

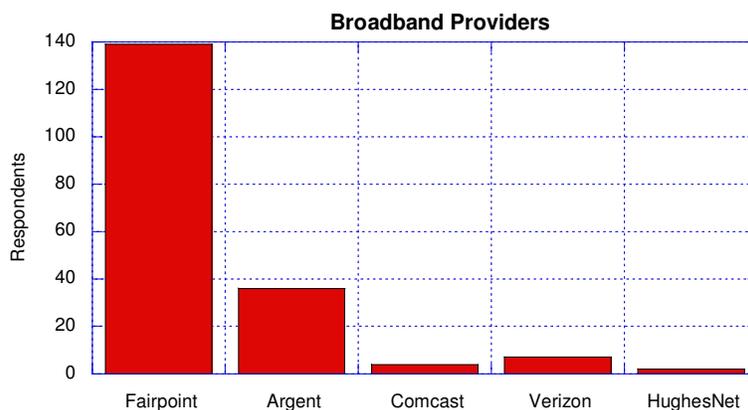
Chesterfield, NH Broadband Survey Results June 8, 2016

From March to May 2016, an online broadband survey was open for residents of the Town of Chesterfield, NH. The purpose of the survey was to get a picture of the broadband service in the town and what residents would like for the future. A total of 203 people responded to the survey. Since there are about 1600 residences and businesses in Chesterfield, this gave us a 13% response rate to the survey, which is very good for something like this.

Here are some interesting statistics from those people responding to the survey,

- 99% of them use the internet on a daily basis.
- 18% of them use the internet for a full-time or home-based business.
- 51% telecommute from home at least once a week, while 24% telecommute from home at least 4 times per week.
- 97% of them believe that broadband access would affect their decision on buying or renting a home, with 75% of them saying it would “strongly” affect their decision.
- 95% of them own their own home
- 61% of respondent have lived in town for 10 years or more, and 18% have lived in town for 3 years or less
- 61% of the households have 1 or 2 residents.
- 30% of the households have 1 or more members attending the regional school system or local colleges.
- The survey indicates that there is a strong desire to expand small businesses in the community.
- 35% of the respondents are 60 years of age or older, with another 34% being in their 50’s.

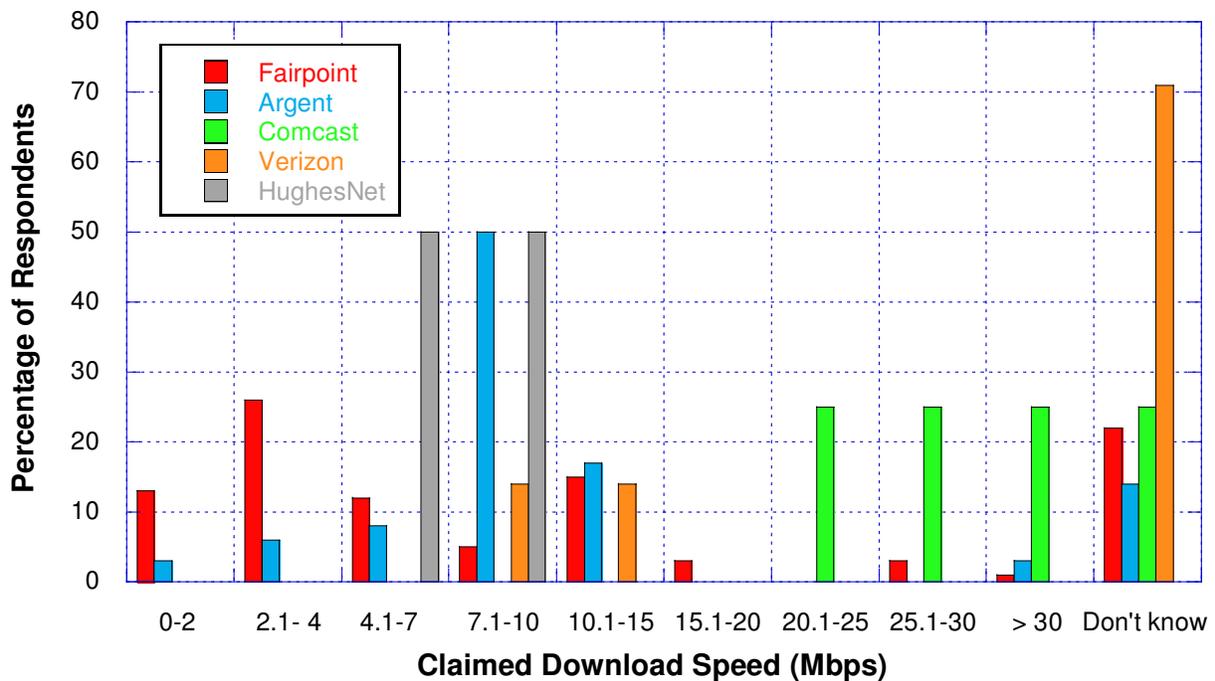
The plot below shows how many of the respondents use which broadband supplier. As is obvious from the data, the majority of the town uses one of two providers: Fairpoint (68%), with Argent (18%). The remaining 14% is from various suppliers including Comcast, Verizon, HughesNet, and whatever the resident was able to obtain.



The next part of this summary will look at the various providers and how they perform. This summary will be limited to the five providers shown in the above plot. However, the reader should note that since there are very little data for Comcast, Verizon, and HughesNet, the results for them should be considered informational only and not very analytical.

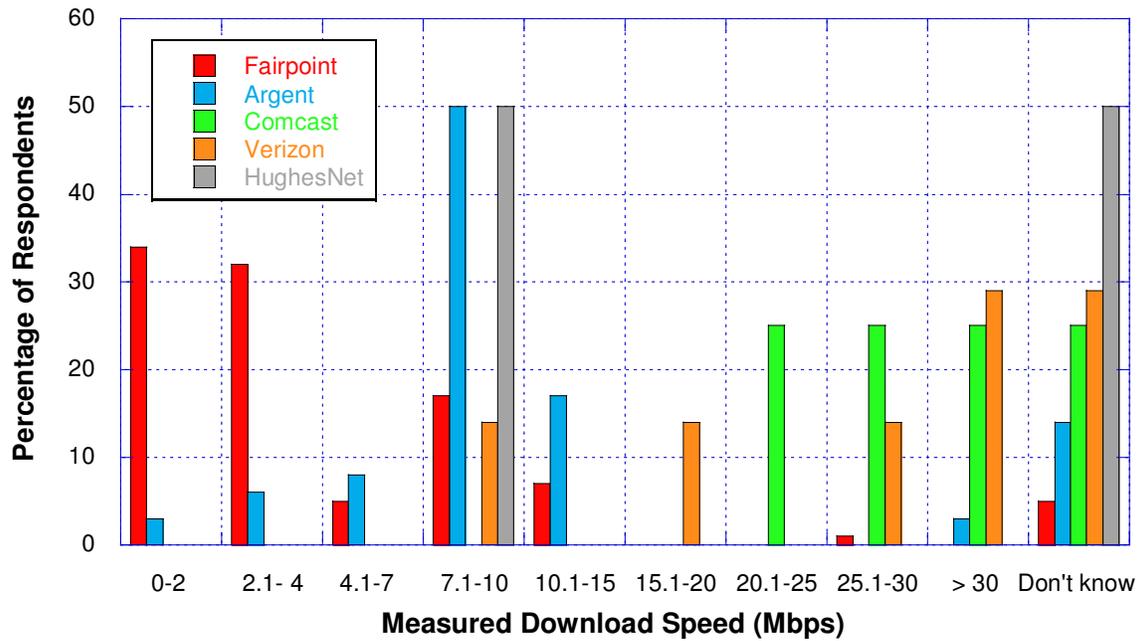
The next two plots show the claimed and measured download speeds from the various suppliers. It should be noted that the claimed speed is a maximum speed capability, and that the measured speed will always be smaller. The measured speed depends on the load on the system and may vary significantly over the period of a day or week. As can be seen in the first plot below, Fairpoint’s claimed speed is highly variable. This is due to limitations in the DSL technology and how far the user is away from one of their distribution boxes. For the most part, Argent’s claimed speed is higher (and more uniform) than Fairpoint’s since a different technology is used, while Comcast has the highest speed in the area. Verizon and HughesNet have fairly high connect speed capability; however, they both have monthly download limits that adversely affects 71% of the respondents that use their services.

What is your max internet download speed (claimed by vendor)



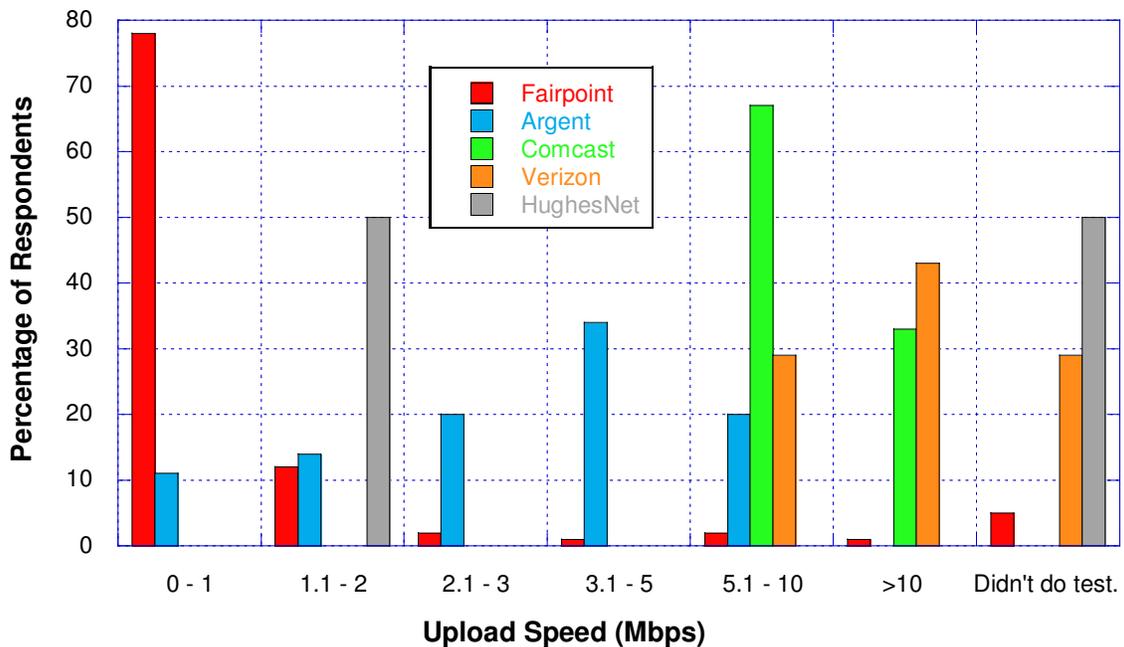
Looking at the second plot of measured download speeds, one will see that they are, for the most part, reasonably similar to the claimed speeds. However, it appears that Fairpoint’s measured speeds are significantly lower than the claimed speeds.

What is your download speed for this provider from the state survey?



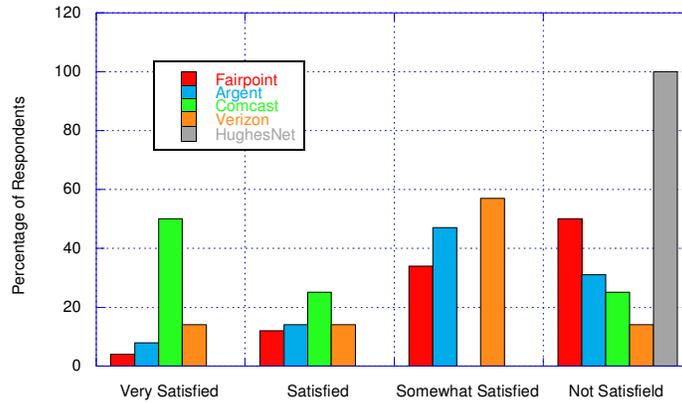
The measured upload speed is shown in the next plot. This is important to people that need to upload large amounts of data and is generally more important to businesses than to individuals. In general, Fairpoint has the slowest upload speed, but it is probably sufficient for most non-business users.

What is your upload speed for this provider from the state survey?

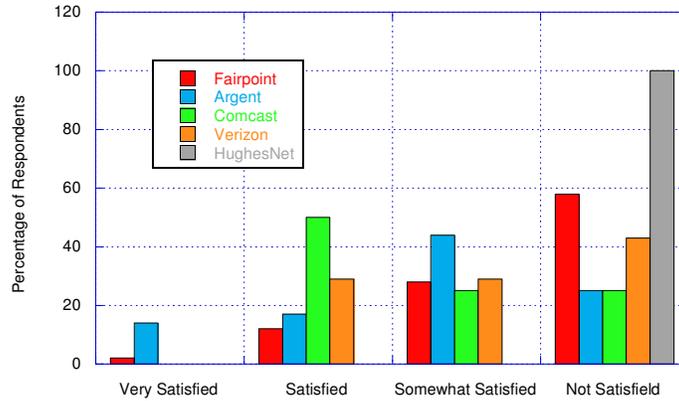


Next, we will look at the “customer satisfaction” for the various suppliers. This is shown in the next three plots and are simply people’s responses to three questions sorted by supplier. Remember that there were a limited number of responses for Comcast, Verizon, and HughesNet.

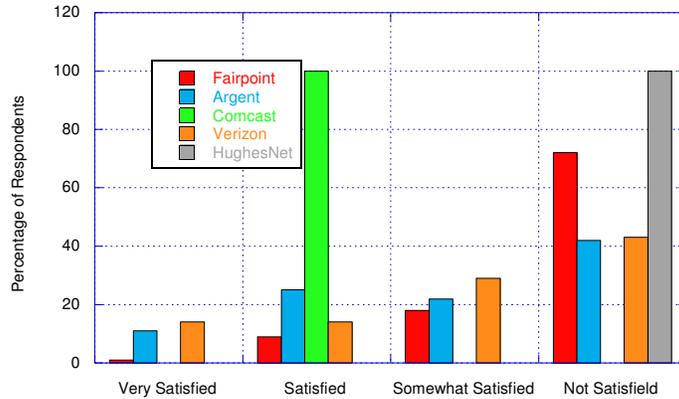
How satisfied are you with this provider in terms of cost, performance, and reliability of service?



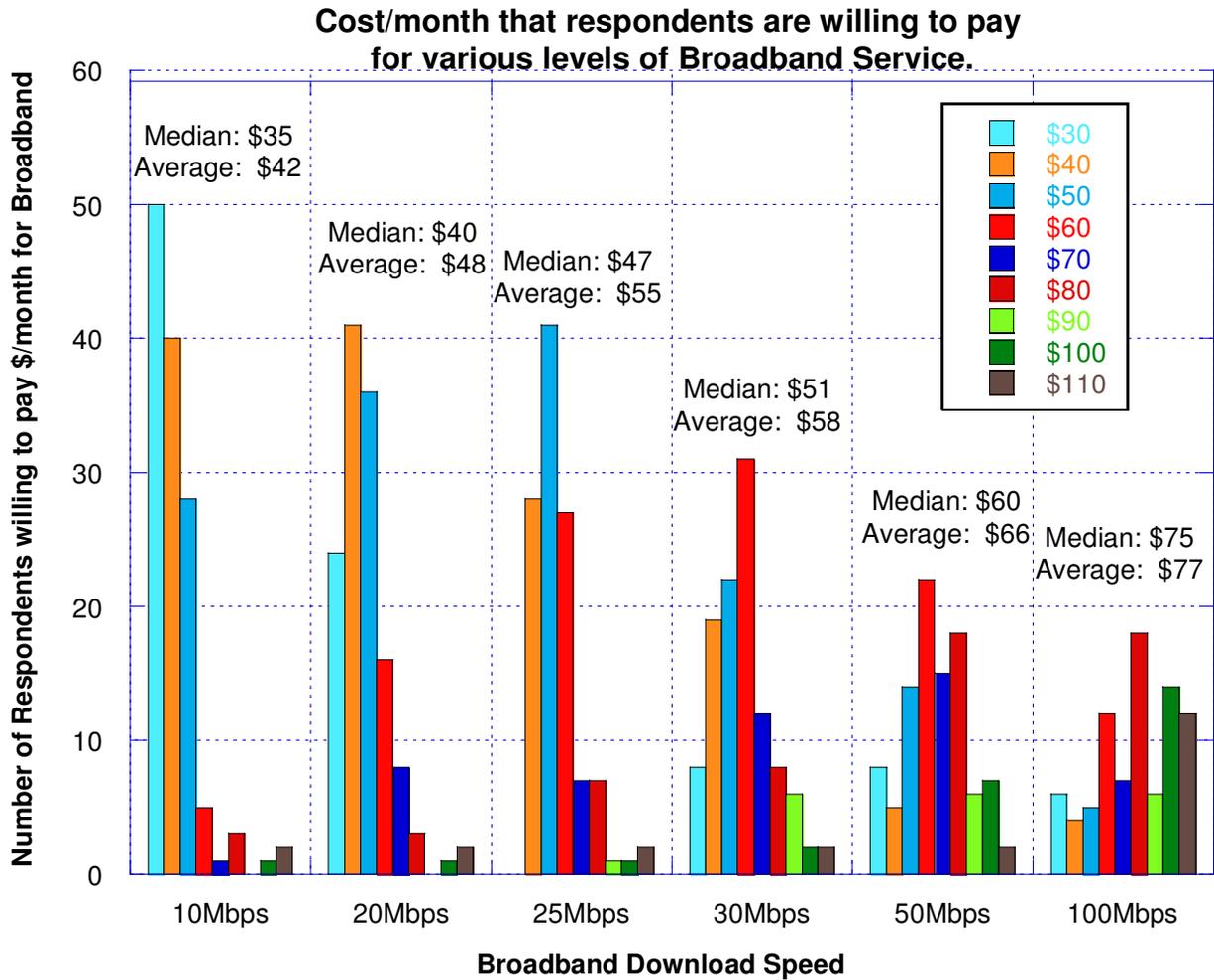
Are you satisfied with the VALUE (cost relative to performance) of your current Internet access with this provider?



Are you satisfied with your current LEVEL of Internet access (speed) from this provider?



The survey asked the question of how much people were willing to pay for various levels of broadband service, in terms of download speed. Histograms of the responses are shown below for the various download speeds. In addition, for each speed, a median and average value were calculated.



The survey asked about how people are currently using the internet and what they might want to use it for in the future. This is useful for future planning of broadband capabilities. The results are below.

	Currently Use	Would like to use in the future...	Do not need
E-Mail	98.99%	1.01%	0%
Video calls (for example Skype/Facetime)	60.22%	28.49%	11.29%
Phone calls from your computer/smartphone/tablet	41.48%	27.84%	30.68%
Shopping	96.94%	1.02%	2.04%
Online multiplayer games	28.82%	18.24%	52.94%
Streaming Media (Watching Movies or TV though your computer/phone/tablet)	66.67%	29.17%	4.17%
VPN into other networks (often used by people who telecommute)	40.12%	19.19%	40.70%
Education	54.44%	20%	25.56%
Telemedicine	7.59%	34.18%	58.23%
Manage a business/Telecommute	41.52%	24.56%	33.92%
Connect parts of your home/business to the internet to manage them remotely (e.g. garage door opener, dishwasher, lights – also known as the “internet of Things”)	18.60%	51.74%	29.65%

Additional Comments from Survey

Go, go, go.

Broadband is very important to our life style and the attractiveness of our community.

Like I previously stated the current download and upload speeds are the highest I've ever measured. However, very poor reliability (going down numerous times during most days) has been a problem especially in the last year.

Internet access is much better than when we moved here in 2002 but there is room for improvement. It will become more of an issue with each passing year as bandwidth requirements continue to grow.

Faster is better and needed. I will pay extra for outstanding service.

Thank you!

Yes I hope we can get more reliable service in future. We had TimeWarner in town (Keene) and never had a problem.

This is very important to me. I constantly consider moving away from here because of this single issue. I have worked from home for 8 years now and I rely on the Internet to do this. I need faster Internet than I currently get and I need it to be more reliable than it currently is. I am currently paying for both Argent AND Fairpoint just so that I have a somewhat reliable connection at all times. And I still also use 4G cellular as a backup sometimes.

I would be willing to help and participate directly in any aspect of this process to help make this happen.

I work from home. I am a business coach who needs to communicate with clients and training centers. I do not "telecommute" because I have no office to go to intermittently.

filling out a second survey since I have 3 internet services here.

Although I am strongly dissatisfied with Fairpoint's "broadband" service, I don't have any other truly viable options. Poor experience with reliability of cable TV service has made me unwilling to trust internet access to that provider. And other providers are precluded from competing. In my opinion, we need to access the optical fiber already hung in this town, and do whatever we can to extend fiber to as many homes and businesses as possible, even if we have to invest in this upgrade ourselves.

Argent has vastly improved their service over the last 4-5 months. They react promptly by phone and service techs.

I am very excited that the Town of Chesterfield is looking to improve the internet service!! Thank you.

The pitiful internet options here are a serious detriment to my ability to live here long-term. Working virtually for a consulting company, bad internet connection is at best embarrassing and at worst a real barrier to succeeding in my job. Cost is really no barrier for me as my expenses are paid by my employer. But it is literally impossible for me to purchase a better plan because it is not offered. Internet connectivity is a problem, but bad cell phone coverage is equally problematic. I have to have a land line because my cell phone frequently drops calls, which is unacceptable when talking with clients. I also have a "backup" Verizon MiFi hotspot provided by my employer that I can use when other coverage goes down.

Thank god for Verizon LTE service- prior to that, I was stuck with Fairpoint, which is unquestionably the worst business service I have ever had to interact with. When their internet would go down, I had to take days off from work because their repair service was terrible and it could be days before they would come and attempt (often unsuccessfully) to fix the problems. If I can't get online, I can't work that day,

so Fairpoint was completely infeasible.

Considering the providers we have had in the past, I believe that Argent Communications has done well by the town!! Strongly suggest we remain with them as providers!!

We need reliable, stable service at decent speeds (10-20Mbps). We don't need slow (0-5Mbps), and we don't need blazing fast (30+Mbps). We need contemporary technology (no dial-up, no DSL). We don't need the leading edge technology (whatever that is.) And we don't need a service that requires a lot of extra or rented equipment (DiSH internet requires a different dish on my house; Argent requires that I use their modem, rather than an up-to-date model that I can keep current; HughesNet satellite obviously requires a different dish. I may be painting an impossible picture, but these are some thoughts. Thanks for the survey. SFP.

I work as a real estate agent. I have had three clients stop looking in Chesterfield and buy in Brattleboro or Keene because internet speeds here were too slow to support their needs. It is becoming a question both more frequently and of greater importance.

The speed test from nh didn't work, so the AT&T test was used.

many current internet connected devices require a moderate amount of upload capacity. ISP markets download speeds, which they promise only 80 % of that in reality. They do not promise enough upload speed for any of these devices to work including new Chip enabled Credit card machines, IP cameras, doorbells, medical devices etc

Glad to see this initiative to expand broadband to more areas. Good job.

I would really love faster internet to get rid of Direct TV I do not need all the junk channels and be able to pay only for what I want to watch.

I would purchase the highest speeds available.

Cable doesn't come to us so our only option is cellphone as a hotspot - not optimal

"bellow provides montly" are you dictating your text?

Our internet is so lousy, both links failed to perform the speed test. My answer was based on past speed tests.

Thank you so much for working on this!! I have the worst internet of anyone I know!!!

The terms offered to described our community don't quite do the job for me. Yes, one of us commutes outside of town for work, but we chose the town for it's small, rural appeal. It would be a shame for the town to go down the road of so many other small towns and expand and build until it simply wasn't the same place we were attracted to in the first place. Not everything has to change and grow in order to be better...

Would love to have improved internet service, what we have today is the only provider available and it is not sufficient to meet our business and personal requirements.

It would seem that the town has been a long time coming go the realization that the community is not at all well served when it comes to such things as access to the internet.

The results of my "speed test" were as follows:

1.31 download;

0.47 upload;

67 latency.

Anything you can do to improve internet service/provider would be greatly appreciated

Did not succeed in the cut and paste aspect of this inquiry.

I moved up from Maryland in December, 2014.

You people here are sorely in need of a reality check if you think that dinosaur speeds of 30 Mbs is going to be sufficient as more and more people move to working COMPLETELY from home - which I do now.

I would like to buy a property in this state and have so far passed over at least 2 dozen properties due to the lack of internet infrastructure in this state. Most properties have only 10-15 Mbs choices which is no where near sufficient for me to work from home on a daily basis. I'm now thinking about moving back to a more populated area where there are choices.

Compare this to Longmont CO - which has just opened up their FIBER OPTIC internet access with 1 Gbs (THAT'S GIGA - NOT MEGA) for \$50 a month. I can move into the mountains of CO and get Comcast Blast speeds in most areas.

This may be the "Live Free or Die" - but if this state doesn't update their thinking process and catch up soon - it's going to die.

Broadband high speed Internet would be a huge plus to the Chesterfield community. Many larger scaled companies in the area are very costly for what little they provide. A community-based Internet with increasingly higher speeds (over 30Mb) would be amazing. Honestly I believe in a family of 4 or more you should have at least 15Mb Internet speeds.

Thank you for working to improve our town.

Homeowner is family who resided here for 27 years. Internet has always been less than satisfactory.

This is also the Home of Arthur Foard, another resident and business owner in 03466 (husband)

my husband and i are very frustrated that we do not have certain broadband options. would love to stream movies and have better broadband coverage options so we could bundle tv and internet. because of where we live...right on a main road by the way... we are unable to take advantage of comcast or dish internet. hardly any options are available for us. we have a hot spot from us cell which costs a fortune for almost no service and we can not afford enough data to even begin using it for games or tv.

please do SOMETHING to increase the broadband coverage in this town. it seems everything stops just down the street from us. thanks

We definitely need better options than Argent cable service, satellite internet and Fairpoint. Argent is unreliable, especially on weekends, allowing down-times to go on for days and limiting the ability to have multiple tv's in a household. Fairpoint's strike last year left a very bitter taste for doing business with them as their "service" was non-existent during that time and they did nothing to repair consumer relations. Satellite becomes the only solution for some of us, and depending on location, may also be unavailable. Satellite internet service is costly and very slow and unreliable, and the provider doesn't even allow you a 24 hour trial period to change your mind before locking you into a minimum two-year contract.

Please follow through with this, even a small increase would be great. It would show that this community is trying progress. Just because you live on a dirt road should not determine what type of broadband access you can get.

I have no other option than Fairpoint DSL where I live. I have always had to have satellite TV as well since cable TV does not come down my road. I would rather give up satellite TV and stream what I want to watch; the cost would be cut by more than half. My internet is too slow to that though.

I support this effort to improve our broadband access. Our current internet service is now acceptable, but this has only recently happened. Last fall both of us were extremely limited in our abilities to do our jobs. We worry that when we sell our house in the next 5 years, this current level of service will be a barrier. We have an apartment in our house and we recently lost three possible tenants due to the level of service we have.

PLEASE help us to obtain better internet speeds . I may have to close my practice sell my building and rejoin a clinic . I will be penalized for not having an EMR. I also offer virtual online patient visits. Difficult to accomplish with present Internet .

Fairpoint is our only option, they are inconsistent and unresponsive. In our option, serious consideration should be given to finding another provider.

This survey does not get at the needs we have at all.

We currently use Verizon Wireless because there is no cable and we are beyond a reasonable DSL line (we tried it and it was extremely slow and unreliable). While the speed is acceptable with verizon because we are in line of sight of the cell tower, our data usage is extremely limited because of the cost of data. We would use far more data if we had access to it. Simply put we have fast service but at too high a cost to use it at what we would consider reasonable data rates.

I certainly hope something positive can come out of this survey. I love the small rural type town, but we should have equal access to current technology whether we want to be successful with a home or small business or just want educational or entertainment capabilities. Why does a low population, quiet town have to be discriminated against by greedy large internet providers when sufficient internet services are next door?

Thank you. It would be great to get something faster and more reliable than current intermittenetnet.

1.5mbps is pathetic

I would love to see reliable, affordable internet access that is truly high speed be readily available in our community.

Very glad that someone is tackling this problem.

Thank you for addressing this. Internet access is a vital utility, not a luxury. We are willing to pay for acceptable service - it's just not available here.

Thank you!!!!!!

My wife and I use the internet in our daily lives. However, we both reserve things to do online for when we are at friends houses or after work wherever we can find wifi in town. This is mostly do to our monthly data cap, which right now is set to 18 GB and still isn't enough. We have cut out all online gaming and though we have the option to stream video/entertainment, we do not because of how quickly it pushes our data up. The ability to have high speed internet without a data cap would not only make our day to day lives easier, it would also save us money every month because of how much we pay for internet and satellite TV. This would be a huge improvement for our household.

I have been waiting for years for an upgraded broadband option in chesterfield. We are not that far off Rt. 9 and should have other options for increased speeds in this highly technological world. Almost every aspect of our lives relies on high speed internet access, which we currently do not have.

We talked to Argent Communications, the only other provider available to us, but we would have had to install new conduit in order to use their service at a cost of several thousand dollars.

The Argent are very and helpful, but our Internet is inconsistent.

We could not answer how much we pay for Internet because it is bundled with our cable TV.

Compared to other communities, our internet is slow even though much improved. The increase for speed and data will only increase, better plan now.

I will be selling one of my homes, and i am considering selling the 2nd and moving, due to the lack of

internet options. I will be joining the group of citizens with multiple internet providers, as a last desperate move, before selling and possibly leaving town. I am willing to pay more, due to my rural location, but not having the option is becoming a deal-breaker.

Go With Comcast, phone, internet, streaming

Thank you for your advocacy

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Our biggest issue is the unreliable service we receive from Argent which is the only internet provider for our address. We frequently lose our internet connection, between once a month and sometimes multiple times a week.

It would be nice to download movies and watch them (Netflix) and also not sit waiting for pages to come up if they even do at all.

Why was someone else's name was on the survey when I went to complete it?

Seriously, down with Fairpoint. Their service is terrible, and their attitude is worse. The internet service is my sole complaint about living in Spofford. We have such an awesome community, it is shame that we can't move into the 21st century. When even other small towns like Nelson vastly outstrip us in broadband performance it's simply sad. It would be so wonderful if we could come together as a town and improve internet access for everyone. It's so important in this day and age as a tool not only for business or pleasure but also education.

Please allow us to get ANYTHING other than Fairpoint. The customer service is unbearable. For example, Fairpoint sent a newsletter to all residents of our neighborhood informing us of a potential upgrade to our service (after over 10 years of 1.5mbps, they now offered 15mbps in 2016). We called on 4 different occasions and were promptly told by a representative that there was no upgrade available to our address. It finally took me having to get on the phone with an engineer who got in touch with local engineers (because all of the customer service is based in Portland, ME) to ask and make sure that an upgrade was available. Only then, after these numerous phone calls and 24 hours of engineers checking their capabilities OF WHICH THEY SENT OUT A NEWSLETTER BOASTING ABOUT, did they allow us to upgrade our service. This company is a huge pain in the ass of all residents in the greater Spofford/Chesterfield area and we need an alternative. We would happily pay for the services for 25-50mbps granted that the speed will be consistent throughout the day (or at least damn close). We would also very much consider a 100mbps option if given it, depending on price. Thank you.

My Location needs internet speeds that are consistent, and much faster, 15 to 30 mgs download, and supports the infrastructure to maintain it. It is critical for our daily lives and has quickly become a utility as important as electricity that powers our homes.

The initiative that the town is driving to improve internet access is exactly the right thing to do. I am happy it is being undertaken.

Faster internet would match the world we live in. Education and work from home would be possible.

We greatly appreciate the town looking into ways to provide better service. Thank you!

We are very rural on a dead end road, and therefore don't have internet options that others do in our town. We would like to be included in future options!!

When I tested speed tonight at speedtest.net, upload ranged from 4.99 to 6.76 mbps. Download was .93 to .95.

We just increased our service....upload is supposed to be 15.

Already receive monthly email newsletter.

My problem with internet is not speed. It is reliability and connectivity. System is down too often. Until this week I have been unable to connect wirelessly to the system. Router would not link up. Received new modem/router from Argent this week, so far so good, maybe this problem is resolved.

Thank you for organizing this survey. Communities are stronger, and meet the needs of individuals better, the more they can work together.

Argent is a hard working group of folks. Fairpoint is stable, I use for backup. I switched to Argent as primary when Fairpoint was going thru the strike and I lost service for a while

Thank you for doing this. The value of our home is dependent on Internet service.

Thanks for caring!

There are communities across the nation that manage to deliver 100Mbit Internet access to their citizens, why can't Chesterfield?

We can't even get Comcast on Streeter Hill Rd. Our only choice for media is satellite tv and slow DSL for Internet. If Comcast would come to Streeter Hill we could at least get faster internet.

I am would like to see the town pro business, I see it would very difficult to establish a business with the current atmosphere.

My Fairpoint bill of \$80 includes a landline as well