

BROADBAND INFORMATION MEETING  
Administration Building  
North Haverhill, NH 03774  
April 4, 2022

PRESENT: Commissioners Piper, Lauer and Ahern, County Administrator Libby, Administrative Assistant Norcross, Rep. Sykes, Rep. Egan, Rep. Gordon, Senator Hennessey, Bill Darcy - NHEC, Leo Dwyer - NHEC, Johnathan Chambers

Rep. Sykes called the meeting to order at 8:40am.

Commissioner Piper stated that the three (3) Commissioners are present for this meeting with the reason being that they want this to be a public meeting and have minutes taken. The Commissioners through a formal motion formed the Broadband Committee, which is a public body that consists of appointed members. She explained that the Commissioners are very concerned about this meeting with one of the providers as it creates an impression of favoritism. They wanted to make a statement of their feelings on the meeting for the record.

Leo Dwyer thanked Rep. Egan for arranging the meeting. He explained that he is a board member of NHEC and the Executive Chair of their Broadband initiative. He introduced Bill Darcy, who is also an NHEC Director and Johnathan Chambers who is the technical expertise.

L. Dwyer reviewed the following PowerPoint presentation. (\* see attached)

Commissioner Lauer stated that if the representatives of the NHEC are going to be bashing the Broadband Committee she is not going to stay. L. Dwyer stated that he is stating their impression. He believes it will be hard for the Broadband Committee to get federal funding because federal funding precludes overbuilding. B. Darcy noted that federal programs are intended to make sure that the most underserved are served first. Programs that do not focus on the most needed areas first have a hard time receiving funding.

Commissioner Piper stated that the purpose for this meeting is not clear. It appears to her that based on the discussion this morning, NHEC's intention is to demonstrate NHEC as a competitive enterprise with the established Broadband Committee. However, her understanding has been that NHEC responded to an RFP for service providers that was sent out by the Broadband Committee. The first two (2) providers that will meet with the Broadband Committee are NHEC and Hub 66 and this has caused the Commissioners' concern about showing favoritism. Commissioner Piper stated that NHEC is having a special meeting that no one else is having. Rep. Sykes stated that his understanding of the meeting is to become educated on broadband and in that regard, he feels this meeting has been useful. He respectfully agrees that this raises a bunch of questions, but this is not the time and place to hear them. This meeting is educational, and no decisions are being made today. Rep. Egan stated that has been his impression as well. Commissioner Piper asked if this eliminates the worry about preferential treatment because NHEC had submitted a response to the RFP. Rep. Gordon stated that he became concerned that it would appear that they are addressing one particular entity that might

be providing services to the County and giving them special treatment, but he is hearing what the Co-op is planning to do, which may change the shape of what Grafton County can do.

Rep. Egan noted that he listened to and respected the Broadband Committee's concerns to not be a part of this meeting so there is no impropriety. Commissioner Piper stated that because the Grafton County Board of Commissioners formed the Broadband Committee, she worries that the absence of the Broadband Committee at this meeting does not eliminate that concern.

B. Darcy stated that they do not view NHEC as seeking contracts and money from the county. They are providing services to their members and Grafton County residents as they had in Coos County. They have responded to many RFI's and RFPs to provide information to municipalities and Counties. Carroll County invited them to work with them. Grafton County is the only place who has treated them like this.

Senator Hennessey stated that she is here because Rep. Egan has invited her. She is not part of the Broadband Committee. She stated that based on this presentation so far, if they look at what the senate passed SB 445, they made changes to the language of the broadband fund. They changed the matching grant to 75/25. The middle mile may not be covered by the matching grant, and if the County is doing duplicative work, it may not be funded.

Commissioner Lauer stated that she appreciates what NHEC is doing. She wants to learn what they are doing for a potential integration but she sees NHEC is stating there are issues with designing individual towns, which is not what she is hearing from the Broadband Committee. L. Dwyer stated that he is trying to explain to them that NHEC is going to be building in twelve (12) towns he will not be using Grafton County's design so he does not know why the Broadband Committee is creating them. Rep. Gordon stated that he worked for AT&T for 15 years and they provided a monopoly service. They did not have an opportunity for competition. The county may have a different perspective on creating the opportunity for a single provider to provide a monopoly in a particular area. The idea of serving individual towns, no one is interfering with NHEC's plan to provide service to their customers. The county may be interested in creating competition to ensure that business is provided economically. L. Dwyer stated that whoever builds fiber in rural America would have an unregulated monopoly for the next four (4) years by building it with these funds. A member owned nonprofit is a good choice. B. Darcy stated that in rural areas there is not enough density for two (2) fibers. Competition is good in more populated areas but not in the rural areas.

Rep. Sykes asked why the Broadband Committee's design work did not take into consideration what NHEC has done. Commissioner Lauer stated that the Broadband Committee is meeting with NHEC soon. L. Dwyer explained that any internet provider is going to design their own system. Commissioner Lauer stated that the intent is not a set in stone final design; the intent of the design effort is to give the communities something that they can go into a grant process with. L. Dwyer stated that the committee has designs for \$3.8 million. NHEC has designed 1000 miles for \$300,000. Commissioner Piper asked if L. Dwyer is stating that the \$3.8 million in ARPA funds are not needed for the Broadband Committee's project. L. Dwyer stated that he is concerned that it turned into fiber on poles and not lines on paper and his fear is that the County is missing the opportunity to miss folks off NHEC's system.

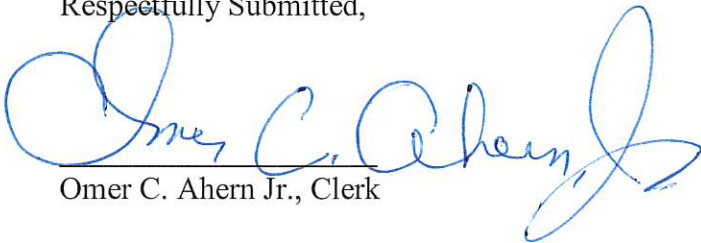
B. Darcy noted that NHEC wanted a discussion to help. If the County wants to invest money into broadband, they have been studying this intensively for two (2) years and want to help the County spend its money in the most efficient way to get service to residents. Commissioner Piper stated that the reluctance of the Broadband Committee to be here today was the impression of preferential treatment. The information that the Commissioners have been given is that NHEC is a possible provider competitor. L. Dwyer stated that they can be a provider without the Broadband Committee, but he thinks it would be more efficient for the County if they cooperate because there is only so much money.

J. Chambers stated that his company is currently building out 10% of the geography in the country today. They do so primarily by building off Electric Co-op infrastructure such as NHEC. He explained that there are cost advantages associated with building out with an electric co-op and doing that saves customers money. He went on to explain what L. Dwyer and B. Darcy are talking about is the ability to build more efficiently with a co-op. The electric co-ops are not for profit and the residents own them. Therefore, Grafton County constituents would own the fiber. This project would take care of half of the county. He stated that if the Grafton County Broadband Committee were to do nothing, half of the County would receive 2 GB internet through NHEC. Grafton County can then take the ARPA funds and focus on the low service areas where no one has wanted to build. J. Chambers explained that his experience is when they build into an area they are invited in by the towns and they work something out with towns one by one. Grafton County can focus on unserved areas where there is not going to be a Co-op infrastructure built within the next 18 months.

Rep. Sykes thanked NHEC and the Commissioners for coming.

10:05 AM With no further business, the meeting adjourned.

Respectfully Submitted,

A handwritten signature in blue ink, appearing to read "Omer C. Ahern Jr.", written in a cursive style.

Omer C. Ahern Jr., Clerk



# Grafton County Update

April 4, 2022



Leo Dwyer

NHEC Director  
NH Broadband Executive Chair

DwyerL@NHEC.com

William Darcy

NHEC Director  
NH Broadband Vice Chair

DarcyW@NHEC.com



# Things we have in Common

- We are elected by our constituents
- We work for a pittance
- We do it because we are trying to do good
- We are both facing a once in a lifetime opportunity to help our internet deprived constituents get state-of-the-art fiber internet service to enable them to fully participate in educational, business, health and social activities.

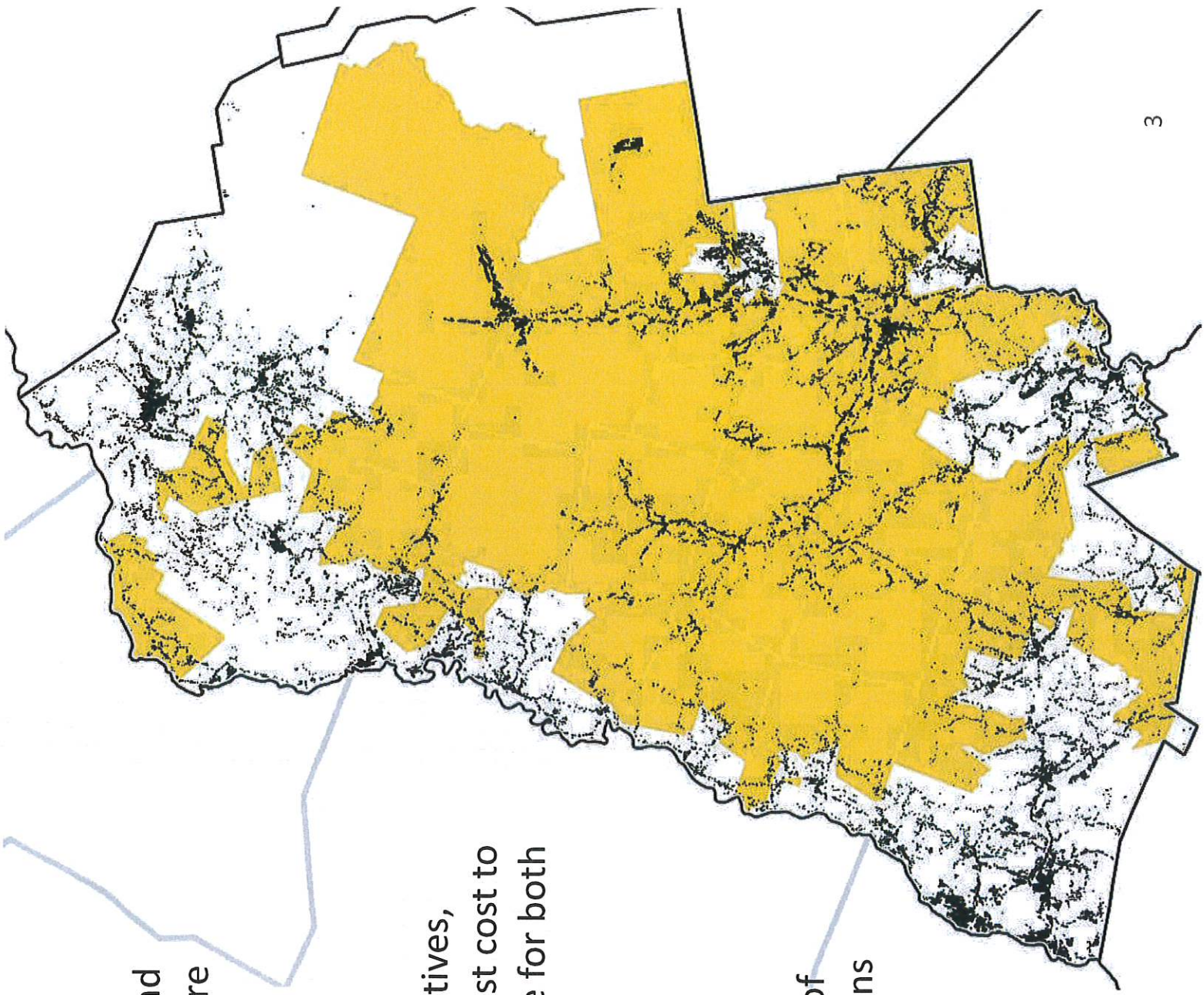
Let's make sure we both get the best outcome for the residents of Grafton County

Some 50% of the households and businesses, in Grafton County are served by NHEC

NHEC like most electric cooperatives, serves the lowest density, highest cost to serve customers and that is true for both electric and broadband service.

That also means NHEC's service territory has a high proportion of the federal grant eligible locations with only DSL service.

*Note: Building footprints shown as black, NH Electric Coop Electric Service area overlaid in yellow*

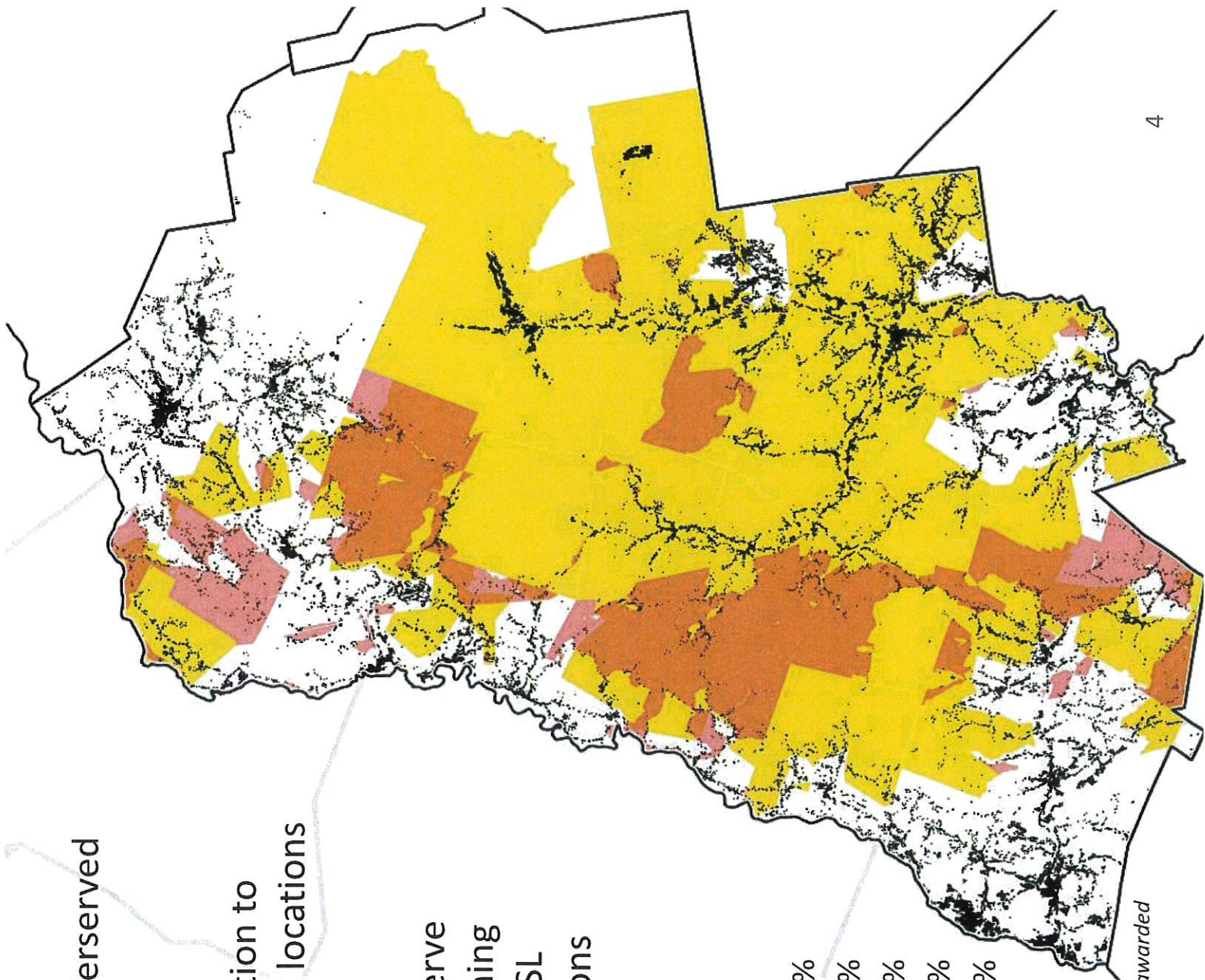


This map illustrates the most underserved broadband areas in the County.

In Dec 2020, the FCC held an auction to serve the 3,389 unserved (<25/3) locations FCC identified in Grafton County

NHEC took on the obligation to serve most of the census blocks containing 100% unserved (less than 25/3 DSL areas) covering 85% of the locations the FCC identified.

RDOF Awardee	Passings	
NHEC/NH Broadband	2,872	85%
Lyme Fiber	302	9%
CCI	135	4%
Space X	80	2%
<b>Total Grafton</b>	<b>3,389</b>	<b>100%</b>



Note: Red areas indicate Census Blocks that NHEC was awarded in the RDOF Process



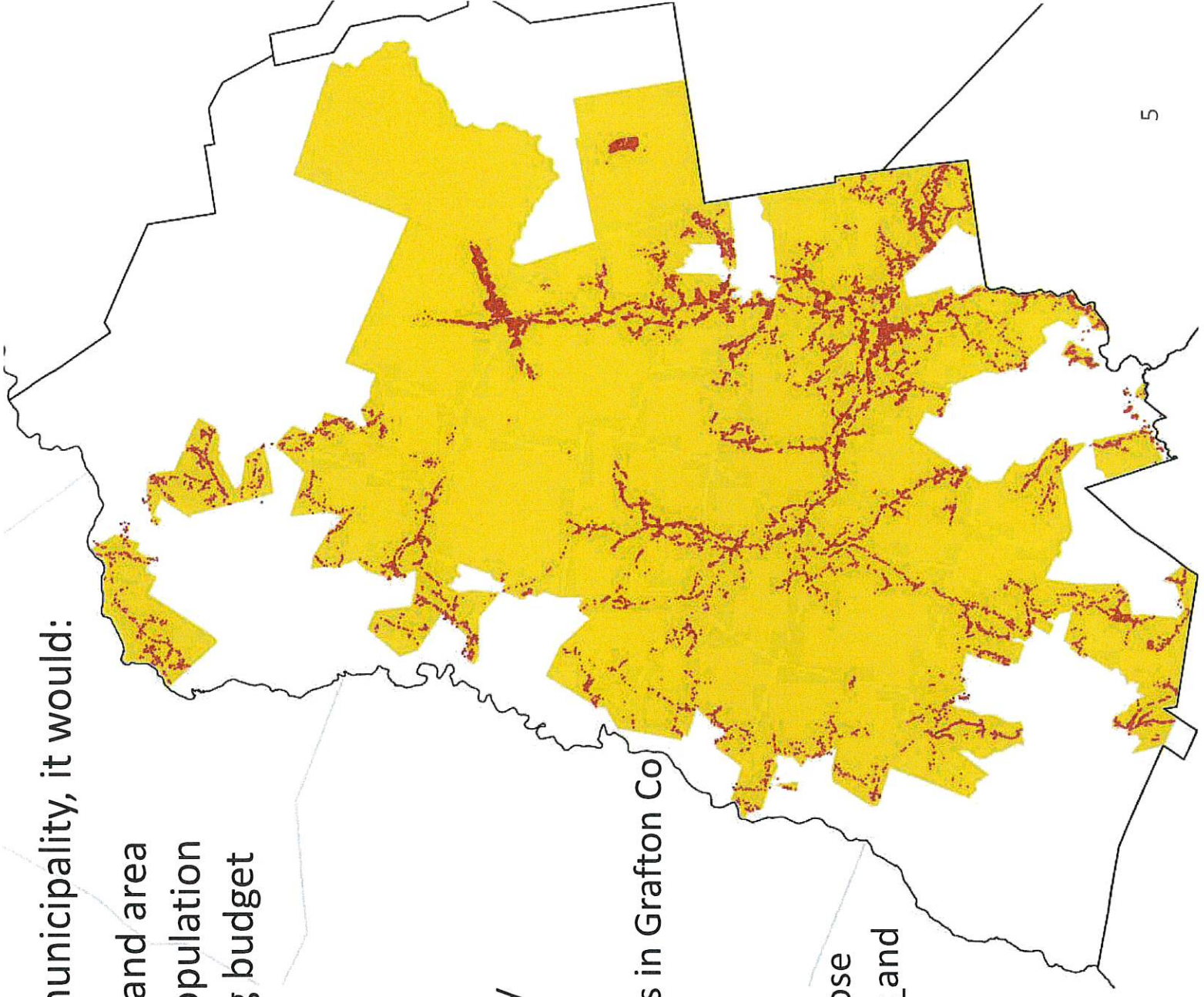
If NHEC's service area were a municipality, it would:

- Cover 60% of the county land area
- Include half the county population
- Have an annual operating budget 3x Grafton Counties

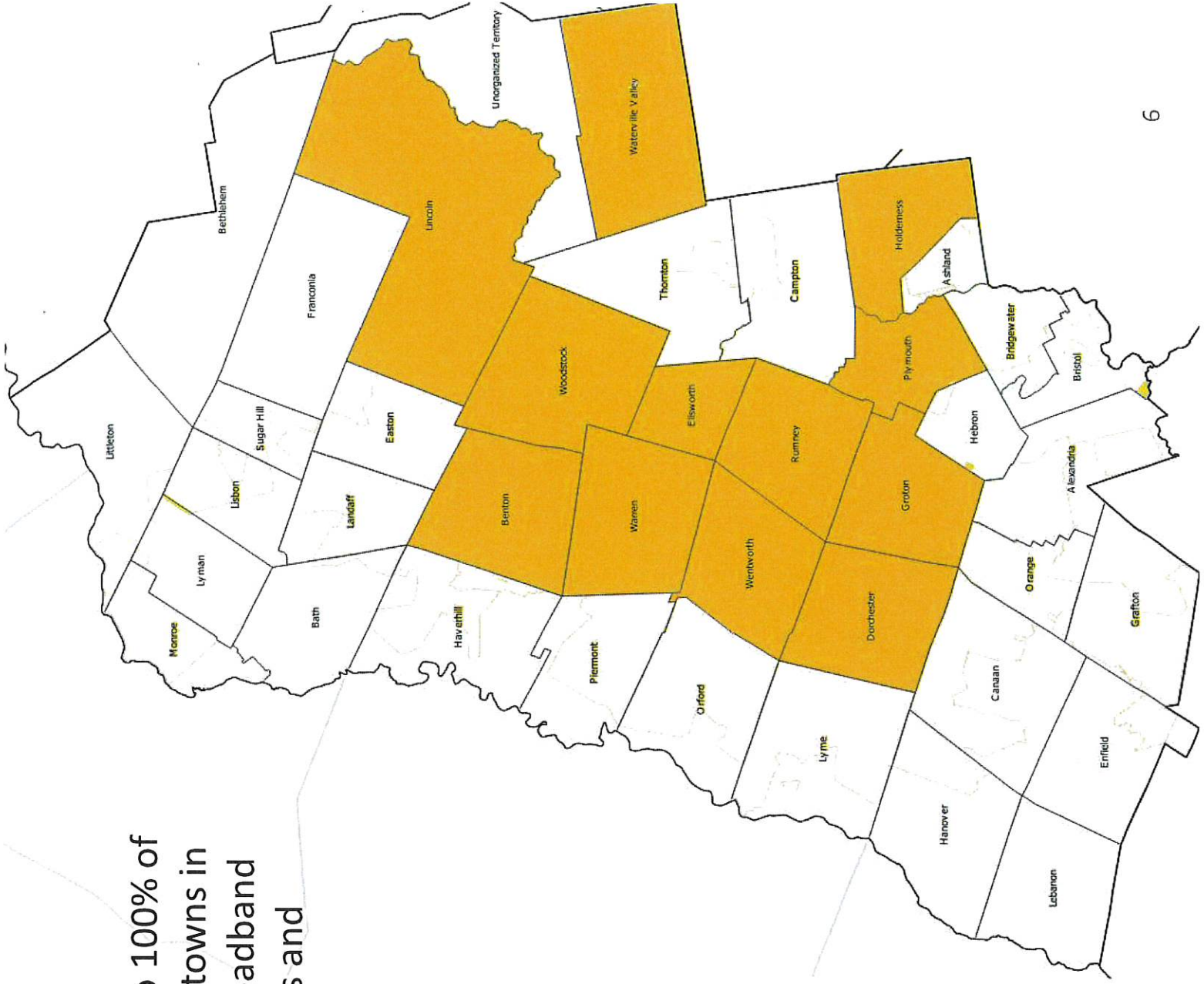
And we have:

- Experience operating a utility
- Capacity to bond
- Ability to act quickly
- Ownership of +-26,000 poles in Grafton Co

And most importantly, like a municipality, we are owned by those we serve; we don't make a profit and we operate at cost.

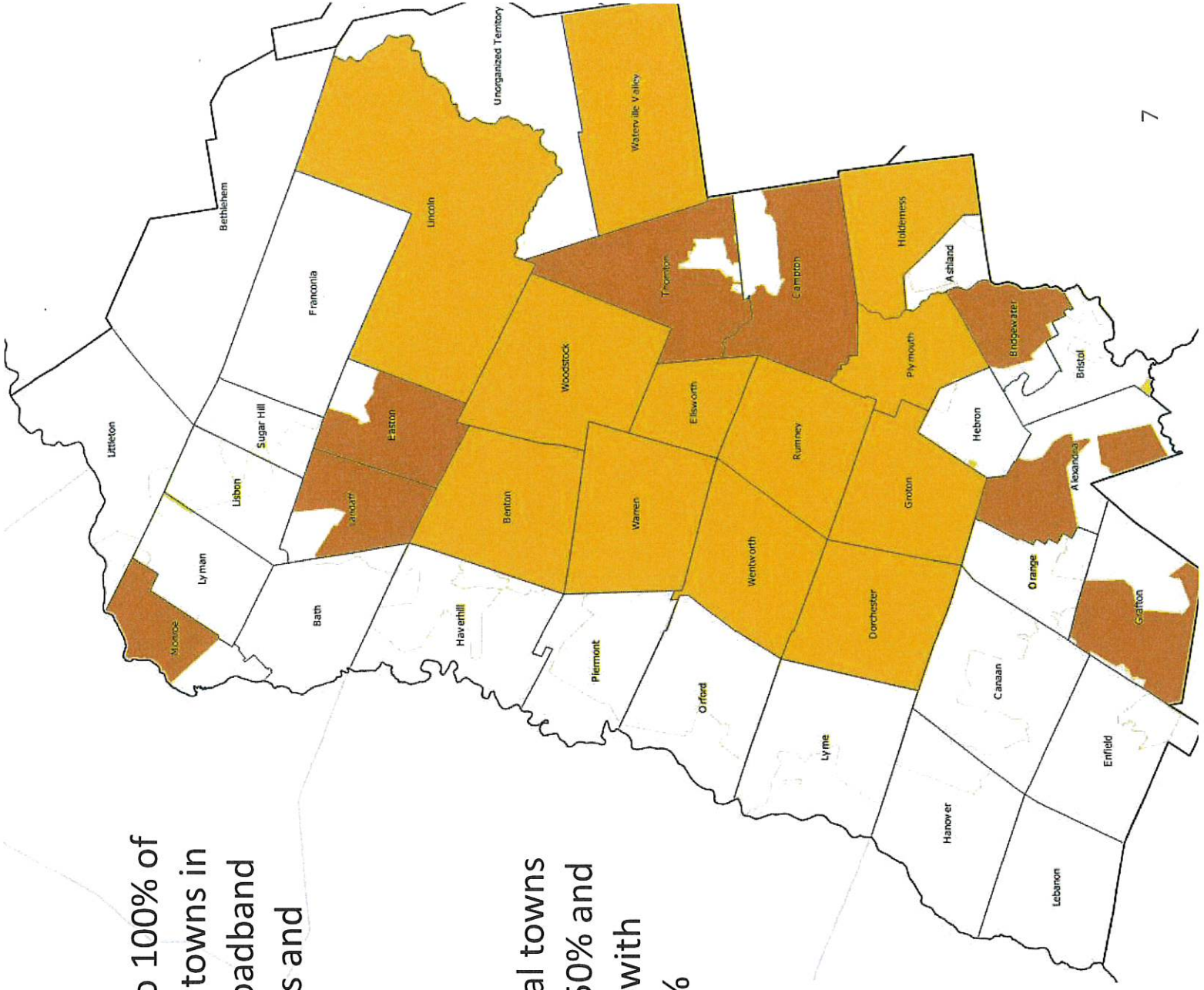


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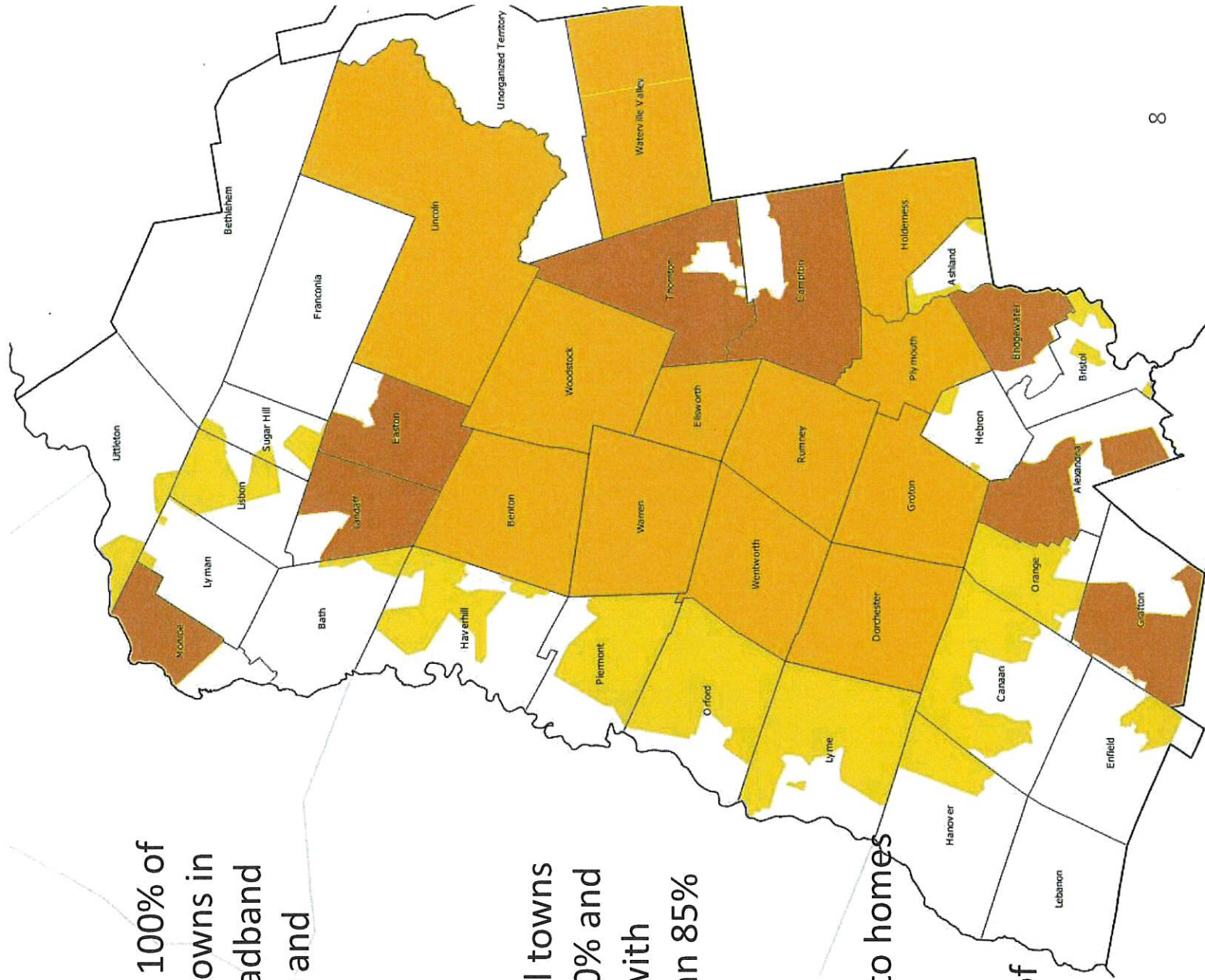
NHEC also plans to provide fiber broadband service to 8 additional towns in which NHEC serves between 50% and 100% of homes and businesses, with some like Easton, more than 85% coverage in the town.



NHEC provides electric service to 100% of the homes and businesses in 12 towns in Grafton and plans to provide broadband internet to 100% of the residents and businesses in those towns.

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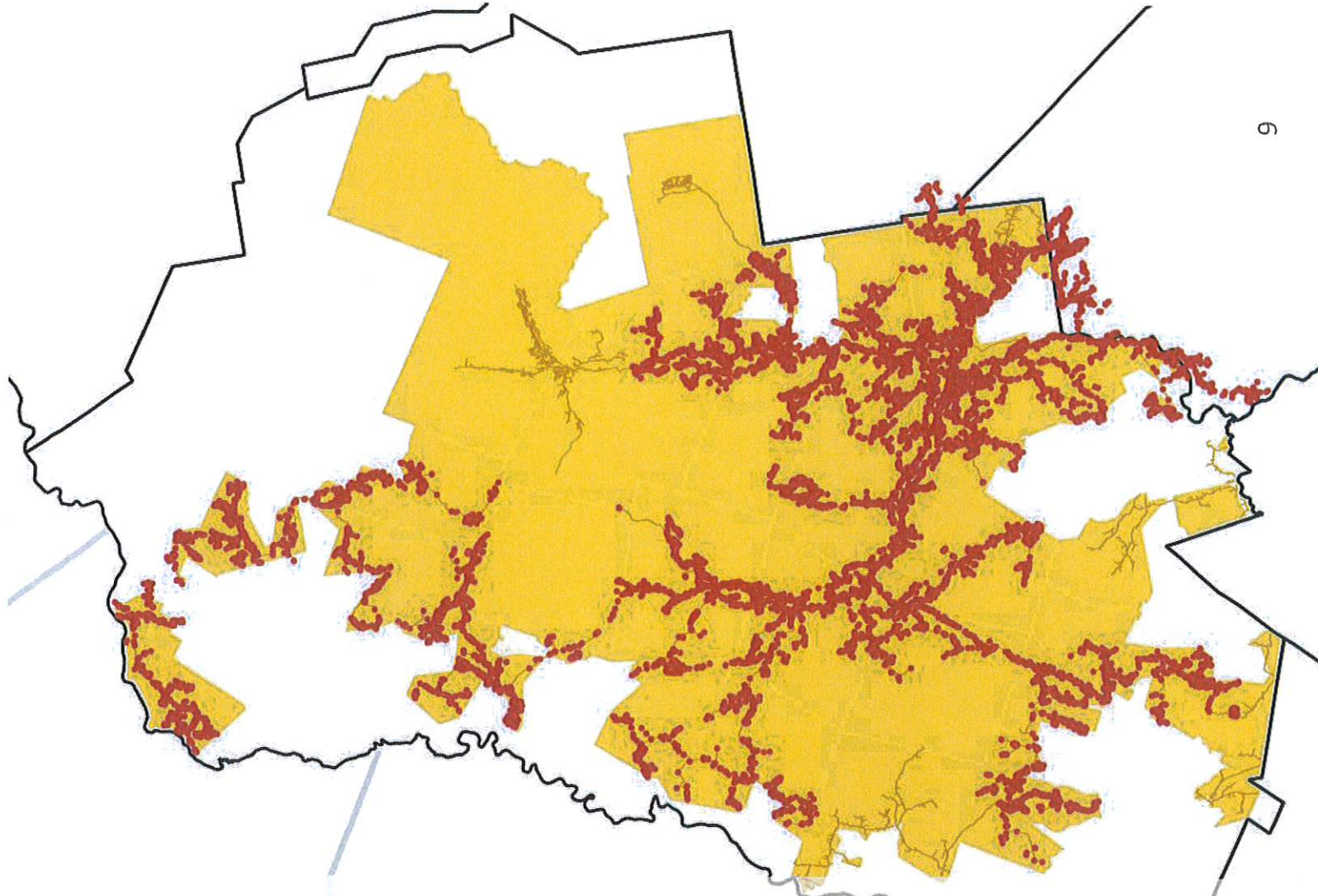
NHEC also plans to provide fiber to homes and business in towns in which it represents <50% of the electrical supply, Primarily the rural areas of towns along the western border Of the county.





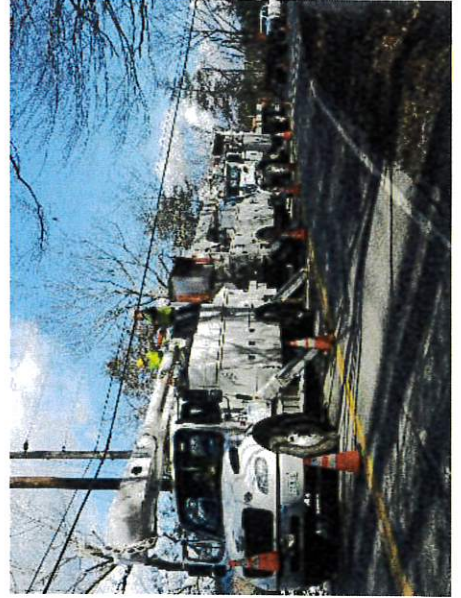
## NHEC's 2022-23 Grafton Build

- Over 900 miles of fiber
- Focused on the most underserved Grafton residents, something traditional ISPs would never do
- Will reach denser areas like Lincoln and Waterville Valley in future phases
- For context, Town of Bristol intends to build out the entire town in 5 years
- NHEC phase I Grafton build will serve over 16,500 residents and businesses in 18 months, hooking up residents as we build.

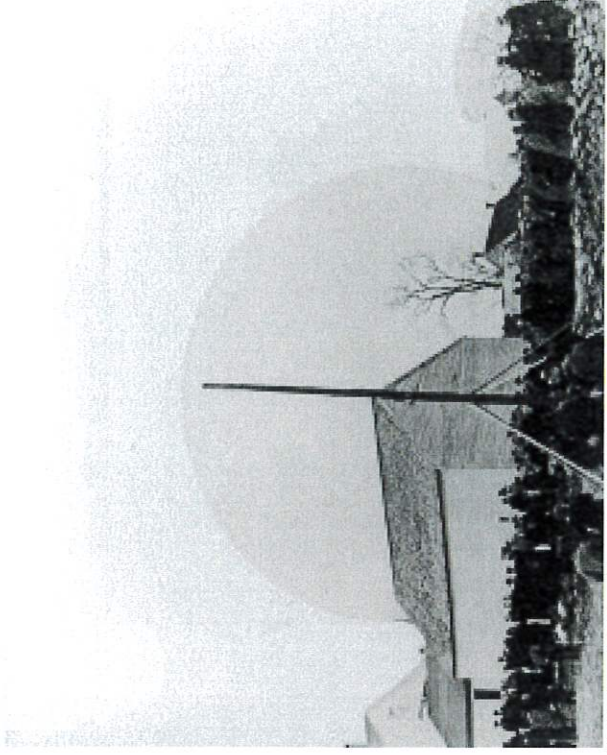




Fiber being strung past NHEC's first pole, Lempster NH 2022



Make ready work for fiber Bean Road Sandwich NH 2022



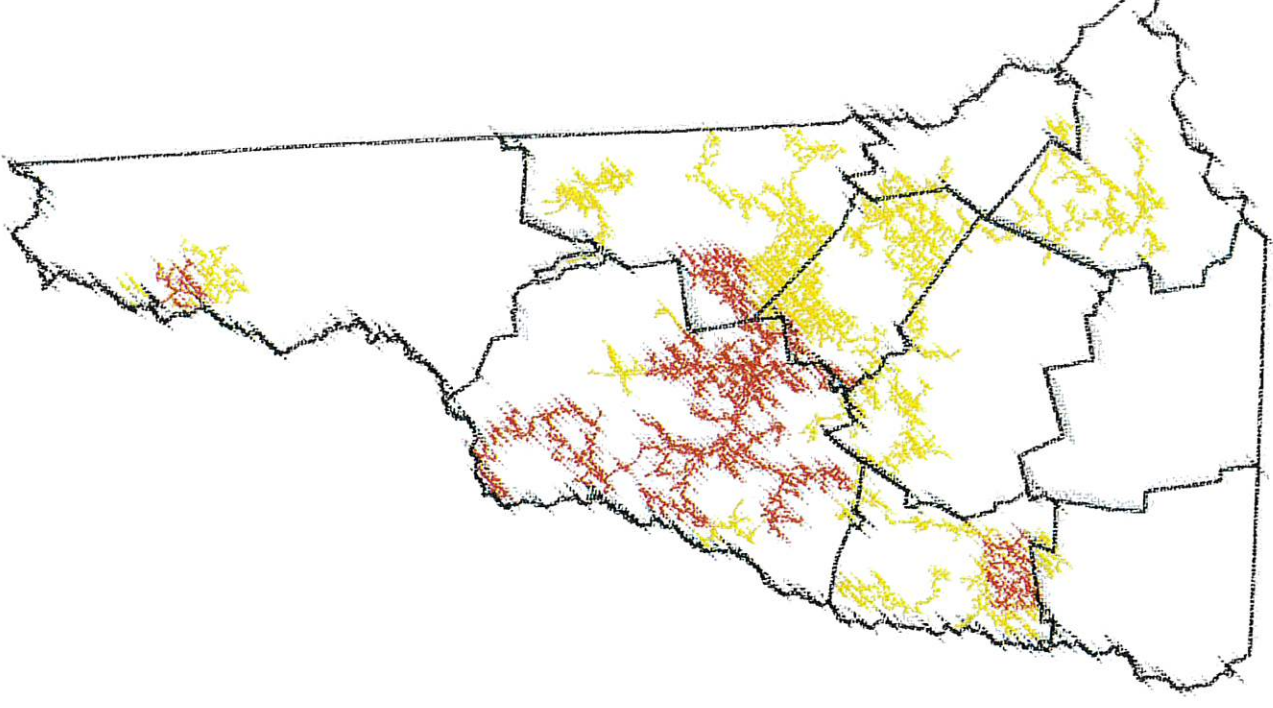
First NHEC pole being set Lempster NH 1939



Electronics hut being set Rt 25 and Mountain Road Sandwich NH 2022

## Future Phases of NHEC Fiber Builds

- Complete Grafton County build
- Carrol County where most NHEC members reside and there are many unserved
- Coos County, complete Colebrook area buildout
- Belknap County and remainder of NHEC service area
- Off system RDOF areas and difficult system builds like islands
- Other non-NHEC areas in cooperation with counties and municipalities

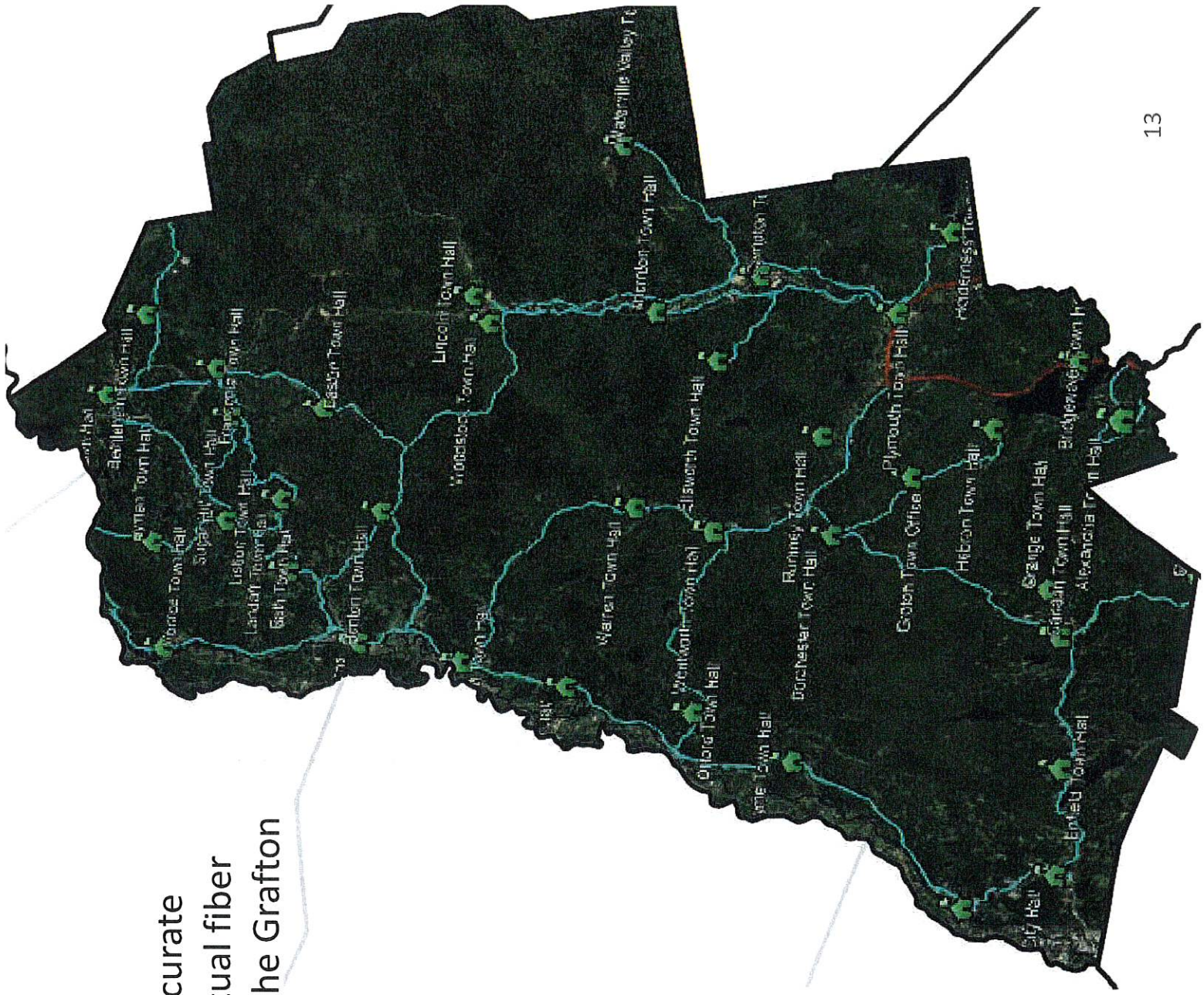


Red lines represent NHEC/NHB existing fiber service in Lempster, Colebrook, Stewartstown, Clarksville, and builds in process in Sandwich/Acworth as well as the Grafton build



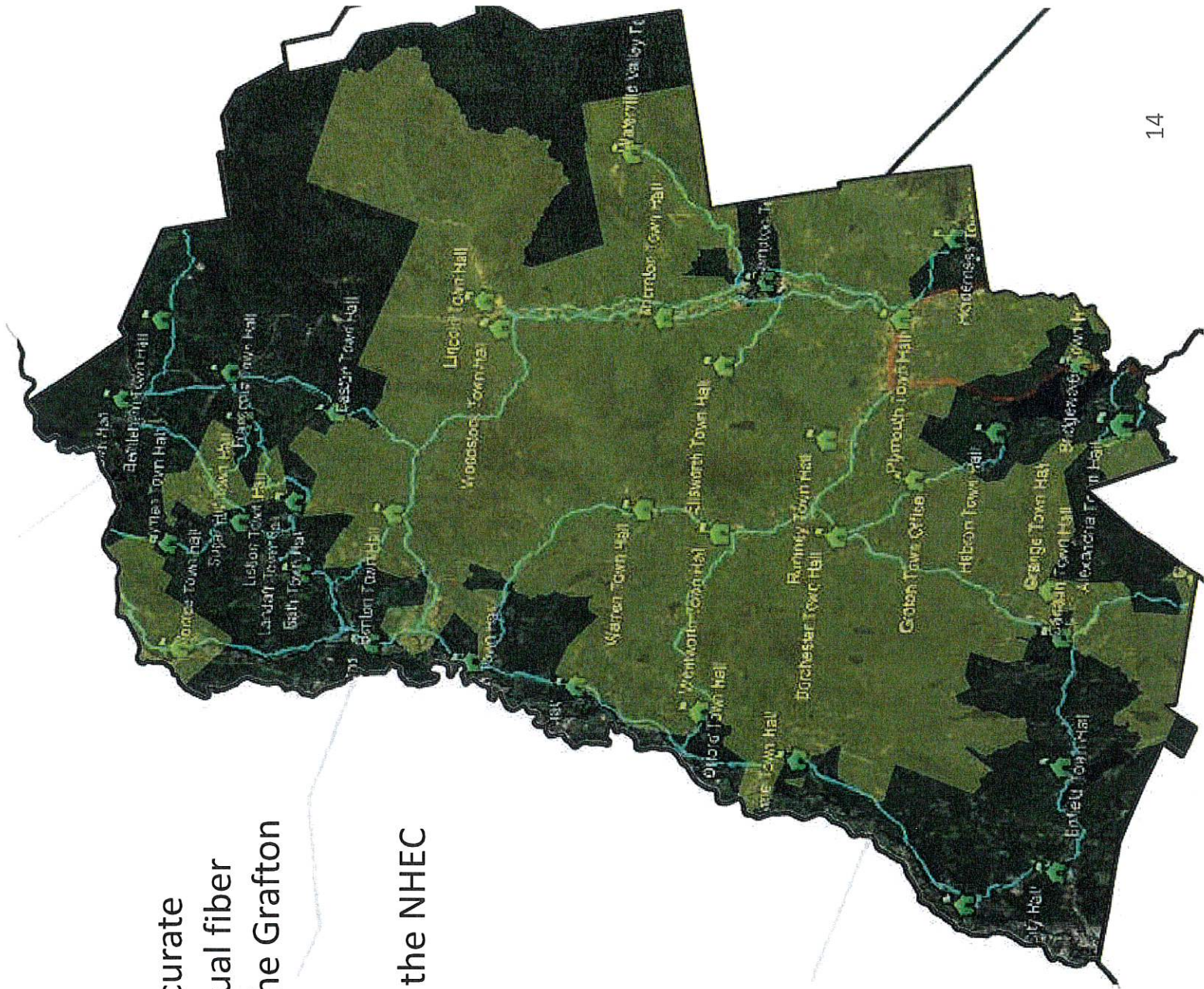


This is a more geographically accurate representation of where the actual fiber would be strung to implement the Grafton County Middle Mile Ring.



This is a more geographically accurate representation of where the actual fiber would be strung to implement the Grafton County Middle Mile Ring.

That same map now overlaid by the NHEC Service Area with a yellow tint.

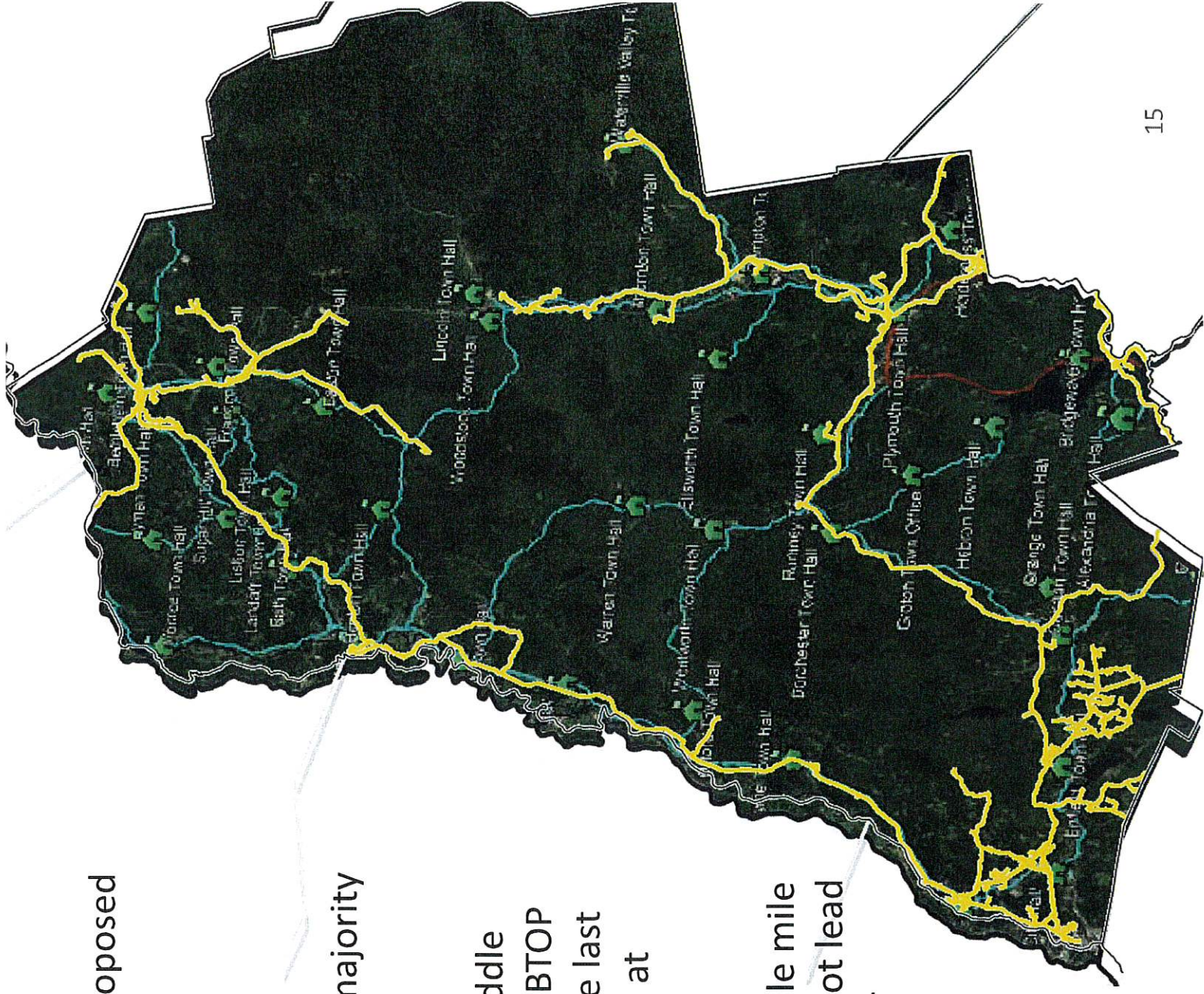


The same “Middle Mile Ring” proposed by Grafton County Broadband Committee

This time overlaid with existing FirstLight Fiber in yellow – the majority of which is currently un-utilized

Firstlight inherited the failed Middle Mile Ring funded by the federal BTOP program 20 or 30 years ago – the last time gobs of money was thrown at broadband.

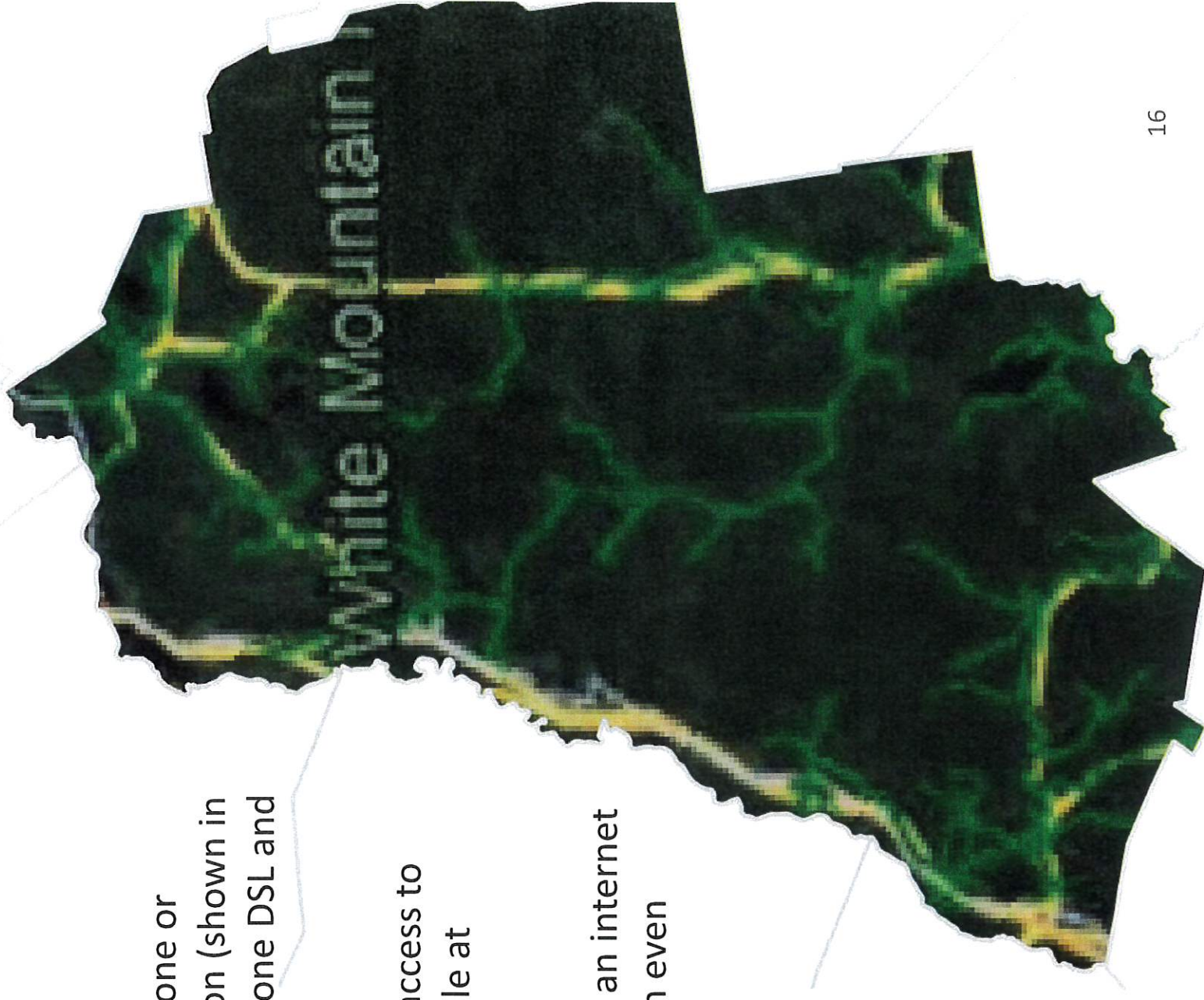
The federally funded BTOP middle mile and its FirstLight successor did not lead to a “last mile” build out of fiber internet to Grafton residents.



CCI also maintains a fiber backbone or “Middle Mile” network in Grafton (shown in green and yellow) for its telephone DSL and fiber products.

Like the FirstLight middle mile, access to CCI’s fiber middle mile is available at commercial rates.

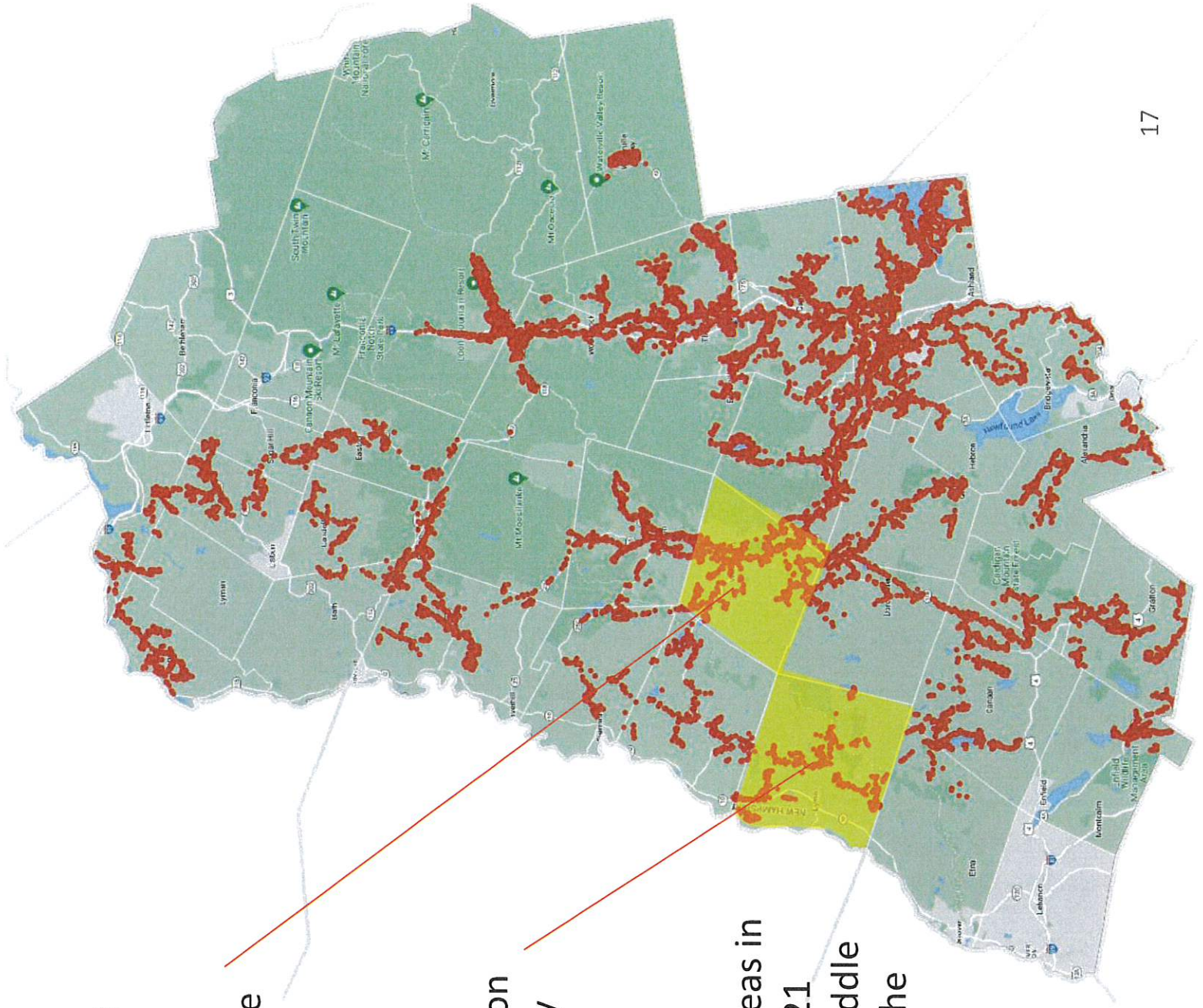
As example CCI recently offered an internet connection to NHEC in Sandwich even though we are a competitor.



When CCI recently proposed a bond deal to Wentworth for a FTTH buildout – They didn't suggest they needed a "Middle mile ring" to connect to because they don't

Lyme Fiber currently provides Gigabit connectivity in a Grafton County town without a County "Middle Mile Ring"

When NHEC built to remote areas in Colebrook and Lempster in 2021 NHEC didn't have to build a middle mile, we purchased access to the existing FirstLight middle mile.

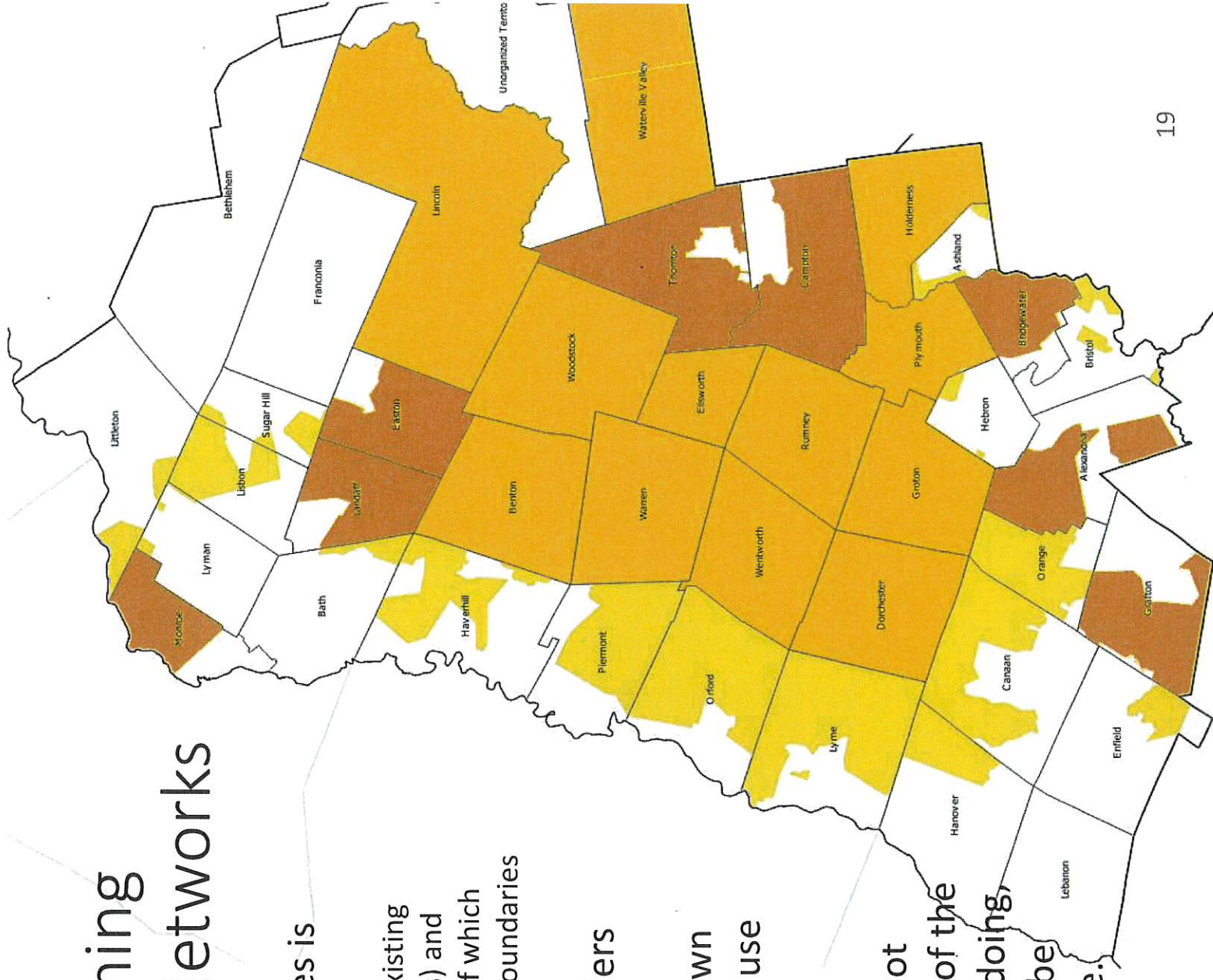


# Issues with Proposed Grafton “Middle Mile”

- It is not needed to enable the County or its 39 municipalities to gain access to the internet.
- Federal broadband funding will likely be denied for projects duplicating existing broadband projects and the Grafton projects duplicate existing broadband middle mile infrastructure.
- Federal broadband funding is also primarily directed at *last mile connections*, not middle mile projects, and *providing service to those deprived of 25/3 or 100/20 service*. The Grafton middle mile traverses primarily cable areas which do not have many underserved, grant eligible premises. Those limitations on grant funding are embedded in the law and neither BEA , state legislators nor federal bureaucrats can change them.
- For all the above reasons, the duplication of existing broadband facilities, the lack of focus on last mile internet service and the underserved population, it is highly unlikely that the Grafton middle mile project will be successful in securing federal ARPA or infrastructure grants.
- The most productive focus of the County would be helping to provide fiber-to-the-premises in areas beyond NHEC’s service territory that are underserved that are in desperate need of help. NHEC wants to work with the County to serve those areas.

# Issues with Designing Individual Town Networks

- Designing to town boundaries is inefficient:
  - One should design based on existing infrastructure (poles and wires) and geographic constraints, both of which completely ignore municipal boundaries
- Many internet service providers (e.g., CCI, NHEC, and cable companies...) will use their own network designs rather than use eX2's design.
- Funding 39 town designs is not needed for it duplicates half of the county that NHEC is already doing, including 12 towns that will be provided whole town service.



As a nonprofit cooperative based in Grafton County, owned by county residents, that has embarked on a project that will serve half of the county's population, we hope to work closely with the County Commission and its Broadband Committee to coordinate broadband development in Grafton County.

NHEC should not be minimized and pigeonholed as “just another ISP,” for we have interests far different than for profit ISPs, including service to our members and a strong interest in serving the underserved who have been ignored by ISPs for decades. We are a grass roots organization owned by those we serve.

Think of us as a Communications district that covers most of the unserved in Grafton County.

What’s not to like?



# Our Points

- We represent a broadband solution for 50% of the county's homes and businesses that includes the vast majority of the unserved in the county.
- That system will be **owned and operated** by those served – not unlike a municipal or communications district solution
- You don't need a "Middle Mile" – you already have at least two and we are going to build a third for a large portion of the county
- Designing individual systems for each town is wasteful and inefficient.
- NHEC is willing and eager to work with Grafton County to extend beyond our footprint.



This isn't just Bill and Leo or NHEC

Conexon will provide:

- Design
- Contracting
- Material Procurement
- Construction Management

At Scale ! Current national run rate is 65,000 miles of fiber per year.

