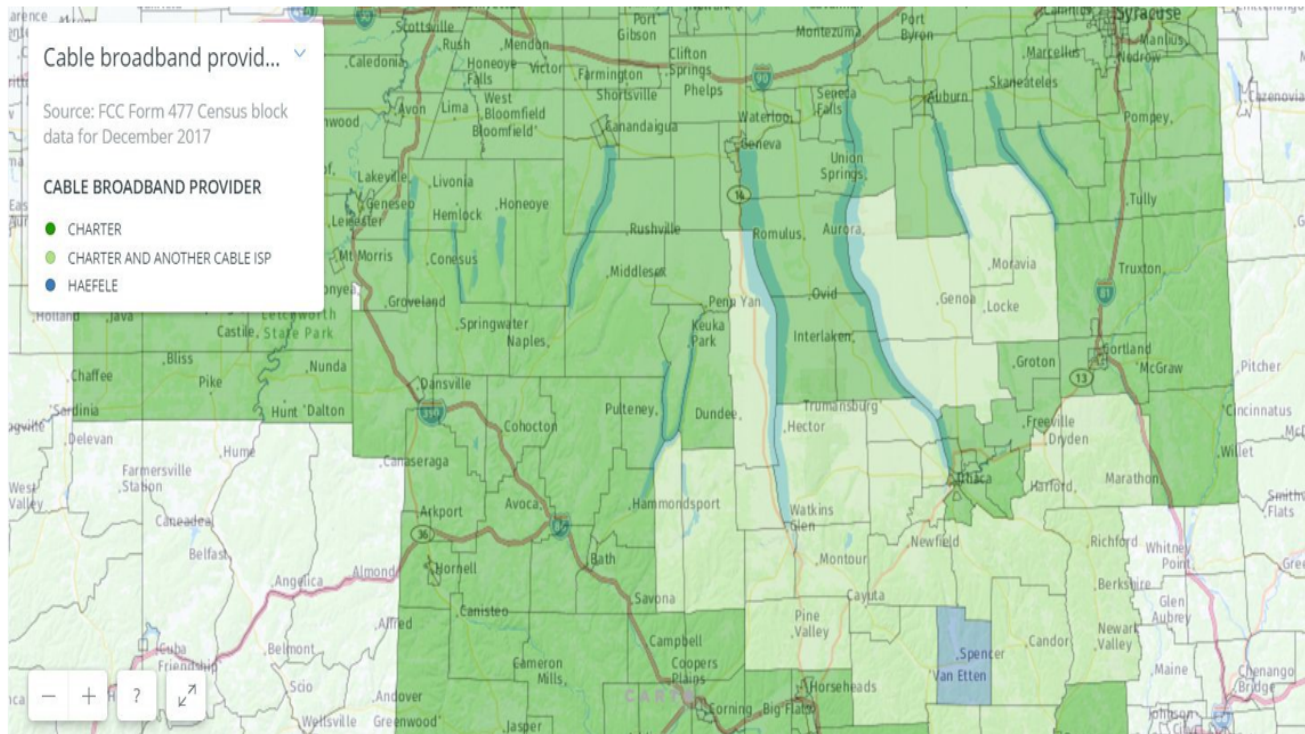


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## Cable Modem Service

Charter Spectrum **claims to offer its basic cable Internet service to residences throughout Monroe, Livingston, Wyoming, Wayne and Ontario Counties.**



*Basic Internet service cost:* **Basic Spectrum Internet service is up to 100/10 Mbps at a flat cost of \$65.99 per month. (Actual speeds may well be slower, of course.)**

*Low-income discounts:*

- 1. Pursuant to a condition of FCC approval of Charter's merger with Time Warner Cable, Spectrum has a discount service offer called Internet Assist which Charter says is available to any family with a child receiving Federal subsidized school lunches, as well as any customer 65 years or older whose main income is Supplemental Security Income (SSI). Internet Assist is up to 30/4 Mbps at a flat cost of \$14.99 per month, modem included. The terms of the FCC condition allow Charter to end Internet Assist in 2020, and to add \$3 to its monthly cost this year (2019)**

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**if they choose.**

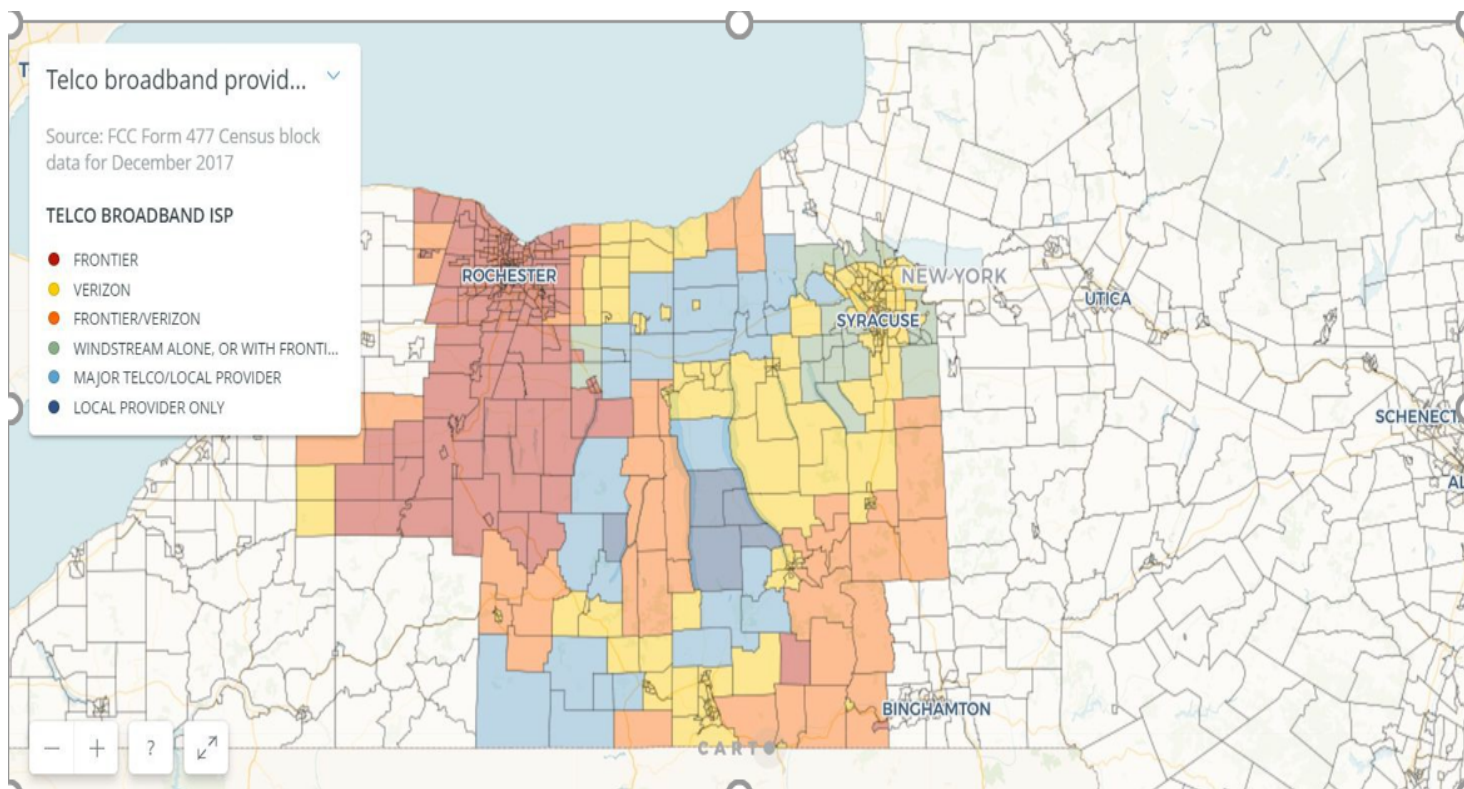
- 2. All Spectrum customers in New York also still have the option of a Time Warner legacy product called “Everyday Low Price” (ELP) — a 3/1 Mbps account at a monthly cost of \$14.99 (modem not included.) An agreement with the NYPSC will keep this option available until May. After that, it may disappear, as it has in other states.**

## TELCO BROADBAND, I.E. x DSL SERVICE (ADSL and VDSL)

**The dominant telco broadband (i.e. ADSL/VDSL) provider for four of the five Pioneer counties — Monroe, Livingston, Wyoming, and Ontario — is Frontier.**

**Verizon is dominant in Wayne County and has small service areas in the western third of Wyoming County and the northeast corner of Ontario County.**

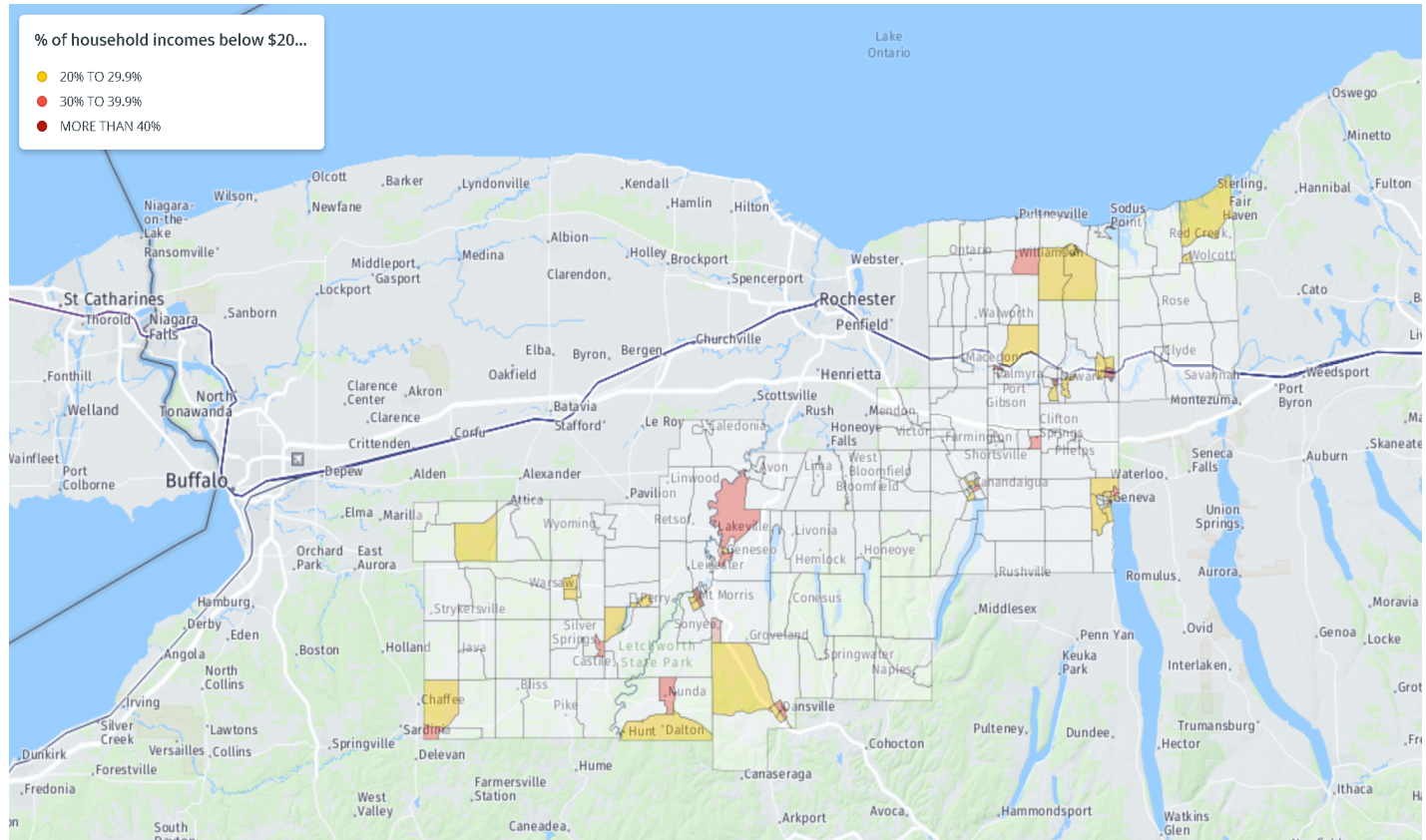
**Windstream has a small service area northeast of Canandaigua, centered in Manchester.** Ontario and Trumansburg Telephone (OTTC), a small independent, provides low-end DSL (6/.768 Mbps) to a small area of Ontario County around Clifton Springs and Phelps.



*Providers of telco broadband service to communities in the Pioneer Library System counties with concentrations of households*

**Of course, the majority of the Census block groups in the PLS region with concentrations of lower-income households — households who would have difficulty paying “normal” ISP bills in the \$55 to \$75 range — are found in the city of Rochester and nearby communities in Monroe County. But the 2017 Census**

**shows lower-income household clusters in smaller communities throughout the other four counties.**



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**Among the communities in the Pioneer Library System region where Census block groups have 20%, 30% or even 40% of households with annual incomes below \$20,000, the following get their primary telco broadband access from Frontier:**

- **Rochester and other areas of Monroe County**
- **Canandaigua**
- **Geneva**
- **Geneseo and the rural area to its north**
- **Mount Morris**
- **Dansville**
- **Silver Spring and rural area to its north**

**The following communities with similar lower-income household clusters are served by Verizon:**

- **Wayne County communities including**
- **Newark**
- **Lyons**
- **Sodus**
- **Williamson**
- **Palmyra**
- **Far southwest corner of Wyoming County (western Arcade)**

**And residents of one such community, Clifton Springs, get their basic DSL service from OTTC.**

*Basic Internet service costs:*

**Frontier and Verizon both make it very difficult to pin down their monthly charges for residential Internet service after “new customer” discounts have ended. Since they are**

unregulated with respect to Internet services, they have no obligation to post rates publicly, and generally, avoid doing so on their websites.

Here are our best estimates of Frontier’s and Verizon’s current price structures for ADSL service:

Provider	Download speed Mbps	Initial Discount Period (months)	Basic charge	Modem	Required phone line	Total during discount period	Discount added back	Final Monthly Cost
Frontier	1 to 6	24	\$23.90	\$10	NA	\$33.99	\$5.00	\$38.99
Frontier	7 to 12	24	\$28.99	\$10	NA	\$38.99	\$5.00	\$43.99
Frontier	13 to 18	24	\$33.99	\$10	NA	\$43.99	\$5.00	\$48.99
Verizon	.5 to 1	12	\$24.99	\$0	\$30.00+	\$54.99	\$5.00	\$59.99
Verizon	1.1 to 15	12	\$35	\$0	\$30.00+	\$64.99	\$5.00	\$69.99

**\* Verizon’s ADSL service requires a basic landline, for which the NYPSC-approved charge is \$23. But Verizon adds various taxes and surcharges which raise the cost to \$30 per month or more.**

*Low-income discounts:* None. **Neither Frontier nor Verizon offer any kind of discount or price reduction to low income or otherwise disadvantaged customers.**

The FIOS alternative: **Both Verizon and Frontier offer “FIOS” fiber-to-the-home service in some but not all of the communities they serve. The most recent Federal Communications Commission reports (Form 477 Census block data for December 2017) show neither Frontier nor Verizon offering FIOS to residents anywhere in the PLS counties.**

**However, Frontier is now advertising FIOS availability in some local ZIP codes including Rochester and Canandaigua, and Verizon FIOS is available elsewhere in the larger region including the Syracuse area.**

**So when looking at the speeds and monthly charges for ADSL service above, it’s useful to consider them in the context of FIOS where it exists:**

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- **Frontier is now offering 50/50 Mbps FIOS service for \$43.99 for two years, with an added \$10 modem charge in year 2. That's \$44 to \$54 a month for 50 Mbps symmetrical via FIOS, compared to \$44 a month for 13 to 18 Mbps down via ADSL (and a fraction of that speed for uploads).**
  - **Verizon is offering a one-year \$39.99 price, with a \$12 modem fee, for 100/100 Mbps FIOS. Even if that price rises \$10 in the second year and comes with some add-ons, Verizon FIOS will be in the same ballpark as Spectrum—between \$60 and \$70 a month for 100 Mbps down—while its ADSL service is far, far slower *for roughly the same cost!***

**Other local providers— notably Greenlight, Empire and OTTC— also offer fiber to the home services comparable to FIOS in limited areas of Monroe, Ontario and Wayne Counties.**

**Greenlight currently offers 500/500 Mbps residential service for \$50 per month with “no taxes, fees or contracts”. Empire is more expensive, with an offer of 100/20 Mbps for \$65 per month for the first six months with an 18-month contract, and no information regarding costs for months 7 through 18.**

**Either of these options seems to be a much better deal, in terms of cost per Mbps, than Frontier and Verizon's ADSL prices— better, that is, for consumers who happen to live in their service areas and are able to pay monthly bills of \$50 to \$75.**

### **AVAILABILITY OF “FCC REAL BROADBAND” (25/3 MBPS) IN THE REGION**

**Affordability issues aside, the most common question about broadband availability is whether residents of an area have some kind of access to Internet service that meets the Federal Communications Commission's benchmark for true “broadband”: 25 Mbps downstream and 3 Mbps upstream.**

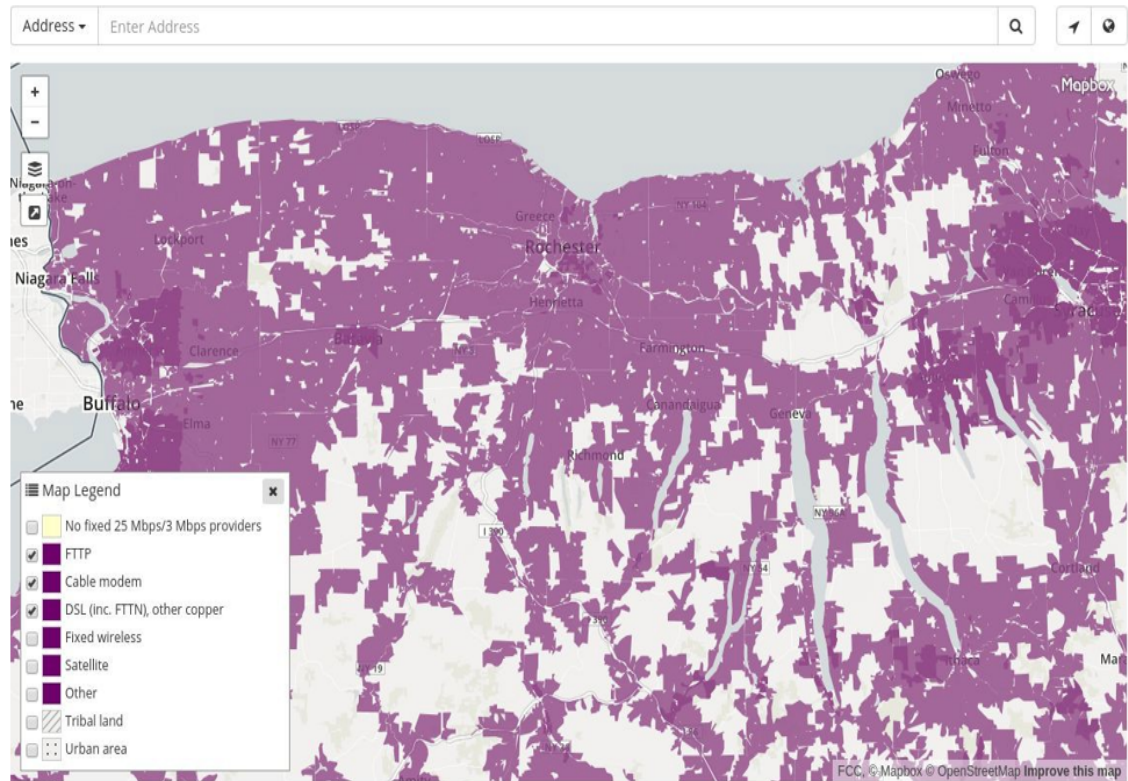
**All systematic data on this question comes from the FCC's own Form 477 Census block data, which is notoriously problematic due to the reporting framework (providers report their maximum advertised speeds *to any address* within a Census block, which tells you nothing about all the other addresses) and other data reliability issues. But for the moment it's what we have.**

**For a birds-eye view of the data, the FCC provides a set of interactive maps. The current maps are for June 2017, which is six months behind the most recent available FCC data.**

**The images below are screenshots of the FCC's June 2017 map with the “Technology”**

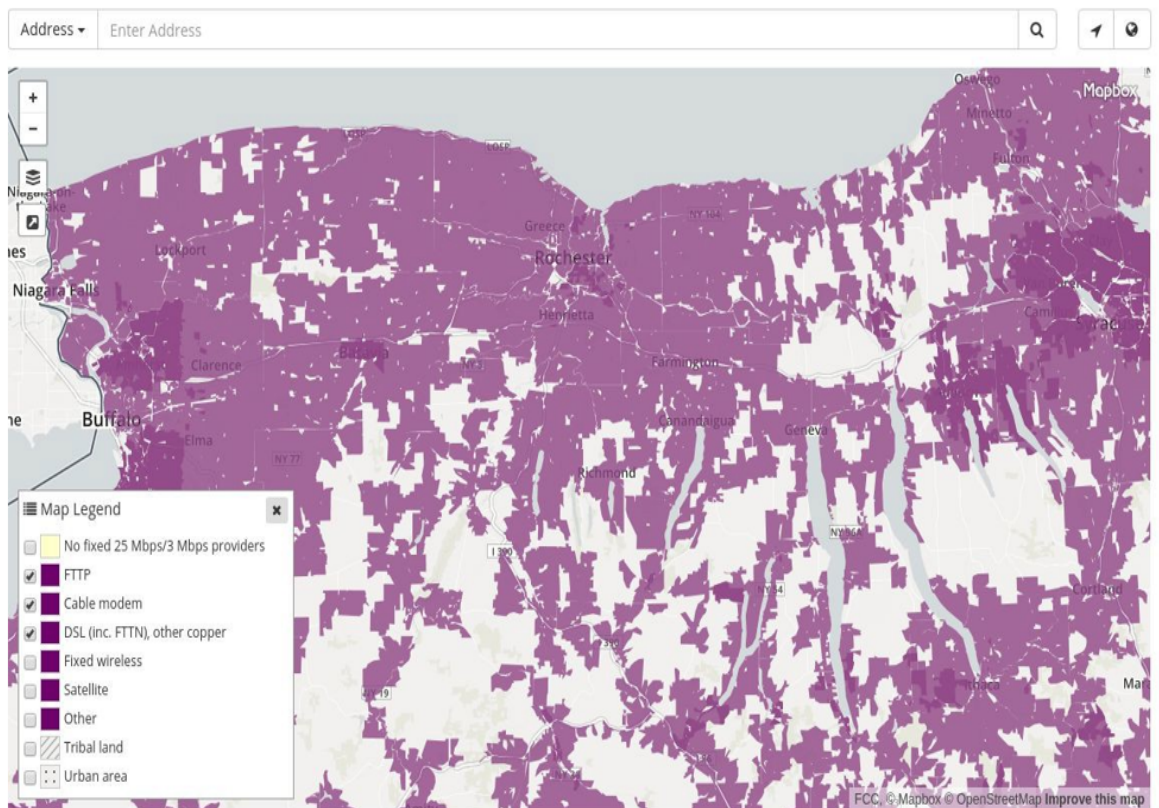
**tab selected and the map centered on the Finger Lakes region (two magnifications).**

Fixed Broadband (25 Mbps/3 Mbps) as of June, 2016





Fixed Broadband (25 Mbps/3 Mbps) as of June, 2016



Fixed Broadband (25 Mbps/3 Mbps) as of June, 2016

**The relatively broad distribution of 25/3 access shown on these maps is largely due to one provider, Charter Spectrum. The coverage areas may well have increased slightly in the past two years as the result of Charter's interactions with the NYPSC. As explained above, the telco providers in the region have relatively small areas of fiber-to-the-home penetration, and their xDSL services seldom provide speeds above 20 Mbps.**