

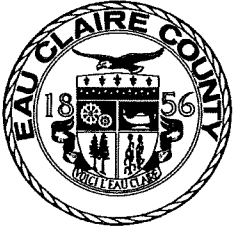
**AGENDA**  
Eau Claire County  
Broadband Committee  
Thursday, May 19, 2022  
4:00 P.M.

Courthouse – Room #3312  
721 Oxford Avenue – Eau Claire, WI

Those wishing to make public comments must submit their name and address no later than 30 minutes prior to the meeting to [rod.eslinger@co.eau-claire.wi.us](mailto:rod.eslinger@co.eau-claire.wi.us)

1. Call to order and confirmation of meeting notice.
2. Roll Call
3. Public Comment (limit to 3 minutes per person)
4. Election of the Broadband Committee Chair and Vice Chair – **Discussion/Action**
5. Appointment of the Broadband Committee Clerk – **Discussion/Action**
6. Recognition of Don Mowry for his past service as the Broadband Committee Chair - **Discussion**
7. Broadband Committee Term (20-21.080) and Membership – **Discussion/Action**
8. Internet Service Provider (ISP) Updates – **Discussion/Action**
  - a. Spectrum/Charter RDOF update
  - b. Mosaic Communications
9. Digital Equity/Inclusion “United Way” Resolution/MOU – **Discussion/Action**
10. Strategy to serve the eastern Eau Claire County – **Discussion/Action**
11. WI GEO Software – **Discussion/Action**
12. Verizon 5G project - **Discussion**
13. SpaceX Starlink Pilot Project Update – **Discussion/Action**
14. Review/Approval of February 22, 2022, Committee Meeting Minutes – **Discussion/Action**
15. Next Steps and future meetings – **Discussion/Action**
  - a. Future Meeting: June 16, 2022.
16. Adjourn

PLEASE NOTE: Upon reasonable notice, efforts will be made to accommodate the needs of individuals with disabilities through sign language, interpreters or other auxiliary aids. For additional information or to request the service, contact the County ADA Coordinator at 839-4710, (FAX) 839-1669 or 839-4735, TTY: use Relay (711) or by writing to the ADA Coordinator, Human Resources, Eau Claire County Courthouse, 721 Oxford Avenue, Eau Claire, WI 54703.



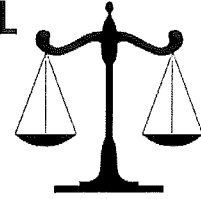
**CORPORATION COUNSEL**

*Timothy J. Sullivan*

**OFFICE OF CORPORATION COUNSEL**

**EAU CLAIRE COUNTY**  
**EAU CLAIRE COUNTY COURTHOUSE**  
721 OXFORD AVE., SUITE 3520  
EAU CLAIRE, WI 54703

PH: (715) 839-4836 Fax: (715) 839-6243



**ASSISTANT**  
**CORPORATION COUNSEL**

*Sharon G. McIlquham*

*Richard A. Eaton*

*Charles R. Ellefsen, III*

October 5, 2020

**FACT SHEET 20-21/080**

This resolution extends the existence of the special committee on rural broadband. The committee was originally formed as the result of resolution 19-20/020. The committee was to be in existence for "up to 12 months or until a final plan was approved."

There is a need to extend the existence of the rural broadband committee so they can complete their work of "identifying under-served rural areas, identify funding resources, identify potential strategies to improve access, and to recommend cooperative ventures to improve rural broadband coverage."

Based on the information provided by Supervisor Mowry: as of this time the broadband special committee has developed a vision, mission, and goals/objectives but not a final plan. They have applied for a pilot program to WEDA and the PSC for the Broadband Connectors Pilot Program and their number one goal is to develop a plan to bring broadband access to all of Eau Claire County.

Timothy J. Sullivan  
Corporation Counsel  
TJS

2  
3  
4 EXTENDING THE EXISTENCE OF THE SPECIAL COMMITTEE ON RURAL  
5 BROADBAND  
6

7 WHEREAS, The Eau Claire County Board of Supervisors, pursuant to Resolution No.  
8 19-20/020, Enrolled No. R163-013 created a special committee on Rural Broadband; and,  
9


10 WHEREAS, the Rural Broadband Special committee was charged with the function of  
11 identifying under-served rural areas and gaps in broadband service. Identify potential strategies  
12 to improve access, and recommend cooperative ventures to improve rural broadband coverage;  
13 and,  
14

15 WHEREAS, the Rural Broadband Committee is composed of varied stakeholders who  
16 represent educational, technical, Extension, and rural partners; and,  
17

18 WHEREAS, the Rural Broadband Committee has made progress in reaching its goals it  
19 has yet to approve a final plan to improve access to broadband services in rural areas of Eau  
20 Claire County.  
21

22 NOW THEREFORE BE IT RESOLVED that the Eau Claire County Board of Supervisors  
23 extends existence of the special committee on Rural Broadband as created by Resolution No. 19-  
24 20/020, Enrolled No. R163-013 until such time as a final plan is approved but not longer than 24  
25 months from the date of approval of this resolution.  
26

27 I hereby certify that the foregoing  
28 correctly represents the action of the  
29 Committee on Administration on  
30 October 13, 2020, by a vote of 5 for, and 0  
31 against.  
32

33   
34 Nick Smiar, Chair  
35 Committee on Administration  
36  
37  
38

**APPROVED BY  
CORPORATION COUNSEL  
AS TO FORM**

2  
3  
4 EXTENDING THE EXISTENCE OF THE SPECIAL COMMITTEE ON RURAL  
5 BROADBAND  
6

7 WHEREAS, The Eau Claire County Board of Supervisors, pursuant to Resolution No.  
8 19-20/020, Enrolled No. R163-013 created a special committee on Rural Broadband; and,  
9

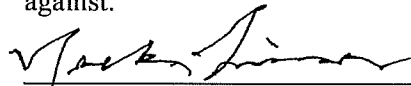
10 WHEREAS, the Rural Broadband Special committee was charged with the function of  
11 identifying under-served rural arears and gaps in broadband service. Identify potential strategies  
12 to improve access, and recommend cooperative ventures to improve rural broadband coverage;  
13 and,  
14

15 WHEREAS, the Rural Broadband Committee is composed of varied stakeholders who  
16 represent educational, technical, Extension, and rural partners; and,  
17

18 WHEREAS, the Rural Broadband Committee has made progress in reaching its goals it  
19 has yet to approve a final plan to improve access to broadband services in rural areas of Eau  
20 Claire County.  
21

22 NOW THEREFORE BE IT RESOLVED that the Eau Claire County Board of Supervisors  
23 extends existence of the special committee on Rural Broadband as created by Resolution No. 19-  
24 20/020, Enrolled No. R163-013 until such time as a final plan is approved but not longer than 12  
25 months from the date of approval of this resolution.  
26

27 I hereby certify that the foregoing  
28 correctly represents the action of the  
29 Committee on Administration on  
30 October 13, 2020, by a vote of 5 for, and 0  
31 against.  
32

33 

34 Nick Smiar, Chair  
35 Committee on Administration  
36  
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38

## FACT SHEET

### TO FILE NO. 19-20/020

This resolution creates a special committee to review and develop strategies to expand broadband services in Eau Claire County. Many areas in Eau Claire County are underserved or not served at all with broadband.

The term broadband commonly refers to high-speed Internet access that is always on and faster than the traditional dial-up access. Broadband includes several high-speed transmission technologies such as:

- Digital Subscriber Line (DSL)
- Cable Modem
- Fiber
- Wireless
- Satellite
- Broadband over Powerlines (BPL)

The broadband technology you choose will depend on a number of factors. These may include whether you are located in an urban or rural area, how broadband Internet access is packaged with other services (such as voice telephone and home entertainment), price, and availability.<sup>(1)</sup>

The Special Committee shall include the following in their review/plan:

- Analysis of Cellular/Broadband coverage within Eau Claire County, including a phased plan to improve coverage Countywide Results from public participation/survey efforts;
- Provider information, their location(s) and details on current service and technologies;
- Industry findings and funding sources;
- Potential project partners;
- Legal and regulatory issues;
- Business and financial modeling in support of network build to include Fiber to the Home (FTTH), Fixed Wireless Broadband, or a Hybrid System;
- Provide ESRI ArcGIS shapefiles or geodatabase created or utilized for the project;
- Final list of recommendations and suggested implementation measures to be employed by Eau Claire County and its municipalities, together with a summary of data collected and relied upon for recommendation.

**Fiscal Impact:** It is estimated that there will be minimal committee expenditures for per diem and mileage that will be handled through existing committee and commission accounts. General expenditures for conducting necessary studies will be derived from existing budget accounts.

Respectfully Submitted,



Frank Draxler – Operations Manager, Administration

<sup>(1)</sup>Definition retrieved from the Federal Communications Commission on May 30, 2019, <https://www.fcc.gov/general/types-broadband-connections>

4 - CREATING A SPECIAL COMMITTEE ON RURAL BROADBAND

5 WHEREAS, currently access to broadband in rural Eau Claire County is limited; and,

6  
7 WHEREAS, it is important for all residences to have access to broadband for education,  
8 communication, employment, business development, and medical care; and,

9  
10 WHEREAS, similar to water and electricity, high capacity internet ("broadband") is  
11 quickly being viewed as a 21st century necessity for communities, businesses and household  
12 consumers; and,

13  
14 WHEREAS, Eau Claire County desires to act as a catalyst with partner organizations and  
15 individuals to improve access to broadband services; and,

16  
17 WHEREAS, the Special Committee will identify under-served rural area and gaps in  
18 service, identify potential funding resources, identify potential strategies to improve access, and  
19 recommend cooperative ventures to improve rural broadband coverage; and,

20  
21 WHEREAS, the committee will be comprised of varied stakeholders who represent  
22 educational, technical, Extension, and rural partners; and,

23  
24 NOW THEREFORE BE IT RESOLVED, by the Eau Claire County Board of  
25 Supervisors that a special committee on Rural Broadband be created consisting of 11 members  
26 appointed by the county board chair, for a period of up to twelve months or until a final plan is  
27 approved; and,

28  
29  
30 OFFERED BY:

31  
32  
33 Gary Gut  
34  
35 James Ahrenberg  
36  
37 Joseph Zuyko  
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39 Robin J. Gray  
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42

31  
32 Donald Bulkie  
33  
34 Colleen Bates  
35  
36 Fay L. Henning  
37  
38 Mark M. Bedford  
39  
40  
41  
42 Committee on Administration

43 Committee on Planning and Development Dated this 11 day of June, 2019.

44  
45 Dated this 25<sup>th</sup> day of June, 2019

46  
47 TJS

48 Reviewed by Finance Dept.  
49 for Fiscal Impact

APPROVED BY  
CORPORATION COUNSEL  
AS TO FORM

2  
3 DESIGNATING AMERICAN RESCUE PLAN ACT (ARPA) FUNDS TO BE USED BY THE  
4 BROADBAND COMMITTEE FOR THE PURPOSE OF DIGITAL EQUITY AND INCLUSION  
5 PROGRAM UNITED WAY OF THE GREATER CHIPPEWA VALLEY AND EAU CLAIRE  
6 COUNTY BROADBAND EXPANSION  
7

8 WHEREAS, with the COVID-19 pandemic the lack of service through Eau Claire County  
9 and the need for broadband service in underserved areas has become more apparent as many people  
10 in those areas were not able to connect to work, school or healthcare services through the internet;  
11 and  
12

13 WHEREAS, among other things, one of the permitted uses of ARPA funds is investment  
14 into Broadband infrastructure, that would help to expansion of broadband services to the rural  
15 areas of Eau Claire County; and  
16

17 WHEREAS, Eau Claire County has already created a Broadband Committee that is  
18 charged with the mission of exploring ways to expand broadband services to the residents in rural  
19 areas of Eau Claire County that are not currently served by broadband services; and  
20

21 WHEREAS, the goal of the Digital Equity and Inclusion Program and the Memorandum  
22 of Understanding between the United Way of the Greater Chippewa Valley and Eau Claire  
23 County is to bridge the digital divide throughout Eau Claire County, supported by the United  
24 Way’s connecting with stakeholders in the community to promote digital equity and inclusion  
25 based on the four pillars of digital equity and inclusion:  
26

- 27 • Access to high-speed internet service
- 28 • Access to internet capable devices
- 29 • Access to digital literacy training
- 30 • Access to quality technical support; and  
31

32 WHEREAS, the collaboration between Eau Claire County and United Way will focus on the  
33 following priority populations and organizations:  
34

- 35 \*Individuals and Community based organizations in “broadband deserts” or areas of  
36 limited broadband connectivity.
- 37 \*Under-resourced schools in or near broadband deserts.
- 38 \*Households with school aged children.
- 39 \*Under-resourced schools or other education-focused community organizations.
- 40 \*Persons seeking employment, especially employment requiring moderate to high digital  
41 skill and/or other opportunities for “up-skilling.”
- 42 \*Vulnerable populations, such as those experiencing domestic violence or homelessness;  
43 and  
44

45 WHEREAS, the estimated cost for the first year of the project is \$78,625. This project  
46 has been awarded a PSC grant that will provide \$58,968.75 toward the first-year funding; and  
47  
48

1 WHEREAS, to accomplish the goal of digital equity and inclusion, the Broadband  
2 Committee is requesting funding from Eau Claire County through American Rescue Plan Act  
3 (ARPA) and other funding sources over a period two years. The request from Eau Claire County  
4 ARPA funding is:

- 5 • Year 1 – \$19,656.25
- 6 • Year 2 – \$79,920
- 7 • Total request – \$99,576.25

8  
9 THEREFORE BE IT RESOLVED, the Eau Claire County Board of Supervisors designates  
10 a total of \$99,576.25, consisting of a Year 1 contribution of \$19,656.25 and a Year 2  
11 contribution of \$79,920.00 for a total of \$99,576.25, to be provided for through the American  
12 Rescue Plan Act Funds to be used as funding for the Digital Equity and Inclusion Program  
13 United Way of the Greater Chippewa Valley and Eau Claire County Broadband Expansion  
14 project for the expansion of broadband service within Eau Claire County.

15  
16 BE IT FURTHER RESOLVED, the funds shall be administered by the Eau Claire  
17 County Broadband Committee consistent with the Memorandum of Understanding between the  
18 United Way of the Greater Chippewa Valley and Eau Claire County.

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21 ADOPTED:

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34 \_\_\_\_\_  
Broadband Committee

35 Dated this \_\_\_\_ day of May 2022

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45 \_\_\_\_\_  
46 \_\_\_\_\_

47 Committee on Administration

48  
49 Dated this \_\_\_\_ day of May 2022.



## FACT SHEET

TO FILE NO. 22-23/028

The goal of the Digital Equity and Inclusion Program and the Memorandum of Understanding between the United Way of the Greater Chippewa Valley and Eau Claire County is to bridge the digital divide throughout Eau Claire County, supported by the United Way's connecting with stakeholders in the community to promote digital equity and inclusion based on the four pillars of digital equity and inclusion:

- Access to high-speed internet service
- Access to internet capable devices
- Access to digital literacy training
- Access to quality technical support

The collaboration between Eau Claire County and United Way will focus on the following priority populations and organizations:

- \*Individuals and Community based organizations in "broadband deserts" or areas of limited broadband connectivity.
- \*Under-resourced schools in or near broadband deserts.
- \*Households with school aged children.
- \*Under-resourced schools or other education-focused community organizations.
- \*Persons seeking employment, especially employment requiring moderate to high digital skill and/or other opportunities for "up-skilling."
- \*Vulnerable populations, such as those experiencing domestic violence or homelessness.

The Eau Claire County collaboration will be modelled after the successful Techquity program developed by United Way of Greater Milwaukee and Waukesha County and using National Digital Inclusion Alliance (NDIA) recommendations and resources for digital equity coalition building.

### Fiscal Impact:

To accomplish the goal of digital equity and inclusion, the Broadband Committee will be requesting funding from Eau Claire County through American Rescue Plan Act (ARPA) or other funding sources over a period two years. Those requests will be:

- Year 1 – \$19,656.25
  - The estimate for the first year is \$78,625. We have been awarded a PSC grant that will provide \$58,968.75 of the first-year funding.
- Year 2 – \$79,920
- Total request – \$99,576.25

The goal of the Digital Equity and Inclusion Program is for the program to be self-sustaining by the end of year 2. The resolution requesting funding from Eau Claire County will be presented to the Eau Claire County Board as a part of a resolution containing other funding requests from the Eau Claire County ARPA funds.

Respectfully submitted:

Dave Hayden, Eau Claire County

Andy Neborak, Director, United Way

# Starlink Pilot – survey results

Speed Test Averages all surveys	Download Speed (Mbs)	Upload Speed (Mbs)	Latency (ms)	Responses
Survey 1	68	12	40	30
Survey 2	69	10	40	23
Survey 3	76	10	37	27
Survey 4	97	9	38	34
Survey 5	111	11	43	30
Survey 6	98	10	44	43
Survey 7	115	13	36	43
Survey 8	81	14	25	4
Survey 9	149	13	40	26
Survey 10	124	13	37	30
Survey 11	122	13	32	26
Survey 12	113	13	34	33
Survey 13	98	9	38	30
Survey 14	122	10	35	26
Survey 15	89	8	41	29
Survey 16	85	6	36	28
Survey 17	93	8	35	25
Overall	101	11	38	

# Starlink Pilot – last reported speed test by participant

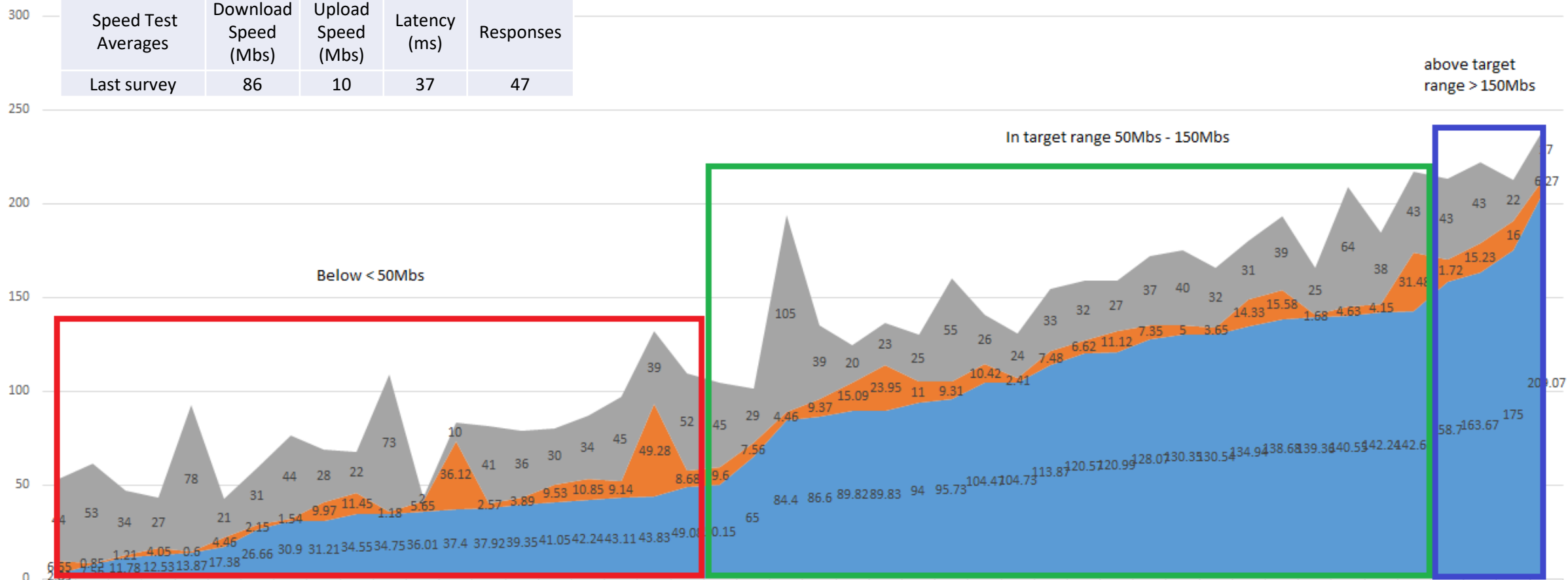
Starlink Performance

Speed Test Averages	Download Speed (Mbs)	Upload Speed (Mbs)	Latency (ms)	Responses
Last survey	86	10	37	47

above target range > 150Mbs

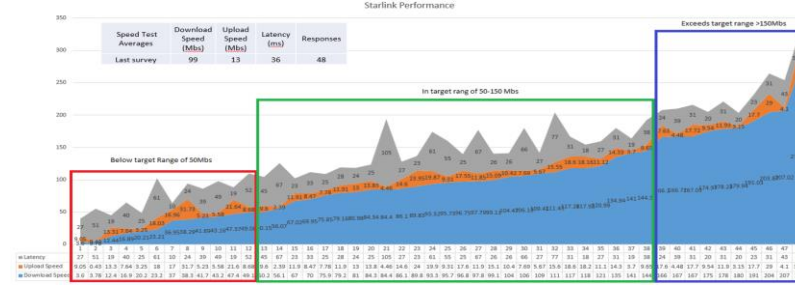
In target range 50Mbs - 150Mbs

Below < 50Mbs



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
Latency	44	53	34	27	78	21	31	44	28	22	73	2	10	41	36	30	34	45	39	52	45	29	105	39	20	23	25	55	26	24	33	32	27	37	40	32	31	39	25	64	38	43	43	22	27	
Upload Speed	6.55	0.85	1.21	4.05	0.6	4.46	2.15	1.54	9.97	11.5	1.18	5.65	36.12	2.57	3.89	9.53	10.85	9.14	49.3	8.68	9.6	7.56	4.46	9.37	15.1	24	11	9.31	10.4	2.41	7.48	6.62	11.1	7.35	5	3.65	14.3	15.6	1.68	4.63	4.15	31.5	11.7	15.2	16	6.27
Download Speed	2.89	7.56	11.8	12.5	13.9	17.4	26.7	30.9	31.2	34.6	34.8	36	37.4	37.9	39.4	41.1	42.2	43.1	43.8	49.1	50.2	65	84.4	86.6	89.8	89.8	94	95.7	104	105	114	121	121	128	130	131	135	139	139	141	142	143	159	164	175	209

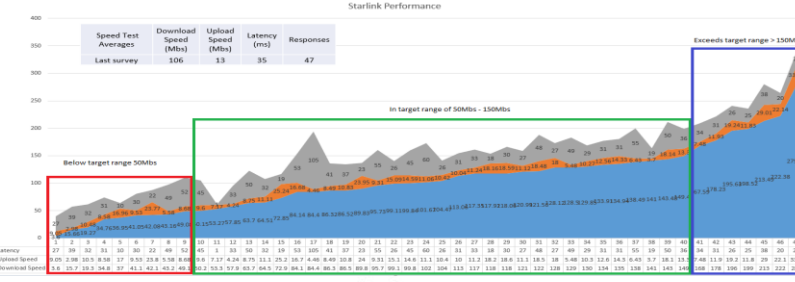
12-22-21 to 1-11-22



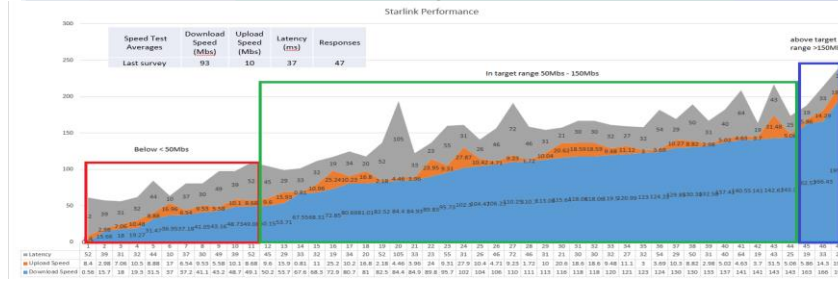
Outages or degraded service Reported by Starlink

- 1/7/2022 – global outage 90min
- 2/14/2022 – intermittent service
- 2/24/2022 – degraded service
- 3/05/2022 – degraded service
- 4/18/2022 – degraded service
- 4/21/2022 – degraded service
- 4/28/2022 – intermittent service

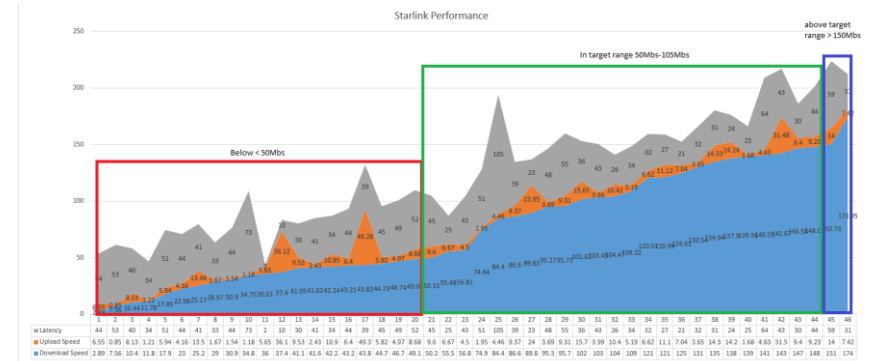
1-26-22 to 2-8-22



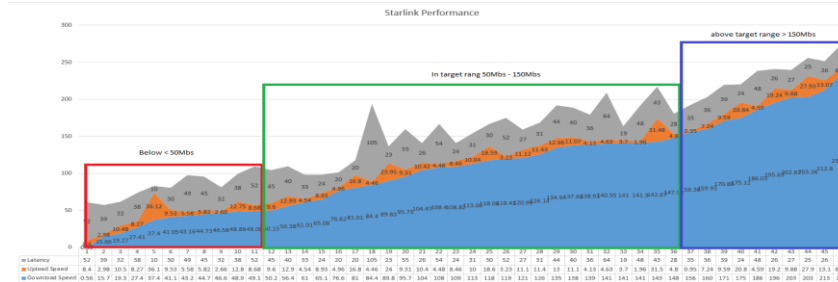
2-9-22 to 2-22-22



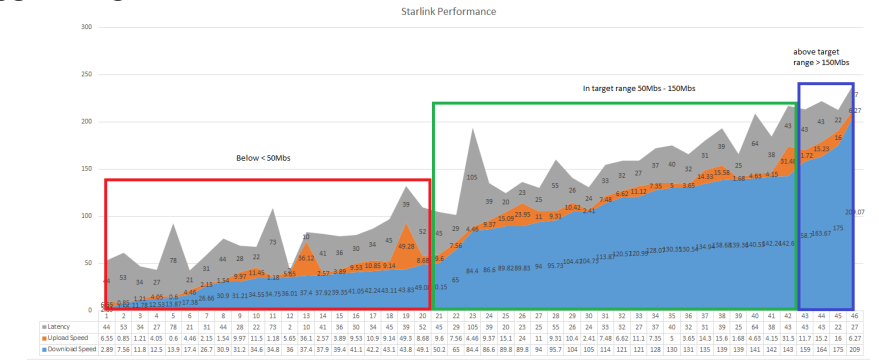
3-23-22 to 4-12-22



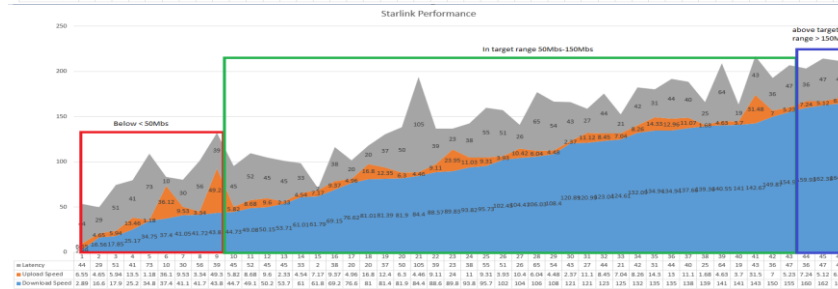
2-23-22 to 3-8-22



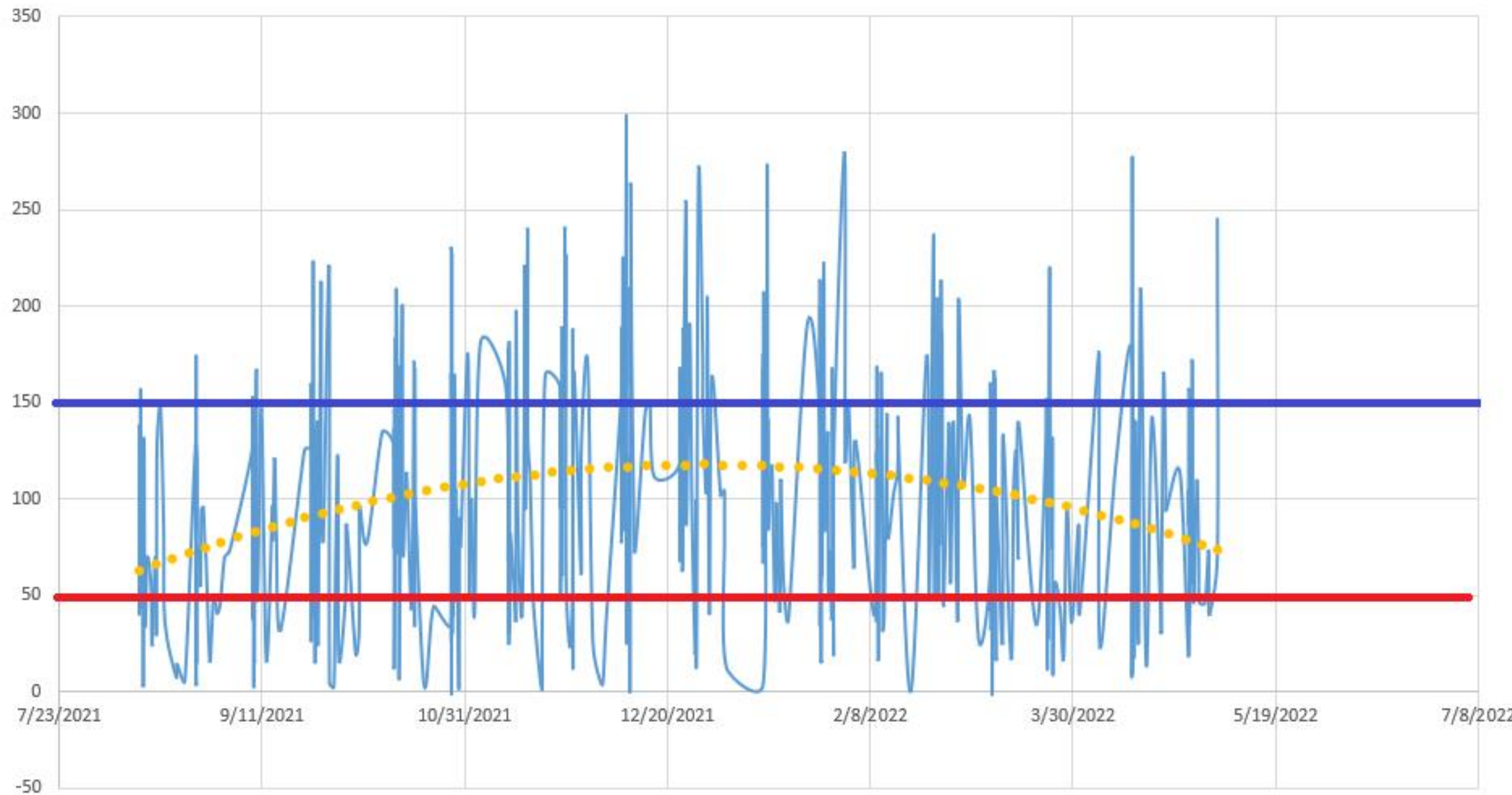
4-13-22 to 4-26-22



3-9-22 to 3-22-22



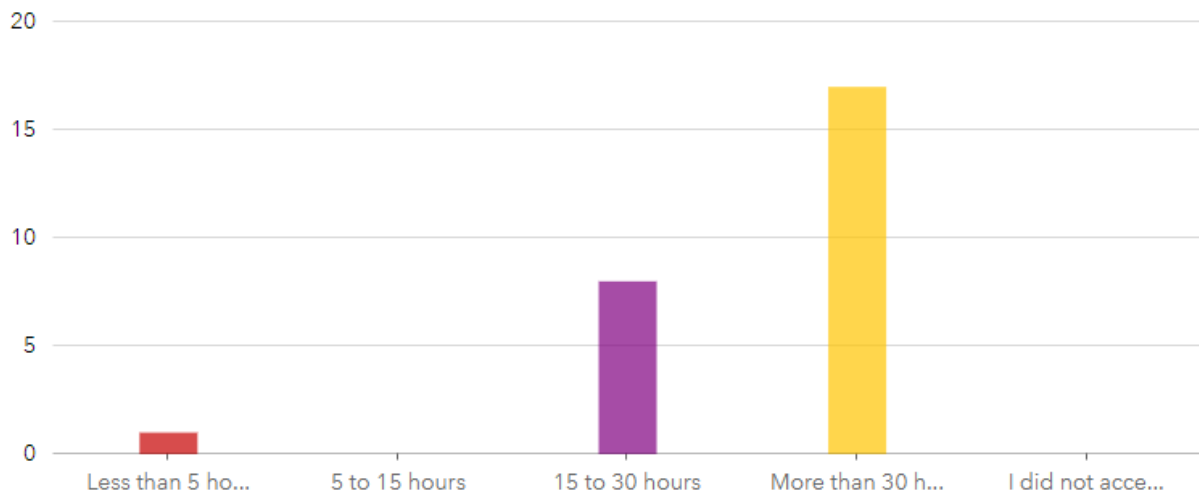
# Download Speed



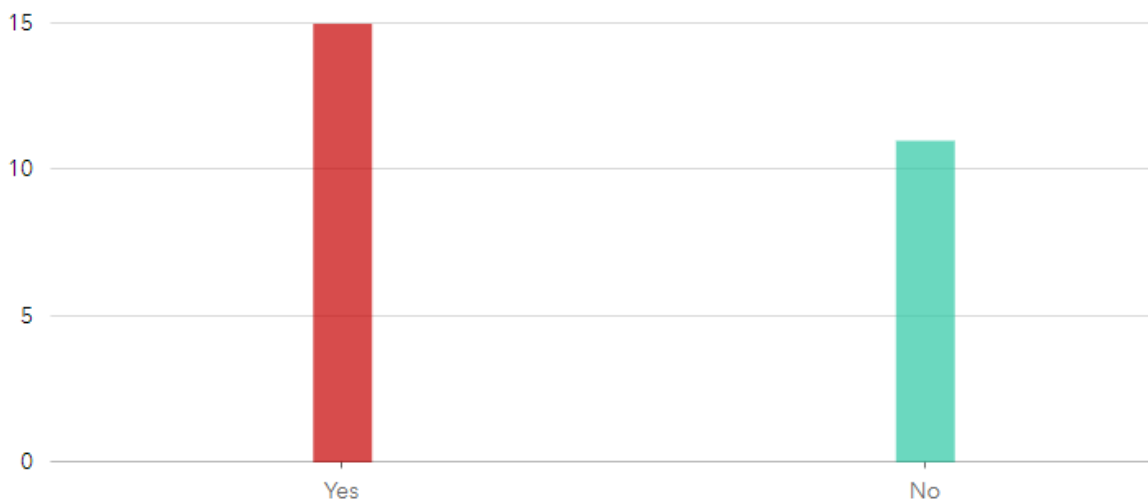
# Survey 17: 4-13-22 to 4-26-22

What is your Starlink participant ID? \* Answered: 26

Since the last survey, approximately how much time did you use Starlink to access the internet? \*



Since the last survey, did you experience any connectivity issues with your Starlink internet access? \*

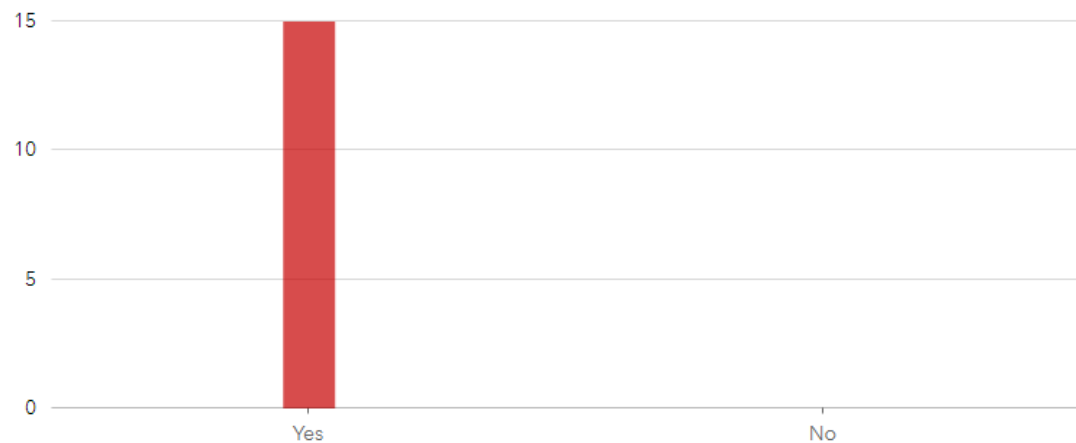


Please describe the connectivity issue encountered. \*

Response

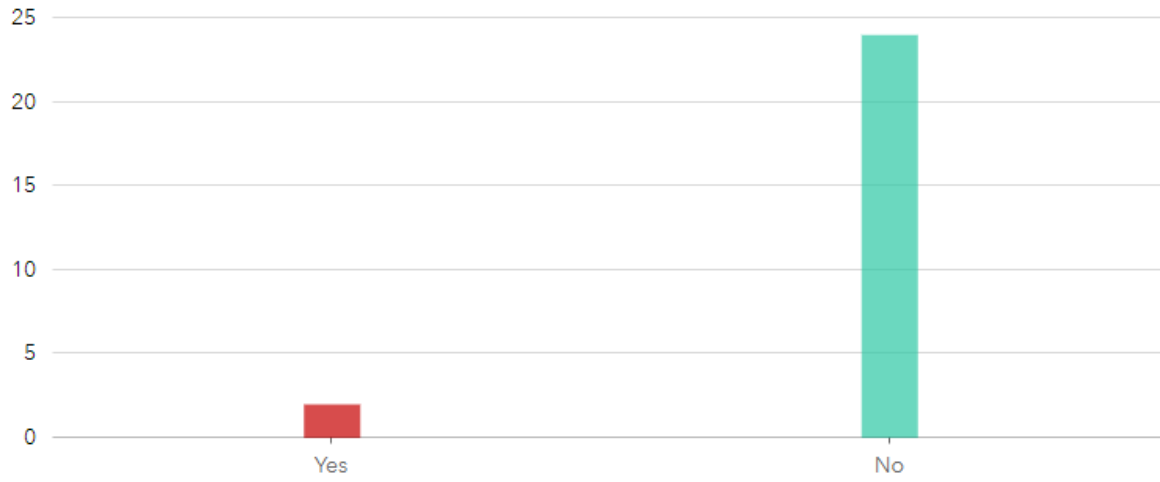
- Weather related
- We were dropped a few times, but due to Starlink outage.
- There were a couple times that it seemed that Starlink was down. The outage did not last long.
- Rain and clouds interfere with connecting lately... didn't contact Starlink since the router showed full signal. Eventually it worked again just used my hotspot until that happened.
- Only during a thunderstorm
- Not sure of the dates, but I did experience two time where there were noticeable service interruptions and there were at least a couple of notices of service interruptions during times I was not actively using the service.
- More outages than usual
- Missing signals, power outage
- Loss of connection
- Intermittent signal loss and had to reset router a few times due to losing wireless internet
- Had notifications of outage, but minimal disruption.
- During the storms on 4/12/22, connection was intermittent. Obviously caused by the heavy rain and wind though.
- disconnects when snowed on
- Bad weather.

Was Starlink able to successfully resolve the connectivity issue? \*

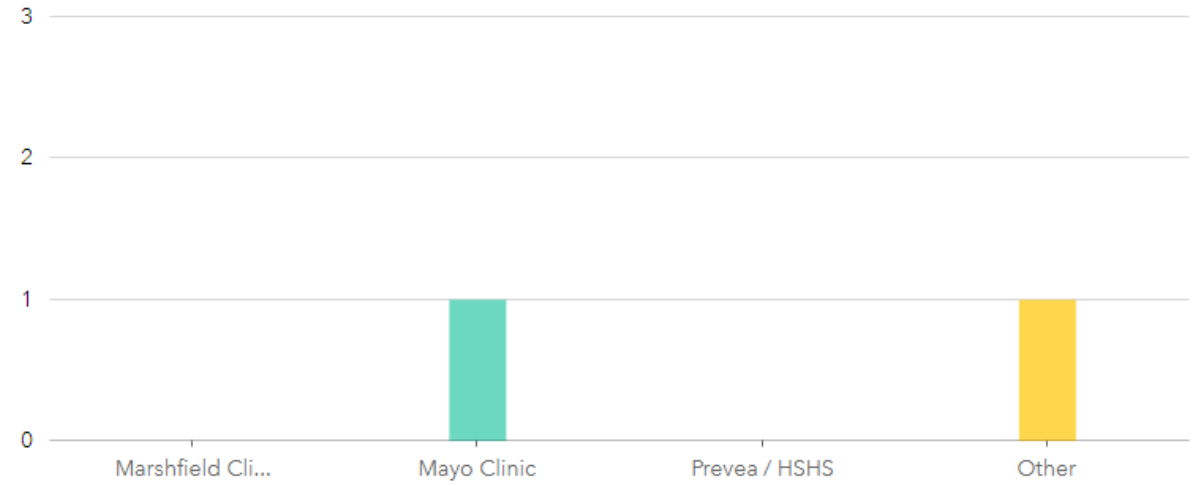


# Survey 17: 4-13-22 to 4-26-22

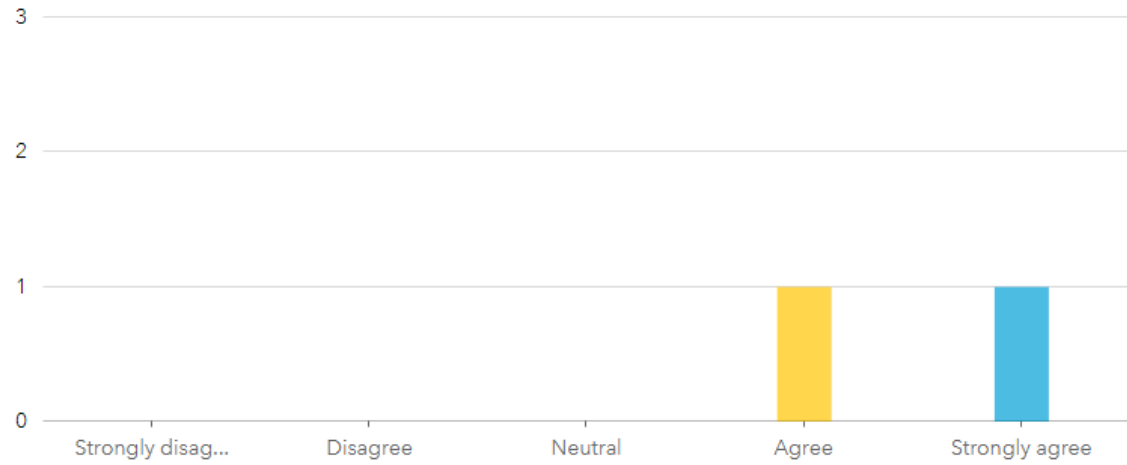
## Since the last survey, did you use Starlink for a Telehealth visit? \*



## Telehealth provider that was used \*

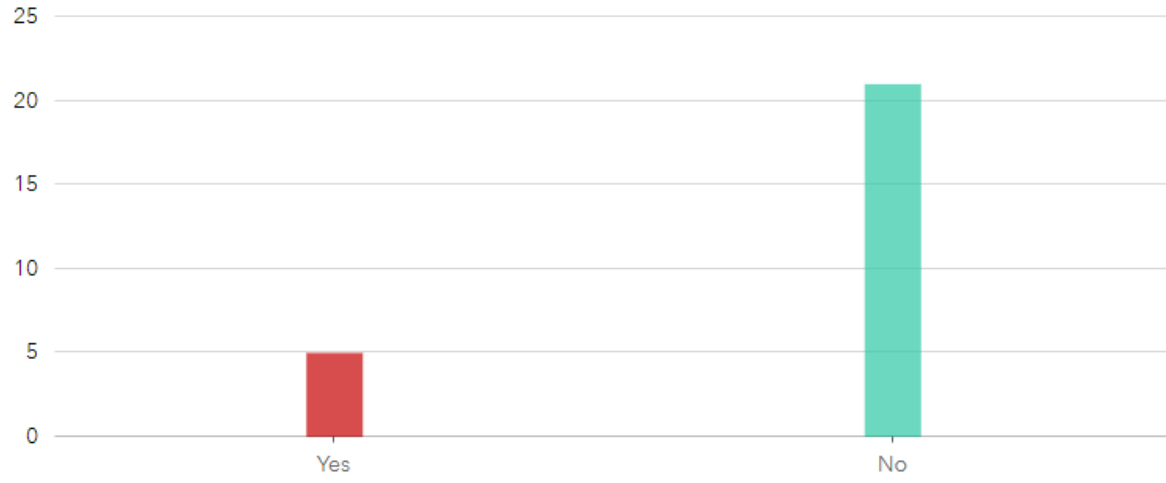


## Starlink internet worked well for the Telehealth services \*

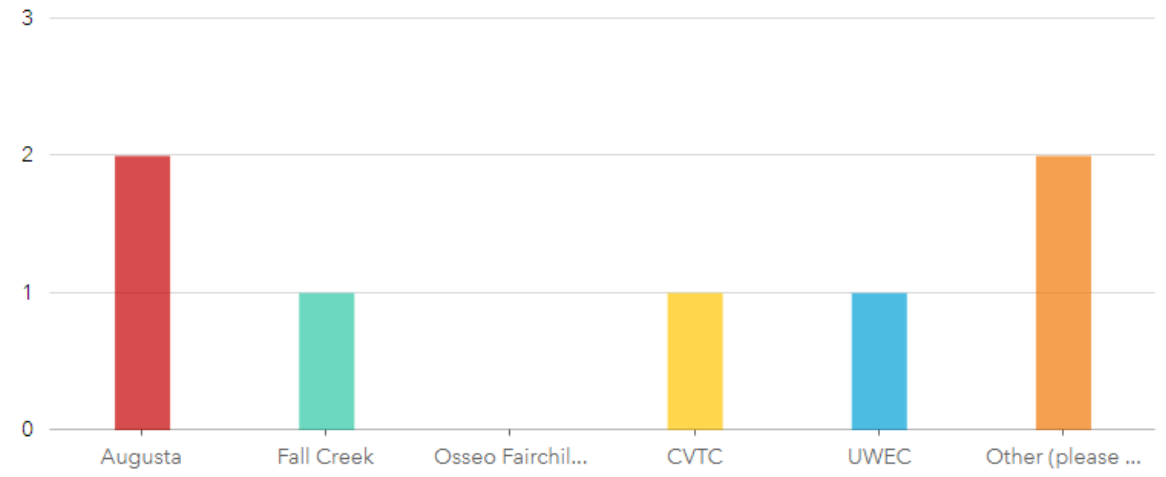


# Survey 17: 4-13-22 to 4-26-22

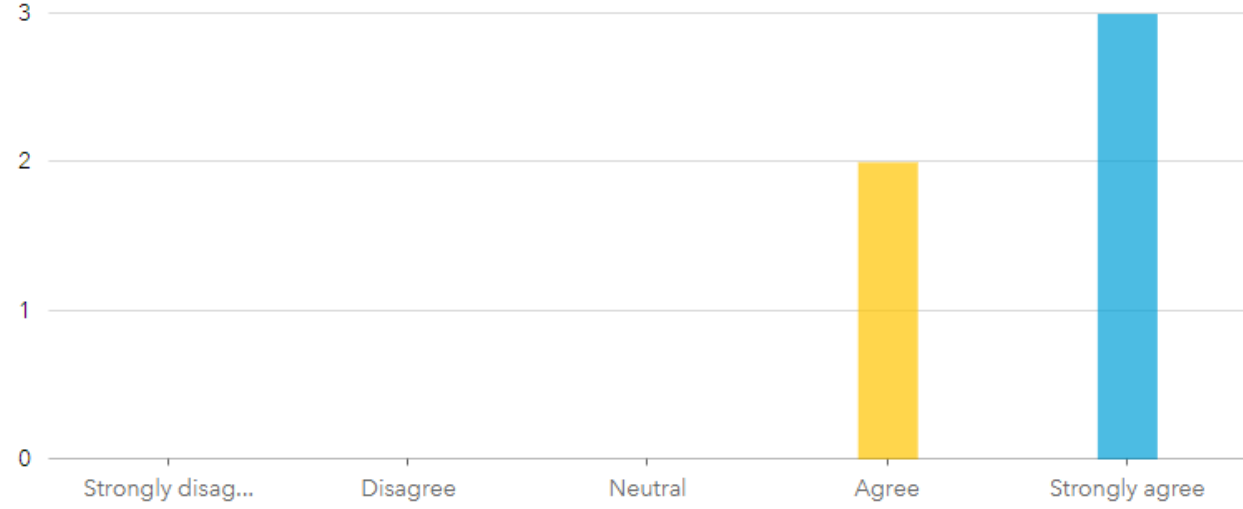
Since the last survey, did you use Starlink to participate in distance learning? \*



Educational provider that was used \*



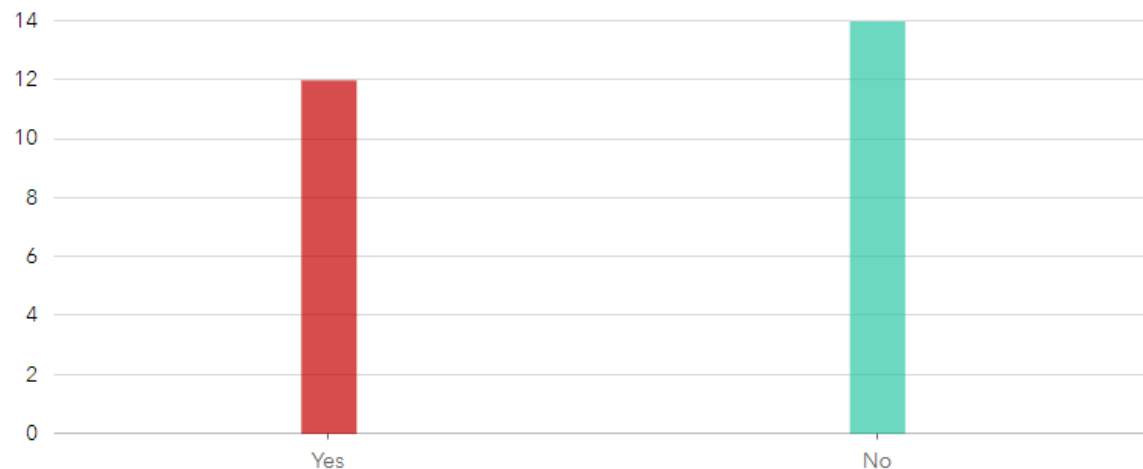
Starlink internet worked well for distance learning. \*



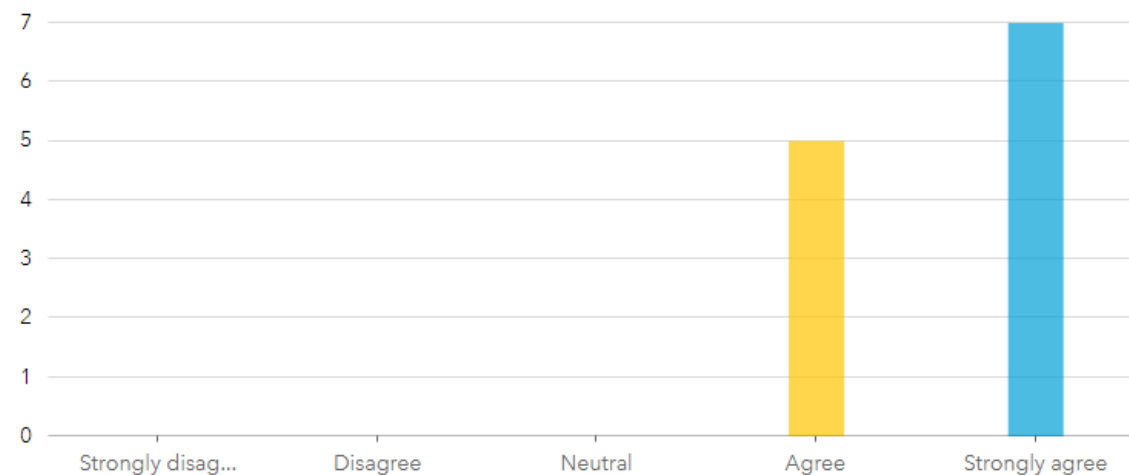


## Survey 17: 4-13-22 to 4-26-22

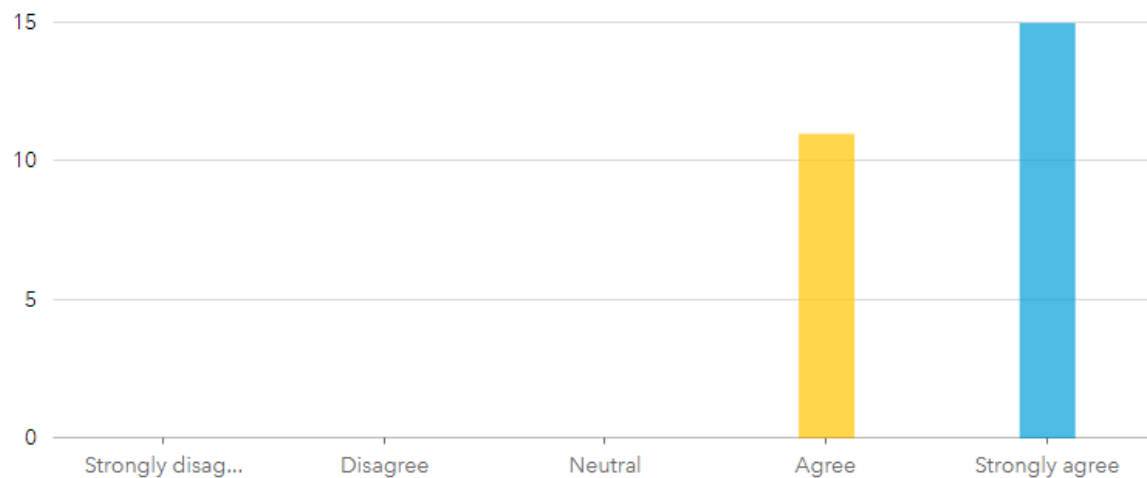
Since the last survey, did you use Starlink to work remotely? \*



Starlink internet worked well for working remotely. \*



So far I am very satisfied with Starlink internet service. \*



Response (remote work)

- Worked very well. Didn't have any connections issues or slow downs
- One of the times I had services issue I was needing to work remotely. I was able after several attempts to resolve the connectivity issues.
- I am a farmer, so I use the internet to get test results from our milk buyer.

Overall Comments

- When working as it should it is great! Seems to work better than satellite TV such as DISH during stormy weather. Just a day or two ago we had storms. DISH was out with no signal for quite a bit of time, and I was able to stream a show easily from Starlink. That's a win! However, there are still what seems to be random issues. Not clear if it's a signal issue or almost seems more likely it's an equipment issue that needs to be re-woken or rebooted.
- Overall, we're very pleased with the service. However, it does freeze occasionally on zoom calls.
- I continue to be VERY pleased with my StarLink service. No major unexplained outages, super reliable.

# Starlink Pilot – survey results

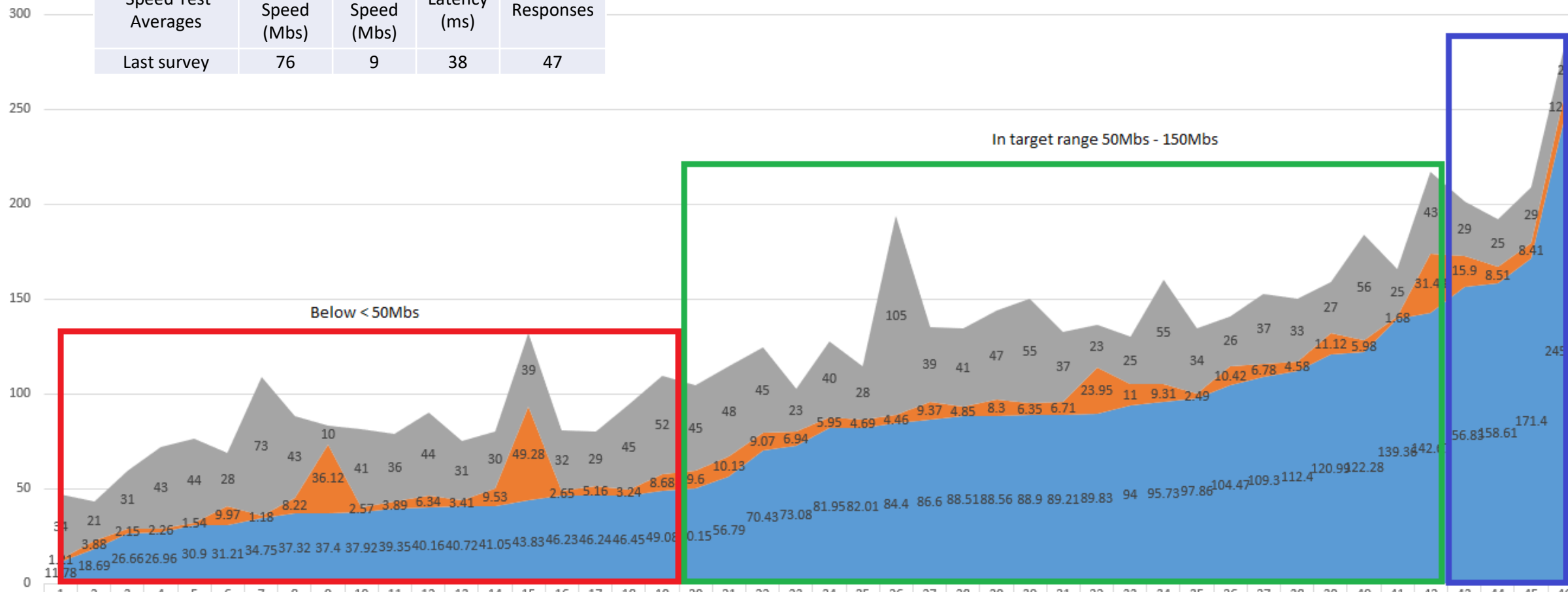
Speed Test Averages all surveys	Download Speed (Mbs)	Upload Speed (Mbs)	Latency (ms)	Responses
Survey 1	68	12	40	30
Survey 2	69	10	40	23
Survey 3	76	10	37	27
Survey 4	97	9	38	34
Survey 5	111	11	43	30
Survey 6	98	10	44	43
Survey 7	115	13	36	43
Survey 8	81	14	25	4
Survey 9	149	13	40	26
Survey 10	124	13	37	30
Survey 11	122	13	32	26
Survey 12	113	13	34	33
Survey 13	98	9	38	30
Survey 14	122	10	35	26
Survey 15	89	8	41	29
Survey 16	85	6	36	28
Survey 17	93	8	35	25
Overall	101	11	38	

# Starlink Pilot – last reported speed test by participant

Speed Test Averages	Download Speed (Mbs)	Upload Speed (Mbs)	Latency (ms)	Responses
Last survey	76	9	38	47

Starlink Performance

above target range > 50Mbs



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
Latency	34	21	31	43	44	28	73	43	10	41	36	44	31	30	39	32	29	45	52	45	48	45	23	40	28	105	39	41	47	55	37	23	25	55	34	26	37	33	27	56	25	43	29	25	29	26
Upload Speed	1.21	3.88	2.15	2.26	1.54	9.97	1.18	8.22	36.1	2.57	3.89	6.34	3.41	9.53	49.3	2.65	5.16	3.24	8.68	9.6	10.1	9.07	6.94	5.95	4.69	4.46	9.37	4.85	8.3	6.35	6.71	24	11	9.31	2.49	10.4	6.78	4.58	11.1	5.98	1.68	31.5	15.9	8.51	8.41	12.4
Download Speed	11.8	18.7	26.7	27	30.9	31.2	34.8	37.3	37.4	37.9	39.4	40.2	40.7	41.1	43.8	46.2	46.2	46.5	49.1	50.2	56.8	70.4	73.1	82	82	84.4	86.6	88.5	88.6	88.9	89.2	89.8	94	95.7	97.9	104	109	112	121	122	139	143	157	159	171	245.2

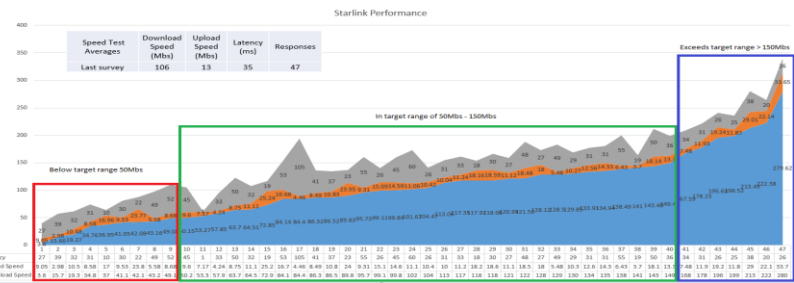
# Outages or degraded service Reported by Starlink

- 1/7/2022 – global outage 90min
- 2/14/2022 – intermittent service
- 2/24/2022 – degraded service
- 3/05/2022 – degraded service
- 4/18/2022 – degraded service
- 4/21/2022 – degraded service
- 4/28/2022 – intermittent service

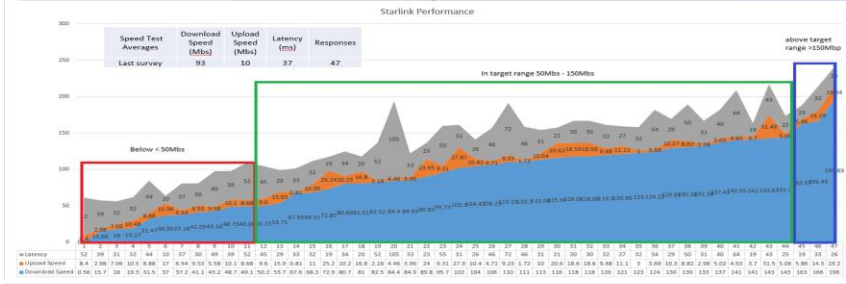
12-22-21 to 1-11-22



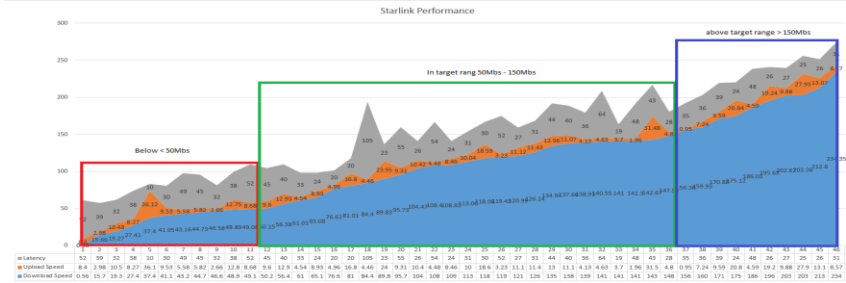
1-26-22 to 2-8-22



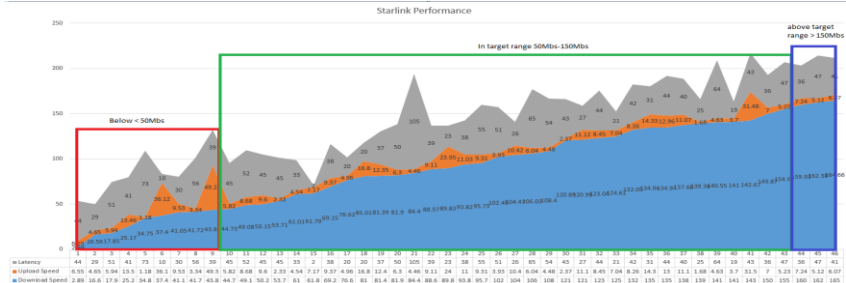
2-9-22 to 2-22-22



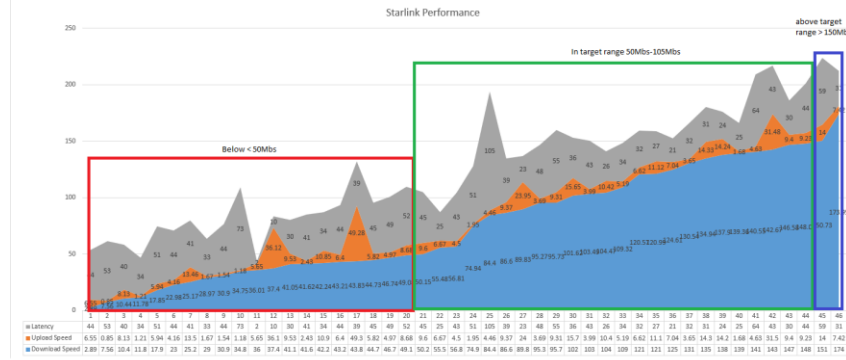
2-23-22 to 3-8-22



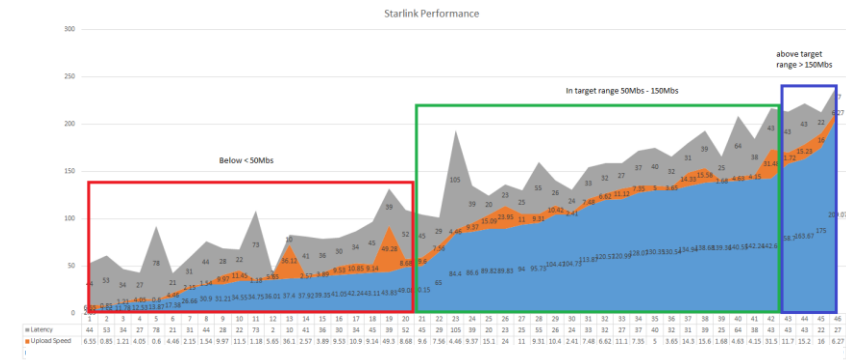
3-9-22 to 3-22-22



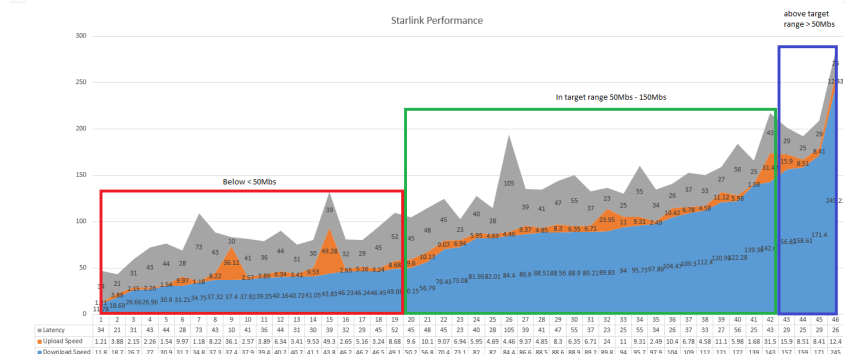
3-23-22 to 4-12-22



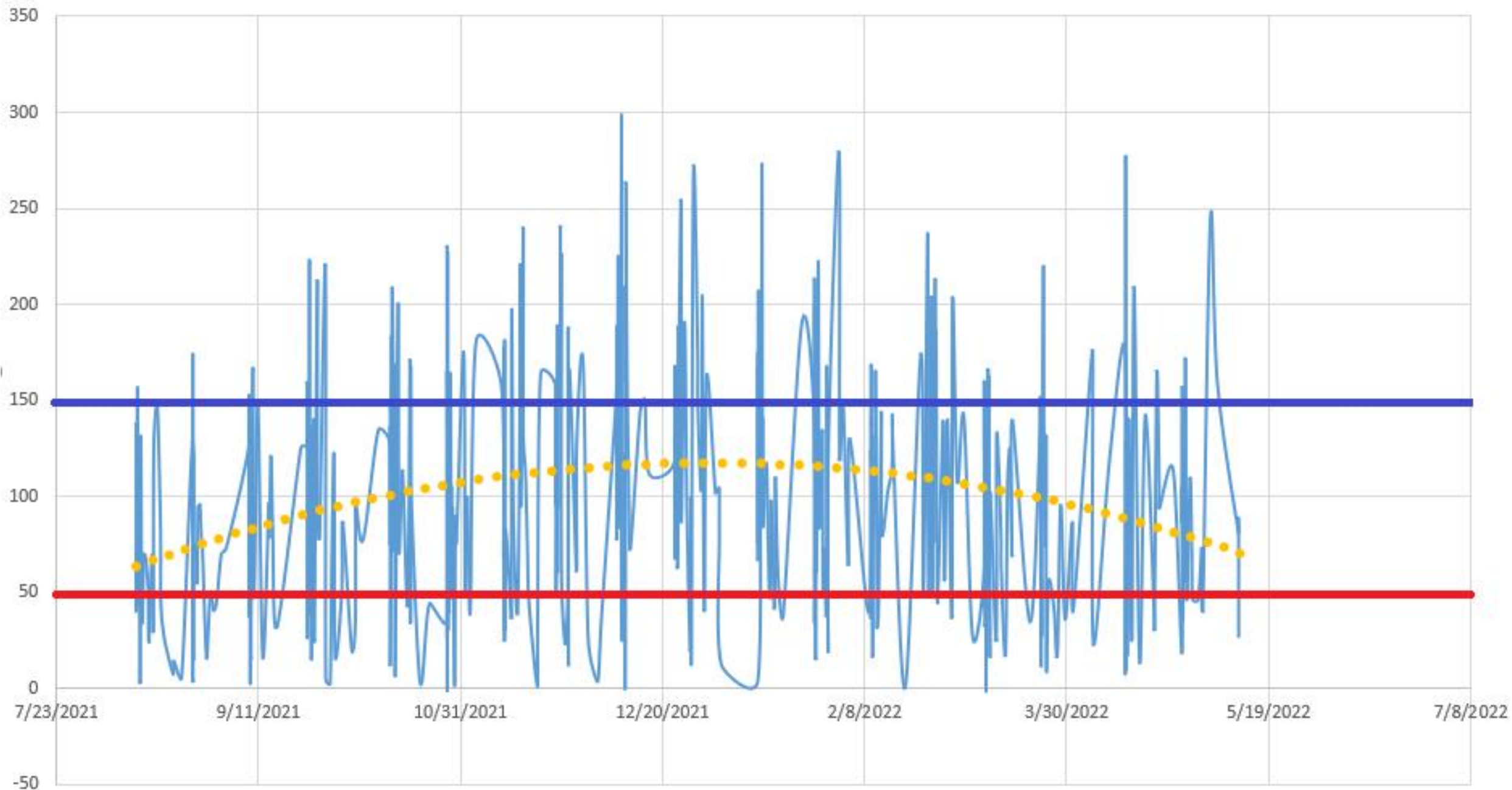
4-13-22 to 4-26-22



4-27-22 to 5-10-22



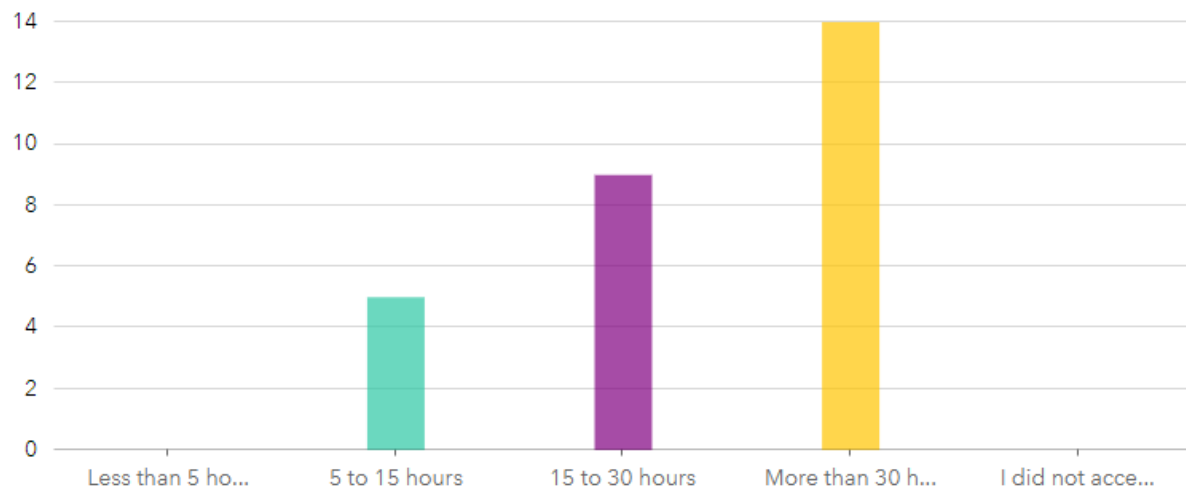
# Download Speed



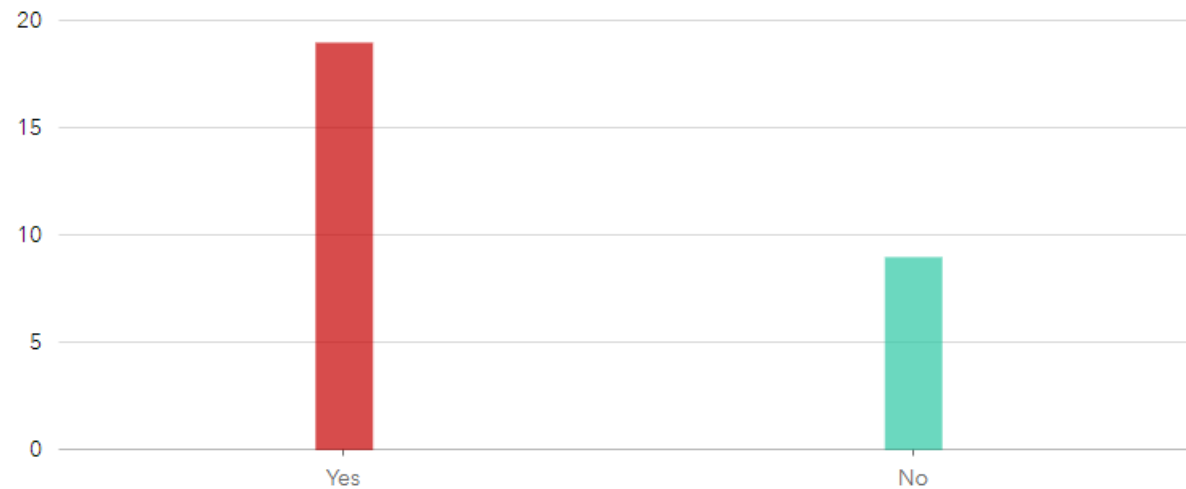
# Survey 18: 4-27-22 to 5-10-22

What is your Starlink participant ID? \* Answered: 28

Since the last survey, approximately how much time did you use Starlink to access the internet? \*



Since the last survey, did you experience any connectivity issues with your Starlink internet access? \*

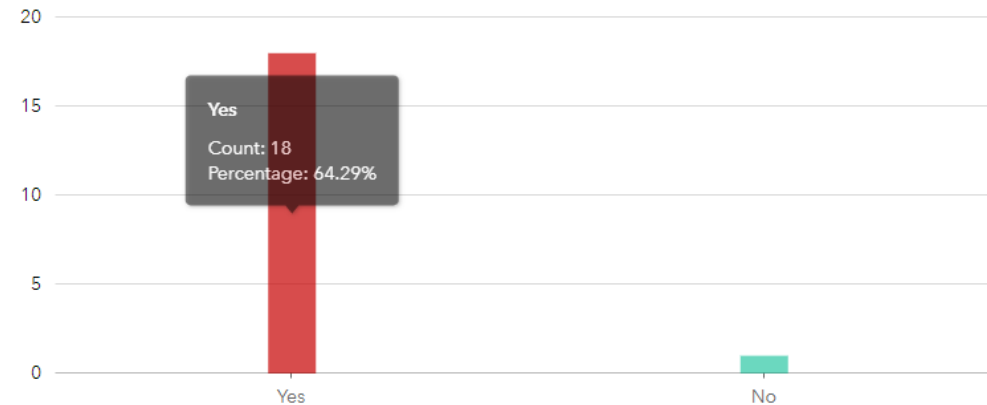


Please describe the connectivity issue encountered. \*

Response

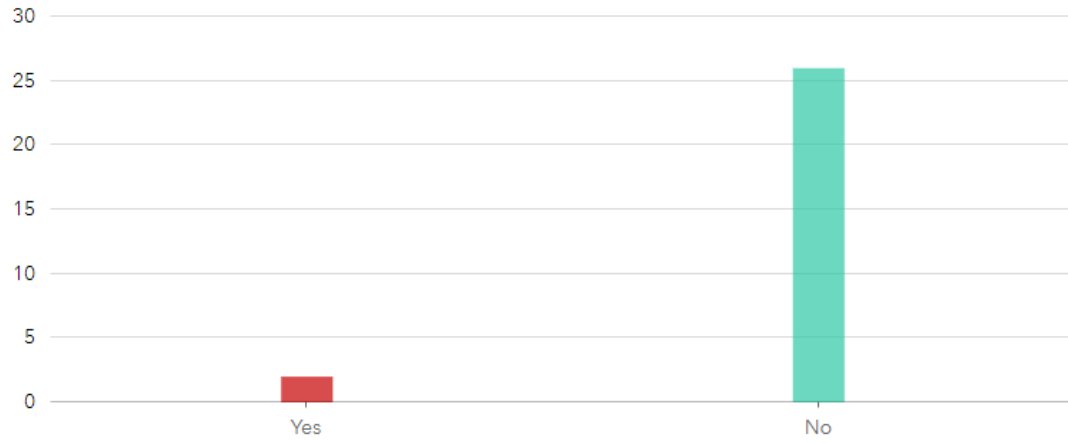
- weather related, network related outage
- weather related
- There were a couple of brief periods where there were connectivity issues. They were very short periods of time.
- Starlink had a few outages.
- slow
- shut off my connection
- Outages
- Our signal has been intermittent just about every day for the last week. It is very difficult to stream movies and TV shows. We have not been able to contact starlink, we don't know how.
- My app told me there was an obstruction, which is possible as the trees are beginning to leaf out for the season --but I had no issues in the late fall and through the winter when installed in the new location. However, I was also told that there was a Starlink related issue. It remained most of the evening, but I did finally get enough connection to be streaming as normal. There have been a few brief outages since then, and my app does show a minor obstruction, possibly causing issues "every 3 minutes", but I don't notice anything awry in general.
- Lots of outages recently
- Late night...possibly weather???
- Just the ones that we were notified by Starlink that there was something going on in our area
- Just a few outages.
- issues seemed to be resolved
- ls was completely down for an hour in the morning on the 27th
- dropped when talking on FaceTime and skype for a short period of time
- continues with dropping on FaceTime and Skype a couple of times during use
- Connected, no internet

Was Starlink able to successfully resolve the connectivity issue? \*

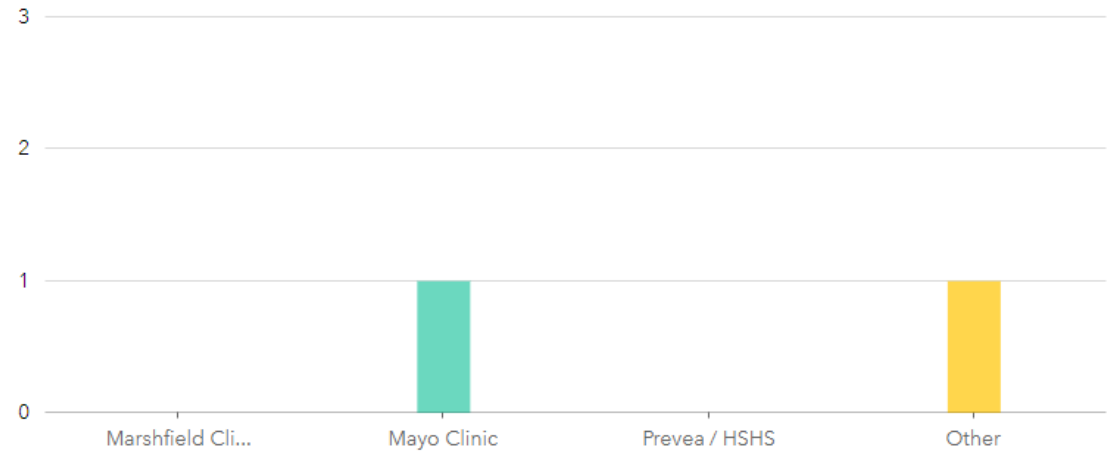


# Survey 18: 4-27-22 to 5-10-22

## Since the last survey, did you use Starlink for a Telehealth visit? \*



## Telehealth provider that was used \*

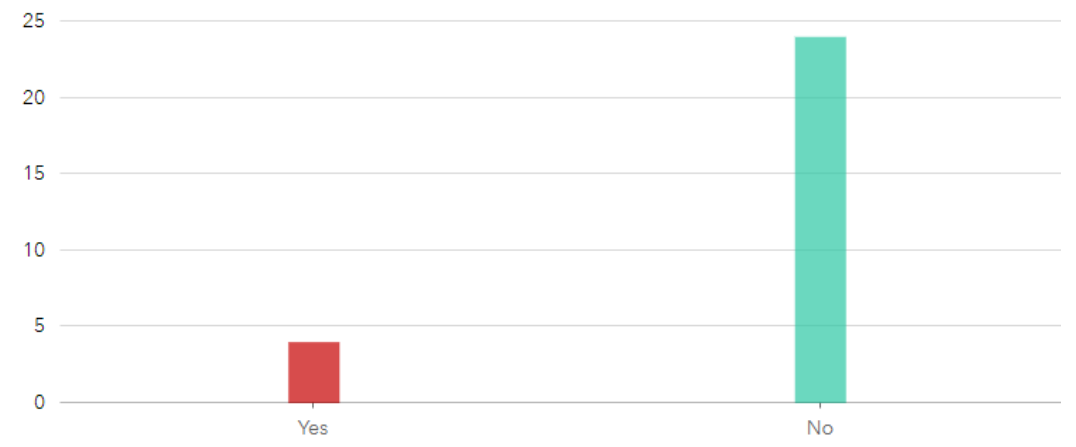


## Starlink internet worked well for the Telehealth services \*

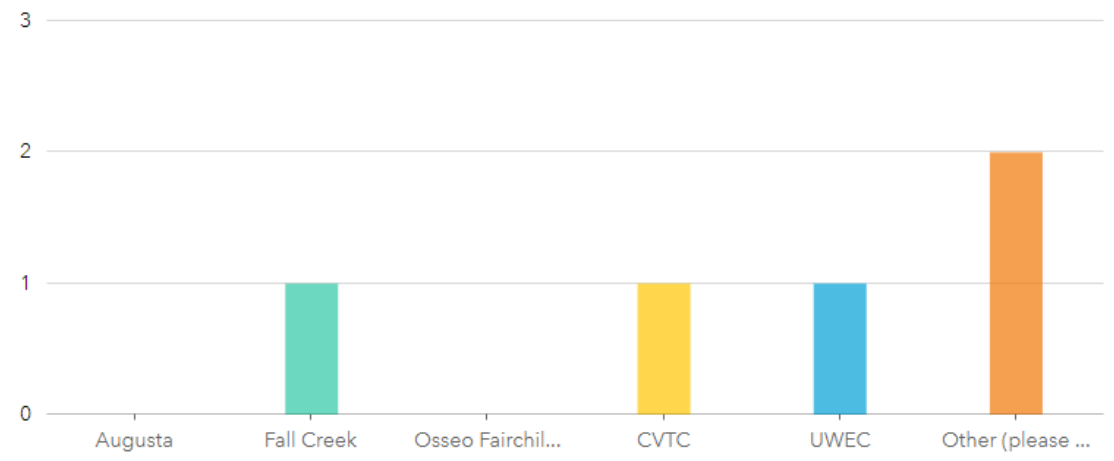


# Survey 18: 4-27-22 to 5-10-22

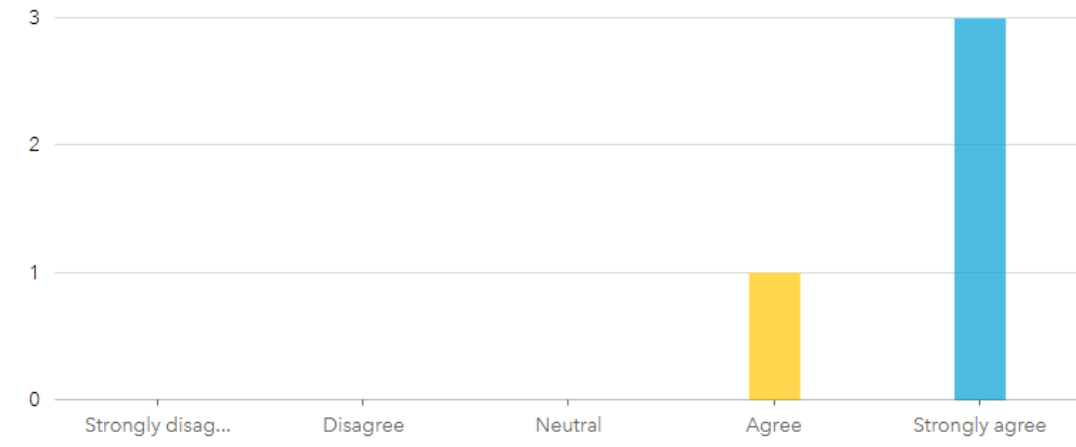
Since the last survey, did you use Starlink to participate in distance learning? \*



Educational provider that was used \*



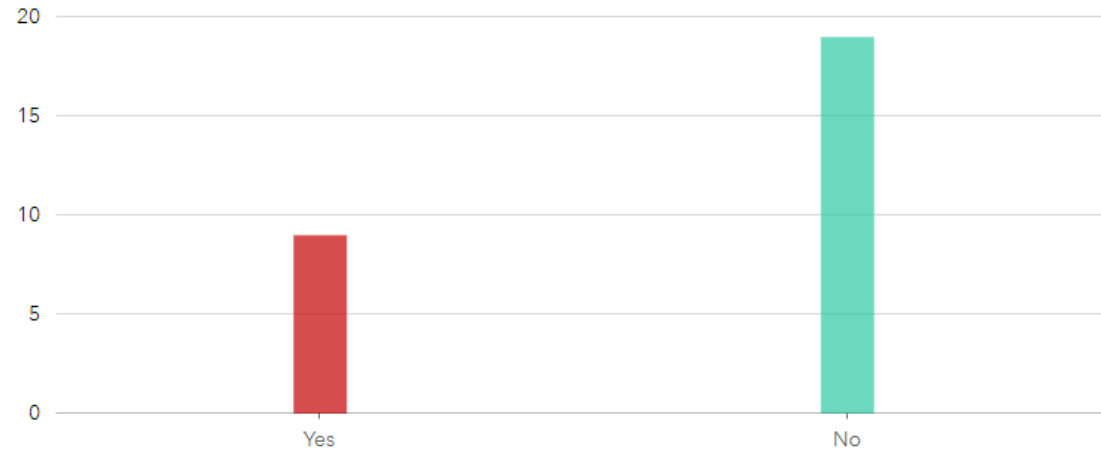
Starlink internet worked well for distance learning. \*



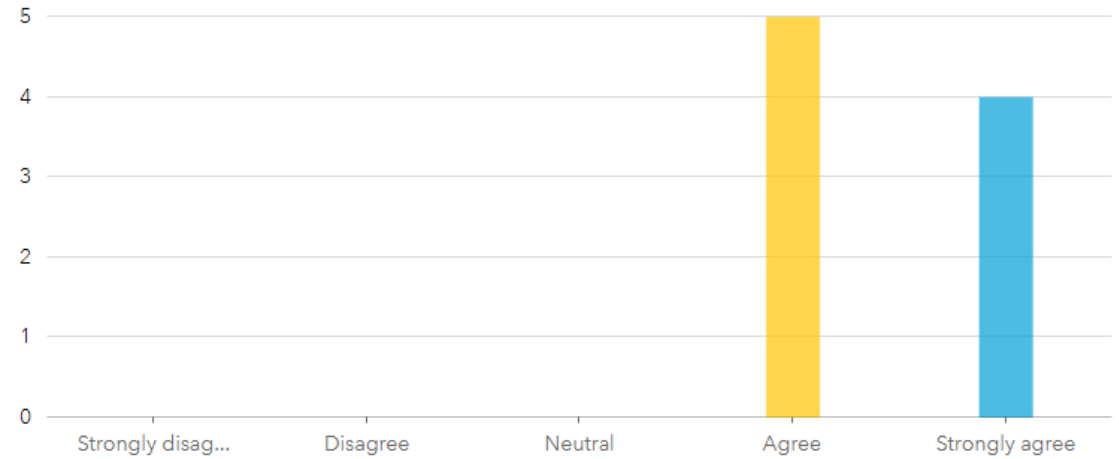


## Survey 18: 4-27-22 to 5-10-22

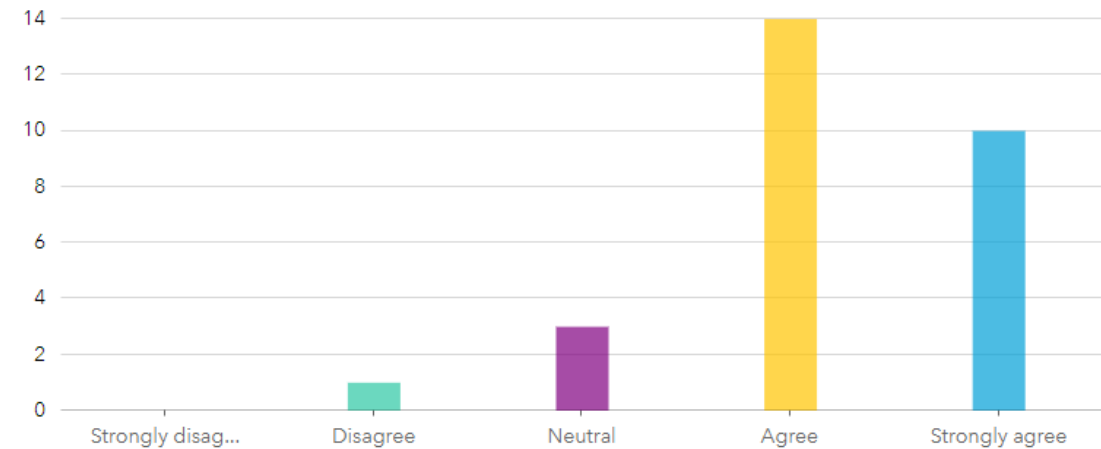
Since the last survey, did you use Starlink to work remotely? \*



Starlink internet worked well for working remotely. \*



So far I am very satisfied with Starlink internet service. \*



Response (dissatisfied with Starlink service)

- The service and reliability aren't getting better. I still use my DSL over starlink because it just isn't that fast

Comments

- The windy somewhat cloudy weather lately has been causing issues. We did not have these problems last winter
- Our streaming for movies is fine. But it is difficult to get online sometime, especially to watch granddaughter play sports. Mostly on YouTube. FaceTime it will occasionally freeze or drop completely. I am able to get back on but they are somewhat disturbing.
- Even with the occasional odd-ball connection issue, Starlink has been great and on the ball about correcting whatever is going wrong (on their end of things; I might need to do some tree trimming or move Dishy a bit!). Speed hasn't been an issue, although I have noticed that it is testing slower than when I first installed it. Overall, I'm still very happy with this service and appreciate it's availability.