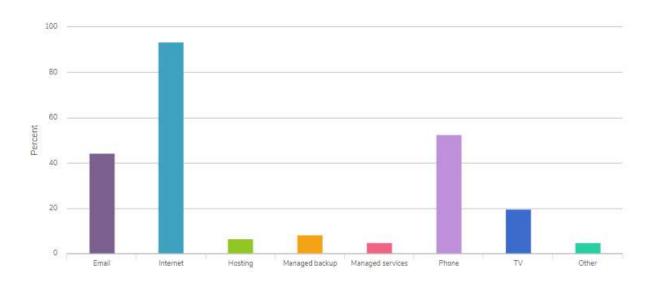


FIGURE 9: CURRENT SPEED PURCHASED



17. What services do you receive from your provider? [Please click all that apply.]

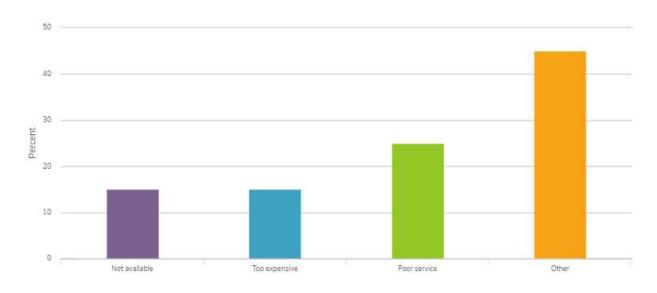


Value	Percent	Responses
Email	44.3%	27
Internet	93,4%	57
Hosting	6.6%	4
Managed backup	8.2%	5
Managed services	4.996	3
Phone	52.5%	32
TV	19.7%	12
Other	4.9%	3



Non-Residential No Internet

18. Why do you not have Internet access at your business location today?

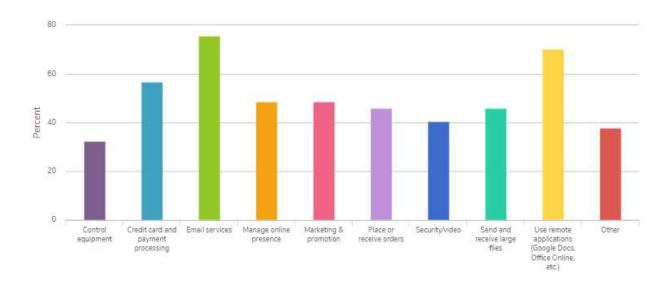


Value	Percent	Responses
Not available	15.0%	3
Too expensive	15.0%	3:
Poor service	25.0%	5
Other	45.0%	9

Totals: 20



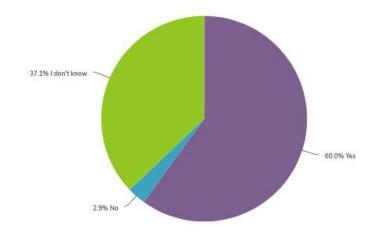
19. What would be the primary uses of broadband in your business? (Please check all that apply.)



Value	Percent	Responses
Control equipment	32,496	12
Credit card and payment processing	56.8%	21
Email services	75.7%	28
Manage online presence	48.6%	18
Marketing & promotion	48.6%	18
Place or receive orders	45.9%	17
Security/video	40.5%	15
Send and receive large files	45.9%	17
Use remote applications (Google Docs, Office Online, etc.)	70.3%	26
Other	37.8%	14



20. Would broadband access enable you to be more competitive in your business?

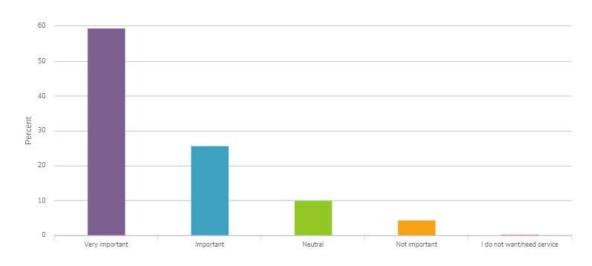


Value	Percent	Responses
Yes	60.0%	21
No	2.9%	1
I don't know	37.1%	13

Totals: 35



21. How important is it to you to have a choice in providers?

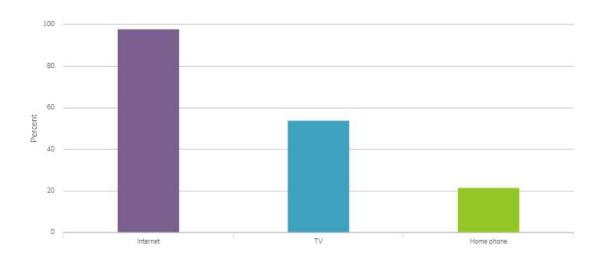


VIII	B	
Value	Percent	Responses
Very important	59.5%	322
Important	25.7%	139
Neutral	10.0%	54
Not important	4.4%	24
I do not want/need service	0.4%	2

Totals: 541



22. Please check the services you would be interested in purchasing from a new service provider.



Value	Percent	Responses
Internet	97.9%	562
TV	54.0%	310
Home phone	21.6%	124



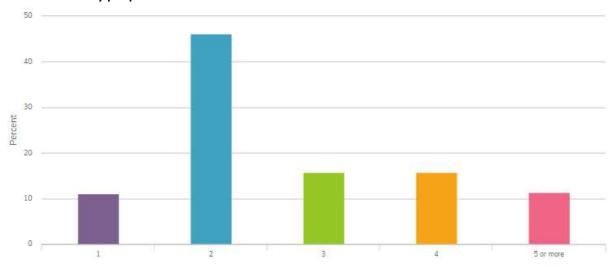
Household Demographics

23. How important is Internet access?

	Very important	Somewhat important	Neutral	Not important	Not applicable	Responses
to stay in touch?						
Count	505	91	22	7	4	629
Row %	80.30%	14.50%	3.50%	1.10%	0.60%	
to stay informed?						
Count	493	81	16	2	2	594
Row %	83.00%	13.60%	2.70%	0.30%	0.30%	
for your healthcare?						
Count	241	165	90	26	9	531
Row %	45.40%	31.10%	16.90%	4.90%	1.70%	
to your quality of life?						
Count	305	160	44	7	3	519
Row %	58.80%	30.80%	8.50%	1.30%	0.60%	
to your ability to earn a living?						
Count	255	88	85	35	55	518
Row %	49.20%	17.00%	16.40%	6.80%	10.60%	
to your ability to pursue an	•		•		•	
Count	212	64	104	53	83	516
Row %	41.10%	12.40%	20.20%	10.30%	16.10%	



24. How many people are in this household?

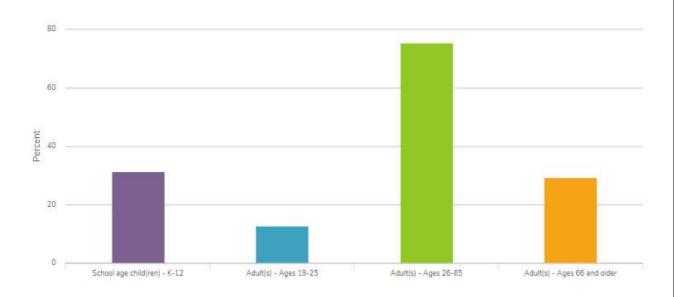


Value	Percent	Responses
1	11.1%	58
2	46.2%	241
3	15.7%	82
4	15.7%	82
5 or more	11.3%	59

Totals: 522



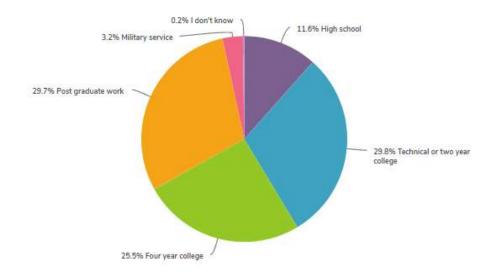
25. Who are, or would be, the primary users of Internet at your address? (Please check all that apply.)



Value	Percent	Responses
School age child(ren) - K-12	31.396	166
Adult(s) - Ages 19-25	12.8%	68
Adult(s) - Ages 26-65	75.596	400
Adult(s) - Ages 66 and older	29.4%	156



26. What is the highest level of education obtained by any one person in this household?



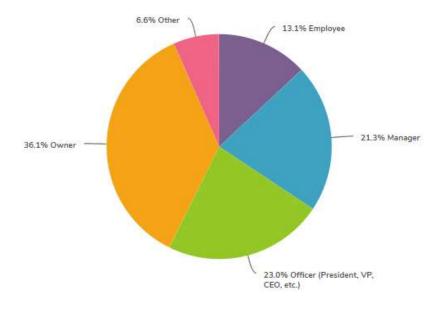
Value	Percent	Responses
High school	11.6%	61
Technical or two year college	29.8%	157
Four year college	25.5%	134
Post graduate work	29.7%	156
Military service	3.2%	17
Idontknow	0.2%	1

Totals: 526



Non-Residential Firmographics

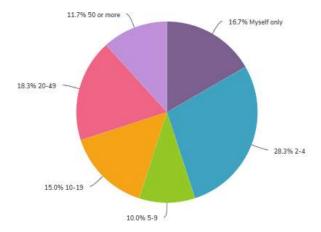
27. What is your position with the company?



Value	Percent	Responses
Employee	13.1%	8
Manager	21.3%	13
Officer (President, VP, CEO, etc.)	23.0%	14
Owner	36.1%	22
Other	6.6%	4
		Totals: 61



28. How many people does the company employ?

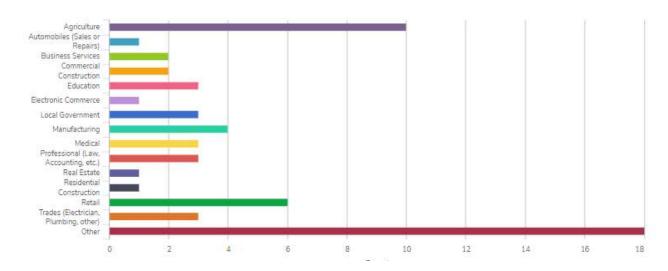


Value	Percent	Responses
Myself only	16.7%	10
2-4	28.3%	17
5-9	10.0%	6
10-19	15.0%	9
20-49	18.3%	11
50 or more	11.7%	7

Totals: 60



29. What is the primary line of business at your location?



Value	Percent	Responses
Agriculture	16,4%	10
Automobiles (Sales or Repairs)	1.6%	1
Business Services	3.3%	2
Commercial Construction	3.3%	2
Education	4.9%	3
Electronic Commerce	1.6%	1
Local Government	4.9%	3
Manufacturing	6.6%	4
Medical	4.9%	3
Professional (Law, Accounting, etc.)	4.9%	3
Real Estate	1.6%	1
Residential Construction	1.6%	1
Retail	9.8%	6
Trades (Electrician, Plumbing, other)	4.9%	3
Other	29.5%	18

Totals: 61



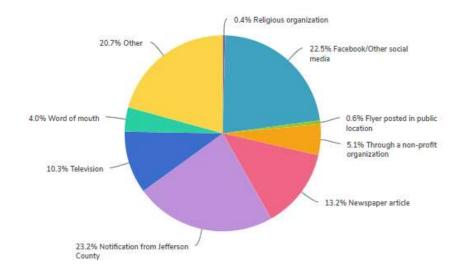
30. How important is broadband access?

	Critical	Very important	Somewhat important	Neutral	Not important	Responses
your vendor satisfaction?						
Count	23	23	6	5	3	60
Row %	38.30%	38.30%	10.00%	8.30%	5.00%	
your business profitability?						_
Count	26	20	4	6	4	60
Row %	43.30%	33.30%	6.70%	10.00%	6.70%	
efficiency in your operations?						
Count	29	18	8	2	3	60
Row %	48.30%	30.00%	13.30%	3.30%	5.00%	
your customer/client						_
Count	22	24	5	5	3	59
Row %	37.30%	40.70%	8.50%	8.50%	5.10%	



General Track – All Respondents

31. How did you hear about this survey?

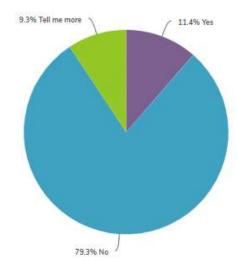


Value	Percent	Responses
Religious organization	0.4%	3
Facebook/Other social media	22.5%	150
Flyer posted in public location	0.6%	4
Through a non-profit organization	5.1%	34
Newspaper article	13.2%	88
Notification from Jefferson County	23.2%	155
Television	10.3%	69
Word of mouth	4.096	27
Other	20,7%	138

Totals: 668



32. Would you be willing to be a champion for improved Internet access in the County?



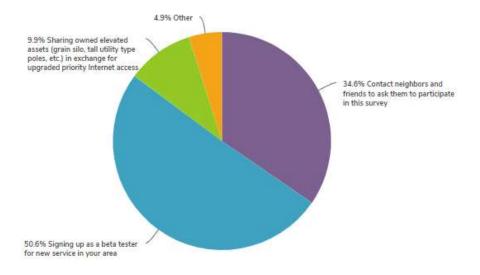
Value	Percent	Responses
Yes	11.4%	69
No	79.3%	478
Tell me more	9.3%	56

Totals: 603



33. Thank you for your interest in being a champion for broadband. There are different ways our residents can help our efforts in Jefferson County. Please click any of the boxes below to indicate ways in which you might be interested in helping!

This question was shown to respondents only if they requested a desire to be a champion in the preceding question. If they did not make that selection, this question was not exposed to the respondent.



Value	Percent	Responses
Contact neighbors and friends to ask them to participate in this survey	34.6%	28
Signing up as a beta tester for new service in your area	50.6%	41
Sharing owned elevated assets (grain silo, tall utility type poles, etc.) in exchange for upgraded priority Internet access	9.9%	8
Other	4.9%	4

Totals: 81



4.0 How the BAAT Program Works

How It Works. Residents and businesses access a community-promoted Internet site developed and deployed by ECC using devices such as a PC, iPad, laptop, or even mobile devices. The assessment results are valid no matter what device is used by the respondent. Speed test results are not as reliable, even though the instructions on the site advise participants to NOT take the speed test unless they are at their reporting location.

The respondent enters their local address (required for geolocation) and answers questions regarding their current Internet service or lack thereof.

Having conducted many BAAT campaigns over the past five years, ECC has identified, and developed question sets for residential and commercial respondents – both with and without broadband access. The results are statistically valid and feature key insights for County and City decision makers and potential service providers.

Assessment Results. Geolocation based analytics determine where there are "holes" in the response rates, as well as identifying where broadband service gaps are in the community. The BAAT further returns data to allow analysis of obstacles to adoption for residents who already have access to broadband services but choose not to subscribe. It will help determine paths to address those issues—holding classes on computer usage at the library, for instance.

The process uncovers areas that will be profitable to serve for a service provider. It also identifies areas needing future work or subsidy, either due to affordability issues or low population density.

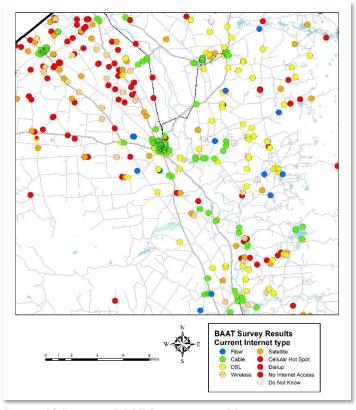


FIGURE 10 EXAMPLE BAAT RESPONDENTS MAPPED

The definitive, specific customer information gathered and documented during a campaign can be used to support further funding/investment for advancing broadband projects. The data can also be used to identify "champions" willing to advocate for broadband efforts within their community.



ECC offers additional value in comparing the responses from the Jefferson County study with cumulative results from our other BAAT campaigns. This allows for added insights in evaluating the local results with a larger control group.



5. Site Analytics

There are multiple statistical components for analysis in the BAAT program. ECC can look at data accruing from the Speed Test and from the Survey. For both components, ECC can identify the ISP server and its latitude / longitude. Additionally, respondent data can also be analyzed including device operating system and revision and browser operating system and revision.

5.1 Speed Tests.

Speed test data considers upload and download (or throughput) rates. These rates are not absolute and can vary over the course of a day or even an hour. Various testing servers are called in these tests, and allowances are made for real time processing differences by server to normalize the results for comparative purposes.

The speed test cannot account for issues inside the home or business. Inefficient in-home routing, usage defaulting to an existing Wi-Fi connection - time of day use and device load, are just some components which have an impact on speed tests.

For many of the speed test results, ECC can identify an institutional or carrier-based primary server and can discount those responses as non-representative of the true location-based speed of the respondent.

5.2 Survey Results

As previously discussed, the raw data returned from the assessment database includes a variety of information like the speed test in addition to the actual responses. The vital data, however, are the required address components which allow any or all of the assessment responses to be mapped.

5.3 Internet Site

As with the previous two components, there is similar information available at the beginning of the process through the Internet site. However, there is some key information which is useful during the BAAT process for decision making.

Looking at the number of unique visits and pages by day provides insight into the experience of the respondent on the site. Some visitors read the first two paragraphs and click the speed test button – other visitors will read all of the pages including the Legal/Acceptable Use Policy and the Privacy policy.

The web statistics will also track clickthrough so we can count visits to the Jefferson County Internet site, or to the ECC home page.

More importantly, we can see the referring page – in other words, where did the user come from before they came to the Jefferson County BAAT site. In the early weeks of the campaign, there were a significant number of respondents coming through the County Facebook page and through direct entry (i.e., Typing the URL into the address bar in their browser).



As the campaign progressed, there were additional referral sources as well as search results from Google and Bing.

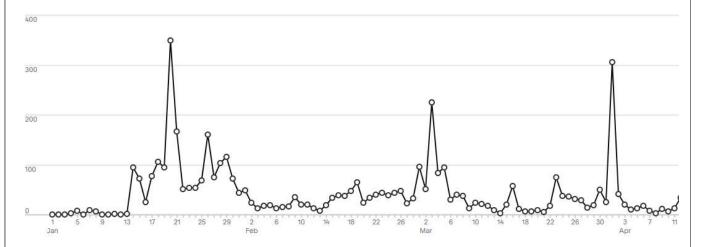


FIGURE 11 SITE VISITS JAN 14, 2021 TO APRIL 15, 2021

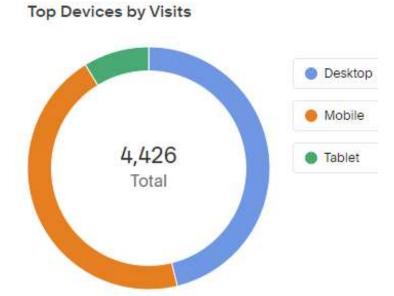


FIGURE 12 TOP DEVICES BY VISITS



Top Browsers by Visits

Top Operating Systems by Visits

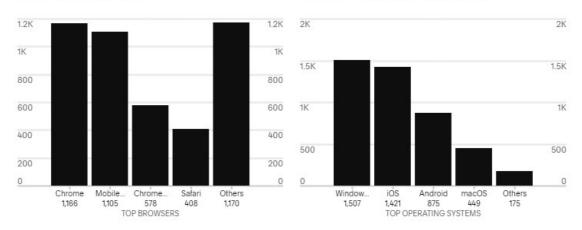


FIGURE 13 TOP BROWSERS AND O/S'S BY VISITS

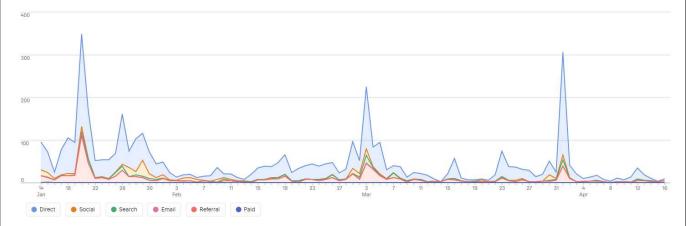


FIGURE 14 SITE REFERRALS BY DATE



Traffic Sources

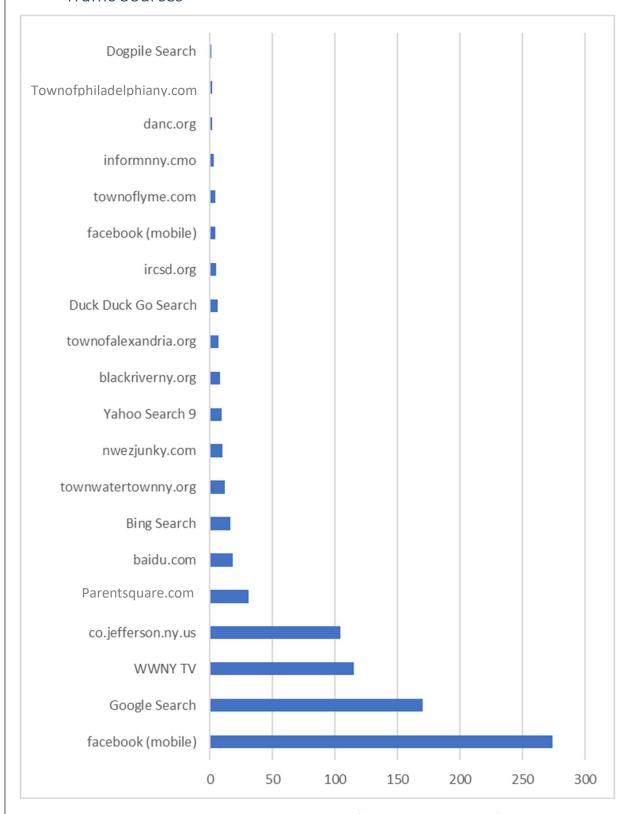


FIGURE 15 REFERRAL SOURCES (EXCLUDE DIRECT & SOCIAL)



Appendix



Appendix A. Respondent Comments

There are multiple ways for a respondent to communicate through the BAAT campaign.

First, there is a listed email address on the "Contact Us" page. By selecting this link, the respondent's default email application will initialize on their device. The respondent then creates an email and sends it to the designated contact(s) supporting Jefferson County.

The second method is by using the form on the contact page. The form requests a first and last name, email address and a section for comments supporting a maximum of 32,000 characters.

Once the form is completed and the POST process is completed, the results of the form are delivered to ECC via email. On the respondent's screen, the blank form is replaced by a thank you message.

ECC reviews the inbound communication and discards inappropriate responses and solicitations and forwards the remaining emails directly to the Jefferson County and DANC representative.

The third method is in the actual survey itself – there is a section where respondents are invited to provide comments to accompany their response. This section lists all comments. Please note these are raw comments and have not been edited for spelling, grammar, or language.

There is GREAT need for competition in this county. Spectrum has it locked up. That's a monopoly and wrong. Their customer service is the absolute worst and their prices are out of line. They are toooooo expensive. In my experience, their techs in the field are pros. They know their stuff and work very hard and a guess would be underpaid for such, as is corporate business today-all profit, screw their workers and customers.

our internet routinely kicks us off line. we were told that we could purchase a business line to upgrade

We pay for 35 and only get 7-10 download speed from frontier,

Our internet is provided by our phone company (Frontier). We cannot access their internet without buying their telephone services, so the bundling reference does not quite apply. We do not pay for TV other than Prime streaming service that is included in our Amazon Prime free shipping package.

Affordable internet should be the number one goal.

For those of us who are not very technically savvy there really doesn't seem to be much choice for services

State policy (cable and telephone franchise agreements) hamstring competition more than anything else.

Our internet service (Spectrum) is poor. The connection frequently goes in and out while home members are trying to work from home and do remote education. Our speeds are not up to what we are paying for.

this is a good topic for the County to investigate

I don't always feel my internet is reliably the same speed and too expensive.

We have children that are attempting to do school work with service that is awful. Not fast. Cannot talk to teachers on google meets because they need to shut that down in order to even watch. Half the tine our



service doesn't work at all. We tried dish services with same results. Never fast enough to stream videos and service drops in weather. Lines were run to end of our driveway and were never hooked to house during expansion required by state.

I feel like internet is absolutely necessary in times like these with virtual learning due to COVID. I think many parents feel we are forced to purchase internet in order for your child to continue school and prices of internet just keep rising and we as parents no matter what the price... are forced to pay. Frankly its just not right and we deserve a break in cost.

cost too much very slow and keeps disconnecting all the time pain in the butt trying to do home school with meetings with 2 young kids

Broadband choice also needs to work in our North Country weather. Current Satellite and dish choices DO NOT work during heavy lake effect snow.

Too expensive and subpar download and upload speeds for what I am paying for which is 100 mbs

Like most locations there is only one high speed provider. With no competition price increases must be met to maintain service. Spectrum has been caught twice providing false information on expanding service with government funding. Uncontrolled they can also slow speeds to create a tiered system and charge more to bring speeds back up.

I really don't have a problem save interruptions. Wouldn't mind an alternative source.

We need it

Currently too expensive, not enough competition, and quality does not match the level you pay for.

My wife is an educator and requires very good internet service for virtual classroom and working on and accessing the school resources. I am an engineer requiring internet to answer emails from work and running a small business from home. I am also a Town board member and use internet a lot communicating to board members and highway and clerk personnel. We had very poor internet with Frontier and improved with cable internet service. The price has doubled. We have removed the land line all together and rely on our cell phones. My service is constantly dropping off and get many errors in uploading or downloading. We can use wireless throughout our house with the aid of boosters. We must limit the number of devices we use to enable both of us to use the internet at the same time. We could possibly improve our internet using the Charter business subscription but our costs would double. There are many in the area who have very spotty service and it should be a requirement that all households that want it should be able to get internet without paying over \$50 per month.

faster service and more speed is needed for the internet

In my neighborhood it would be nice if there was a fiber provider such as what fios offers. Spectrums service in this area is sometimes horrible.

End Spectrum monopoly

With virtual school for most of the county, it is imperative to be offered a reasonable, efficient, effective internet source for all.

Every month the cost of service increases. We have no alternatives....



Access to reliable, attainable, affordable internet access is something that all citizens require for equity in education and opportunities. It should be provided in a manner that's similar to water and sewer services. It is infrastructure and should be a high priority, please. Thank you.

I have been fighting for years to get internet at the address giving only to be told I have to pay 4000 to put in but my neighbor has it and is only 600 feet from me this is not right specifically needed it for my school children.

Broadband is not only a personal use asset, but also to support our business...a small internet wedding cake business... needing internet to support business website

Wireless Internet should be Nationwide at the price of basic cable by now !. The cable companies should be obsolete We are behind the times on this..

Spectrum in area but won't go down the road to our residence. Castle Cable only provides fiber to get high speed and house is not wired for fiber it has cable. Castle Cable should be able to provide high speed with existing cable wiring

Working remotely for chart completion as a medical provider and having children learning remotely, is taxing on our current service. We use our data limit in a few days and then have horrifically slow service for the remainder of the month. This had impacted my work productivity and the ability to download/use the school applications that are being requested by the school teachers.

Broadband access, at an affordable price, is critical for ALL County residents. Recent events have forced many residents to rely on their internet access to maintain a fully functional lifestyle, eg. Education, health care, financial, etc.

I really struggled teaching remotely this year and lack of adequate broadband access caused me to decide to retire early because I can't effectively teach more than one college course online. My grandsons also come to my house after school and are unable to both do their online homework at the same time. This is a huge problem.

If we are given an upgrade opportunity ,it should be service commensurate with payment or perhaps a sliding scale of payment

We would like to be part of Verizon Fios build out. Cuomo promised five years ago that under served areas would have broadband and we are still waiting.

Why is Spectrum allow to serve built up areas of the state and county but is allowed to ignore the rural areas?

broadband at this point should be considered "infrastructure" and be free and readily available to everyone, especially in rural areas.

Spectrum seems to be the only option for broadband access and it would be great to have more options

Yeah the village has a chokehold on providers because we're a tourist town, but I'm sure our tourist would like normal speeds also

The North Country as a whole has been left out of the high speed internet options offered to other areas. Corporations have received federal and state assistance to increase capacity and need to do so. Verizon, Spectrum, Frontier specifically. The excuse of not having enough homes per mile is no longer valid. Hold the businesses accountable for what they have already received. If they are concerned with building out



cost then look more towards wireless solutions (Wifi not cellular). County, state and federal officials need to start putting this first and foremost. If this pandemic had not happened it would have continued as status quo and not been a priority. Lets not loose the momentum.

Castle cable is expensive - \$65.00/month for 5mb down / 2mb up

We have horrible internet!!! We have no other options it's horrible. We reset internet constantly just to get on. It's very frustrating.

I an grandfathered my internet through Verizon only if i keep my home phone and i have been a long time customer. My neighbors cant get it only though the verizon hot spot. Our local cable co wont give anyone here internet. We cant get Fios.

We have Castle Cable TV. Very expensive, poor choices. Would love some competition here. It really is a monopoly.

Although I live alone, I have adult children who visit and grandchildren who do remote school. Improved and more reliable service would help them be able to visit for longer periods of time.

Only one provider for landline at more than \$50.00 per month.

Just plain poor service. One everything's going well, the next we could be with service for 24 hours plus. They have done service calls and nothing is fixed. This interferes with school work, business work each day and teaching my college class.

Verizon DSL is affordable for the speed but the price is going up this next month with no hope of increased speed. Spectrum isn't available inside the Alex Bay limits. Castle Cable is ridiculously high priced for what they offer in speeds. Castle Cable fro Plessis has a monopoly in the Alex Bay area and it seems be OK with the government. Something isn't right there. Satellite isn't reliable.

Castle Cable / Citizens is not reliable, completely overpriced and has terrible customer service when there is a problem.

Internet is now an essential service that residents of Jefferson County are deprived of. It's a hinderance to any professional occupation being able to function remotely during a time when it's the only way to be working.

Island living has some challenges. The outrageous taxes paid get us garbage pick-up only. I have contacted the phone company regarding dsl service and was informed that it was not available at my address (we have had landline telephone service since the early 1960s). It's my understanding that dsl is not available on Wellesley Island, which is where our landline service came from. It would be nice to have internet service available from something other than a hot spot.

The cable company is over priced compared to others in the area based on price vs speed.

There are more houses in my area that have school age children.

Dickson Road and Delphi Hall Road are two of the only roads in the county that do not have high speed internet access. Spectrum runs down State Route 11 and County Route 26, which those roads are located at each end of Dickson Road. However it is not available on Dickson Road. I know almost everyone in both roads would like high speed internet access.

Broadband around us , in more rural settings , we are right off route $11\,$



I have many neighbors with in a 1 1/2 mike radius that all so would purchase if ,, I thought all residents were suppose to have acess to hi speed , my grand kids come and can't do there school work

Hi we have tried for many years to get cable and internet i did get dish butbit was 260 a month for 3 yrs and no streaming now spectrum wants 18grand to give me cable and internet they went around us we live on rt 11 there is 4 miles with no service but spectrum is all around us in oxbow and spragueville but not here on rt 11 my grandson has to leave to do his video school stuff

I have checked with Spectrum previously and have been told that we live outside their internet "footprint" but a neighbor just 1/2 a mile up the road has spectrum service. Verizon has wires coiled at the telephone pole that is just 3 or 4 poles down the road from our house. I have contacted Verizon previously an am supposed to get an email when the service is available from our home but neither company appears to be moving closer than previously stated.

Yes this is the second time i filled this out i see john moore in st lawrence county but the 4 miles on rt 11 that no one owns the lines and spectrum wants 20 grand from us really sucks 41033 rt 11

Poor service. Dead area

Would like someone other than Spectum, who is extremely slow at installing our service and consistently upping their costs.

we pay to much through spectrum

In this modern day and age we all need to stay informed, have access to news and weather, educational or personal achievements, entertainment, and even on-line shopping, broadband/internet access can be our daily key.

There are types of businesses that specialize in things like free access. But, you can't start one due to COVID restrictions.

It would help drive down the cost of internet service hopefully.

Internet availability is nearly as important as NG power, you can do your banking, and pay taxes and bills etc. with a good connection.

Slow internet in my area.

Currently have Spectrum. Prices are outrageous. Would very much like other options.

Spectrum provides the fastest internet for us, but the cost is so high that we're forced to use slower DSL through TDS Telecom

This survey doesn't capture the complexity of our real life where my husband runs and manages a small business out of our home and I telecommute for a national firm. Broadband internet is what allows us to live here in the North Country, and improvements in reliability and speed would dramatically improve our lives. Bandwidth and jitter problems both on our cable-based internet through spectrum and our cell service through Verizon are not up to the task of good voice and web meeting based communication.

While I am paying Spectrum for download speeds of much more than 25 mbps, as you can see from the speed test (I did four different tests... this was one of the "fastest") the service is actually much slower than promised and often doesn't work at all... this is in one of the largest villages in the county!



Very important for viditing children to have for work while visiting

my internet speed constantly goes up and down daily. Sometimes I will have 100mbs, other times it will be 40mbs, I have even seen it stay at around 3mbs before.

Choice is an important factor. I don't feel we have one at this time.

The price Spectrum charges is outrageous for the quality of service. Unfortunately there are no other cable companies here so we as customers are forced to pay their rates. I guess it is the customers responsibility to pay for their fines from the Time Warner merge and I expect it will increase again to subsidize Gov Cuomo's affordable internet for all promise.

We have Spectrum and our internet is regularly slow during daytime hours, connectivity in some parts of our home is poor even with the modem and booster we own, and prices continue to rise. We have just internet and are paying \$95/month now.

The internet speeds vary so much my children have a hard time staying connected to their classes.

I only receive internet services because TW/Spectrum charges have gone crazy. So I may not have answered the cable question correctly. I love cable tv but on fixed income cannot afford it so just get internet tv

I have internet but i heard broadband is a lot faster.

Spectrum provided internet to the roads at both ends of my road but did not run internet on our road. Doesn't make any sense. We've called several times and they said they don't show it going in any time soon.

Competition is paramount!!!!!

I may have to telework from home soon but am not willing to pay 76.00 for service for work. Because I live so far in the country internet is not cheap and I will be canceling my services soon.

Broadband is the telephone of this decade so absolutely critical to people's every day lives for work, education, health care, information gathering and recreation. Since broad band is important in every aspect of our lives it's amazing that there are issues in availability and the cost is ridiculous and caused by a monopoly in access. New York cares more about broadband access in urban and metropolitan areas where there is greater access than in rural areas and allows agreed upon funds for increased broadband access in underserved areas to be used in the easier to service urban areas. Makes no sense but that was the case between the NY Public Service Commission and Spectrum recently.

The county should consider responsibility as important as roads, schools, and emergency services. It is obvious the modern age places enormous emphasis on internet access for employment, education, records, and emergency services. It is also obvious that residents lacking these services are legitimately at a disadvantage to the rest of the state and even disenfranchised, when considering their ability to help themselves.

NO

This business is actually located over the county line - in Lewis County

If I didn't have to have internet for my children to do their school work I would not have it due to cost.

Not a fan of Time Warner/Spectrum, however I will say that the reliability and speed of their internet service has improved dramatically over the past five years.



Confront internet suppliers for charging huge cost to connect to your residence.

The focus ought to be on expanding to rural out of town households.

Spectrum raised its rates by \$5.00 this month with no warnings. This should not be allowed during a pandemic and with no competition we are forced to pay there ransom!

Woeful

I think it's very important for all children to have access to the internet etc.

Choices are extremely limited for our area (seasonal island resident)

It's important to have a choice. This price is not affordable for a lot of people, especially for older adults on fixed incomes. Seven hundred seventy-nine dollars and eighty-eighty cents is too much. This price is just for internet, cable isn't included. I pay bills online, use social media, research medications, research cancer, and look up several topics online. You have to learn to type, own a computer, and have basic skills to use the' informational highway.

We have Spectrum at our house and at least 3 times a week the internet completely shuts off. Takes almost an hour to get it back up and running again. It is very frustrating when we can't rely on our internet to be reliable and to not shut off. Also, most of the time we get about 8 mbps download speeds on our 5G network!! It is extremely frustrating that we don't have reliable and good speed internet since you need it for everything

Being in an older age category it is very important to have the ability to stay in touch with family, medical and all other people. For peace of mind and actual safety reasons.

In order to receive internet speeds that were acceptable & affordable; we had to change from satalite tv services to local cable. Local cable finally gave us an affordable package; but that won't last long & service is not as good as satalite tv.

Strong belief that the County should be involved in improving broadband access and quality of internet services

We had Verizon provided wifi for a number of years but the service was very slow if not on the mainland. We are currently using a complany who sends radio waves to power our wifi, but you have to be in the line of sight from their towers in order to receive the signal. More options for service would be wonderful.

ridgeview communications is quite adequate for us. we use it yearround for a webcam

We are very fortunate to have cable service in a fairly populated area. New service is being installed on rural roads around us but not connected yet.

Not at this time

Spectrum is expensive for a service that is inconsistent. My bill for internet services went up over 7% this year to \$74.99 and I receive service that is unable to power HD consistently to a tv that is directly connected via hardline to the router. I would welcome consistent service able to power a household's worth of devices and not pay significantly more monthly.

Continuously lose service throughout the day

I believe it's expensive for what you get and it certainly is not affordable for all families



my internet is constantly going down, I have to constantly reboot

I am excited that Verizon is installing Fios in my area [Clayton Center]. Spectrum has been OK but FIOS would be better. Thru the pandemic I have thought about the teachers and students who have been working virtually. As a retired teacher, I know I would not want to be working from home without the best possible internet. And I think also of those students who have far less than average service. It has been a huge challenge from both sides of the classroom.

we live on border of jefferson, and lewis counties. so feel we are being overlooked. even though there are 20 houses on our short 2 mile rd.

I am in need of reasonably priced service, as a teacher and I have a college and high school student in my household. We all need reliable internet for schoolwork.

We have 3 college students and I am a teacher. When things are virtual, not having any options other than hotspots on our phones is terrible! We NEED another option in my area.

Our biggest issues with not having internet access easily available has been when our children have been required to remote learn, and when I have been taken out of work. I am completely unable to work from home without internet access, and it has made it much harder to have all of the kids doing school from home when needed.

I live in jefferson county and broadband spectrum started on my road and stopped about a mile from my house and stated it wasn't cost effective to continue to connect the rest of the road. With covid it's very hard. I can't attend church online on Sunday or zoom bible studies. I can't video chat with my parents who are 75. Everything takes data

It is very frustrating with poor internet access. We live at the bottom of a hill so wireless access (the only access available to us) is spotty at best. Working from home has been difficult.

Was told a few years ago that it would cost hundreds of thousands of dollars to get internet service on our road

We need wired internet for school purposes

I would be interested in the possibility of fiber optic cable service.

Spectrum interent service is a monopoly in the area. I do not believe the price being paid or charged by Spectrum equates the the current quality being received at this time. I would prefer another provider if there was one available.

There are multiple deadspots in Jefferson County for cell service. I am unable to access internet by smartphone if my cable wifi is not available. This is especially true along the Shores of Lake Ontario/Brownville area.

I have Spectrum bundled service and am outraged that I pay over \$221 per month. I have nothing special in my TV availability, no special channels. This amount is outrageous.

It would be wonderful to have a choice of cable/internet providers!

It's not just about speed. Connectivity in the area is unreliable. Home internet through spectrum, cell phone through Verizon, or even my workplace's fiber from Verizon. Get frequent long hangups on the web, get disconnects when gaming. And the speed test selecting an "optimal server" is BS. I was real-world



reflected. It selected Clarkson at first, with a 12ms ping (That's amazing!) with 100+ downstream and ~10 upstream. The up and down remain about the same w/others, but no other one has that amazing ping time. Some over 50 ms. Some will have a long pause trying to start each part of the test before reflecting pretty good speeds once it actually works. While higher speeds would be nice, it's ping that needs improving, and reliability, especially when trying to reach the internet outside a 50 mile radius (which is 99.99999% plus of the internet).

We have spectrum

We are lucky to live in a village that has contracted with Time Warner/Spectrum since 1999. I earned my Educational Administration degree almost totally online from Johns Hopkins. My grandchildren came to stay with me last spring when their schools went virtual. The only connection my husband has had with his mother has been through FaceTime. Our isolation during COVID has been diminished through use of the Internet. Years ago I lived with dial-up internet and can't imagine how people in the local school district are using it for instruction. It is extremely annoying when others are using a substandard form of internet during meetings.

For what we pay a lot of the time zoom meetings get loss of service during the call. Not sure why since we are paying much more than the offers on TV for our service. Very difficult to communicate with NYS Nurses from across the state when this happens.

Husband has shown interest in fios before.

If you have electricity, you should have broadband access.

I have changed out my modem, called Spectrum to help with the speed of our wifi and have went as far as buying a new router. I've done all I can to help increase bandwidth for 2-k-12 kids and 2 college students. The schools require us to be on any time from 7am-4pm depending on the schedule/classes, that's not even counting the video gaming, and streaming of services. We need the County to sit down with Spectrum, and other services and figure out a way to get better service. I'm tired of paying \$60+\month for service that barely handles 4 laptops at one time for zoom and google.

We have been asking spectrum to provide us with service for 2 years. The service stops at the corner of our road. Spectrum wanted \$8,000 to run the line. Now with the kids being in school virtually we need high speed internet. Please help use get access.

There is service less than a mile from us and they say we are to remote to run the line any further. Less than a half mile.

We are a small library here to serve the community in their needs the best we can.

Government should stop spying on its residents.

Cheaper internet people can afford. Different companies to choose from. Just not for the whole county. A company that works with you on payment.

I believe I pay to much for internet and don't receive what I pay for!!!

Although my city address is Gouverneur, the county line is about a mile from us so we are considered Jefferson County.

dickson road and delphi hall road have no access but hughes net or dial up



I know there are areas in the county that have little or no internet. I would like to see it faster and less expensive. Also more dependable.

Wish there was more then one high speed service in our area. Use spectrum and they know they can use people because they are the only one with high speed internet. Frontier dsl is too slow to use for gaming and streaming. We need competition to help with prices!

I would like to be able to purchase just internet accessibility that is not so expensive as what the local cable company charges. They make the excuse that you only get the reduced price as long as you bundle other services.

It's important to have it, & it would be nice to have another choice besides Spectrum.

We have two choices for Internet services, Frontier, which is extremely slow, and Spectrum. We would like some other choices.

It has been tough for my son to do his school work it has made school hard for him

It's imparative with online schooling. Hot spots don't always work. Our children obviously need internet daily to do school work.

Broadband is extremely important because of education for my 3 school aged kids. Its very expensive to pay for cellular internet service by the GB. 3 kids on video meetings and school work uses lots of data.

It would be nice to have choices for internet access. Also broadband access in my surrounding area is spotty and many families have no access. Affordable, reliable, quality internet.

"Spectrum has service about 1/2 mile down road, which ran on the lines that would service my residence, but has refused to do so. On Dutch Gap, they ran to the end of a road for 2 h/h's and the homes before these are Amish. Not fair.

internet should be free for schooling and work purposes now days

In my home we could really benefit with the ability to have internet other than our cell service. With 2 kids in school and my husband and I trying to run a business plus me going to college it is hard right now and somethings we can't do. On top of that for our TV and internet we are paying \$650.00 a month. When we call spectrum to ask for service they promise to send out someone to help us but when they see we don't have the proper lines nothing is done. Please help us with this. Thank you

w/o AT&T Wireless Home Phone & Internet, I would have nothing but dialup. Have tried satellite and it was very slow. I have the wires on the pole for Spectrum, but that line was never connected. It was a last minute push by them when NYS threatened to kick them out of the state. So that is not an option.

It seems like small towns, such as Lafargeville, only have Spectrum broadband in the townships. I know people who live a couple of miles outside of town who can't get any broadband access.

I feel this is very important that I have access to some sort of Internet I do not live out in the boonies and they have access to spectrum on the next road over I feel our area needs to get with the times so that everyone is allowed access to Internet especially in the times whereOur children need it for schooling my son gets knocked off my cellular hotspot all the time and it lags



It is 2021 having high speed reliable internet is a necessity for rural businesses and individuals. Without the best technology for residents of Jefferson County I fear we will be left behind. Additionally I feel it is extremely unfair to pay for dsl when we don't get the speed all the time and there's no other option

Having a choice in providers would be essential in driving the price down. We rely on internet as we don't have cell service here and have to use a land line too! The price of all three separate is very expensive.

spectrum only did half of the road stopping about 500 feet from my house there is other resident that want spectrum. I being calling for about 3 years asking when going finish installing line with no results

It would be great to have something more reliable and more affordable.

Lack of information of actually hooking up to Broadband. We are not able to participate in important virtual meetings for the volunteer fire department and also key school related activities to support students learning from home.

We often have to go to a different location to conduct business due to the black of internet and cell service in our area.

There are several homes on this road that only have access to satellite internet which is very unreliable in this area, the internet line stops half way down this road leaving all these homes without reliable service making it very difficult for schooling as well as work. There are several families that will hook up if we can get it run on the rest of this road.

The current providers available offer a great starting price, but this quickly rises and becomes too expensive after being a customer for a few months. Please set a limit that companies can charge. In our current society, all families need access to affordable, quality internet.

Our current internet is not able to support remote learning for my child. It is also not able to support working from home. It is crucial for my job as I am a teacher.

Cost of adequate internet service in the local area is cost prohibitive for many households

None

It is important to us to have reliable internet service because our home is seasonal and our home security service and home monitoring system are connected to the internet. We are currently paying way too much for internet service that is just barely sufficient to our needs. We believe that all residents of Jefferson County should have equal access to these services.

I am a teacher and having poor broadband has made my job more difficult and impossible, at time. Also, I feel it is a shame that I have to pay 150.00+ in order to get poor to mediocre internet access. Viasat isn't a huge scam

I question the download speed I am paying for with my provider. I am paying for 100 Mbps but I never had a test when it has been at that level. If was paying for 100 kW for electricity and only received 60 kW, I should only pay for th 60 kW. It would be nice to have some competition to improve the service for people in the area.

running a farm from this location it is important to have good internet. It is a struggle sometimes for accounting, cow record keeping and parts lookup as it is all going online My wife is trying to teach from home when school goes virtual



I also have an in home daycare. I have 1 high schooler, a middle school, 2 Kindergarners, 2 Prek Kids, a 3rd grader and 5th grader who all need to do remote learning.

Verizon high speed internet lines are less than 500 feet from our home, but they have not run them long enough for that to be an option to our family.

We have a Verizon Hot spot. Spectrum comes down our road, but we are 600 feet from the road and it would cost us \$2000 to have cable/internet at our home.

We would like to get unlimited usage at the same price that we get now for 16gig a month. Limits our watching to as streaming takes a lot of data usage.

I am mostly happy with our current internet service, but would be happier with a lower monthly price.

This is SO important. We just got a Verizon internet line 4 months ago, and it has made a world of difference, for us to conduct our business from home as well as kids to attend remote school. HUGE.

I Live in plessis only internet available at this time is castle cable they are rude an expensive and slow

We have limited access to cell phone and the use of data on our phone. Sometimes it works and sometimes it dies not

Spectrum Charter has lines across my property and services my neighbors, but wanted several thousand dollars to connect me even though lines run next to my house because of having to make a new connection. Cannot afford that and feel it is unfair and unreasonable.

We are locked into only being able to go with Castle Cable if we want high speed internet. Their internet is horrible and gets worse at night.

Redwood only has satellite internet companies that charge a huge amount for limited GB, there are a decent amount of people in Redwood I dont understand why a broadband company (spectrum, Verizon, etc) doesn't provide internet here.

The problem with internet service here is that the speed is usually not even anywhere near what we are paying for. A lot of time, the bandwidth is oversold and no one has good service.

We need high speed internet in Redwood, the one provider there has a monopoly, no one else is allowed in right now. We heard Verizon Fio was coming in, I sure hope so

high speed broadband should be made available to everyone.

Im 71 and I live alone and the cell service is marginal and unreliable. Although I have an unlimited plan I am "throttled down" after 15 gb which makes use of the internet all but impossible. During the pandemic I remain isolated and family connections through video calls would have helped immensely to help with depression. Being able to stream programming would also have helped. But the most important need for safety is a reliable phone service.

we charge a high amount for the speed we are provided with. Our kids literally laugh when they come here at 3 mb..which we never even get, for the price we pay. Castle Cable has also begun charging us when we leave for the winter. They rob us blind anyway they can. We pay 43.00 for 3 mbs of service..crazy, and we cant afford more as we are retired.



3rd person in house is 4y o grandson who comes daily. Interested in internet for myself for computer & tv but also concerned for his future education on line.

I am a retired teacher. I currently tutor students currently doing remote learning. We are constantly disconnected, Usually multiple times per day. My husband owns a business and often tries to work from home but he is unable to because the WiFi is not reliable.

Hughes net is terrible, does not allow us to telework at home. Puts us at higher risk for covid. Is extremely expensive for far below quality of services it provides. Very, very slow, cursed off all the time.

I'm tired of being ripped off

Castle Cable provides good service at a reasonable rate. High reliability. Would welcome higher speed at same price. Neighbors begged for service years ago and Castle Cable was the only one to step up. Now that the market is established other providers jumping in at way to high a price.

As stated, I use satellite service from Viasat. The signal is poor. Very slow, intermittent, cannot stream dependably.

Frontier has horrible customer service spectrum stopped two houses down from me because they were to lazy to run service behind a house who would have given them permission to do so. They never asked

It's very important to have good quick reliable internet service BUT it needs to be more affordable. It's ridiculously expensive & really driving people away.

Internet access is very important for a families needs. Now especially with remote learning in schools. We now have Spectrum at our house, which is a good thing. They need some competition to have an incentive to keep their rates from increasing. Hopefully Verizon can bring their services here as well.

No

Internet is very spotty. I was told by Frontier its the best internet available in our area.

It's sad our state has prioritized parts of our state more than others. Citizens in Jefferson county deserve better and I am afraid this with a handful of other things will continue to have an affect on people leaving this county and our state for better run states and local governments. When you can't get an affordable actual useable internet in your home or place of work it is sad. Government has failed much of upstate NY

Broadband during the pandemic would have been great, without it life was a struggle

We need more choice of providers through the county. Spectrum holds a near monopoly on Internet service and they aren't everywhere. Cellular phone service coverage is also spotty. Why is there no FIOS service - it's been available in Syracuse for years? We need better broadband access, as well as regional and community based broadband.

High speed internet is all we need. With current tech available and everyone with Cell Phones, who needs cable and phone. The bundles are foolish from an end user, but we have no choice.

Spectrum is the only option, which is a terrible disservice to people here

I have limited access with the hot spot. Cable internet would give me the amount of data I need but the only current option is 65 dollars a month and goes up 20 a month after the first year. Over 1000 dollars a year is to much on a retiree's income. There should be more affordable options.



Verizon recently ran fiber at this address. It is a trailer park (Indian River Estates). Fios is not yet available though. The park owner will not allow Spectrum to install unless he gets free service (which isn't happening). We currently use Ridgeview Communications paying \$50/month for approximately 1Mbps download/0.3Mbps upload speeds.

I get one bar on my Verizon device at the location. The phone must be on the porch to get that level of service and I hotspot off of it. If reception were better it would make the hotspot bearable, but it is seasonal, so there is a tradeoff

The current provider has us over a barrel. I pay much more for much less speed and quality than the service available less than 1 mile from me.

Spectrum feels like it's highway robbery. The longer I'm with them the more I have to pay and if I switch to another provider I won't receive the same services. I've heard Verizon FIOS is great internet but it's not available in our area. I would love to switch to Verizon entirely.

I generally believe the government shouldn't be involved in any of this because that generally means they pick one provider and there's no control over prices. there should be three or four providers such as cable companies waiting for the same customers and the price of Service will go down and be a lot more reasonable with the competition

Until September 2020 we only had Verizon Wireless WiFi available, now we have to continue paying that contract and added Verizon Fios so our child can continue education as they are remote when school closes or 3 days weekly. My husband had to work from home for 3+ months at the beginning of COVID shelter in place. I still have to have access for my work, communication with family and friends, entertainment, and bill paying.

I have two high school aged students at home that have fluctuated between in-person and online learning. When studying online they have scheduled Zoom's all day. I pay \$169 a month for 100GB's with Viasat and do not have the option to buy more. We run out of data by the end of the month while only using it for school and work. Plus if it rains or snows service is unstable.

My company switched to VoIP. With satellite internet there is a significant lag. Plus, if there is rain or snow service becomes sketchy. I pay \$169 a month for 100BD of data that my kids also use for online schooling on some days. I cannot continue to live here if I do not have better service - I need more data and for it to be a stable connection.

We need fires in our area all We have is our cell phones which is poor

We have seen Verizon and Spectrum install cable lines for the last two years on CR 22. Spectrum quoted our neighbor \$25,000 for installation!!!! Verizon still not available. very frustrated, satellite internet is not great. Help!

Everyone should have access to the internet as the world is changing and access to banking, medical and communication in general is done through the internet. The cost of using the internet should not be a burden on anyone. At this time, Internet alone in our area is very high, almost \$100 for the slowest speed. There are times it is like watching paint dry waiting for pages to load on the internet.

Yes. Spectrum has provided service to 1/2 of Flanders road and have stalled on providing the second half for almost 2 years Due to there being no poles, only underground connections. All of our right of way permissions have been submitted. Spectrum should be sanctioned for not continuing service simply because



of there financial concerns. They gave me a quote of \$28,000 to provide high speed internet access My neighbors are currently limited to a 1mb connection via TDS, which is very limiting

at certain times a day the internet in the whole area is slow it varies on the times of day that this happens.

We had to travel to a nearby area 5 days per week in order for our daughter to complete her homework! The library had limited wifi access and was still several miles away.

Summer home - retired - spend very little time inside watching TV (antenna) or on computer (hotspot)

The internet speeds vary out here on Point Peninsula. Sometimes, I get info a day later. I have Spectrum internet and it's expensive

Having only one local service provider is disadvantageous to pricing. Plus I don't like the company. I couldn't do my job or keep in touch or do most of my shopping without an internet connection, so it's pretty darned important.

While our service is adequate, there are sections of the county that are underserved.

Bring the cost down. It is too expensive now.

It is very difficult to navigate these trying times without access to reliable internet. I am a teacher and have 2 high school age children. On numerous occasions we are all trying to use our not so-reliable, spotty hotspots. At the time of this survey my son has used all his data in his hotspot so it makes it difficult to complete work at times. The fact that we live on a main road that has no access to internet is unacceptable.

SPECTRUM, S SERVICE IS LOUSY

Internet is becoming a requirement given the impact Covid has created and the fact there is not a price cap for low income families is ridiculous. When you live in income based housing your only given 1 option and the fact that you have no say in the choice of provider is wrong let along the fact they continue to raise prices and not offer the services you are paying for. I pay for 100 and am only averaging 50. There is a problem with that considering I was getting 100 and now I'm not since Covid started.

I would like to see more options for higher speed internet. Spectrum is currently the only option and the cost of getting gigabit internet is way too high.

Spectrum shouldn't have a monopoly on service. There should be competition.

\$75/mo for 30mbps is highway robbery by Spectrum. Anyone promoting or working with them should be tried for treason. As soon as Starlink is available in this area, i will be switching. \$99 for up to 150mbps with no fiber or cable needed and I can take it anywhere in the world they have turned on. Spectrum only lists promotional pricing and will never tell you what things cost. They knowingly mail existing customers flyers promoting new customer rates that you cannot get. Or they want you to add TV/phone service no one uses anymore. This area definitely needs other providers. Nationally, and even globally, we have some of the highest cost per MBPS there is. More copper isnt the answer. That cost will be passed on to taxpayers and existing customers. Starlink is the future for rural service. Its only downfall is when there is heavy snow in the air. But thats really only less than 10 days a year.

As the importance of high speed internet grows and it becomes even more Important To have a strong reliable system that as a group can be had at a shared cost has to be the goal.



Please bring us competition for spectrum. They keep raising rates. I used to have basic internet with time warner that was a reasonable cost and speed was fine for home use. That cost has more than doubled with the spectrum monopoly.

Broadband is crucial to Jefferson County and the entire North Country for bringing new business to the area. It's also crucial for attracting people from other areas to Jefferson County. Right now, the choices for broadband are beyond limited, the costs are prohibitive and there are entire areas of the county where you cannot even gain access to broadband. I have friends that still have dial up, as it's the only internet they can get. I have others who have to use a hotspot for internet & are limited on time due to costs. And I have customers who trek all the way from Theresa or Adams to Watertown to use our computers at work because even if they had access to the broadband, they can't afford the costs.

The state of the state address highlighted the need to drop plan costs down to \$15/month. Our family could use the extra money to pay of student loan and mortgage debt, which is high priority for our family. Also, Spectrum really is the only game in town with the speeds that we need to telework, so there is need for a more competitive market that can provide lower costs.

Based on the recent state of the state addresses, we hope that our internet service can be reduced to \$15/month. That would allow for us to put more money into paying off student and mortgage debt, which is a high priority for our family. Also, Spectrum really was the only option to receive the internet speeds that we need to telework. So, having a competitive market would improve costs.

Internet is very unpredictable.

The current service provider continues to increase prices and hope providing low quality service. With kids attending school online, it forces us to continue to keep their service.

Spectrum needs more competition. Maybe that way their bill wouldn't be around \$250 a month for their bundled service.

it feels like there is only one actual option for ISP's so your stuck paying whatever they tell you is the going rate.

I see Verizon trucks all around LaFargeville, Theresa, Clayton putting up fiber cable. Why can't we get Verizon's internet service in Watertown?

For what I'm paying the speed and reliability could be better.

Broadband should be affordable, pervasive, and have a choice of provider to choose from.

It would be nice to have some choice for high speed internet. Spectrum is very expensive

Frustrations that the speed I pay for isn't what I get. And there's only one real provider and that's Spectrum.

I have a medical device that requires results be downloaded for physicals review. I am currently unable to do this and may loose the device because of this.

Need more choices for internet and cheaper rates.

I feel that Spectrum's charges are excessive. I would love the opportunity to have more than one provider to pick from.



We are in desperate need of high speed, reliable internet. Children are learning remotely and poor internet makes their studies nearly impossible.

We have Westelcom fiber for internet and phones, very good service.

I believe competition is good. We have had consistent internet speed issues with our current provider. They also have consistently raised prices. I would like to see what the cost for broadband would be.

After years of dialup only service in my rural area, i love the high speed internet.

A better selection of providers would be great. We're currently paying a lot for internet only, because all the feedback we get on a satellite provider has not been good.

We need good choices other than spectrum.

Too expensive

We would like to have access to the Verizon Fios buildout. Spectrum has a monopoly in our area

Residents in Watertown should have Fiber from a provider other than Comcast/Spectrum to foster a competitive environment that will improve speed, service and lower cost.

Someone needs to break up the controlled monopolies that have carved up the tri-county area into little kingdoms. Choice would be a huge difference.

Spectrum is over priced and quality of internet is horrible.

I think the cost of internet through Spectrum is obscene and they are the only option here in Watertown. If I didn't need it for work and my daughters school I would probably have to get rid of it because of the cost and poor service. I constantly get disconnected. It is a struggle with my Daughter trying to do school Zoom meetings and her online work. At least twice a day she has to redo an assignment because the internet has disconnected and she is unable to upload. This is enough of a struggle for a 6 year old without that added in

Our internet access speed is decent, but the price keeps increasing. We are unhappy to see that Spectrum continues to gouge their customers on a whim. Competition would be healthy for the consumer if a choice was available.

There is currently no cable or internet available along this section of road. It is needed for working from home and virtual learning once our kids are of age.

Reduce Spectrum's monopoly and HIGH prices for lower than quality internet service!

Our internet is very spotty. Intermittent interruptions happen on a daily basis.

services are slow during peak hours.

I'd be willing to pay \$10 for high speed internet only

Spectrum internet goes out all the time here and we wish there were other options for internet service!

Spectrum is a monopoly. There are no other options in the area that are either competitive or relatively available. They raise their prices every year and there's nothing you can do about it since they are the only viable option. I hope other providers (fios for example) could come up here so there's marketplace competition.

The internet rarely works. While speeds may be good, it cuts in and out very badly.



I believe that this address is the only household on my road that is not able to get high-speed Internet from spectrum. I have contacted them, and they have come out to survey, but they refused to hook up to this house due to where they chose to cross the road with their cable. Our household was never taken into account by spectrum. Because of that, the Internet that we have available is not ideal for working from home, or schoolwork. We make it work, because we have to. It just doesn't seem right or fair that everybody else on this road has the option to get high speed cable internet service but this home does not due to their misjudgment on where to run cable. Seems almost illegal.

I do have access to spectrum, but they want 4000.00 to run their cable from the pole to my house to connect. How do customers pay for that??

It is not fair that we do not have choices and are over charged and do not get what we pay for

Needed but too expensive

Very expensive

Psy for 400 MBs and usually only get 50

I really need and want fast, wireless internet that is cheap or free, if at all possible.

Internet service should be much lower for the elderly since it is needed for banking and staying in touch with family, doctors, friends. It is a lifeline for people in this day and age. Everything in this world is scary to the core.

Only one source for cable internet creates a situation where without competition the company can charge high prices for inferior service. In areas with choice of providers the prices are lower and internet speeds are more then double what we have here.

Broadband is an essential service since the pandemic began and we in Jefferson County have too few options and at too high a cost. We need a public option for satellite based service as a reasonable cost. Spectrum is legalized extortion!

Time Warner prices seem to rise every year. With kids and parents all working from home we need faster internet but cannot afford to upgrade.

Tried Spectrum Internet for a year. Rate increases the \$80/mo. To expensive for something that wasn't dependable.

Please research the availability to have a competitor to Spectrum such as AT&T U-Verse

One one provider who charges a huge amount a month for my area it's a monopoly I have no other choice

I am glad that this survey is helping those who might need it.

For the price that I pay for internet service it should be faster than it is. I have even moved my cable provided modem and even had it replaced before and there are multiple times that my kids say it's running slow. Because I have three game systems, one school provided chrome book for classes and homework, three laptops, one desk top computer and eight cell phones, I had to get the biggest internet package through spectrum at about \$100 a month to only to still have slower than expected internet service. With internet being required more than before because of covid 19, there should be something done to improve these services.



Spectrum should not have a monopoly based on location. When choosing my internet provider it was the only option I had and their rates continue to increase.

I have been charged for 100 mbps for a long time and receive 50 mbps because of a wireless connection? That was never mentioned at the time I initiated this service. Subsequently, after I proved to Spectrum that I was not receiving 100 mbps low not have a disclaimer for wireless users! Total ripoff...

It's pretty sad when Spectrum is the best in the area but even with how good they are, the internet is constantly cutting out.

It would be nice to have a choice in broadband providers for City residents beyond just Spectrum. Their prices are outrageous and continue to go up, year after year.

We have spotty internet service. I would like this fixed so my children can do their school work at the same time.

Glad to have this survey and the speed test. I hope it results in expanded service throughout the north country

The test for this location is affected a bit by the VPN, but also shows a more real world account of the area's broadband, as it's not just testing a connection to servers within a 50 mile radius. Ran it a few times, approx 120ms ping to Nashville area each time. Though, being on fiber, I imagine our low down/up speeds is probably based on service level chosen by the company and other users on the network at the time. But, again, this shows a more real world experience.

This location is both business (farm) and resident.

I work in the Court system. Since COVID hit, almost all court proceedings are virtual. It is critically important to be able to hear everything that is said during court proceedings.

We have Broadband at our location

No idea why the Fukk Jeff Co has anything to do with "Broadband" .. it's not even called Broadband, too often dummies in Gov't get involved.. slow the process & Fukk things up even more. We have fine Cellphone & ISP in Upstate NY created entirely without the help of Jeff Co or dipschitts in Albany. Best to stay out and quit fukkin things up via Regulations & Bureaucratic Stupidity. Have a good day $\eth \ddot{\nabla} \ddot{\nabla} , \eth \ddot{\nabla} , \ddot{\nabla} , !!$

Service in our area is unreliable

We lose internet service frequently. The network service is spotty and unreliable. Our download speed was 27

Spectrum has a monopoly and we as customers are backed into a corner. This is ridiculous

Spectrum recently quoted me a \$5000 installation fee. Current service is about 1/3 mile from me, but poles were "too low".

I find my data service to be poor - average for the cost. I have had a number of issues over the years and had to convince Spectrum the problem was outside my house since they replaced the line from their pedestal into my house I have seen a marked improvement, however I still find my service to consistently be slow especially when I am moving large files for work, require rebooting, and often experience buffering when viewing TV



I don't want satellite internet but that's what is being offered as high speed internet in this area. Spectrum and also Frontier broadband are available only a few miles from my residence. I also operate a business from my home and would like to have a faster, more reliable connection.