



CVFiber Update: Town of Worcester

A. Introduction

CVFiber is our Communications Union District (CUD) and consists of 18 communities in Central Vermont:



- Barre City
- Barre Town
- Berlin
- Cabot
- Calais
- East Montpelier
- Elmore
- Marshfield
- Middlesex
- Montpelier
- Moretown
- Northfield
- Orange
- Plainfield
- Roxbury
- Williamstown
- Woodbury
- Worcester

CVFiber's has a single aim: to provide residents and organizations of our 18 communities with access to fast, reliable Internet with a goal of 100/100 Mbps service (this is four times the federal government's definition of "high-speed" internet). Our focus is on providing access to those members of the community without good options today. Over the next few months, we will be completing work on feasibility studies, business/financing plans, and determining how and when this Internet access will be rolled out to our various

communities. This is a significant undertaking and will take a number of years to fully complete.

Construction of CVFiber to all premises will require a significant investment and must come from self-funding and borrowing.

We want to thank all of you who completed our community survey. The results provided us with information on a wide variety of topics to help guide our high-speed broadband feasibility and business planning. The survey provides tremendous insights into our communities' interests and their current practices.

The survey was made available to households mostly through postings in each community's Front Porch Forum starting in June 2019 and concluding on January 24, 2020.

B. Demographics

First, some demographics about Worcester and district communities from public sources.

Key Demographic & Education Facts							
2019							
Community	Demographics			Education			
	Population	Median Age	Household Size	No HS Diploma	HS Graduate	Some College	BA/BS +
Barre City	8,972	40.8	2.2	13%	34%	28%	26%
Barre Town	7,787	46.8	2.4	5%	37%	27%	31%
Berlin	2,891	50.9	2.3	7%	36%	28%	29%
Cabot	1,599	44.5	2.5	5%	29%	25%	41%
Calais	1,747	49.7	2.4	3%	25%	24%	49%
East Montpelier	2,625	49.8	2.4	4%	20%	23%	53%
Elmore	903	44.8	2.3	7%	27%	30%	36%
Marshfield	1,613	44.3	2.5	5%	33%	23%	40%
Middlesex	1,716	48.3	2.5	3%	25%	21%	52%
Montpelier	7,944	45.4	2.0	5%	18%	17%	61%
Moretown	1,743	47.8	2.4	4%	24%	22%	50%
Northfield	6,090	28.7	2.4	7%	32%	26%	35%
Orange	1,121	49.0	2.5	10%	51%	25%	15%
Plainfield	1,232	46.1	2.3	7%	26%	26%	41%
Roxbury	716	47.8	2.3	10%	31%	26%	33%
Williamstown	3,489	44.8	2.4	6%	50%	30%	14%
Woodbury	1,047	49.7	2.3	3%	33%	27%	37%
Worcester	999	46.4	2.5	4%	25%	24%	47%
CVFiber	54,154	44.5	2.3	6%	31%	25%	38%

Key Economic Facts

2019

Community	Income			Employment			Businesses		
	Median Household	Per Capita	Median Net Worth	Unemployment	White Collar	Blue Collar	Services	Total	# of Employees
Barre City	\$ 40,587	\$ 23,479	\$ 21,177	3.5%	66%	19%	15%	523	4,642
Barre Town	\$ 68,076	\$ 34,636	\$ 230,994	2.7%	67%	20%	13%	240	2,504
Berlin	\$ 64,537	\$ 36,544	\$ 204,457	4.0%	67%	19%	14%	310	6,790
Cabot	\$ 50,087	\$ 28,858	\$ 129,633	2.4%	63%	23%	14%	54	209
Calais	\$ 63,650	\$ 33,729	\$ 189,971	1.4%	70%	15%	15%	39	166
East Montpelier	\$ 63,543	\$ 37,293	\$ 232,498	0.9%	81%	11%	8%	102	736
Elmore	\$ 60,705	\$ 32,753	\$ 176,014	3.0%	61%	25%	14%	20	92
Marshfield	\$ 58,378	\$ 28,787	\$ 143,566	1.2%	65%	22%	14%	64	327
Middlesex	\$ 73,489	\$ 34,539	\$ 253,221	1.1%	68%	16%	16%	67	660
Montpelier	\$ 60,581	\$ 38,332	\$ 75,718	1.7%	83%	8%	9%	930	10,522
Moretown	\$ 76,529	\$ 44,798	\$ 255,648	2.1%	67%	18%	15%	59	450
Northfield	\$ 72,733	\$ 25,501	\$ 111,932	1.1%	60%	22%	18%	191	2,617
Orange	\$ 61,550	\$ 28,241	\$ 193,505	1.7%	65%	22%	13%	12	54
Plainfield	\$ 57,251	\$ 32,519	\$ 146,852	5.3%	63%	18%	10%	47	322
Roxbury	\$ 52,376	\$ 28,931	\$ 125,730	3.3%	53%	27%	20%	27	123
Williamstown	\$ 56,320	\$ 27,549	\$ 130,759	1.1%	58%	26%	16%	92	640
Woodbury	\$ 70,812	\$ 36,940	\$ 206,306	5.0%	69%	23%	8%	26	115
Worcester	\$ 59,670	\$ 30,141	\$ 183,807	1.4%	69%	19%	11%	27	102
CVFiber	\$ 54,154	\$ 31,738	\$ 120,656	2.3%	68%	18%	14%	2,830	31,071

Source: Esri, Census ACS, and Infogroup

Prepared by David Healy for CVFiber, healy.david.j@gmail.com, 1/13/2020

Population Density

2019

Community	2019 Population	Area (Sq. Mi.)	Population Density/ Sq. Mi.
Barre City	8,972	3.98	2,256
Barre Town	7,787	30.71	254
Berlin	2,891	36.94	78
Cabot	1,599	38.53	42
Calais	1,747	38.56	45
East Montpelier	2,625	32.11	82
Elmore	903	39.58	23
Marshfield	1,613	43.42	37
Middlesex	1,716	39.87	43
Montpelier	7,944	10.25	775
Moretown	1,743	40.21	43
Northfield	6,090	43.63	140
Orange	1,121	39.01	29
Plainfield	1,232	21.04	59
Roxbury	716	42.03	17
Williamstown	999	40.45	25
Woodbury	3,489	39.09	89
Worcester	1,047	38.82	27
CVFiber	54,234	618.24	88

C. Survey Results

1. Responses

Worcester had 73 responses from an estimated 441 households. That’s an impressive response rate (16.6% -- nearly twice the CUD average). Only four other towns had higher rates. This chart shows the level of interest for high-speed internet in all towns in our CUD.

Summary Survey Response by Community			
Community	Total Residential Premises	Survey Responses	% of Residences
Barre City	2,581	9	0.3%
Barre Town	3,125	37	1.2%
Berlin	1,141	119	10.4%
Cabot	776	133	17.1%
Calais	853	161	18.9%
East Montpelier	1,066	131	12.3%
Elmore	552	7	1.3%
Marshfield	711	92	12.9%
Middlesex	796	175	22.0%
Montpelier	2,501	149	6.0%
Moretown	774	114	14.7%
Northfield	1,741	235	13.5%
Orange	533	35	6.6%
Plainfield	526	148	28.1%
Roxbury	468	47	10.0%
Williamstown	1,401	67	4.8%
Woodbury	739	26	3.5%
Worcester	441	73	16.6%
Totals	20,725	1,758	8.5%

2. Subscriber Interest

We asked in the survey, “If CV Fiber brought competitively priced broadband services to your community, how likely would you be to subscribe?” This is a critical question relative to subscription (“take rates”) and revenue generation to pay for the construction, operation, and maintenance of the network. 37, or 51% of Worcester respondents, said they “definitely would” subscribe, and another 27, or 37% of respondents, said they “probably would.” (In all 18 communities in our CUD, 48% of respondents said they “definitely would” and 39% said they “probably would.”) The

CVFiber governing board is encouraged by the results and what that says about the likely viability of the project.

If CV Fiber brought competitively priced broadband services to your community, how likely would you be to subscribe?								
Community	Definitely Would	%	Probably Would	%2	Don't Know	Probably Not	Definitely Not	Other
Worcester	37	51%	27	37%	7	3	-	-
Totals	808	48%	657	39%	161	14	5	29

3. Motivation for Subscribing to CVFiber

We asked a follow-up question: “In stating that you would 'definitely' or 'probably' subscribe to CVFiber, what are your primary reasons? Pick your top three reasons.” District-wide, “Prefer Higher Speeds” was the No. 1 reason, followed by “Improved Reliability” and “Quality of Service.” Worcester agrees, as shown in this chart.

In Stating that you would 'definitely' or 'probably' subscribe to CVFiber, what are your primary reasons?							
Community	Quality of Service	Quality of Support	Improved Reliability	Prefer Locally Owned	Prefer Higher Speeds	Net Neutrality	Other2
Worcester	41	30	48	39	53	24	7
CVFiber	861	516	914	745	1,151	586	171

4. Interest in Investing in CVFiber

CVFiber is actively engaged in obtaining grants and loans to get the project off the ground. To that end, CVFiber has received \$102,500 in grants, is in the process of applying for additional grants, and will apply for \$4 million in loans from the Vermont Economic Development Authority (VEDA) to begin our initial deployment. The terms of that loan require that we become “cash positive” within three years.

CVFiber is not the first CUD in Vermont. That honor belongs to ECFiber (ecfiber.net), which began with \$1 million in private financing. ECFiber, which operates in the Upper Valley, had to rely on loans and grants to get started. Today, ECFiber has connected more than 4,200 customers. CVFiber will also need this type of assistance -- **for example, as matching funds for state or federal grants or loans**. Thus, this survey question: “Would you be willing to invest in the planning, construction, and/or operation of this network for the first 24 months?”

Survey results showed a strong interest in start-up investing. District-wide, 15% of the residents answering this question are willing to loan money to CVFiber. Additionally, 9% percent indicated that they would be willing to gift money to non-profit CVFiber. Most encouraging is the high rate of 62% of respondents who were willing to pre-subscribe to service from CVFiber. 84% of Worcester respondents were willing to pre-subscribe, gift, or loan money. This is critical as any loans we make will require 10% of the loan's value in cash resources. In the next few months, through a letter of solicitation, we will be contacting everyone who expressed an interest in loaning or gifting money to CVFiber.

Would you be willing to invest in the planning, construction, and/or operation of this network for the first 24 months								
Community	Loan	%	Gift	%	Pre-subscription	%	Other3	%
Worcester	6	13%	2	4%	30	67%	7	16%
CVFiber	176	15%	103	9%	748	62%	171	14%

5. Cost for Internet Service

In the survey, we asked, "What is the Current Level of Expenditure for Your Internet Service?" We asked this question to help guide us in developing a rate or rates for providing services for all premises. The following table reflects the Worcester responses, as well as the total responses from the 18 CUD communities. 55% of Worcester respondents are spending more than \$75/month for internet -- about the same for people in the other towns of our CUD (56%).

Amount of Money Spent For Internet Service										
Community	\$10-49	%	\$50-\$75	%	\$75-\$99	%	\$100-\$149	%	\$150+	%
Worcester	16	24%	15	22%	19	28%	10	15%	8	12%
CVFiber	271	17%	426	27%	366	24%	336	22%	152	10%

D. Next Steps

CVFiber has engaged a Massachusetts-based firm, Interisle, to perform a Feasibility Study and Business Plan. They have conducted a number of these studies in western Massachusetts. Interisle's reports will inform our project application for \$4 million in loans from VEDA in the 3rd quarter of this calendar year. Also in the 3rd quarter, it is expected that CVFiber will issue an RFP for design and construction of our system. With the VEDA funds in hand, plus loans, presubscriptions, and gifts from individuals and organizations in our communities, it is expected that construction will begin in early 2021.

Would you like to help contribute to CVFiber's efforts? Learn more on our website:
<https://cvfiber.net/how-to-contribute/>

Town of Worcester CVFiber Delegates:
John Russell, jdr93@myfairpoint.net
Alternate: Allen Gilbert, hallengilbert@gmail.com

Report Prepared by David Healy
Town of Calais CVFiber Delegate,
Phone: 978.761.8409
Email: healy.david.j@gmail.com
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