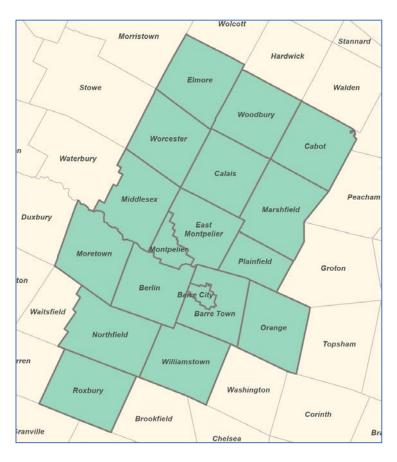# CVFiber Update: Town of Northfield

A. Introduction

CVFiber is our Communications Union District (CUD) and consists of eighteen 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 help residents and organizations of 18 Vermont communities including Northfield to have access to fast, reliable Internet with a goal of 100/100 Mbps service. 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 of provided us with information on a wide variety of topics to help guide its high-speed broadband feasibility and business planning. The survey provides tremendous insights into our community's 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 and information about Northfield and other CVFiber communities from public sources.

Key Demographic & Education Facts							
2019							
	Demographics			Education			
Community	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	Unemploy-ment	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

Northfield residents with 235 responses provided more input than any other community. The response rate represented 13.5% of the 1,741 residences in the community and 13% of the total 1,777 responses to the survey.

2. Subscriber Interest

The survey asked whether "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. 43% of Northfield respondents said they "definitely would" subscribe, another 40% said they "probably would." In all 18 communities 49% said they "definitely would" and 37% 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
Northfield	102	43%	95	40%	26	3	3	10
Totals	808	48%	657	39%	161	14	5	29

3. Motivation for Subscribing to CVFiber

In the 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 number one reason, followed by "Improved Reliability" and "Quality of Service." Northfield agrees.

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
Northfield	110	60	122	66	184	64	26
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 is that we become "cash positive" in 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 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?"

The results provided a strong interest in start-up investing. District-wide, ten percent of residents completing this question are willing to loan CVFiber funds. Additionally, nine percent indicated that would be willing to gift money to the non-profit CVFiber. Most encouraging is the high rate of 45% of respondents who were willing to pre-subscribe to service from CVFiber. Northfield respondents were the most of any community willing to subscribe and to gift money. This is critical as we will need a 10% of the loan in cash resources. We will be contacting all these people with a letter of solicitation in the next few months.

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-sub-scription	%	Other3	%
Northfield	17	11%	20	13%	92	59%	26	17%
CVFiber	176	15%	103	9%	748	62%	171	14%

5. Cost for Internet Service

The survey asked, "What is the Current Level of Expenditure for Your Internet Service?" The results of this question will help guide us to develop a rate or rates for providing services for all premises. The following table reflects the Northfield responses, as well as the total responses from the 18 communities. 56% of respondents are spending more than $75/month for internet.

Amount of Money Spent For Internet Service									
Community	$10-49	%	$50-$75	%	$75-$99	%	$100-$149	%	$150+	%
Northfield	45	19%	66	29%	48	21%	55	24%	17	7%
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. These reports will inform the project application for the $4 million loan from VEDA in the 3rd quarter of this calendar year. It is expected that CVFiber will issue an RFP for design and construction also in the 3rd quarter. With the loan in hand plus loans, presubscriptions, and gifts from the community individuals and organizations 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/

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March 2020