

Application to DHCD Submitted through CAMS

Thomas Jefferson Planning District Commission

TJPDC/Firefly - VATI 2024

Application ID: 107410312023132018

Application Status: Pending

Program Name: Virginia Telecommunication Initiative 2024

Organization Name: Thomas Jefferson Planning District Commission

Organization Address: 401 E. Water Street
Charlottesville, VA 22902

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Project Name: TJPDC/Firefly - VATI 2024

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Project Location: 104 E WATER ST
CHARLOTTESVLE, VA 22902

Project Service Area: Amherst County, Appomattox County, Buckingham County, Campbell County, Cumberland County, Fluvanna County, Goochland County, Greene County, Louisa County, Madison County, Powhatan County

Total Requested Amount: \$15,730,592.00

Required Annual Audit Status: Under Review

Application to DHCD Submitted through CAMS

Thomas Jefferson Planning District Commission

TJPDC/Firefly - VATI 2024

Budget Information:

Cost/Activity Category	DHCD Request	Other Funding	Total
Telecommunications	\$15,730,592.00	\$37,825,981.00	\$53,556,573.00
Administration	\$280,062.00	\$1,492,000.00	\$1,772,062.00
Construction	\$15,450,530.00	\$36,333,981.00	\$51,784,511.00
Total:	\$15,730,592.00	\$37,825,981.00	\$53,556,573.00

Budget Narrative:

Firefly is presently in year five of an ongoing regional network buildout. Throughout our project, we have been fortunate to have the same team of design and contract administration consultant (Conexon), construction material supplier and manager (Graybar), telecommunications hut and consumer premises electronics suppliers (Juniper, Cisco and Calix), and construction contractor (SandN Communications). The project is worked as an ongoing construction project with regular orders weekly and monthly for materials, monthly and quarterly for electronics, and with work orders for labor issued under the same contract terms on a regular basis. The same team that has been involved since the start will build this VATI 2024 project. The estimates for the derivation of costs are based on our ongoing costs for construction with a small escalation for the anticipated increases we expect over the next two years. After building more than 5,000 miles of fiber and connecting almost 26,000 accounts in the very same counties as the VATI 2024 proposal, Firefly has a very accurate idea of the costs for building in the REC, Dominion, AEP and Southside Electric Cooperative electric service territories. Costs include accurate estimates for make ready costs in AEP and REC areas, and for underground construction in the Dominion and SEC areas where make ready costs and timelines make underground the best choice. All necessary ancillary costs are included (permits, bonds, field data collection, etc). The project has been meticulously planned and the budget is an accurate reflection of the cost for Firefly to complete this work in the construction window from late 2024 through 2026.

Questions and Responses:

1. Project Description and Need

Describe why and how the project area(s) was selected. Describe the proposed geographic area including specific boundaries of the project area (e.g. street names, local and regional boundaries, etc.). Attach a copy of the map of your project area(s). Label map: Attachment 1 – Project Area Map.

Answer:

Regional Project Service Area: This 2024 VATI proposal includes 11 counties, Amherst, Appomattox, Buckingham, Campbell, Cumberland, Fluvanna, Goochland, Greene, Louisa, Madison, and Powhatan, touching into 5 different regional planning districts. The project will bring broadband at gigabit speeds to 6,266 locations built over 673 miles.

In 2022, Thomas Jefferson Planning District Commission (TJPDC) and Firefly Fiber Broadband were awarded for a successful application for a regional project to make gigabit speed broadband service available universally to locations that qualified as unserved under the 2022 VATI program guidelines. The 2024 revisions to VATI guidelines raised the minimum speed required to be considered served, making numerous additional locations eligible for inclusion in this year's VATI application.

The project area for 2024 was selected carefully to assure universal broadband service availability to every unserved location in a contiguous rural region of central Virginia. The project service area leverages proximity to the original Central Virginia Electric Cooperative (CVEC) fiber network buildout, the Firefly fiber optic network, and the Firefly partnerships with Rappahannock Electric Cooperative and Dominion Energy. The project will extend the fiber optic network operated by Firefly to reach the newly eligible unserved locations throughout central Virginia.

Application to DHCD Submitted through CAMS

Thomas Jefferson Planning District Commission

TJPDC/Firefly - VATI 2024

The fiber optic network buildout extended to these locations presently serves rural portions of 13 counties. Construction of the fiber network began in 2018 and offers world-class internet access to over 50,000 locations. Plans are underway to pass another 45,000 locations by the end of 2025. The project area for this VATI 2024 application assures that all unserved locations across the 13 counties, using the 2024 VATI guideline definition of unserved, have access to fiber connected broadband service at up to gigabit speeds through expansions from the Firefly network.

The project map, with the VATI eligible areas specifically identified, is included as [Attachment 1 – Map 1 and Map 2 Regional Project Area Map](#).

Also included is a map for each county and a discussion of the project area for each county to provide more detail of specific service areas within the project. Firefly used all possible tools to create an accurate map of unserved locations throughout each county. A combination of online broadband maps (FCC Broadband, Commonwealth Connection/Virginia Broadband Coverage Challenge Portal, etc.), speed test data from Firefly and county surveys, and local information about internet availability were used to develop the very specific proposed project service areas.

[Amherst County \(Attachment 1 - Map 3\)](#): This map shows 519 unserved locations (less than 100/20 Mbps) from the latest FCC Broadband Map. These locations are surrounded by VATI 2022 and RDOF funding awarded to Firefly. 4 locations overlap RDOF Funding awarded to Firefly.

[Appomattox County \(Attachment 1 - Map 4\)](#): This map shows 97 unserved locations (less than 100/20 Mbps) from the latest FCC Broadband Map. These locations are surrounded by VATI 2022 funding awarded to Firefly.

[Buckingham County \(Attachment 1 - Map 5\)](#): This map shows 45 unserved locations (less than 100/20 Mbps) from the latest FCC Broadband Map. These are surrounded by VATI, RDOF, and Reconnect II funding awarded to Firefly. 3 locations overlap RDOF Funding awarded to Firefly.

[Campbell County \(Attachment 1 - Map 6\)](#): This map shows 42 unserved locations (less than 100/20 Mbps) from the latest FCC Broadband Map. The proposed area is surrounded by VATI and RDOF areas awarded to either Firefly or Shentel.

[Cumberland County \(Attachment 1 - Map 7\)](#): This map shows 247 unserved locations (less than 100/20 Mbps) from the latest FCC Broadband Map.

The proposed project area in the southern county is bounded by RDOF areas awarded to Kinex. Otherwise residents only have the option of unreliable wireless connectivity or DSL connections with speeds well below 100 Mbps download and 20 Mbps upload.

[Fluvanna County \(Attachment 1 - Map 8\)](#): This map shows 147 unserved locations (less than 100/20 Mbps) from the latest FCC Broadband Map. To the west these locations are bounded by VATI and RDOF funding awarded to Firefly. 30 locations overlap with RDOF Funding awarded to Firefly.

[Goochland County \(Attachment 1 - Map 9\)](#): This map shows 993 unserved locations (less than 100/20 Mbps) from the latest FCC Broadband Map. These locations are bounded by VATI, CAF, RDOF, and Reconnect II funding awarded to Firefly. 6 locations overlap with RDOF Funding awarded to Firefly.

[Greene County \(Attachment 1 - Map 10\)](#): This map shows 417 unserved locations (less than 100/20 Mbps) from the latest FCC Broadband Map. These locations are surrounded by VATI 2022 funding awarded to

Application to DHCD Submitted through CAMS

Thomas Jefferson Planning District Commission

TJPDC/Firefly - VATI 2024

Firefly and RDOF funding awarded to CenturyLink/BrightSpeed.

Louisa County (Attachment 1 - Map 11): This map shows 434 unserved locations (less than 100/20 Mbps) from the latest FCC Broadband Map. These locations surrounded by VATI 2022 funded awarded to Firefly. 15 locations overlap RDOF Funding awarded to Firefly.

Madison County (Attachment 1 - Map 12): This map shows 1468 unserved locations (less than 100/20 Mbps) from the latest FCC Broadband Map. The proposed service area includes northern and northwest areas of the county where there are no options to receive service at 25 Mbps download speed and 3 Mbps upload speeds and no cell phone coverage. This area qualifies as a priority build under the VATI 2024 guidelines. The other individual locations were identified using the latest FCC Broadband map and are bounded by VATI funding awarded to Firefly and RDOF funding awarded to CenturyLink/BrightSpeed. 1 location overlaps RDOF Funding awarded to Firefly.

Powhatan County (Attachment 1 - Map 13): This map shows 1857 unserved locations (less than 100/20 Mbps) from the latest FCC Broadband Map. These locations are bounded by VATI, CAF, RDOF, and Reconnect II funding awarded to Firefly.

2. List existing providers in the proposed project area and the speeds offered. Describe your outreach efforts to identify existing providers and how this information was compiled with source(s).

Answer:

Five approaches were used to identify existing providers and the services and plans offered in the area: Federal Communications Commission (FCC) data sets provided through BroadbandNOW.com and the latest FCC Broadband map; Commonwealth Connection; individual internet service provider websites; multiple press releases and paid advertisements to drive residents in the project area to take a survey which included a speed test component; data collected by our partner localities and their broadband authorities; and ride-outs of the project area to identify and confirm where other providers' networks started and ended.

In part of the proposed project area, Verizon is the incumbent telephone company or Incumbent Local Exchange Carrier ("ILEC"). Verizon did not accept Connect America Funds ("CAF") and has not performed any upgrades to its facilities in the project area to improve broadband availability. The Verizon ILEC network in this region meets VATI's "unserved" definition. Verizon is not offering FiOS services in the project area, or in areas that are only advertising download speeds up to 15Mbps.

CenturyLink is primarily offering ADSL and VDSL services with some smaller areas with FTTH. Their advertised speeds for xDSL range from up to 1.5 Mbps – 100 Mbps download. With their FTTH offering they offer up to 940 Mbps symmetrical. We pulled out locations where they claim to offer FTTx service and the VATI 2022 contingency areas that overlap their RDOF areas in Madison, Greene, and Campbell.

Comcast and Shentel are offering service in more densely populated areas with speeds ranging from 50 Mbps - 2 Gbps. They offer various pricing for different contract terms. This proposal does not include any location for which Comcast and Shentel show they have service available meeting the 100 mbps download and 20 mbps upload threshold.

United States Department of Agriculture (USDA) ReConnect program, FCC Connect American Fund (Auction 903), and VATI funded areas were removed from the project area.

According to the website Commonwealth Connection, there are some potentially-served areas, but in working with the localities, we deemed that the areas proposed are unserved. We extensively used the latest FCC broadband map dated June 30, 2023 to identify unserved locations.

Application to DHCD Submitted through CAMS

Thomas Jefferson Planning District Commission

TJPDC/Firefly - VATI 2024

3. Describe if any areas near the project have received funding from federal grant programs, including but not limited to Connect America Funds II (CAF II), ACAM, ReConnect, Community Connect, and Rural Digital Opportunity Funds (RDOF). If there have been federal funds awarded near the project area(s), provide a map showing these areas, verifying the proposed project area does not conflict with these areas. Label Map: Attachment 2 – Documentation on Federal Funding Area.

Answer:

CAF II funds were awarded to Firefly and have been carved out of any areas in this grant application. The areas of CAF funding are shown on the Attachment 2 map.

ReConnect funds (2020 and 2021) were awarded to CVEC and Firefly but have been carved out of any areas in this grant application. ReConnect 2020 granted Firefly/CVEC a \$28 million grant/loan combination in Albemarle, Appomattox, Buckingham, Cumberland, Fluvanna, Goochland, and Louisa counties. ReConnect 2021 awarded Firefly a \$14 million grant, and includes areas in Buckingham, Cumberland, Goochland, and Powhatan counties. The two ReConnect grant-funded service areas are shown in Attachment 2.

RDOF funds were granted to areas outside the project area, as well as some areas inside the project area. Firefly received RDOF funds for areas included in this project and for areas in the CVEC electric service territory adjacent to the project, and some other ISPs received funding for areas in or near the project, as well. RDOF funds were awarded to Firefly and Shentel inside the proposed project area and to CenturyLink and Kinex in adjacent areas. The RDOF funded areas in or near the service area shown in Attachment 2.

Notes about Attachment 2: On August 10, 2022, the FCC announced that it had denied SpaceX the release of RDOF awards. Thus, defaulted RDOF areas for SpaceX in and near the proposed areas were removed from this map. The RDOF funding areas for Shentel within our proposed project area were returned/declined, and thus, that area is in default, making it unserved. These areas were removed from the map. Also, Shentel's RDOF-winning bid in Madison County was for a fixed wireless service with speeds of 50 Mbps download.

4. Overlap: To be eligible for VATI, applicants must demonstrate that the proposed project area(s) is unserved. An unserved area is defined as an area with speeds below 100/20 Mbps and with less than 25% service overlap within the project area for wireless projects and 20% for wireline projects. Describe any anticipated service overlap with current providers within the project area. Provide a detailed explanation as to how you determined the percentage overlap. Label Attachment: Attachment 3 – Documentation Unserved Area VATI Criteria.

Answer:

The geographic areas in our proposed VATI 2024 application do not have service available meeting or exceeding 100/20 Mbps. This is based on data collected from multiple sources, including federal and state broadband coverage maps, county data on actual unserved locations, and field observations. Using the latest FCC map, dated June 30, 2023, we identified individual locations to avoid any overlap with locations that were deemed served.

The proposed project area map was laid on top of the Commonwealth Connection map and latest FCC Broadband maps. We also imported the BEAD eligible locations from the state into our mapping system.

- 5.

Application to DHCD Submitted through CAMS

Thomas Jefferson Planning District Commission

TJPDC/Firefly - VATI 2024

Total Passings: Provide the number of total serviceable units in the project area. Applicants are encouraged to prioritize areas lacking 25 Megabits per second download and 3 Megabits per second upload speeds, as they will receive priority in application scoring. For projects with more than one service area, each service area must have delineated passing information. Label Attachment: Attachment 4 – Passings Form.

- a. Of the total number of VATI passings, provide the number of residential, business, non-residential, and community anchors in the proposed project area.
- b. If applicable, of the total number of RDOF passings, provide the number of residential, business, non-residential, and community anchors in the proposed project area.
- c. If applicable, provide the number of passings that will require special construction costs, defined as a one-time fee above normal service connection fees required to provide broadband access to a premise . Describe the methodology used for these projections.
- d. If applicable, provide the number of passings included in the application that will receive broadband access because special construction costs have been budgeted in the VATI application. Describe the methodology used for determining which passings with special construction costs were budgeted in the application.
- e. Provide the number of passings in the project area that have 25/3 Mbps or less. Describe the methodology used for these projections. (up to 15 points)

Answer:

Application to DHCD Submitted through CAMS

Thomas Jefferson Planning District Commission

TJPDC/Firefly - VATI 2024

a. Of the total number of VATI passings, provide the number of residential, business, non-residential, and community anchors in the proposed project area.

See Attachment 4 - Passings Form

b. If applicable, of the total number of RDOF passings, provide the number of residential, business, non-residential, and community anchors in the proposed project area.

Firefly overlaps with 10 total RDOF locations awarded to CenturyLink in Greene County and NexTier locations in Cumberland. 9 Residential and 1 Business. We are not including the locations where the RDOF winners defaulted.

c. If applicable, provide the number of passings that will require special construction costs, defined as a one-time fee above normal service connection fees required to provide broadband access to a premise. Describe the methodology used for these projections.

See Attachment 4 - Passings Form. This application does not require special construction costs for any passings. The methodology used for these projections is simple, we have nothing in this category because we included service extensions up to 2,500 feet without charge and will only be charging for the ditch cost beyond 2,500 feet, which will be about \$1.25 per foot. If a connection qualifies as Low-to-Moderate Income, Firefly will connect this home without a length limit.

d. If applicable, provide the number of passings included in the application that will receive broadband access because special construction costs have been budgeted in the VATI application. Describe the methodology used for determining which passings with special construction costs were budgeted in the application.

See Attachment 4 - Passings Form. No special construction is required for any passing, see answer to 5c.

e. Provide the number of passings in the project area that have 25/3Mbps or less. Describe the methodology used for these projections. (up to 15 points)

The methodology used for these projections is based on known areas in our region and those shown on the Commonwealth BEAD Map and the FCC broadband maps as not having 25/3 availability. Based on the BEAD locations identified and downloaded from the DHCD website, there are 3,664 locations lacking access to 25/3Mbps service; that is 59% of the identified locations in this application. Due to the large scope of this project, we could not look at every location individually, but by reviewing the latest FCC Broadband Maps, dated June 30, 2023, we believe that half of the remaining locations in this project also lack access to 25/3Mbps service. For example, more than 900 locations in Powhatan County and 600 in Goochland County were previously shown as served or now shown as unserved with less than 25/3Mbps service available to them, based on the June 30, 2023 FCC Broadband map. Therefore, we estimate that 80% of the 6266 locations in this project do not have 25/3Mbps service available to them.

6. Describe if any blocks awarded in Rural Digital Opportunity Fund (RDOF) are included in the VATI application area. If RDOF areas are included in the VATI application, provide a map of these areas and include information on number of passings in RDOF awarded areas within the VATI application area, and Census Block Group ID number for each block group in the project area. Label Attachment: Attachment 5 – RDOF Awarded Areas Form in VATI Area

Answer:

In the RDOF 904 Auction, Firefly Fiber Broadband was awarded blocks that overlap slightly with the VATI application area. In these small overlap areas in the counties of Amherst, Buckingham, Fluvanna, Goochland, Louisa, and Madison, there are 59 passings as shown in the RDOF Passings Form included in Attachment 5. As a point of clarification, there is no RDOF overlap in the previously-awarded Shentel RDOF area in northwest Madison County because Shentel defaulted on that award and pulled out of their commitments to the FCC.

Below are the RDOF census blocks partially overlapped in the application.

No entire census block group is covered.

Application to DHCD Submitted through CAMS

Thomas Jefferson Planning District Commission
TJPDC/Firefly - VATI 2024

County	Census block group ID
Amherst	510090102004
	510090106001
Buckingham	510299301022
	510299301023
Fluvanna	510650202002
	510650202004
Goochland	510754004001
Louisa	511099502011
Madison	511139301002

Application to DHCD Submitted through CAMS

Thomas Jefferson Planning District Commission

TJPDC/Firefly - VATI 2024

7. **For wireless projects only:** Please explain the ownership of the proposed wireless infrastructure. Please describe if the private co-applicant will own or lease the radio mast, tower, or other vertical structure onto which the wireless infrastructure will be installed.

Answer:

This is not a wireless project so the question is not applicable.

8. **Network Design:** Provide a description of the network system design used to deliver broadband service from the network's primary internet point(s) of presence to end users, including the network components that already exist and the ones that would be added by the proposed project. Provide a detailed explanation of how this information was determined with sources. Provide information on how capacity for scalability, or expansion, of how the network can adapt to future needs. If using a technology with shared bandwidth, describe how the equipment will handle capacity during peak intervals. For wireless projects, provide a propagation map for the proposed project area with a clearly defined legend for scale of map. Label Map: Attachment 6 – Propagation Map Wireless Project.

Answer:

This project is fiber-to-the-home network expansion utilizing new fiber optic cables placed on Dominion Energy (DE) and Rappahannock Electric Cooperative (REC) electric distribution facilities. In the DE service area, the Dominion Energy Middle Mile program will be used to place fiber along the DE lines, which will be leased to Firefly, and Firefly will extend the fiber in service drops to homes and businesses or extend fiber down laterals and then build the service extensions. In REC territory, Firefly will oversee the construction of fiber which REC will own and lease to Firefly with Firefly providing retail internet service.

The project will tie into Firefly's existing fiber network and/or into its RISE project (VATI 2022).

Additional equipment will be needed in some communication huts to support these additional locations. The use of fiber optic cable provides a world-class solution to deliver broadband internet service to rural residents now and for the foreseeable future. This technology provides the most reliable, highest speed service transfer of data in the marketplace.

Firefly will be using a 32:1 ratio on the network (or up to 32 customers per PON) for residential and small office/home office customers. G-PON has a shared bandwidth per PON of 2.488 Gbps downstream and 1.244 Gbps upstream. Firefly will be switching all new deployments to XGS-PON that has a shared bandwidth per PON of 9.953 Gbps downstream and upstream. We will replace existing GPON deployments with XGS-PON over the next several years.

Firefly currently has G-PON deployed to over 25,000 active accounts in central Virginia with the current utilization of 2-4% per PON using a 32:1 ratio. If utilization increases over 70%, the PON will be split to lower the utilization. In addition, Firefly will deploy enough fiber for an Active Ethernet overlay for enterprise customers needing symmetrical internet connection speeds. Enterprise services have dedicated bandwidth and a service level agreement with support 24/7/365.

Firefly has diverse connections into peering points in Richmond, VA and Ashburn, VA and utilizes two upstream providers. Firefly's backbone is currently at 100 G but will be upgraded to 400 G in the coming months. Firefly currently has caching services on-net provided by Netflix and Amazon.

Application to DHCD Submitted through CAMS

Thomas Jefferson Planning District Commission

TJPDC/Firefly - VATI 2024

9. Speeds: Describe the internet service offerings, including download and upload speeds, to be provided after completion of the proposed project. Detail whether that speed is based on dedicated or shared bandwidth, and detail the technology that will be used. This description can be illustrated by a map or schematic diagram, as appropriate. List the private co-applicant's tiered price structure for all speed offerings in the proposed project area, including the lowest tiered speed offering at or above 100/20 Mbps. (up to 10 points)

Answer:

Internet service will be available at symmetrical gigabit level speed to every home and business. Firefly has a 100 Gbps backhaul connection from the network head end that can be easily expanded as necessary to ensure each user will be able to transmit and receive at the 1 Gbps rate, should they choose to. Firefly will be upgrading the backbone to 400 G in the coming months. Some users may choose the 100 Mbps option, therefore leaving more capacity in the network. Diversity of data usage typically will allow a 100 Gbps connection to meet the needs of thousands of end-users in systems offering gigabit level service. Network monitoring will ensure there is never a slow down or lack of bandwidth for the users to access the internet at the speed for which they pay.

The broadband services being offered will be Fiber-to-the-Premise (FTTP). Both Passive Optical Network (PON) and Active Ethernet equipment can be used to meet residential and business needs. PON is a shared bandwidth technology and Active Ethernet is dedicated bandwidth. For Residential Fiber-to-the-Home (FTTH) service, 10 gigabit symmetrical passive optical network (XGS-PON) will be deployed and for Business Fiber service either XGS-PON or Active Ethernet will be used based on business needs.

Our tiered pricing structure has no contracts, bandwidth limits, data-caps, overages, and no hidden fees or introductory pricing. A carrier-grade Wi-Fi 6 router is included at no charge, and only symmetrical bandwidth plans are offered. There are two residential plans: 100 Mbps for \$49.99/month and 1Gbps for \$79.99/month. Standard business plans are 100 Mbps for \$79.99/month; 250 Mbps for \$149.99/month; and 1 Gbps for \$249.99/month. Advanced business services are offered and include dedicated point-to-point or point-to-multipoint connections, and these are quoted on a case-by-case basis. Residential voice with unlimited long distance is \$34.99/month if stand-alone; a \$5 credit is given if combined with internet service. Business phone service starts at \$29.99/month with unlimited long distance. Advanced business phone services like multi-line PRIs and SIP trunking are also available.

We follow the FCC guidelines for speed testing for CAF and RDOF recipients. A random selection of customers is generated by the FCC for speed testing every quarter. The speed tests are run through the residential gateway/router during peak hours (6PM to midnight) for 7 days. A speed test is run every hour, and a latency test is run every minute during each test period.

Our latest certified FCC Speed Test results from 3rd quarter 2023.

Application to DHCD Submitted through CAMS

Thomas Jefferson Planning District Commission

TJPDC/Firefly - VATI 2024

10. Explain how the proposed project achieves universal broadband coverage for the locality or fits into a larger plan to achieve universal broadband coverage for the locality. If applicable, explain the remaining areas of need in the locality and a brief description of the plan to achieve universal broadband coverage. (up to 50 points)

Answer:

Universal broadband coverage for the central Virginia region is a focus of the Thomas Jefferson Planning District (TJPD) and Firefly project. TJPD and Firefly received a VATI 2022 grant for a project that provided universal coverage for 13 counties in the central Virginia region. The definition of a served location has changed in the grant guidelines since 2022, creating new unserved locations in eleven of those counties: Amherst, Appomattox, Buckingham, Campbell, Cumberland, Fluvanna, Goochland, Greene, Louisa, Madison and Powhatan.

In addition to a few larger areas of completely unserved locations in Greene and Madison counties, many of the remaining unserved locations are dispersed within areas that are otherwise served by an incumbent provider. The remaining unserved locations are often a little further from the main road than their served neighbors or are in small groupings on lateral roads. This project carefully identifies each unserved location and expands the fiber optic network to cover all those locations, assuring universal broadband internet access availability across the entire central Virginia region.

To assure universal access, the project will include line extensions of up to 2,500 feet for any location without additional charges to the subscriber. To address digital equity, there will be no limit for line extensions without additional cost to full-time dwellings of any low-to-moderate income family. Universal service also requires a thoughtful approach to affordability. There will be no account setup fee or charge of any type for those who sign up for service while construction is ongoing in the project area. There are no contracts to force the commitment of a potentially expensive balance of contract payment. The business plan for Firefly allows low rates to be offered throughout the service area, residential rates are offered at \$49.99/mo for 100 Mbps and \$79.99/mo for 1000 Mbps. In the proposal, Firefly is the service provider for all locations and is active in the FCC ACP program. Firefly intends to pursue all other options for support and assistance for those who are challenged to afford universal broadband access, which will include the base price package. This project does not just approach universal broadband access from a construction standpoint, but also includes digital equity and inclusion components, which are essential to universal access.

When this project is complete, all 13 counties in the Firefly service area, including the 11 counties in this project plus Nelson and Albemarle counties, will have service available at a minimum of 100/20 level for every home and business. From Richmond west to the Blue Ridge Parkway, from Lynchburg to the Culpeper County line, Firefly will have service available to more than 110,000 rural locations with speeds of up to one gigabit per second, providing universal broadband availability in these areas.

The region will be served by a sustainable, and easily upgradable and expandable network that can grow to meet the broadband needs of the region for decades ahead. Yes, this project meets the goal of providing universal service access across an entire region of the Commonwealth.

11.

Application to DHCD Submitted through CAMS

Thomas Jefferson Planning District Commission

TJPDC/Firefly - VATI 2024

Project Readiness

Describe the current state of project development, including but not limited to: planning, preliminary engineering, identifying easements/permits, status of MOU or MOA, and final design. Prepare a detailed project timeline or construction schedule, identifying specific tasks, staff, contractor(s) responsible, collection of data, etc., and estimated start and completion dates. Applicants are encouraged to extensively discuss, where applicable, easements relating to railroad crossings, federally-owned lands and parks, partnerships with the Virginia Department of Transportation, and mobile home parks. Applicants must include Memorandums of Understanding (MOUs) or Memorandums of Agreement (MOAs) between applicants (drafts are allowable). Label Attachments: Attachment 7 – Timeline/Project Management Plan; Attachment 8 – MOU/MOA between Applicant/Co-Applicant; (up to 10 points)

Answer:

This Firefly project is an extension and continuation of the regional fiber optic network buildout with which it has been associated since 2018, and it includes the large VATI 2022 project which is already making connections in several areas. Through partnerships with its parent company, CVEC, plus other utility partners, Firefly has been involved with projects building in excess of 1,000 miles of fiber per year in recent years with plans for that pace to continue for two more years. This VATI 2024 project will expand that network into unserved areas, providing an efficient and cost-effective solution for providing universal coverage.

The project team is in place. Firefly has partnered with Dominion Energy and Rappahannock Electric Cooperative (REC) for construction in their electric service territories. Firefly also has developed business relationships with Appalachian Power (APCo) for sharing of data and coordination of make-ready construction. Firefly intends to use the same team of Conexon and S&N Communications who have worked on the CVEC project. Conexon will provide fiber design and contract management and S&N performs construction overhead and underground. Graybar will provide materials and materials management services as they have for CVEC and REC in the ongoing fiber construction projects.

The planning for the project is underway. Firefly has received electric facilities data from each utility to perform the complete design and planning for the buildout. Preliminary project planning is complete to help develop cost estimates.

In the Dominion Energy service area in Cumberland, Goochland and Powhatan counties, Firefly and Dominion will use the Dominion Middle Mile program, made possible by the state utility leverage legislation. Dominion will own and maintain the fiber it builds on its system, leasing it to Firefly for use in extending retail internet access. Firefly will build fiber from the demarcation point on the Dominion poles, extending Firefly-owned facilities to homes and down shorter taps to assure all locations in the Dominion service area of the project have broadband access. Firefly is providing access point requests and Dominion will soon begin internal design processes. Dominion plans to file for SCC approval if an announcement of a TJPDC-Firefly award is made in these areas. Dominion will use its own design firm and fiber contractors which will bring more resources into the project. The Dominion construction of the backbone in these areas expedites the build and limits Firefly to only need data collection and construction for laterals and service drops.

The partnership agreement with REC declares REC will own the fiber and all outside plant assets except for communication huts and associated electronics, and Firefly will lease the facilities, maintain them, and provide retail internet service. In the REC service territory, REC is managing the make-ready engineering and make-ready construction. Firefly will oversee the design and construction of the fiber plant. Preliminary system planning is complete. Due to the good quality of the REC mapping data, no field data collection is required, saving several thousand dollars per mile. The Firefly-REC partnership will assist in bringing

Application to DHCD Submitted through CAMS

Thomas Jefferson Planning District Commission

TJPDC/Firefly - VATI 2024

universal coverage to Goochland, Greene, Louisa and Madison counties.

For APCo electric service territory, APCo will be responsible for all make-ready engineering and make-ready construction. Firefly will build its fiber on the APCo facilities in the telecommunications space. Firefly has already established business processes with APCo for construction over the past several years. The Amherst County locations in this application will be an expansion and continuation of ongoing work in the APCo electric service territory.

The major materials of the project have been secured, with a planned continuation of monthly deliveries of fiber optic cable, conduit, enclosures, pedestals, optical taps and in home electronics to allow a continuation of the present pace of construction. The project has the advantage of being fed from existing communications huts. The associated routers and electronics in the huts will require expansion, but the network nodes that are built in the huts will already be in place.

A preliminary review of potential permits has been completed. Routine permits for working in the VDOT right of way will be secured. A permit to allow construction on the existing powerlines through the National Forest will be required in Madison. Firefly has recently developed enhanced relationships to expedite railroad permitting where necessary. Firefly has successfully managed the acquisition and administration of permits on its projects for the last five years and is comfortable that permits will not be a cost or schedule impediment to the construction of this project.

A project plan and timeline has been developed and is included in Attachment 7 – Timeline Project Management Plan. The timeline shows a 24-month construction period; we request that DHCD staff waive the 18-month completion requirement given the need to coordinate the project with the timeline for the VATI 2022 project, as well as to allow Dominion adequate time for its process which includes an application and review by the Virginia State Corporation Commission.

Firefly and the Thomas Jefferson Planning District (TJPDC) have a draft MOU for this VATI 2023 project based on the final agreement for the VATI 2022 project. Similarly, Firefly and TJPDC have existing agreements with each of the counties included in this project and intend to execute additional agreements for the VATI 2024 project. A template based on the current agreements among the parties is included, see Attachment 8. The counties have provided commitment letters indicating their commitment to funding or joining the project as a partner; these documents are included in the funding sources section of the application in Attachment 10 – Documentation of Matching Funding.

Application to DHCD Submitted through CAMS

Thomas Jefferson Planning District Commission

TJPDC/Firefly - VATI 2024

12. Has the applicant or co-applicant received any VATI grants? If so, provide a list of these grants, with a detailed summary of the status of each.

Answer:

VATI 2022 Thomas Jefferson Planning District and Firefly Fiber Broadband

The applicant and co-applicant, the Thomas Jefferson Planning District and Firefly Fiber Broadband, had a successful 2022 VATI grant for \$79 million. The project includes 4,000 miles of fiber and 36,000 passings. The contract for the 2022 VATI award was signed on 8/22/2022.

The co-applicant, Firefly Fiber Broadband, has successfully received two VATI awards in combination with its parent company Central Virginia Electric Cooperative (CVEC):

VATI 2019 Albemarle County and CVEC/Firefly

Albemarle Broadband Authority (ABBA) received a Virginia Telecommunication Initiative grant for \$301,748. The project with CVEC/Firefly added fiber to the Midway and west area of Albemarle County. 540 passings were completed after one extension. The project was completed within budget and closeout reports have been filed with DHCD.

VATI 2019 Fluvanna County and CVEC/Firefly

CVSI VATI Grant in Columbia- The grant was for \$641,967, included 82 miles of fiber and 569 passings. This project was completed within budget and the actual take rate exceeded the 40% take rate projected in the VATI application. All closeout reports have been filed.

13. Matching funds: Complete the funding sources table indicating the cash match and in-kind resources from the applicant, co-applicant, and any other partners investing in the proposed project (VATI funding cannot exceed 80 percent of total project cost). In-kind resources include, but are not limited to: grant management, acquisition of rights of way or easements, waiving permit fees, force account labor, etc. Please note that a minimum 20% match is required to be eligible for VATI, the private sector provider must provide 10% of the required match. If the private co-applicant cash match is below 10% of total project cost, applicants must provide financial details demonstrating appropriate private investment. If applicants and co-applicants are seeking to include prior expended funds as matching funds, Attachment 11 must be completed. Label Attachments: Attachment 9 - Funding Sources Table; Attachment 10 - Documentation of Match Funding; Attachment 11 - Prior Expended Match Form

Answer:

Per Attachment 9, Funding Sources table total county match funding totals \$1,330,000.

Private funding totals \$36,495,981. It is broken down further in the creation of the Derivation of Costs, and the totals for each utility that will finance a portion of the project as:

Dominion Energy (middle mile program)	\$17,450,000
Rappahannock Electric Cooperative (Firefly partnership and lease)	\$8,003,814
Firefly Fiber Broadband	\$11,042,167
TOTAL	\$36,495,981

Each of the utilities that will provide financing for a portion of the buildout have commitment letters included in this attachment. Firefly will utilize internally generated cash for labor on installations, marketing and project management plus a \$9.2 million CoBank loan to fund construction costs. The CoBank letter documenting their support is filed under the Firefly FOIA exemption request.

Application to DHCD Submitted through CAMS

Thomas Jefferson Planning District Commission

TJPDC/Firefly - VATI 2024

14. Leverage: Describe any leverage being provided by the applicant, co-applicant, and partner(s) in support of the proposed project. (up to 10 points)

Answer:

In order to build out a 5,500-mile (and soon to be 8,000-mile) fiber network, Firefly has secured funding sources, partners and programs to provide universal gigabit speed internet coverage to every rural location in central Virginia. Each expansion has been strategically planned to optimize the use of previous construction, as well as other funding sources and opportunities.

This application leverages the existing 4,000-mile network built on Central Virginia Electric Cooperative facilities (CVEC), the parent company for Firefly Fiber Broadband. The project also leverages the construction of the network funded in part by the VATI 2022 grant award to TJPDC and Firefly, extending that network further into rural areas to assure every unserved location is reached. If it had not been for the work and commitments in the VATI 2022 program, the proposed service area in this application could not be reached economically.

The project also leverages the fiber built using CARES funding in 2020-22. It leverages areas built with support from the FCC Connect America and Rural Digital Opportunity auctions, which brought fiber to the edges of these unserved areas.

The project also leverages the RUS ReConnect grant from the second round of the federal ReConnect program, which extended fiber through Cumberland, Goochland and Powhatan counties. This fiber will serve as the backbone and light source for service areas proposed in this project.

The Firefly partnership with Rappahannock Electric Cooperative (REC) is critical to the ability to reach areas of Goochland, Greene, Louisa and Madison counties. Fiber run alongside the electric facilities expedites construction in these areas.

The ability to use the Dominion Energy Middle Mile program not only makes the project feasible, it accelerates construction by bringing an additional design firm and construction company onto the same project to work in parallel paths with Firefly contractors.

This project uses these other programs and funding mechanisms to create a cost-effective, technically-feasible project to deliver gigabit speed broadband access to some of the most rural and hard-to-reach areas in central Virginia.

15. Communications Plan: Describe efforts to keep the public informed of project progress and the broadband adoption plan.

a. Explain how you plan on communicating the project status to stakeholders, including but not limited to County leadership, project areas residents, etc. (Up to 10 points)

b. Explain how you plan to promote customer take rate, including marketing activities, outreach plan, and other actions to reach the identified serviceable units within the project area. Provide the anticipated take rate and describe the basis for the estimate. (up to 10 points)

c. Describe any digital literacy efforts to ensure residents and businesses in the proposed project area sufficiently utilize broadband. Please list any partnering organizations for digital literacy, such as the local library or cooperative extension office.

Answer:

Application to DHCD Submitted through CAMS

Thomas Jefferson Planning District Commission

TJPDC/Firefly - VATI 2024

a. TJPDC and Firefly plan to communicate regularly with leadership of the 11 counties and prepare bi-annual formal presentations on project and financial progress.

TJPDC staff will:

- Coordinate with Firefly to hold bi-annual meetings with all stakeholders, including county partners, Dominion Energy, and REC.
- Provide regular, informal communication for all stakeholders associated with the VATI project. This includes phone calls, e-mail correspondence, written progress updates, etc. Staff will respond to project inquiries, press requests, and any FOIA requests, as necessary.
- Provide monthly project updates to the TJPDC Commissioners during their regular meetings and present bi-annual formal presentations on project and financial progress.
- Communicate regularly with county leadership on invoices, required documentation, and associated reports.
- Maintain a website to provide information about the project and links to Firefly's website information.
- Communicate via eNewsletter and social media posts.
- Provide regular communication within the project management team.

Firefly will use a similar communication and marketing approach to the one it used in partnership with Central Virginia Electric Cooperative (CVEC) for the VATI 2022 grant areas. Potential customers will receive direct mailings that detail phases of the fiber build, invite them to town hall meetings, and remind them to sign up for services. Mailings will come from REC or Firefly. Dominion Energy alerts residents in areas where they are building the middle mile and Firefly follows up with a series of letters and postcards to every household that can receive service. Firefly uses digital marketing (website, email, social media, ads) to reach potential customers. The full marketing plan can be found in 16b below.

b. Firefly anticipates a 50% (or higher) take rate based on the take rate that has occurred over the last five years in similar rural areas. Potential customers will receive mailings at their home that detail phases of the fiber build.

Firefly will use multiple methods to market service availability.

1. Direct mailings to alert residents of make-ready and fiber construction work in their service zone.
2. Targeted, paid social media ads on Facebook and Instagram to raise awareness - geofenced using our shapefile of the project area.
3. Google ads to ensure Firefly stays at the top of search engines results within our project areas.
4. Mailed invitation to residents in each service zone join a town hall meeting featuring staff who review timelines, Firefly offerings, and what to expect during installation. Attendees are also educated about ACP and how they find out if they qualify for the discount. Meetings will be held via Zoom and/or in-person.
5. The website and social media platforms are used to communicate updates to potential customers. This includes customer education, videos, and information regarding ACP and Lifeline programs and discounts.
6. Firefly trucks are designed with wraps to attract attention. Truck visibility allows for introduction of the Firefly brand and generates interest for those who have not previously signed up for service.
7. Participate in community events such as fairs and festivals in project areas to spread the word about the availability of the service and answer questions.
8. A "last chance" postcard will be mailed to every address in a construction area that has not pre-registered for service.

Application to DHCD Submitted through CAMS

Thomas Jefferson Planning District Commission

TJPDC/Firefly - VATI 2024

9. Firefly's website has been overhauled to show stakeholders and potential customers in which project area they reside, what phase of construction they are in, when connections are expected to begin, a map of the project area, and view the most recent correspondence that has been sent to their area. Website updates are made weekly to capture the most-up-to-date information.

c. The expansion of broadband availability does not automatically lead to broadband adoption and there will be households that do not connect at first. Firefly has a take rate well over 50% in the past 18 months, but there are still households that are not sure how to take advantage of the new broadband access. Digital literacy is a concern among many of our county partners, libraries, and school superintendents. TJPDC and Firefly will leverage these partnerships to educate residents about service availability and the advantages of fiber-to-the-home Internet.

Firefly is a proud participating member of the Digital Access + Literacy Workgroup, a category of the Community Health Improvement Plan (CHIP) for Blue Ridge Health District serving the counties of Albemarle, Greene, Nelson, Fluvanna, Louisa and the city of Charlottesville. Other partners on the workgroup include representatives from Jefferson Area Board for Aging (JABA), Jefferson-Madison Regional Libraries (JMRL), Louisa County Commission on Aging, Thomas Jefferson Adult Career Education (TJACE@PVCC), and social services.

In addition to the activities hosted by JMRL for residents in the counties they serve, other counties in the project area offer digital literacy opportunities. For example, Cumberland County offers technology classes at its library, as well as assistance from a librarian to help with basic issues. The Goochland County Library offers webinars on how to navigate library online resources. They offer streaming channels for kids, Kanopy for adults, and online classes for sign language and other topics. Their DayByDayVA Family Literacy Calendar includes links to online resources.

The Literacy Council in Madison County offers adult classes in basic computer skills including: learning keyboard, how to use the Internet, setting up an e-mail account, how to use online calculators (for GED prep), applying for jobs online and how to save and send documents electronically.

Amherst County Public Schools host virtual webinars for parents to learn about keeping their children safe online, a topic that is most important as more and more children gain internet access at home.

16. Project Management: Identify key individuals who will be responsible for the management of the project and provide a brief description of their role and responsibilities for the project. Present this information in table format. Provide a brief description of the applicant and co applicant's history and experience with managing grants and constructing broadband communication facilities.

Answer:

Thomas Jefferson Planning District Commission (Applicant)

Christine Jacobs

Executive Director

Oversight of project

David Blount

Deputy Director / Legislative Director

Application to DHCD Submitted through CAMS

Thomas Jefferson Planning District Commission

TJPDC/Firefly - VATI 2024

Oversight of project

Lori Allshouse

VATI Program Director

Point of Contact Administration of Grant Reporting

Central Virginia Services, Inc. (Co-applicant)

Gary Wood

President and CEO

Oversight of project

Bruce Maurhoff

Executive VP & COO

Oversight of construction activities

Tina Mallia

Executive VP & CFO

Oversight of finances, accounting, and grant fund compliance

Dennis Reece

Director of Engineering & Operations

Project Manager

Rappahannock Electric Cooperative (Partner)

John Hewa

President and CEO

Oversight for the fiber project in REC footprint

Mark Ponton

Director Broadband and Fiber Services

Lead's REC's activities and primary liaison to project team

Application to DHCD Submitted through CAMS

Thomas Jefferson Planning District Commission

TJPDC/Firefly - VATI 2024

Peter Muhoro

Chief Strategy, Technology & Innovation Officer

Project executive sponsor

Dominion Energy (Partner)

Ed Diggs

Manager, Electric Distribution Grid Solutions, Rural Broadband Program

Lead's Dominion's activities and primary liaison to project team

Matt Hartwell

Manager, Electric Distribution Grid Solutions, Rural Broadband Program

Project liaison

Amherst County (Partner)

Jeremy Bryant

County Administrator

Grant and program oversight

Appomattox County (Partner)

Susan Adams

County Administrator

Grant and program oversight

Buckingham County (Partner)

Karl Carter

County Administrator

Grant and program oversight

Campbell County (Partner)

Frank Rogers

Application to DHCD Submitted through CAMS

Thomas Jefferson Planning District Commission

TJPDC/Firefly - VATI 2024

County Administrator

Grant and program oversight

Cumberland County (Partner)

Derek Stamey

County Administrator

Grant and program oversight

Fluvanna County (Partner)

Eric Dahl

County Administrator

Grant and program oversight

Goochland County (Partner)

Vic Carpenter

County Administrator

Grant and program oversight

Greene County (Partner)

Cathy Shafrik

County Administrator

Grant and program oversight

Louisa County (Partner)

Christian Goodwin

County Administrator

Grant and program oversight

Madison County (Partner)

Jonathon Weakley

Application to DHCD Submitted through CAMS

Thomas Jefferson Planning District Commission

TJPDC/Firefly - VATI 2024

County Administrator

Grant and program oversight

Powhatan County (Partner)

Bret Shardein

County Administrator

Grant and program oversight

Grant and program oversight

The Thomas Jefferson Planning District Commission (TJPDC), the applicant, and the partner county staff have pursued, been awarded, and successfully administered numerous grants at the federal and state level. They are familiar with the requirements of the VATI program and stand ready to oversee an award for this project. The TJPDC is led by Christine Jacobs, David Blount, and Lori Allshouse.

Christine Jacobs is the Executive Director of the Thomas Jefferson Planning District Commission (TJPDC), where she is responsible for overseeing the financial, programmatic, and administrative functions of the organization.

David Blount has been with the Thomas Jefferson Planning District since 1999, where he previously served as Legislative Liaison and presently is serving as Deputy Director and Director of Legislative Services.

Lori Allshouse currently serves as TJPDC's Director of the VATI 2022 Program and has over 20 years' experience in federal, state, and local grant administration, compliance, and budgeting.

The Firefly team has proven an ability to build fiber fast, with its present project constructing 30 miles of fiber weekly. The team includes the design and project management from Conexon which is a national leader. The fiber contractor is S&N Communications, a Virginia company headquartered in Louisa, VA which has a long and successful record of working on large projects with Google, Verizon, and other major communications companies.

Gary Wood is the President and CEO at Central Virginia Electric Cooperative (CVEC) & Central Virginia Services, Inc. (CVSI) dba Firefly Fiber Broadband (Firefly). Mr. Wood has served as CEO of the electric cooperative since 2008. Mr. Wood has overseen the development and build of the system-wide fiber network constructed on CVEC infrastructure. The \$130 million project was completed one year earlier than expected.

Application to DHCD Submitted through CAMS

Thomas Jefferson Planning District Commission

TJPDC/Firefly - VATI 2024

17. Project Budget and Cost Appropriateness

Budget: Applicants must provide a detailed budget that outlines how the grant funds will be utilized, including an itemization of equipment, construction costs, and a justification of proposed expenses. If designating more than one service area in a single application, each service area must have delineated budget information. For wireless projects, please include delineated budget information by each tower. Expenses should be substantiated by clear cost estimates. Include copies of vendor quotes or documented cost estimates supporting the proposed budget. Label Attachments: Attachment 12 – Derivation of Costs; Attachment 13 - Documentation of Supporting Cost Estimates. (up to 10 points)

Answer:

Firefly is presently in year five of an ongoing regional network buildout. Throughout our project, we have been fortunate to have the same team of design and contract administration consultant (Conexon), construction material supplier and manager (Graybar), telecommunications hut and consumer premises electronics suppliers (Juniper, Cisco and Calix), and construction contractor (S&N Communications). The project is worked as an ongoing construction project with regular orders weekly and monthly for materials, monthly and quarterly for electronics, and with work orders for labor issued under the same contract terms on a regular basis. The same team that has been involved since the start will build this VATI 2024 project. The estimates for the derivation of costs are based on our ongoing costs for construction with a small escalation for the anticipated increases we expect over the next two years.

After building more than 5,000 miles of fiber and connecting almost 26,000 accounts in the very same counties as the VATI 2024 proposal, Firefly has a very accurate idea of the costs for building in the REC, Dominion, AEP and Southside Electric Cooperative electric service territories. Costs include accurate estimates for make ready costs in AEP and REC areas, and for underground construction in the Dominion and SEC areas where make ready costs and timelines make underground the best choice. All necessary ancillary costs are included (permits, bonds, field data collection, etc). The project has been meticulously planned and the budget is an accurate reflection of the cost for Firefly to complete this work in the construction window from late 2024 through 2026.

A complete, unredacted copy of Attachment 13 - Documentation of Supporting Cost Estimates can be found with our Request for FOIA Exemption.

18. The cost benefit index is comprised of state cost per unit passed. Individual cost benefit scores are calculated and averaged together to create a point scale for a composite score. Provide the following:

- a. Total VATI funding request
- b. Number of serviceable units
(up to 125 points)

Answer:

The cost benefit index comprises state cost per unit passed. Individual cost benefit scores are calculated and averaged together to create a point scale for a composite score.

Provide the following:

- a. Total VATI funding request \$15,730,592
- b. Number of serviceable units 6,266

19.

Application to DHCD Submitted through CAMS

Thomas Jefferson Planning District Commission

TJPDC/Firefly - VATI 2024

Commonwealth Priorities (Up to 50 points)

Additional points will be awarded to proposed projects that reflect Commonwealth priorities. If applicable, describe the following:

- a. Businesses, community anchors, or other passings in the proposed project area that will have a significant impact on the locality or region because of access to broadband.
- b. Unique partnerships involved in the proposed project. Examples include electric utilities, universities, and federal/state agencies.
- c. Digital equity efforts to ensure low to moderate income households in the proposed project area will have affordable access to speeds at or above 100/20 mbps, include information regarding the internet service provider's participation in the Affordable Connectivity Program
- d. The co-applicant's efforts to mitigate supply chain constraints, including labor shortages and order-to-delivery delays on telecommunications materials required to construct broadband networks.
- e. The applicant's and co-applicant's efforts to promote broadband adoption, including, but not limited to: telehealth, smart farming, e-entrepreneurship, and distance learning.

Answer:

Due to the character limits of CAMS, the full response to Q.19 is posted as Attachment 20. An extremely abridged version is included here in this text box in CAMS to meet the word limit. Please see Attachment 20 for the full response.

1. The inclusion of 25 specific community anchor institutions spanning educational, healthcare, recreational, and civic organizations, underscores the comprehensive impact that improved broadband connectivity can have on these communities.

Amherst - food pantry, 2 preschools, high school field house, public school maintenance building, Virginia Center for the Creative Arts

Appomattox - community sports complex

Buckingham - 3 unserved locations on the campus of Buckingham County HS, including the office building and preschool.

Fluvanna - U.S. Post Office

Goochland – Goochland Free Clinic and Family Services, Camp T. Brady Saunders- Boy Scouts of America

Greene - youth center

Madison - Criglersville Mtn Museum, Rapidan Camp, Old Rag Mountain Rangers Station, Berry Hollow Trailhead, and Rose River Fire Rd. Internet service to trail heads and fire road entrances provides benefits to hikers and provides emergency communications for first responder services in areas without cell coverage.

Louisa - Louisa County HS

Application to DHCD Submitted through CAMS

Thomas Jefferson Planning District Commission

TJPDC/Firefly - VATI 2024

Additionally, over 400 unserved farms are in the proposed project area.

2. Firefly is partnering with REC and Dominion Energy, utilizing fiber optic assets they will own to deliver broadband service access in their electric territories. Firefly will also build fiber in coordination with Appalachian Power.

The 11 counties have collectively committed \$1,330,000 in matching funds to make broadband access available to every location in their county. Dollars aside, county partners have given support to provide demographics and publicize milestones for the project.

Several higher education facilities will benefit since many of their students, faculty and staff live in the project area that closely surrounds campus and will be able to enjoy distance learning: The University of Virginia, Longwood University, Hampden-Sydney College, Piedmont Virginia Community College, and Sweet Briar College.

3. Firefly goes above and beyond to help with the cost of the fiber drop to the premise by covering the cost of all fiber drops up to 2,500 feet. For low-to-moderate income (LMI) homes, Firefly covers the cost of the fiber drop entirely. The generous allowance for the fiber drop to all households and the commitment to build to all LMI households, regardless of the distance of the drop, ensures digital equity and that no homes are left behind due to exorbitant costs associated with building a fiber drop.

Firefly services are affordable. We offer two internet packages and one phone package for residential service: 100 Mbps at \$49.99/month and 1 Gbps at \$79.99/month. VoIP is \$34.99 (\$29.99 when bundled with internet). There is no fine print, no introductory rates, no contracts, no installation fee.

Devices are included at no additional charge to subscribers include a cutting-edge modem and router. Firefly offers 24/7 technical support via phone and chat, managed Wi-Fi to troubleshoot remotely, and a library of online resources on their website and YouTube channel. Firefly will launch a newsletter in 2024 that includes information about security, tech tips, etc.

Firefly encourages participation in the ACP and shares information about the program to social services partners, school principals and County officials and features information about ACP on their website, in literature and on social media. For current customers, ACP information is shared via email and bill messaging.

4. Firefly has a proven track record of successfully navigating supply chain issues by planning ahead for material needs and keeping ample stock of critical supplies on hand. Firefly contracts with Graybar, who specializes in supply chain management services, to operate storage facilities for Firefly and secures materials for the fiber build.

Firefly has partnered with its construction and installation contractors for five years and built solid relationships to ensure that the job is done with their labor force. Most contractors are local to our area and simply move from job to job across Firefly's service territory.

5. In addition to the outreach plan detailed in question 15, Firefly partners with area agencies to advance education, health, and commerce: Chambers of Commerce, Economic Development, schools, colleges and universities, Social Services, first responders, and local cooperative exchanges.

Application to DHCD Submitted through CAMS

Thomas Jefferson Planning District Commission

TJPDC/Firefly - VATI 2024

Firefly's participation in the BRHD Digital Access + Literacy Workgroup boosts awareness of and trust in Firefly, resulting in increased adoption of broadband services. The partnership directly reaches the elderly with JABA, low-to-moderate income families with social services, adults of all ages with PVCC, and all residents young and old who utilize local libraries for books and internet access with JMRL.

Broadband is needed for telehealth, especially in rural towns. Medical professionals can login at home and deliver remote medical services. Patients can access remote doctors for regular checkups and virtual visits for illnesses. New medical devices, such as pacemakers, require reliable broadband connections for daily uploads of health data.

Firefly serves public safety institutions. Transmitting emergency information quickly with reliable broadband slashes response time and literally saves lives.

Firefly serves many small businesses who benefit from internet access for the first time in a rural area. Firefly works with new startups and all businesses to assure business level services for internet connections and VoIP telephone are reliable and affordable to support their startup efforts.

Distance learning is critical in rural areas. Students and faculty benefit from being able to attend class virtually and this new project will bring that option to thousands more locations.

Internet improves production and efficiency for farms and agribusinesses. Working with local Farm Bureaus and agribusiness organizations, Firefly will use this project to encourage faster adaptation of smart farming techniques.

Application to DHCD Submitted through CAMS

Thomas Jefferson Planning District Commission

TJPDC/Firefly - VATI 2024

20. Additional Information

Please attach any letters of support from stakeholders. If the applicant is not a locality(s) in which the project will occur, please provide a letter of support from that locality.

Attachment 14 – Letters of Support.

Provide the two most recent Form 477 submitted to the FCC, or equivalent, as well as point, polygon, and, for wireless providers, RSSI shapefiles for the project area **in .zip file form**. With attachments 17 through 20, attach any other information that the applicant desires to include. Applicants are limited to four additional attachments.

Label Additional Attachments as:

- a. Attachment 15 – Two most recent Form 477 submitted to the FCC or equivalent
- b. Attachment 16 - Point and Polygon shapefiles, in.zip file form, showing proposed passings and project area
- c. Attachment 17 - For wireless applicants: shapefiles, in .zip file form, indicating RSSI projections in the application area
- d. Attachment 18 – XXXXXXXX
- e. Attachment 19 – XXXXXXXX
- f. Attachment 20 – XXXXXXXX

Answer:

Attachment 18 - Firefly Performance

Attachment 19 - Why This Project Should be Funded in This Round of VATI

Attachment 20 - Commonwealth Priorities Expanded Version

Attachments:

Map(s) of project area, including proposed infrastructure

Attachment1ProjectAreaMap12182023101714.pdf

Documentation of Federal Funding (CAF/ACAM/USDA/RDOF, etc...) in and/or near proposed project area.

Attachment2DocumentationofFederalFundingArea12182023101753.pdf

Application to DHCD Submitted through CAMS

Thomas Jefferson Planning District Commission

TJPDC/Firefly - VATI 2024

Documentation that proposed project area is unserved based on VATI criteria

Attachment3DocumentationUnservedAreaVATICriteria1219202320019.pdf

Timeline/Project Management Plan

Attachment7TimelineProjectManagementPlan1219202315847.pdf

MOU/MOA between applicant/co-applicant (can be in draft form)

Attachment8MOUMOAbetweenApplicantCoApplicant12182023113754.pdf

Documentation of Supporting Cost Estimates

Attachment13DocumentationofSupportingCostEstimates1219202325800.pdf

Letters of Support

Attachment14LettersofSupport12192023123448.pdf

Two most recent Form 477 submitted to the FCC or equivalent

Attachment15TwomostrecentForm477submittedtotheFCCorequivalent12182023105503.pdf

Point and Polygon shapefiles, in.zip file form, showing proposed passings and project area

Attachment16PointandPolygonShapefiles12182023105421.zip

Optional

Attachment18FireflyPerformance12182023111253.pdf

Optional

Attachment19WhyThisProjectShouldBeFundedinThisRoundofVATI1219202320209.pdf

Optional

Attachment20CommonwealthPrioritiesExpandedVersion12182023110509.pdf

Documentation of Match Funding

Attachment10DocumentationofMatchFunding12192023123509.pdf

Application to DHCD Submitted through CAMS

Thomas Jefferson Planning District Commission

TJPDC/Firefly - VATI 2024

Derivation of Cost/Project Budget (Use template provided)

Attachment12DerivationofCosts1219202340256.pdf

Funding Sources Table (Use template provided)

Attachments9FundingSourceTable1219202340248.pdf

Passings Form (Use template provided)

Attachment4PassingsForm1219202323559.pdf

Documentation of RDOF awarded area in VATI project Area (Use template provided)

Attachment5RDOFAwardedAreasIncludedinVATIApplication12182023102433.pdf

Notes:

The Department of Housing and Community Development (DHCD) is in an excellent position to assure every location in Virginia has access to broadband access. With the combination of the state funds for Virginia Telecommunications Initiative (VATI) 2024 plus the upcoming federal BEAD funding distribution in 2024, there are adequate grant funds to fully achieve the ambitious goal of universal access. To optimize the efficiency of the application of those funds, DHCD has indicated it reserves the right to make decisions on which applications are the best fit for each funding source. We respectfully request that this Thomas Jefferson Planning District Commission (TJPDC)/Firefly application for VATI 2024 is to be funded in this round from the state funds for three primary reasons - the impact to cost, efficiency of resources, and timing.

VATI 2024

Supplemental Application Question

Applicant: Thomas Jefferson Planning District Commission

Co-applicant: Firefly

Project Name: TJPDC/Firefly - VATI 2024

The question below is question e. from the Commonwealth Priorities section of the 2024 Virginia Telecommunication Initiative (VATI) Guidelines. Please answer the question using this form and email to VATI@dhcd.virginia.gov.

Commonwealth Priorities

20. Additional points will be awarded to proposed projects that reflect Commonwealth priorities. If applicable, describe the following:

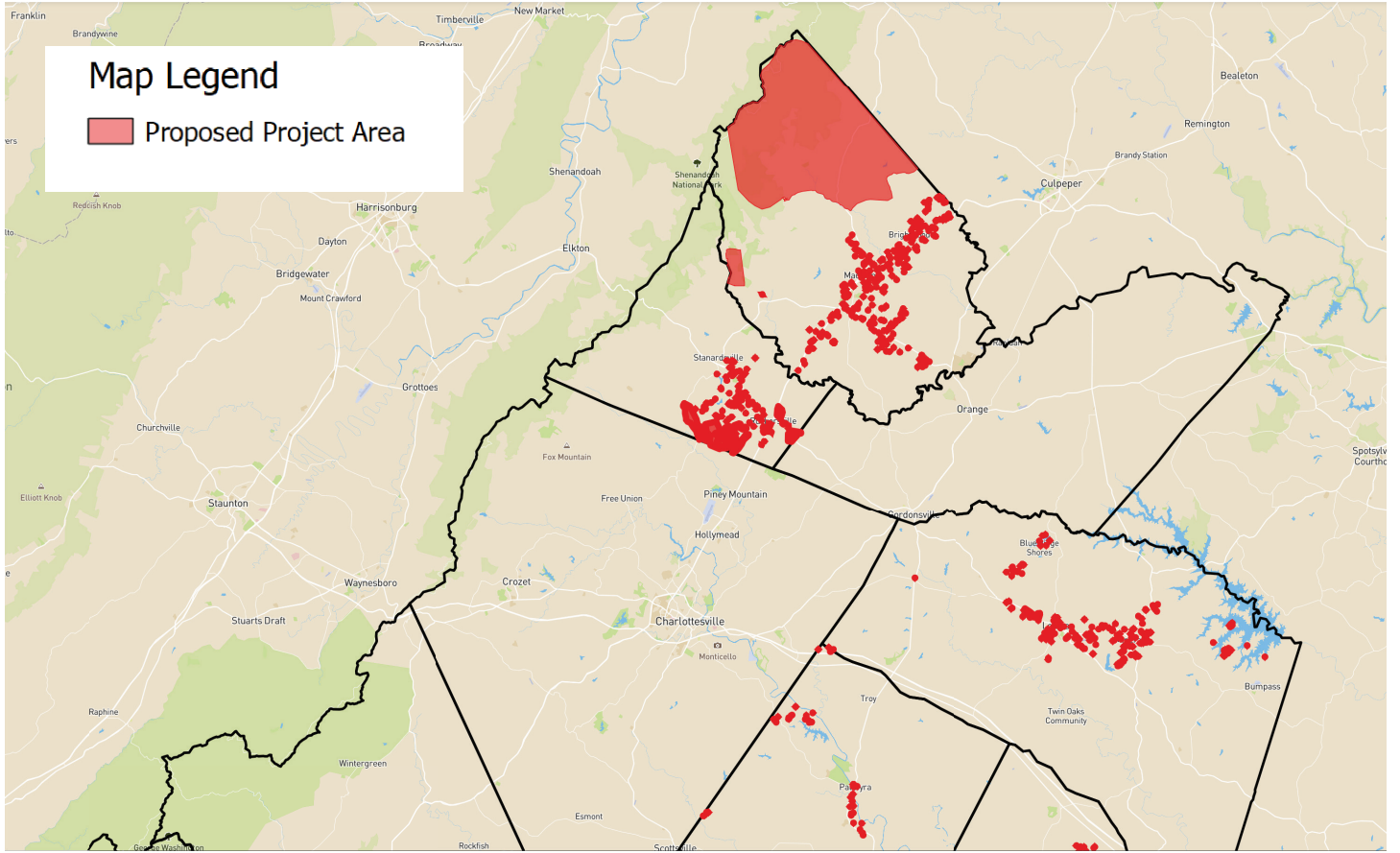
e. The co-applicant's effort to mitigate costs and delays that may be associated with make-ready and other permitting requirements anticipated for network deployment.

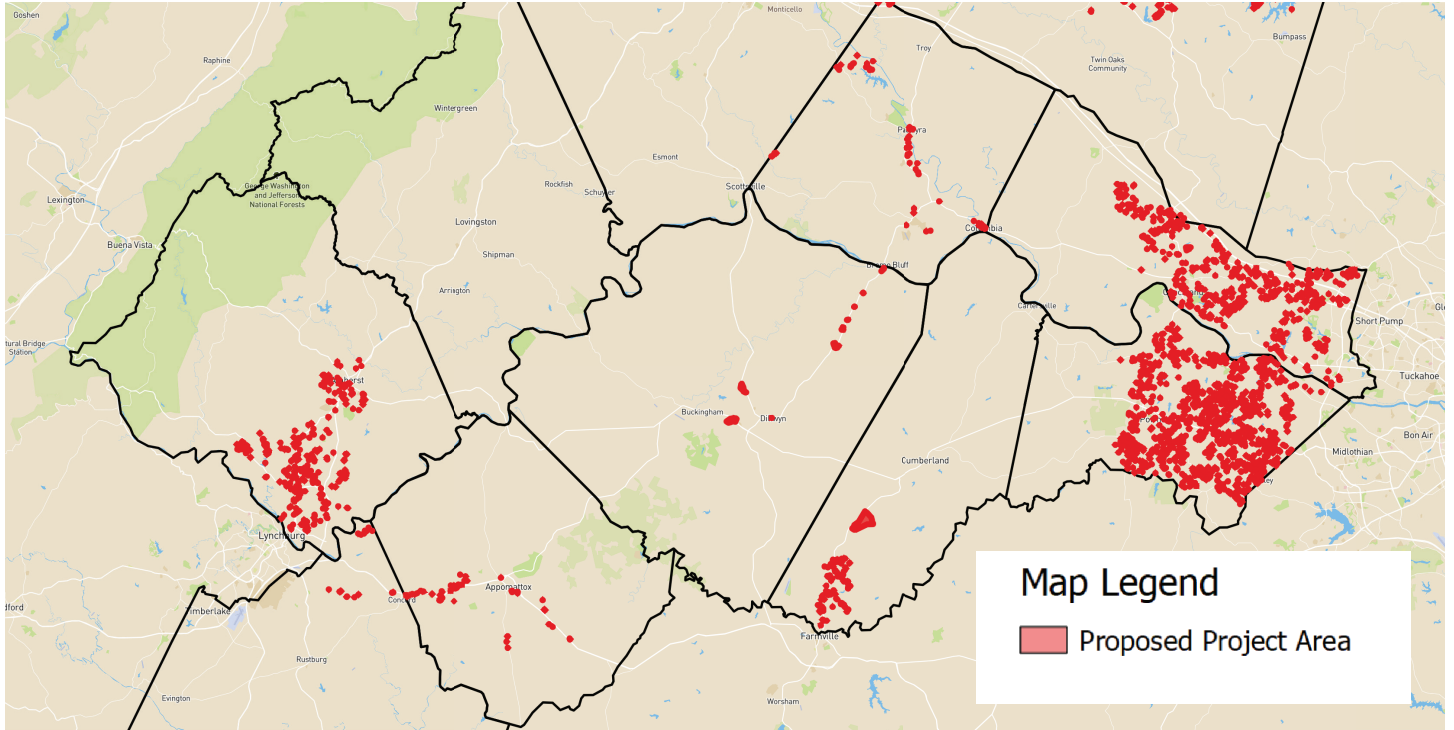
Firefly has a long and successful history of overcoming challenges of every type to stay on pace with fiber construction. Make ready and permitting are two of our success stories.

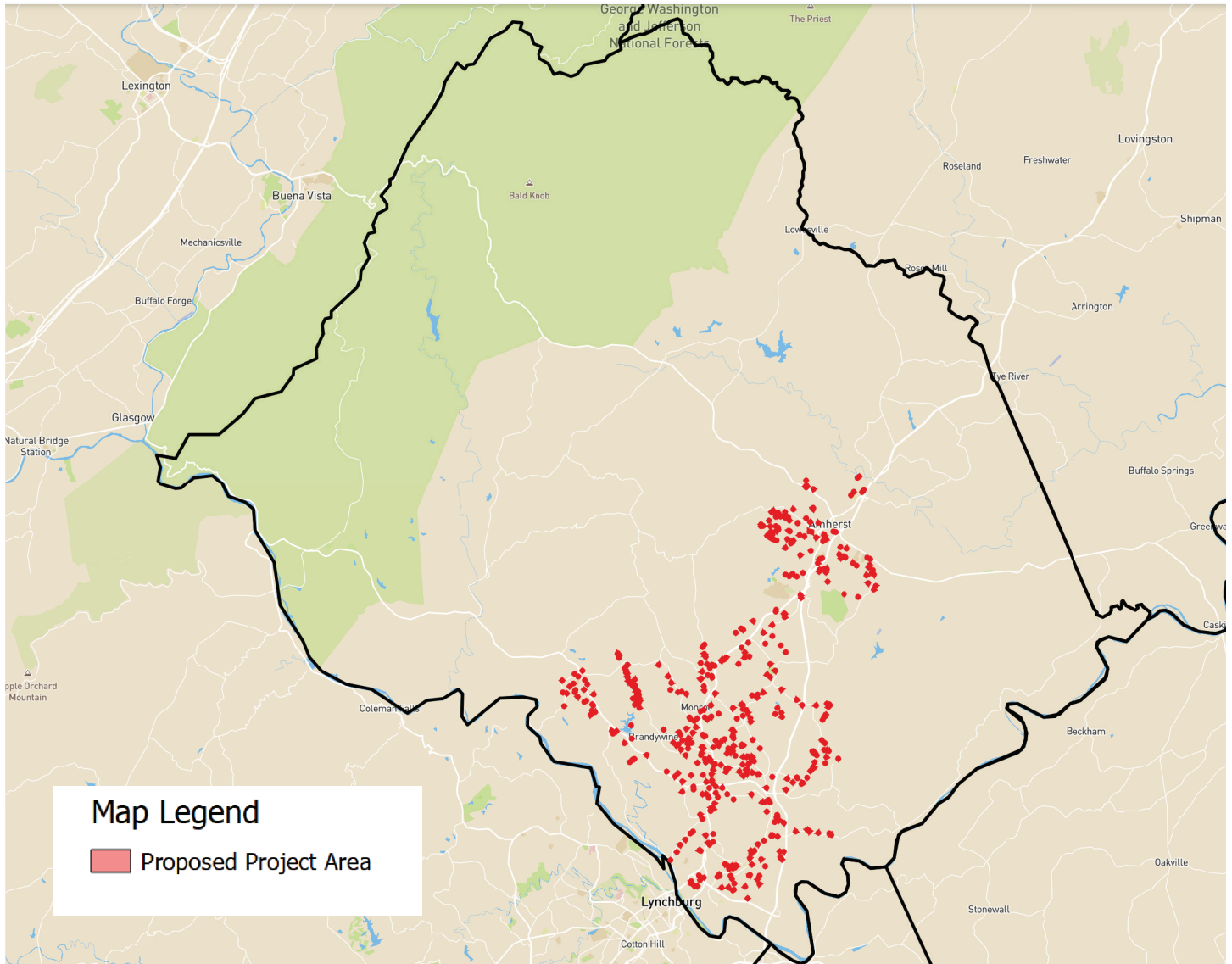
For make ready construction, Firefly intends to maintain ongoing relationships with Rappahannock Electric Cooperative and AEP. Firefly has worked closely with both companies for over 18 months to establish the necessary planning, logistics, handoffs, and coordination to allow construction to continue at an aggressive pace of about 25 miles per week between the two areas. There are 24 make ready crews from multiple contractors assisting and both companies supplement with in house crews occasionally when available.

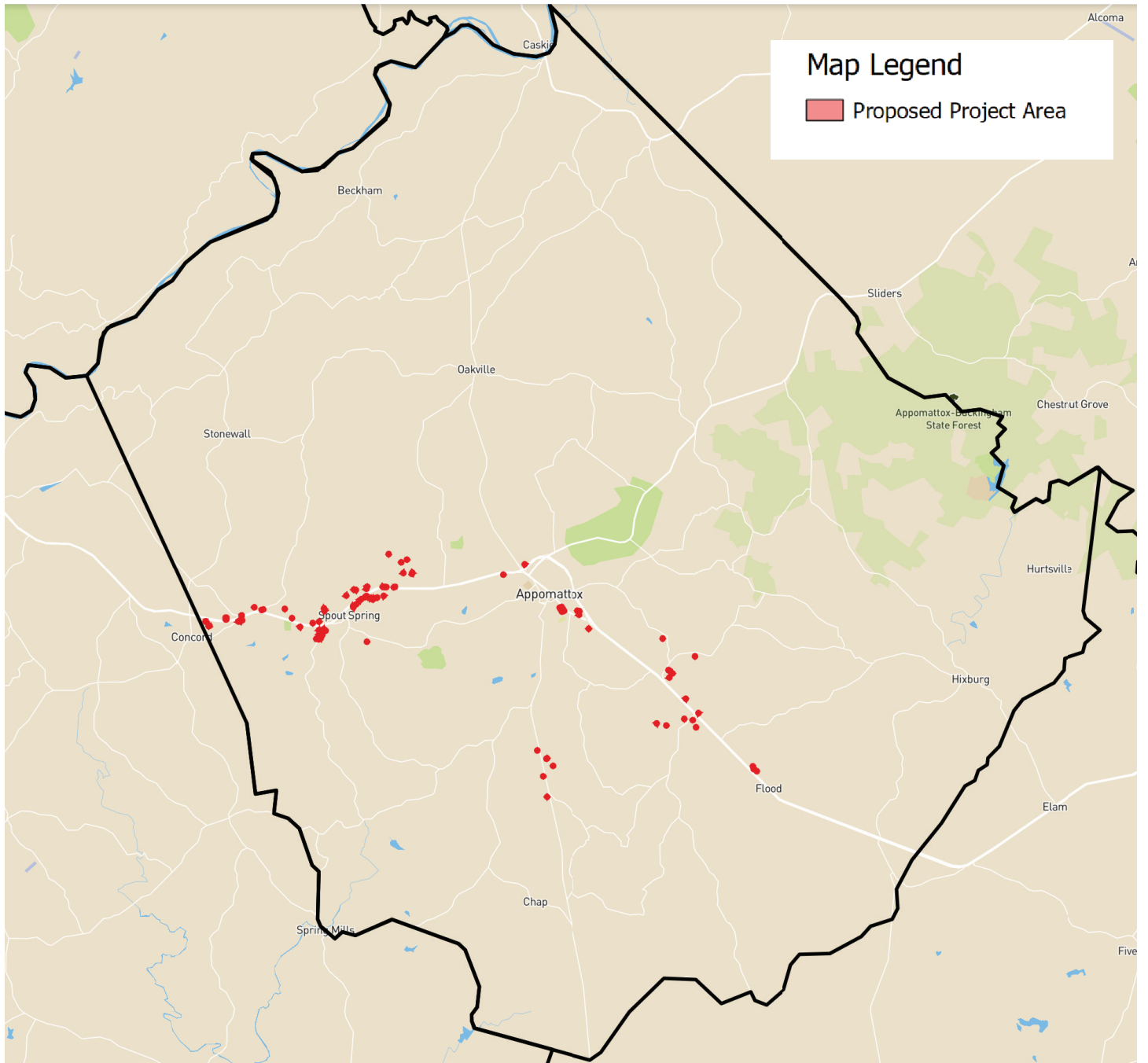
Weekly meetings with REC and biweekly meetings with AEP allow for continuous exchange of information and updates to any known changes in schedules, priorities, etc. Firefly has helped find additional resources for everything from make ready engineering to make ready construction and vegetation management. A project this size requires focus on the every day logistics combined with a nimbleness to alter schedules and shift crews when issues such as property access, vegetation clearing, or material or equipment availability affect planned schedules.

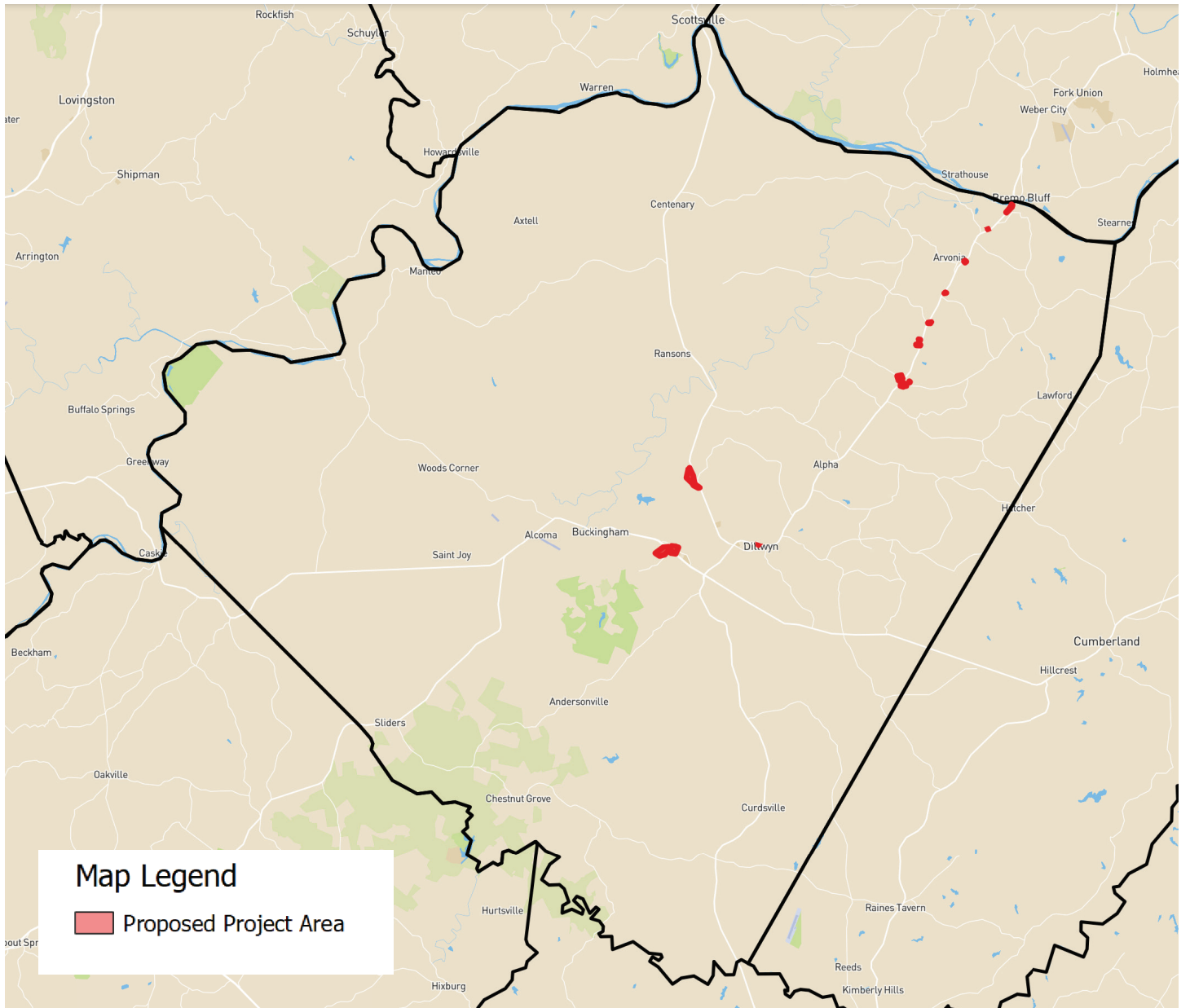
Firefly has again developed relationships to facilitate all permitting. Recent success includes completing 13 Norfolk Southern crossings in the last 6 weeks. Firefly has worked to mitigate impacts of the delays that occur and work ahead to avoid delays where possible.

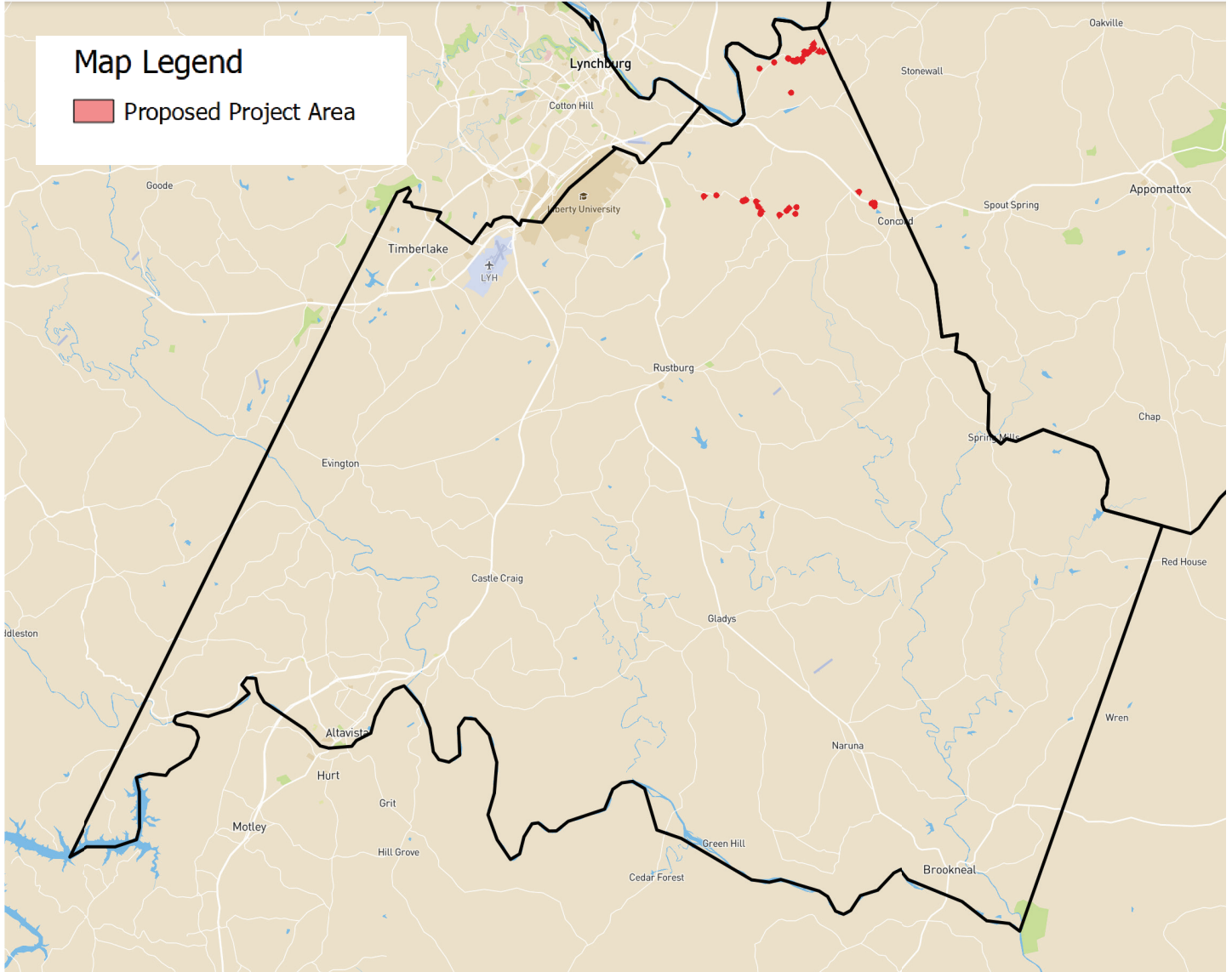


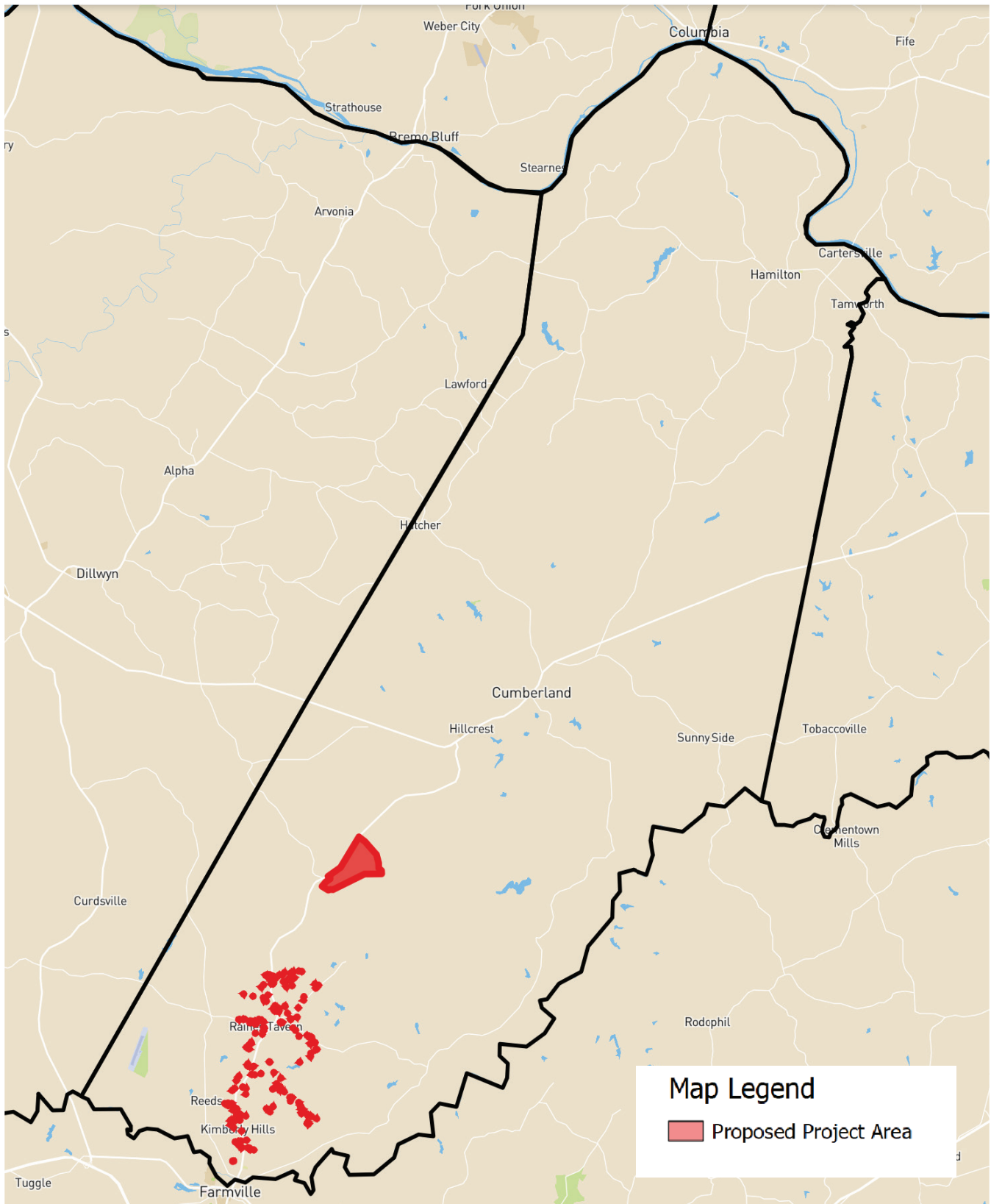


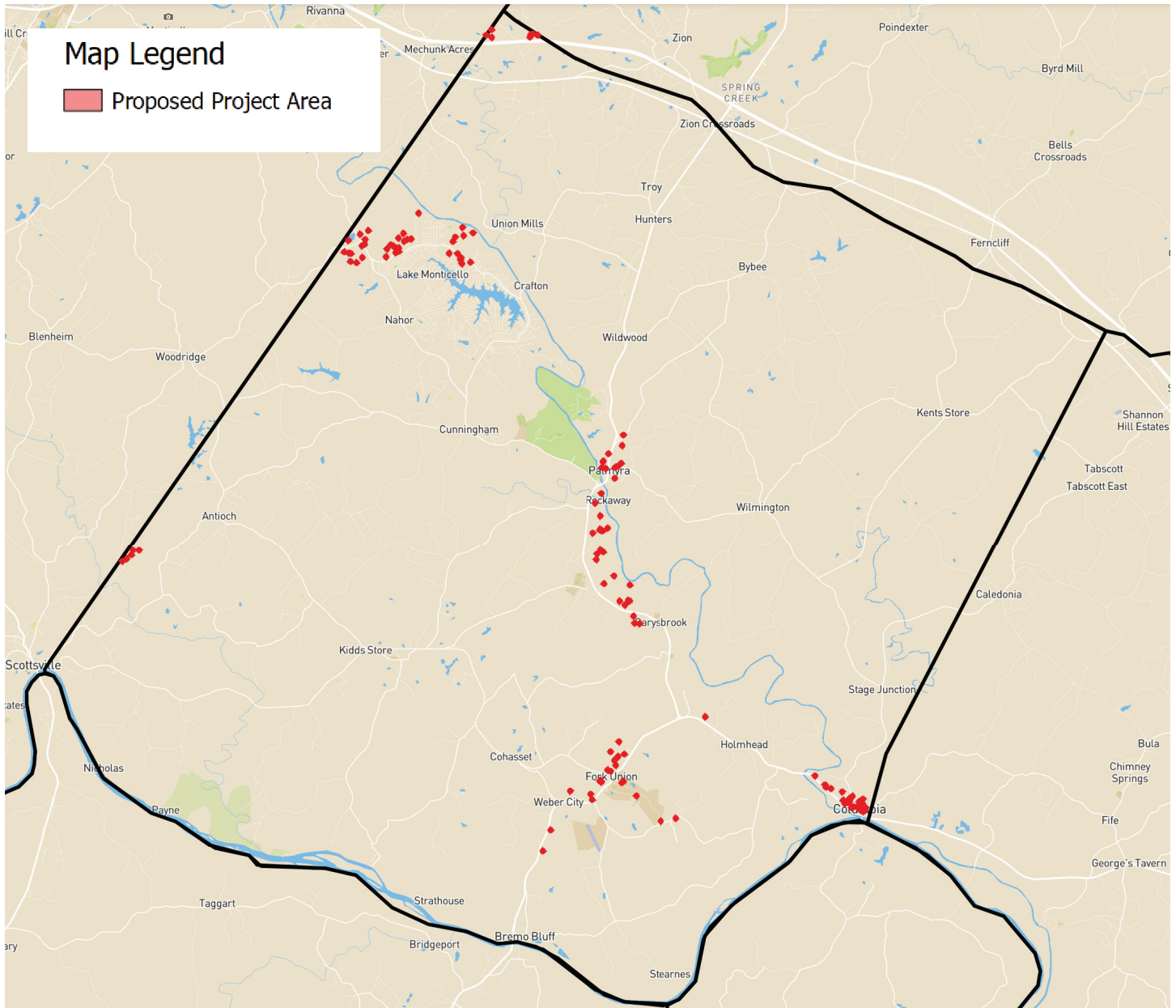


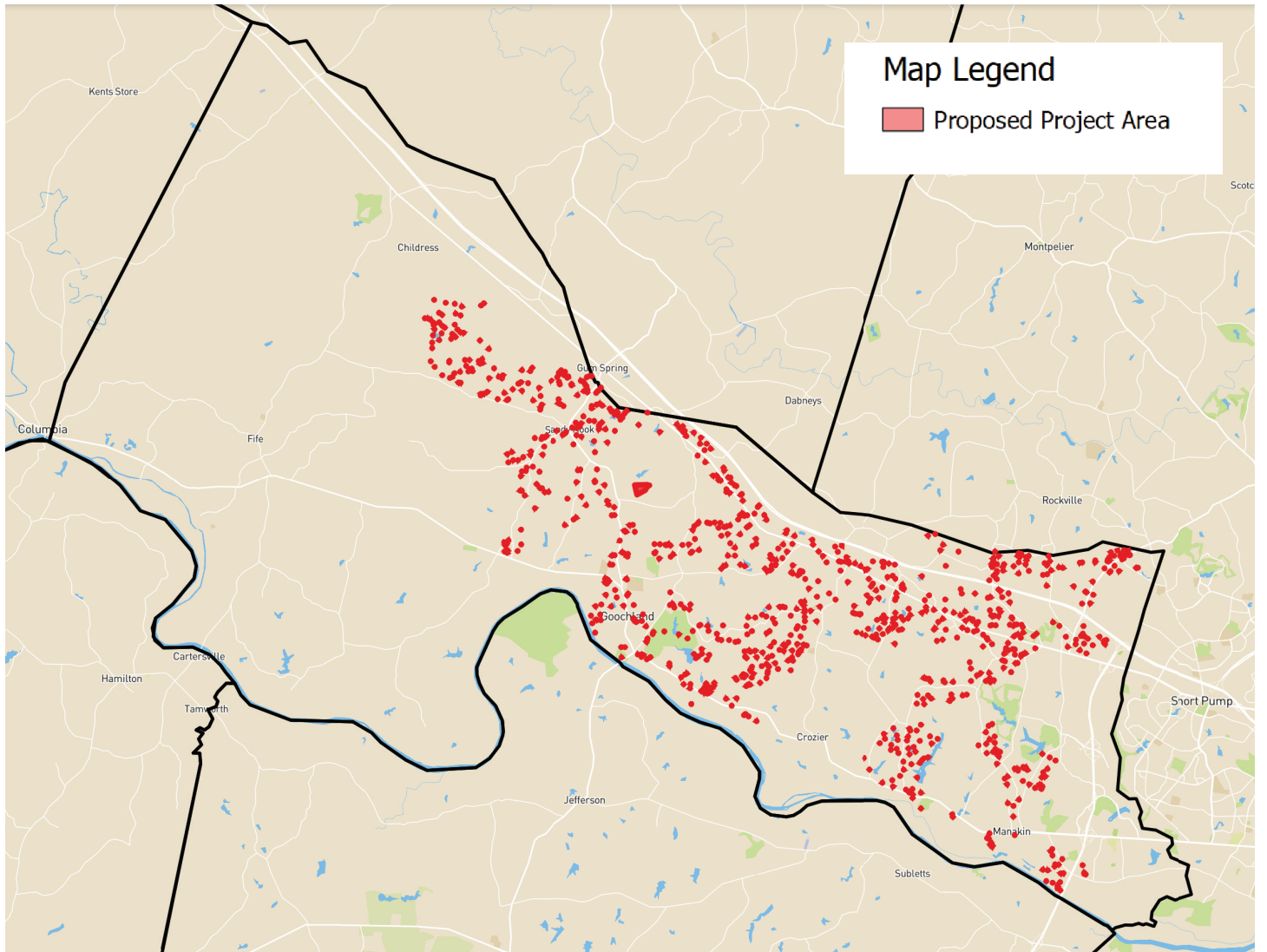


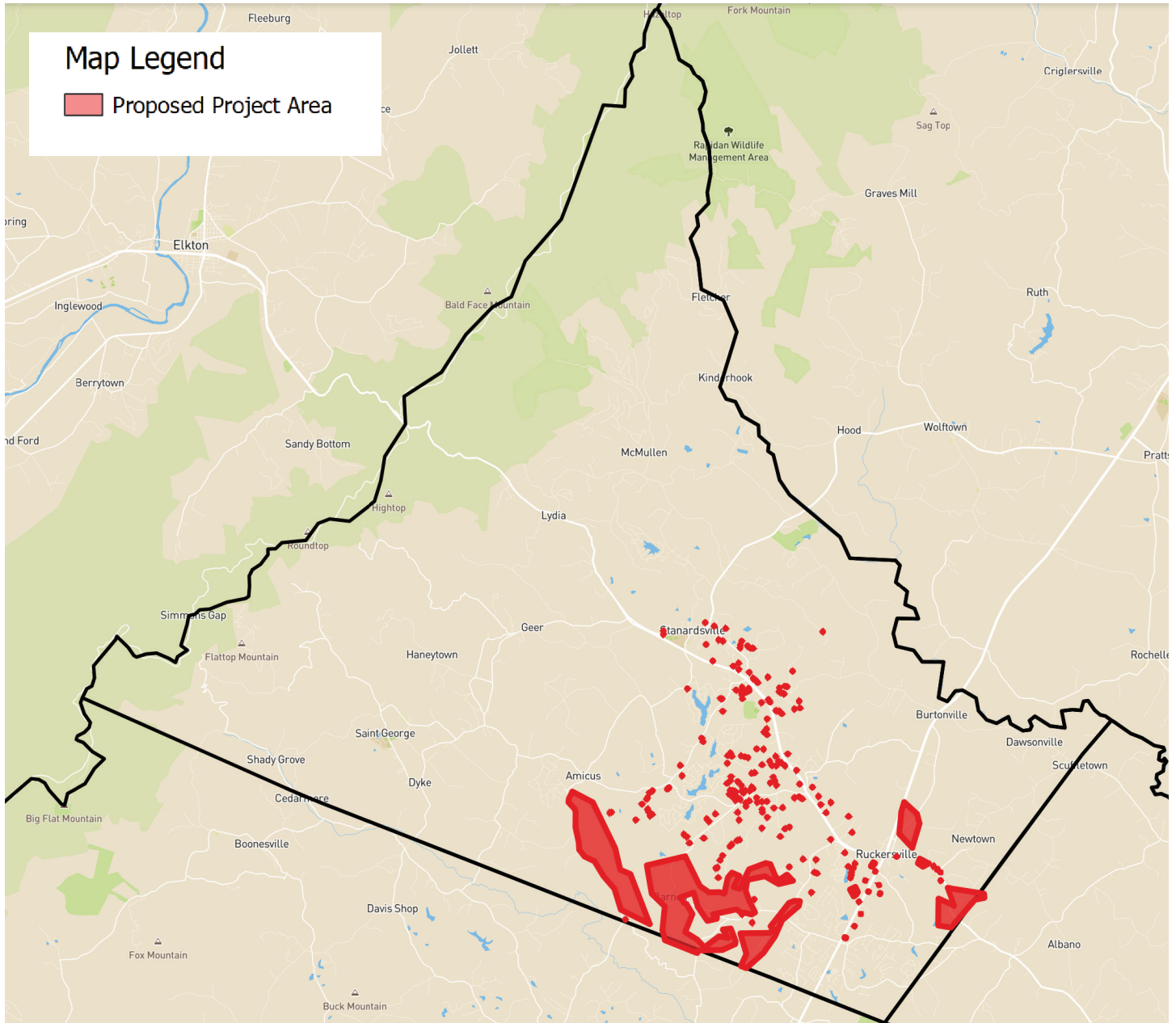


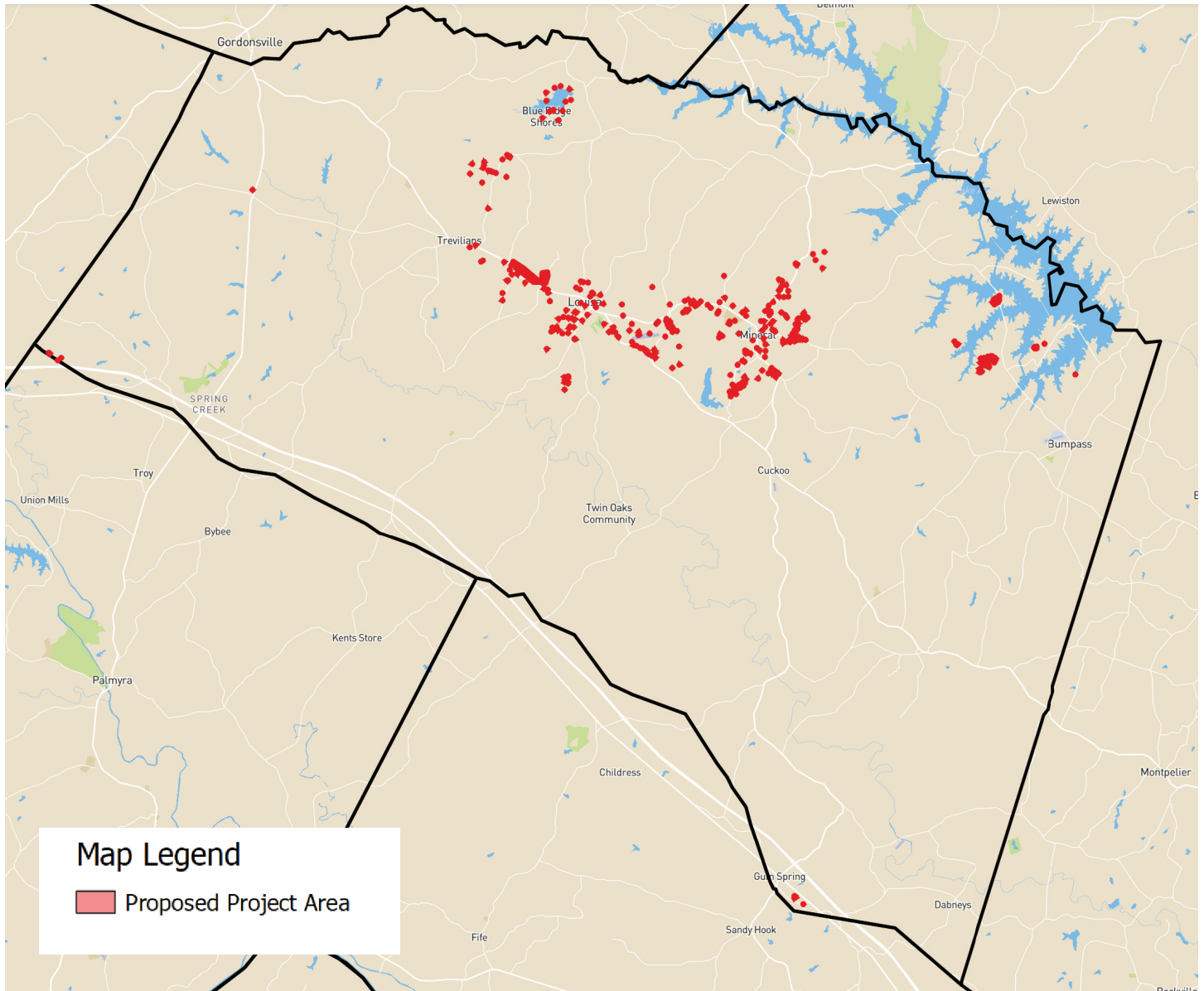


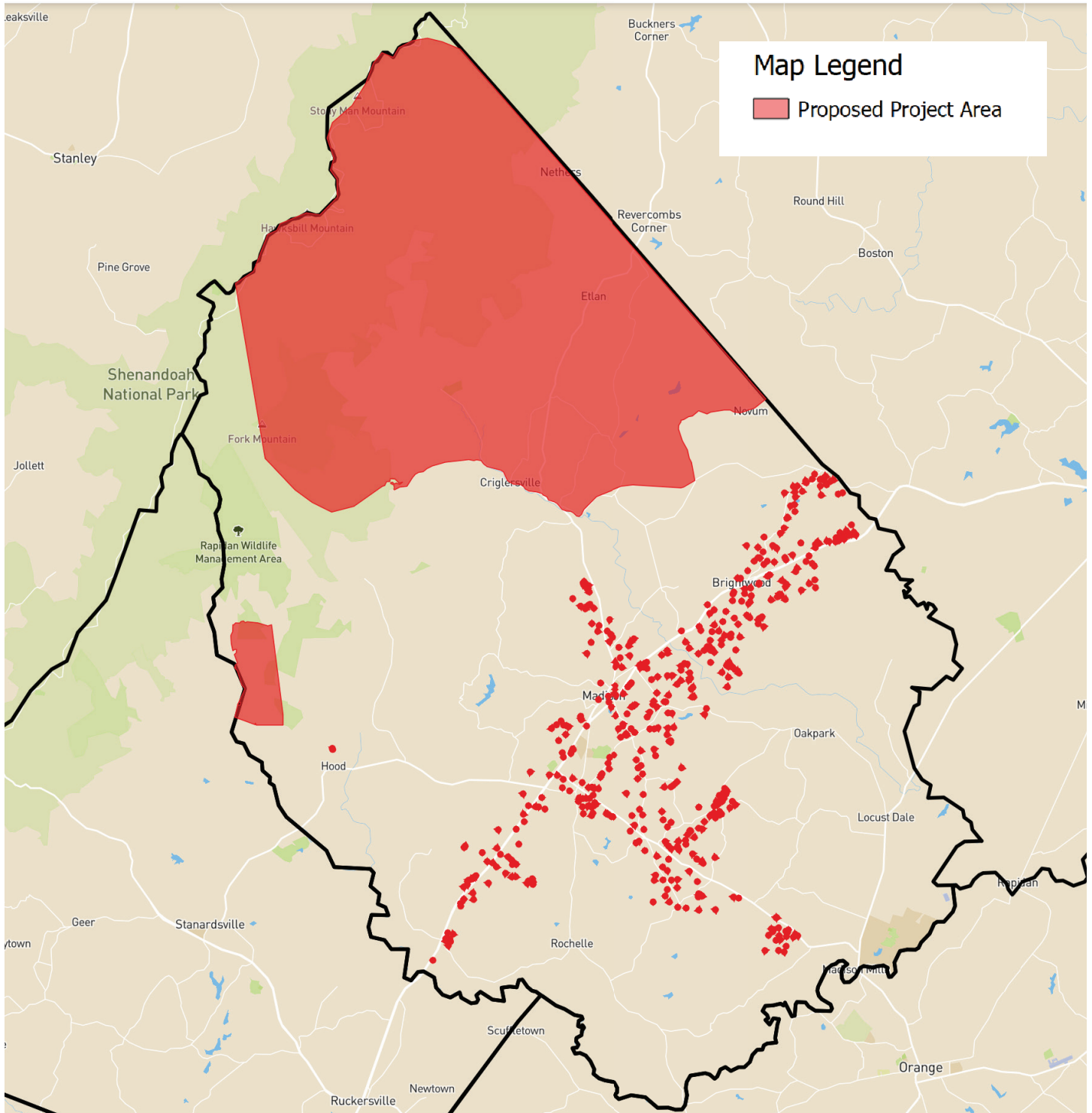


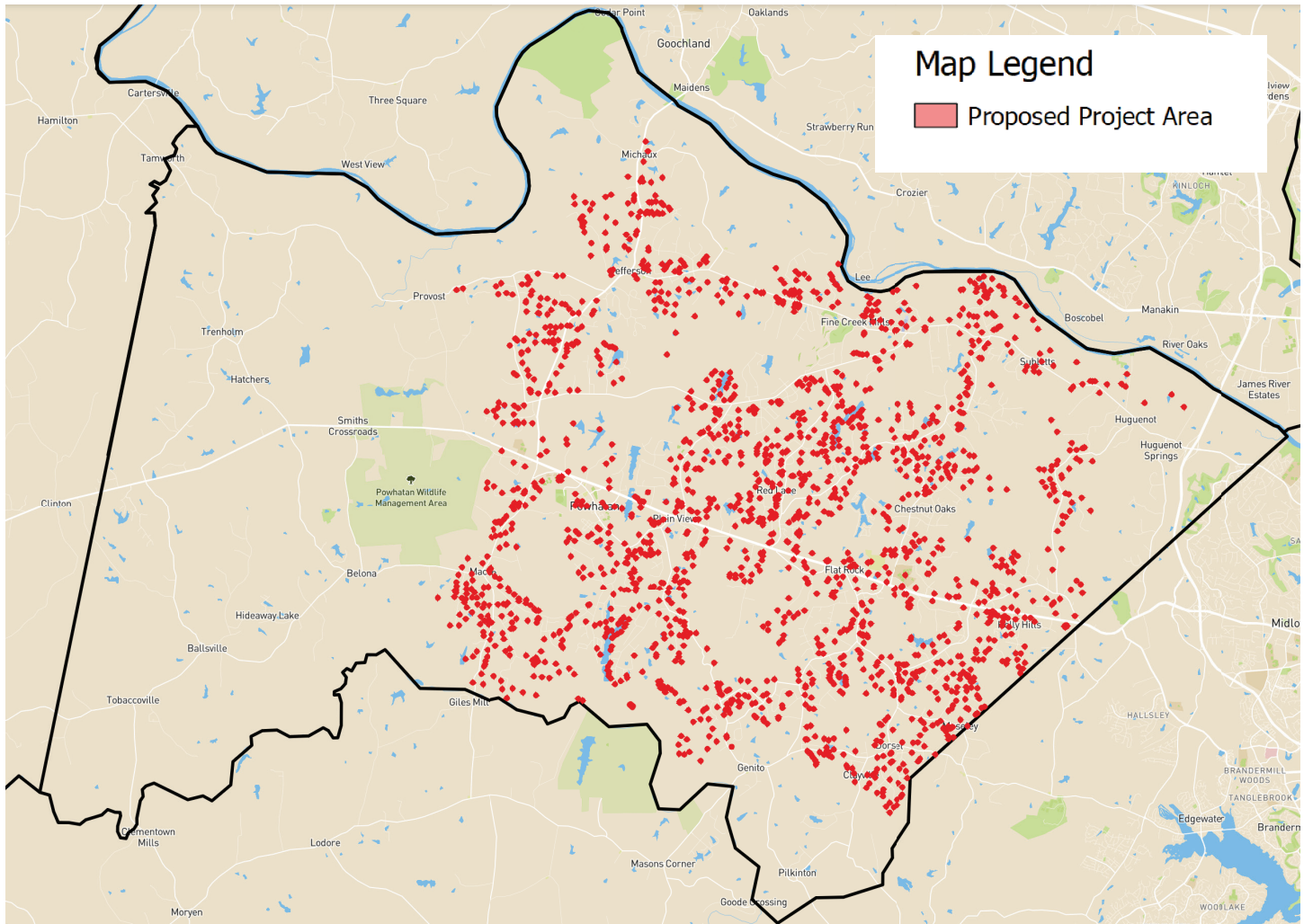


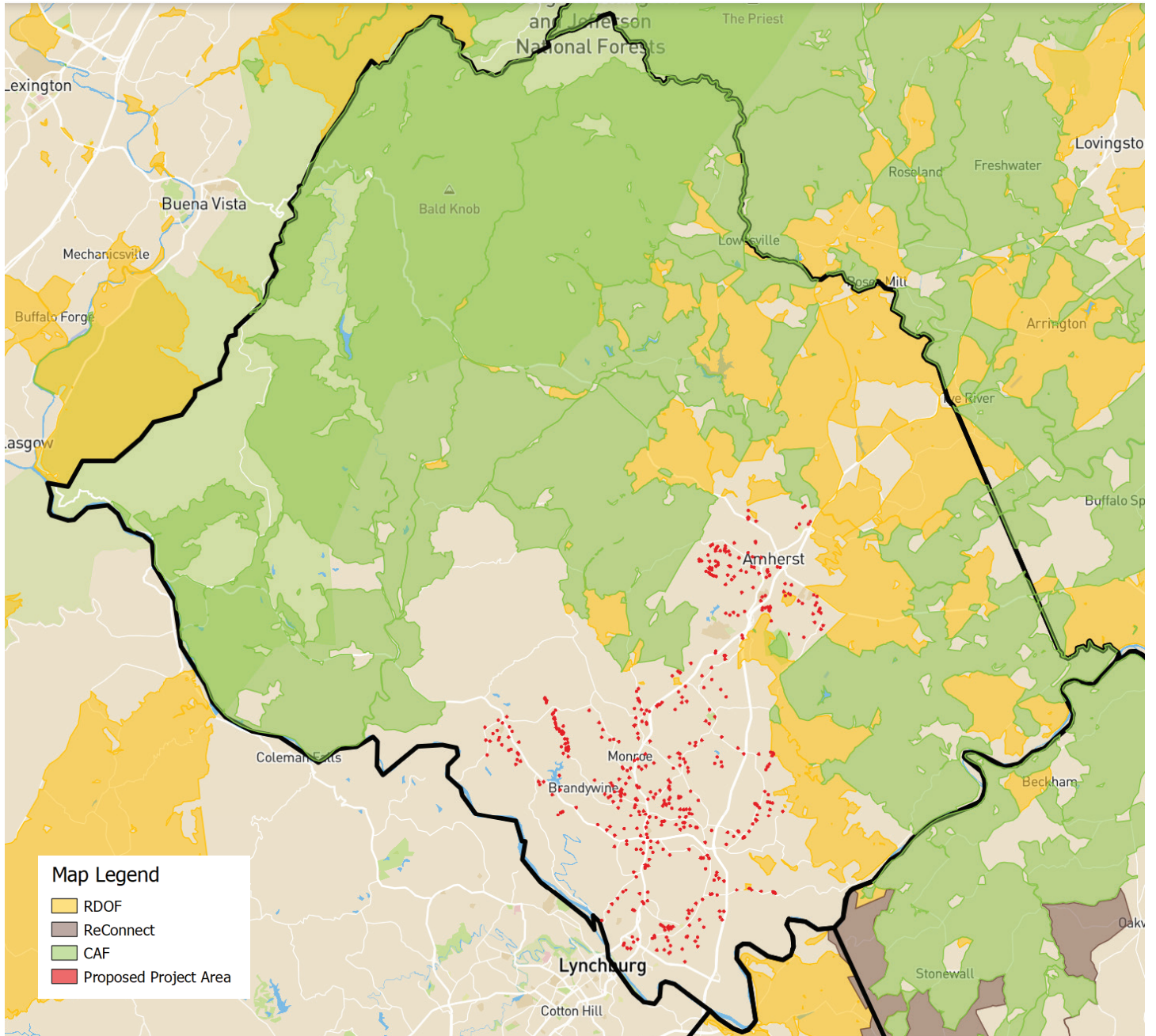


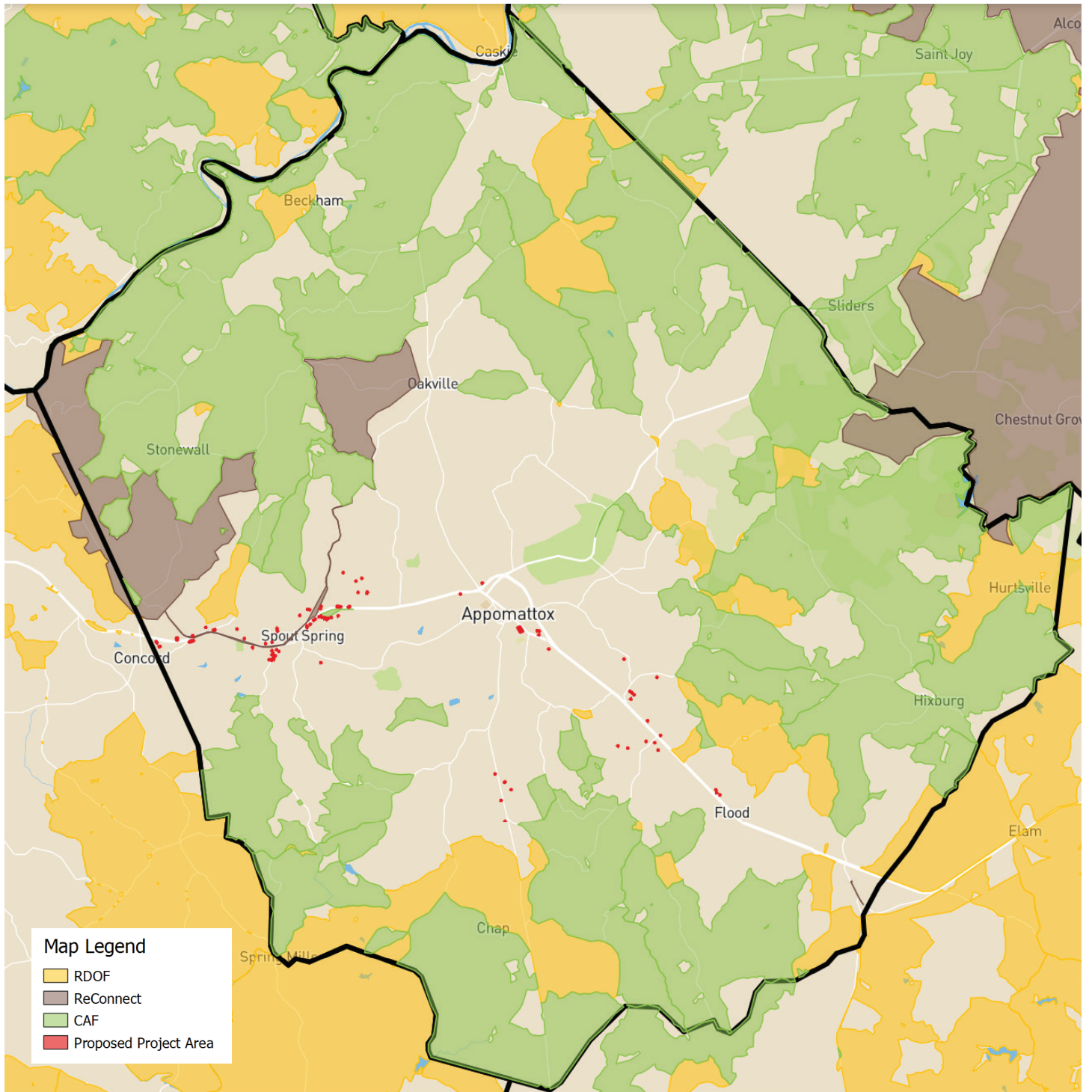


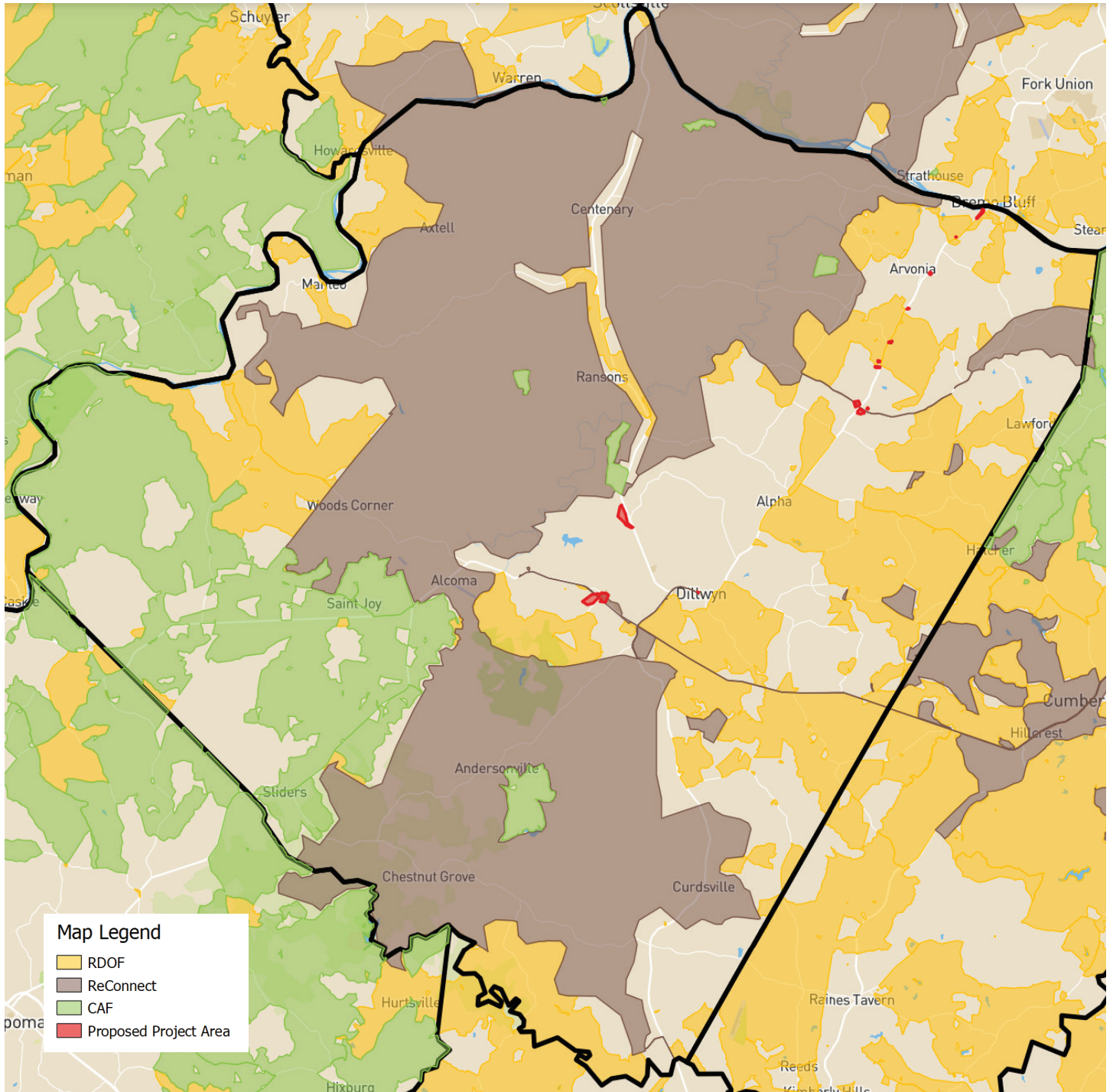


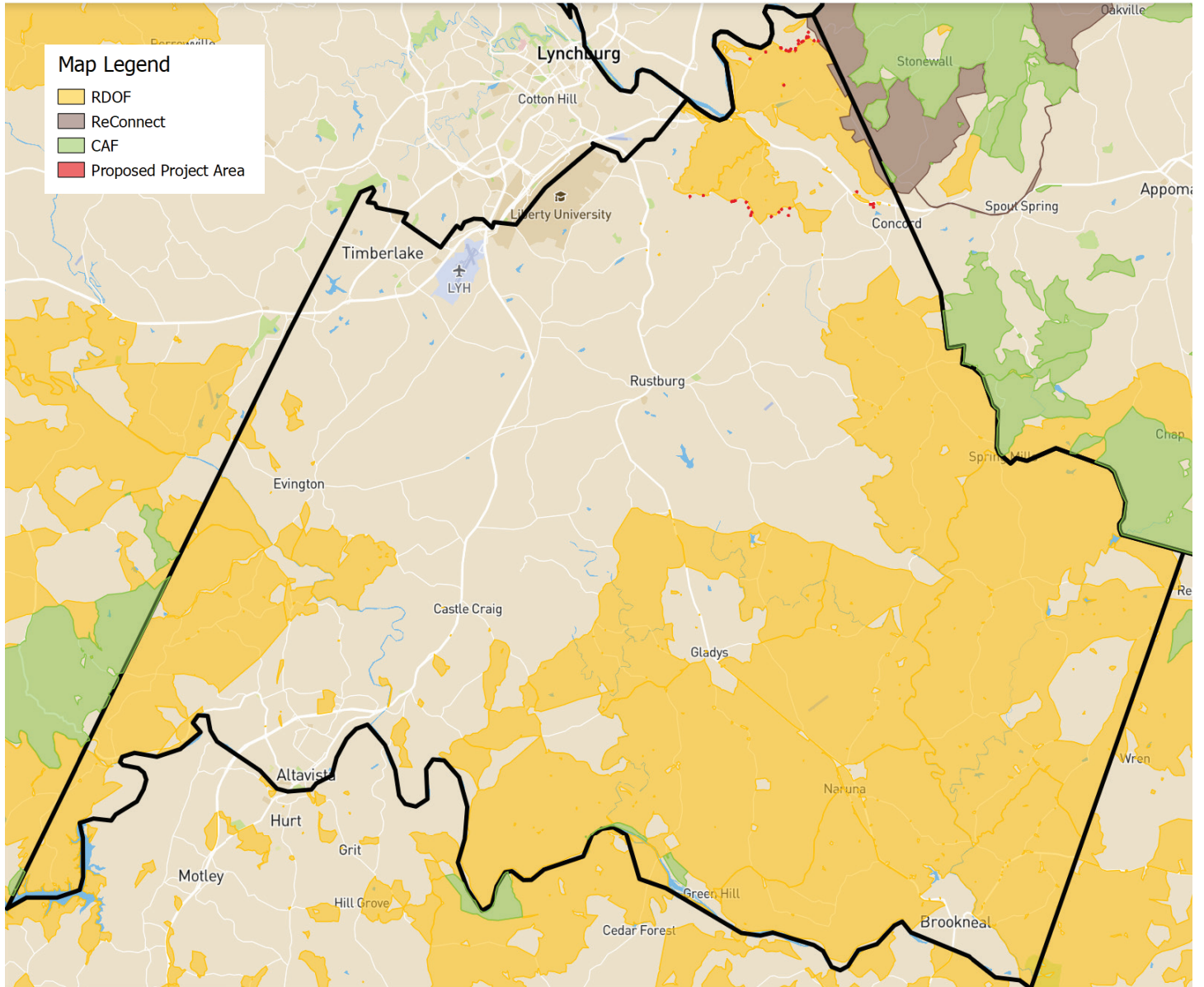


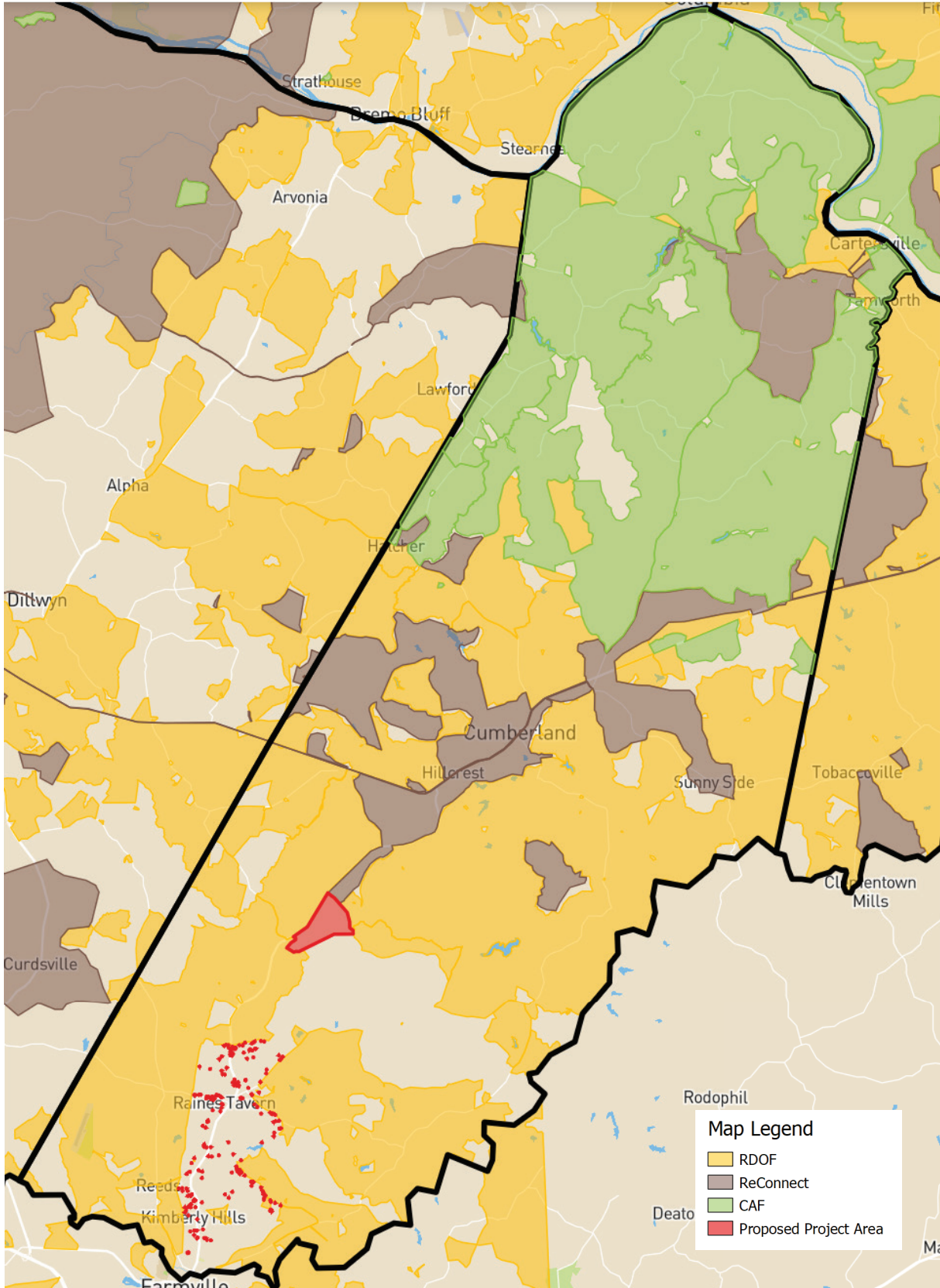


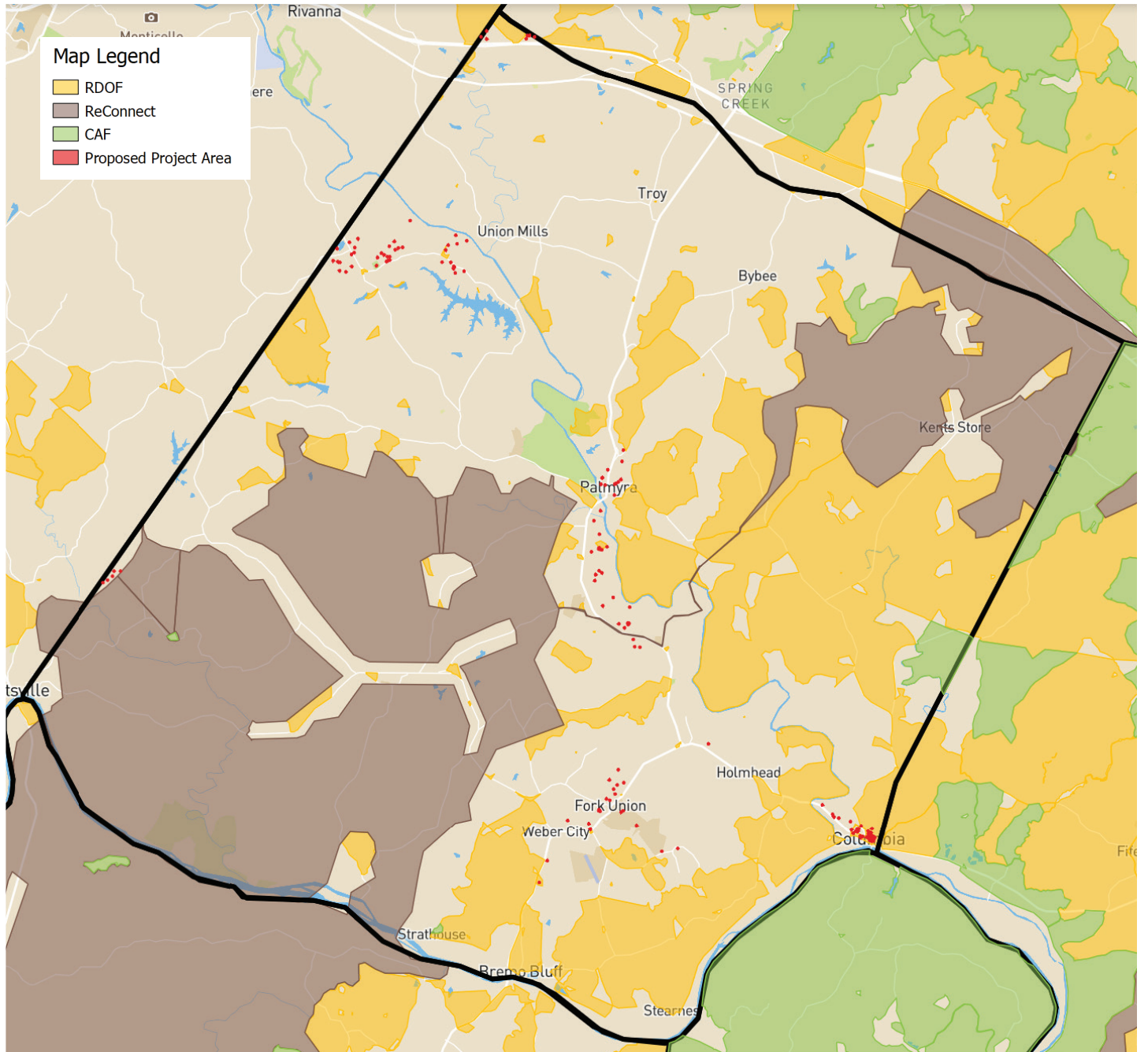


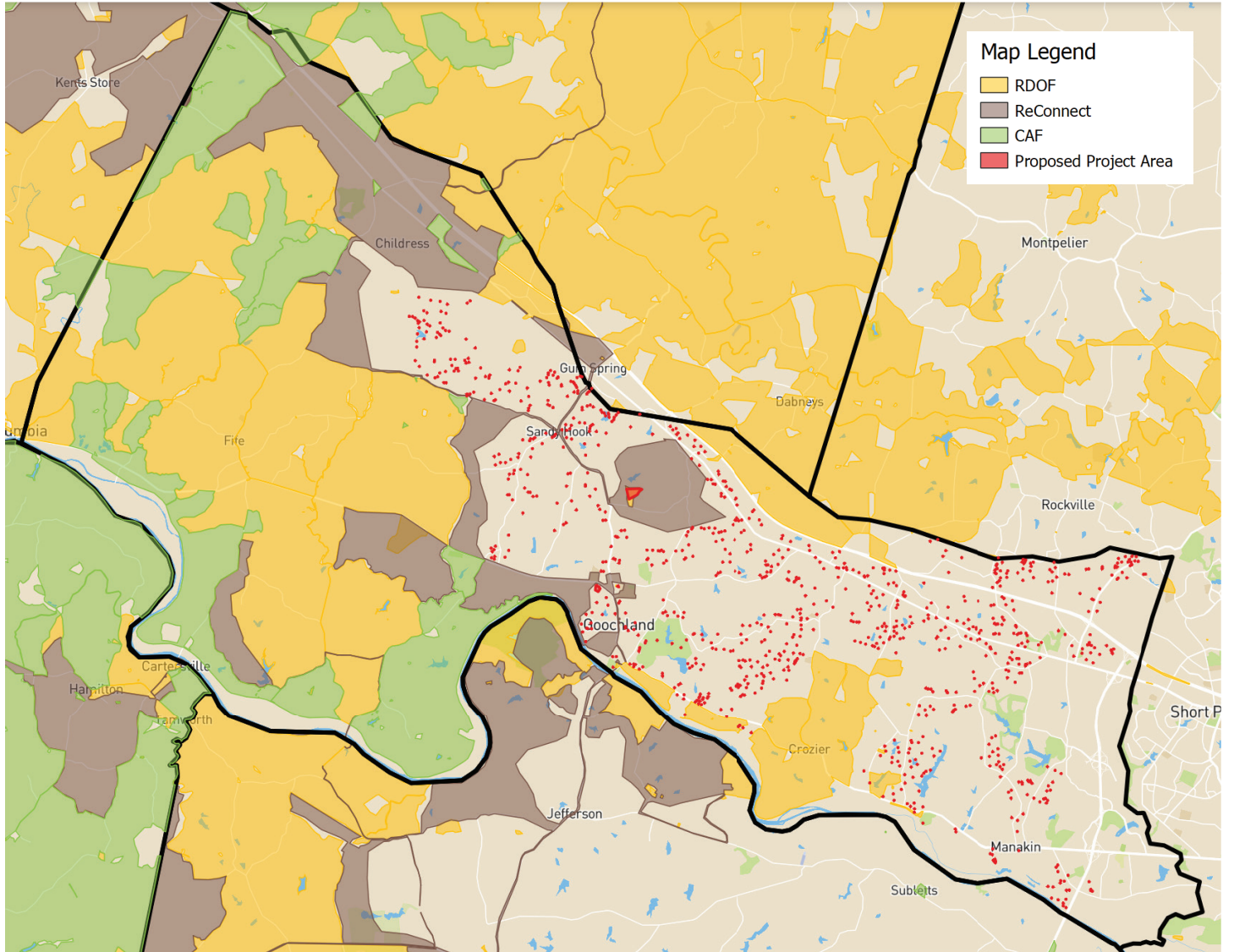


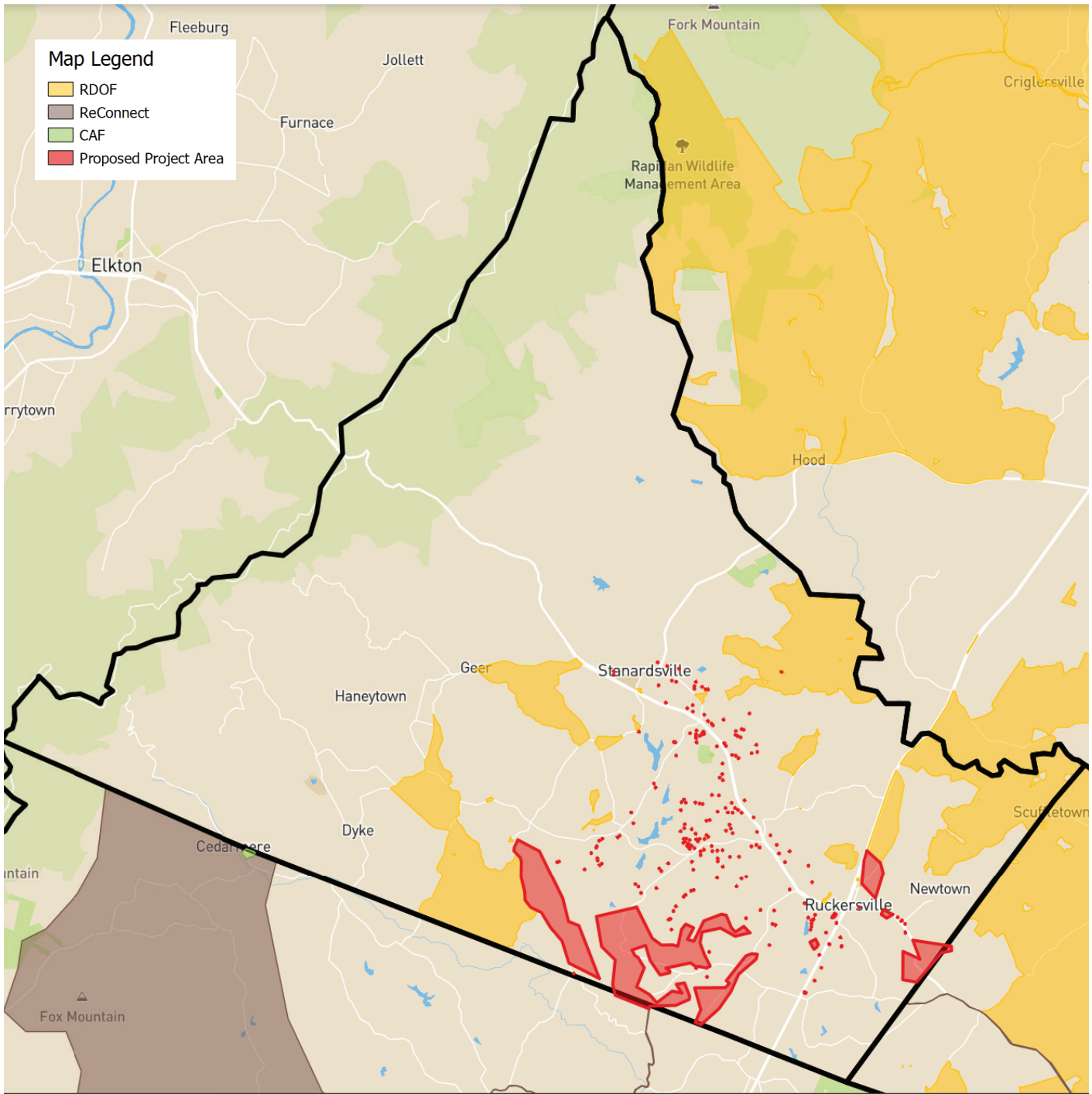


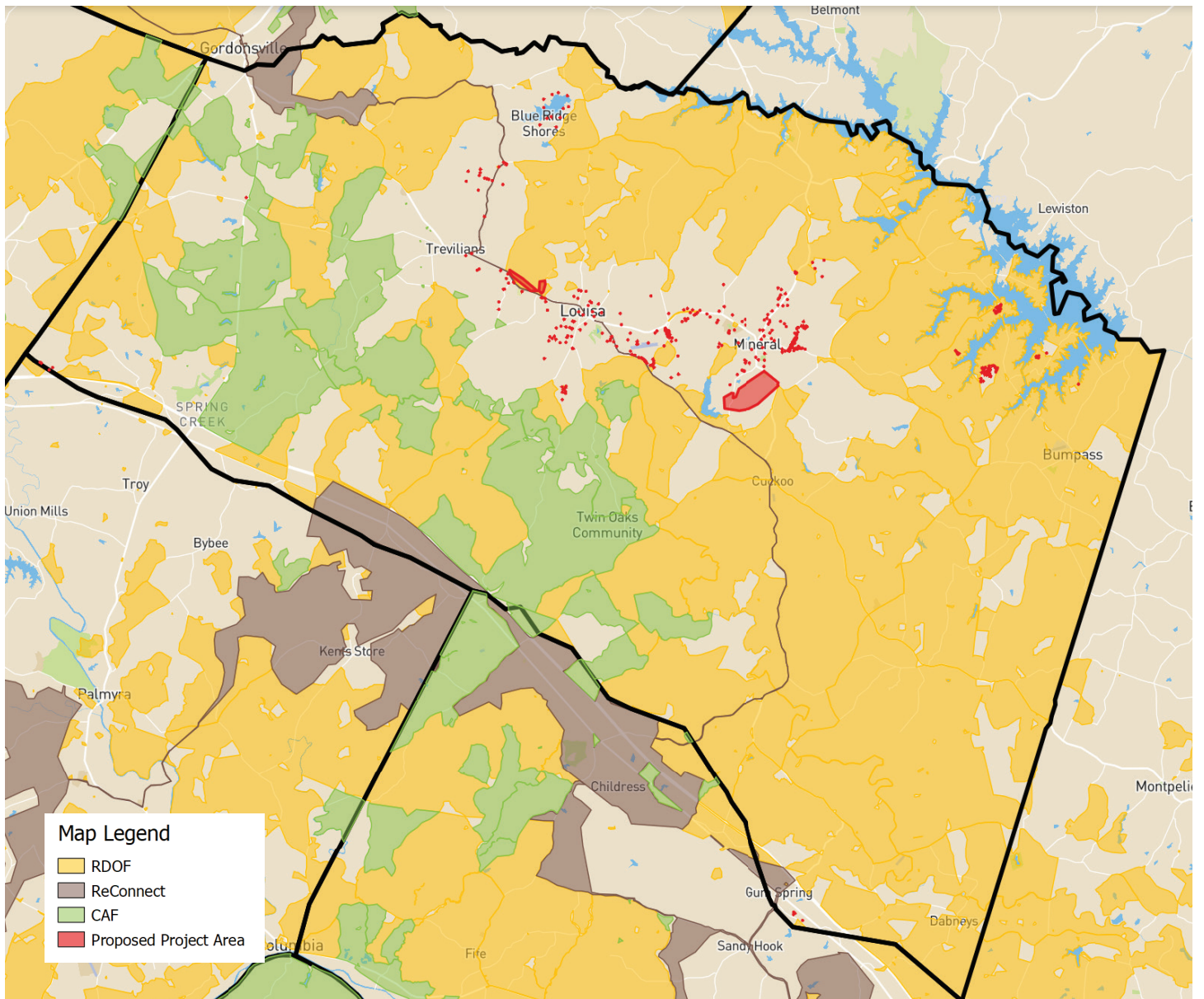


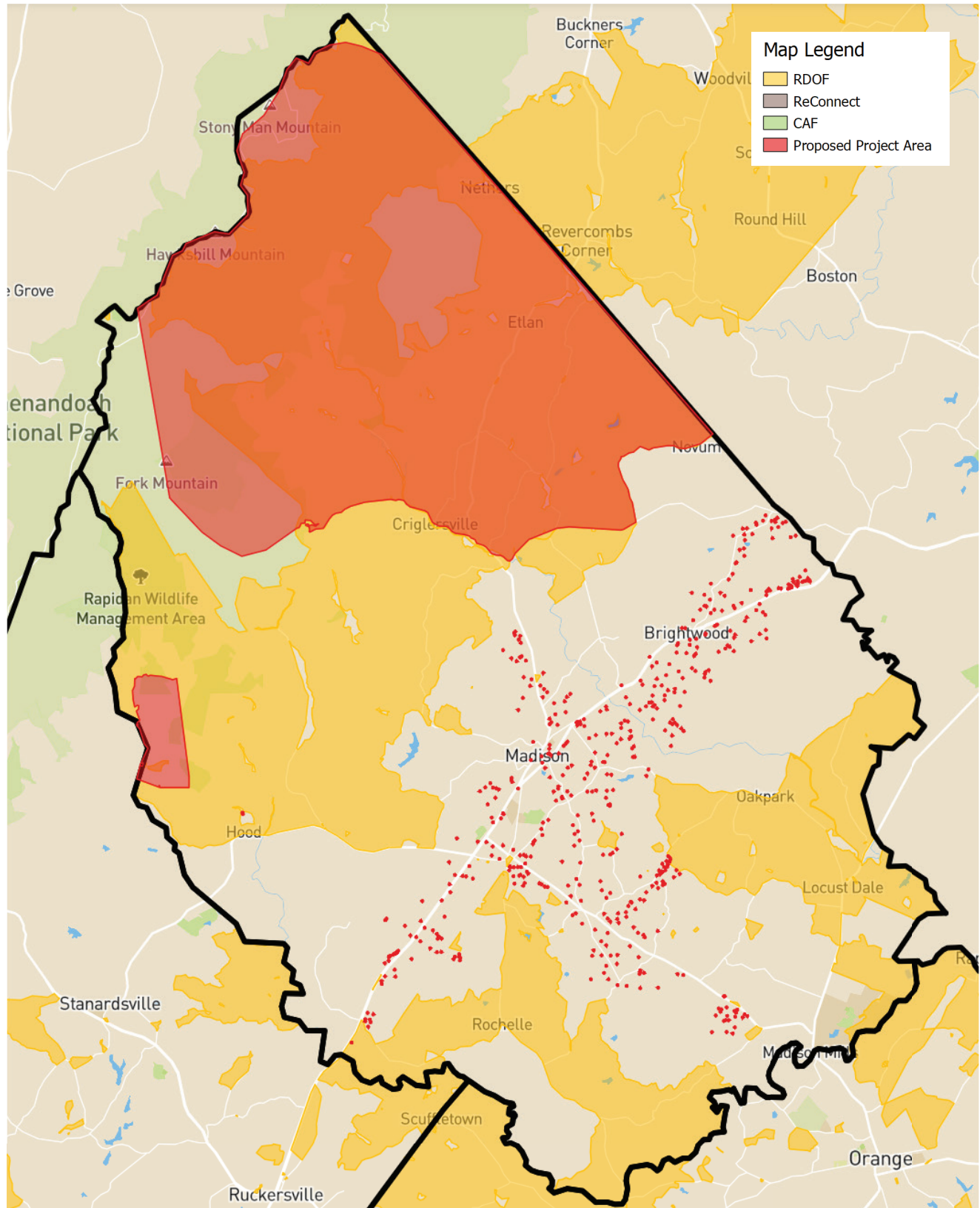


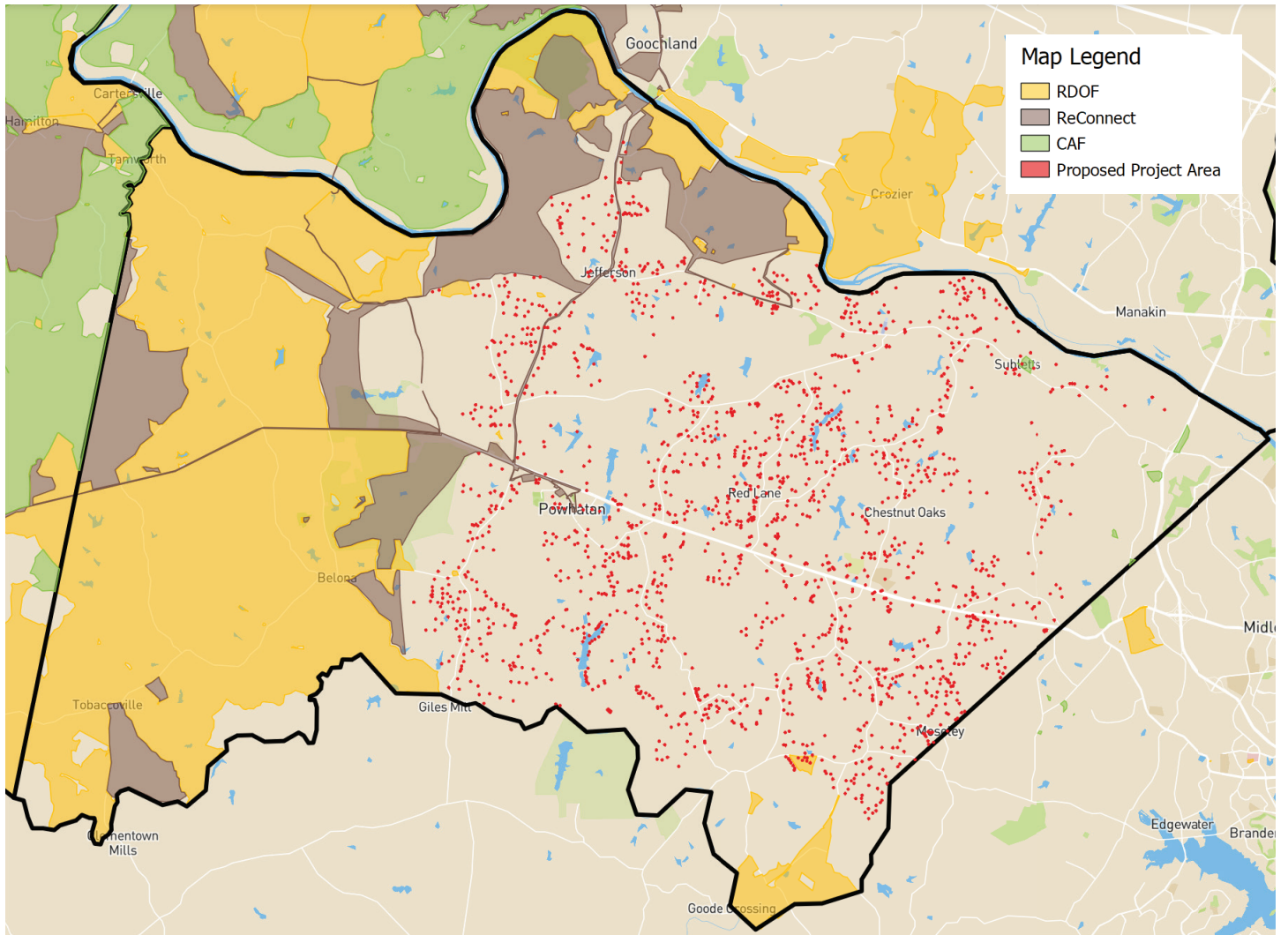












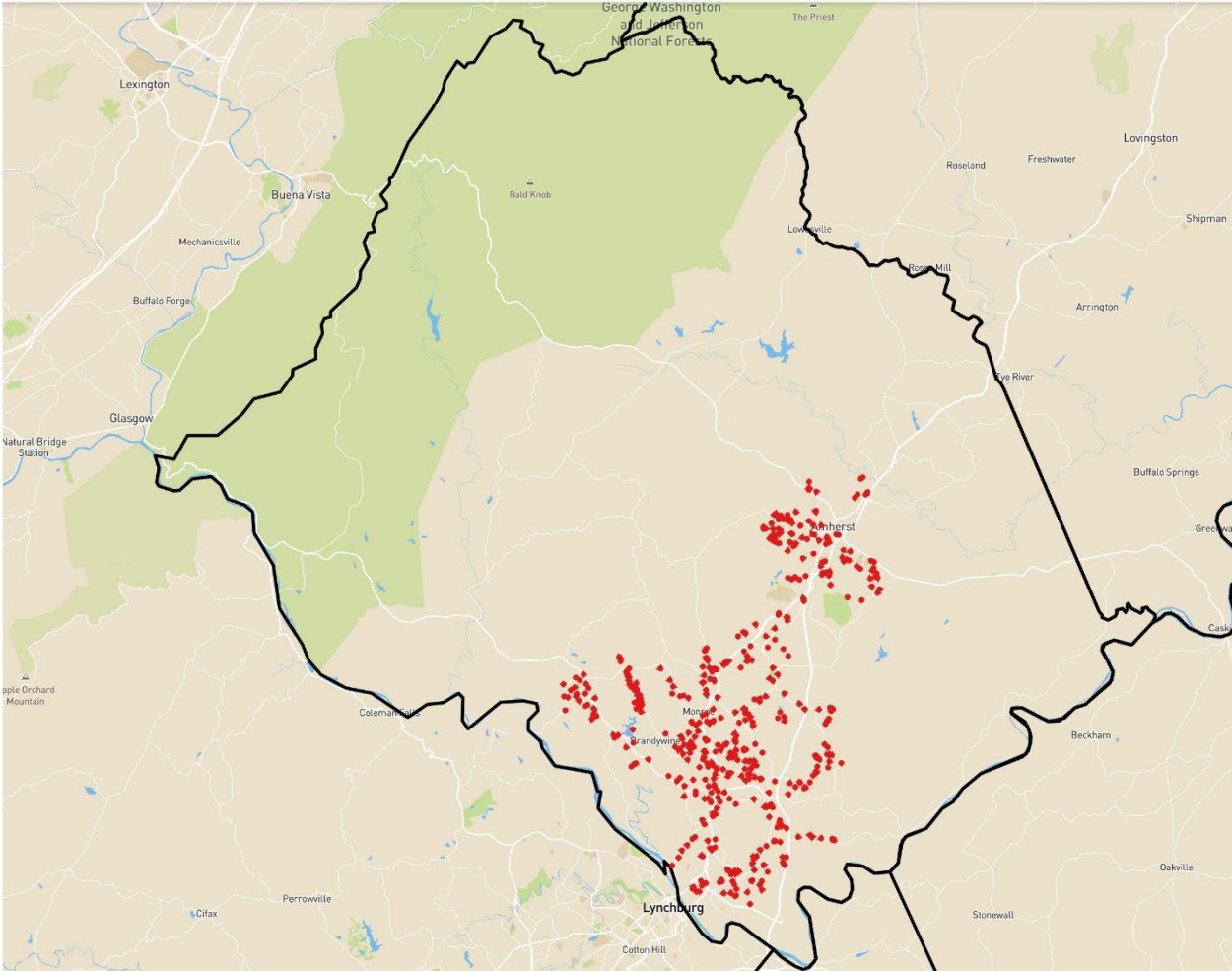
Attachment 3 – Documentation Unserved Area VATI Criteria

The geographic areas in our proposed VATI 2024 application do not have service available meeting or exceeding 100/20 Mbps. This is based on data collected from multiple sources, including federal and state broadband coverage maps, county data on actual unserved locations, and field observations. Using the latest FCC map, dated June 30, 2023, we identified individual locations to avoid any overlap with locations that were deemed served.

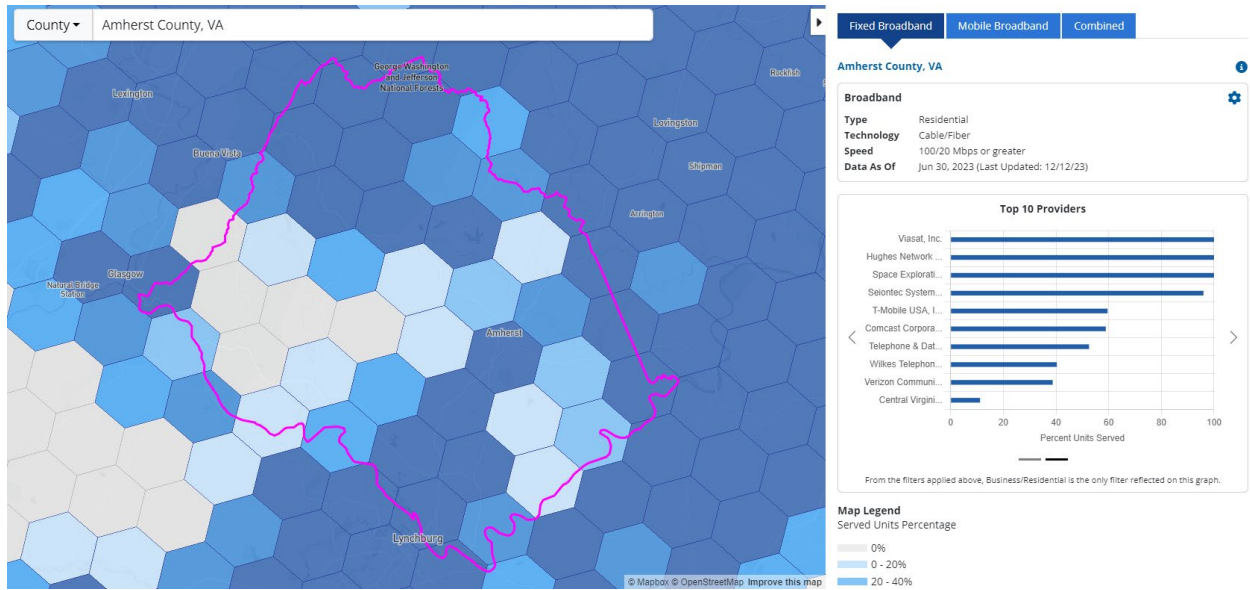
The proposed project area map was laid on top of the Commonwealth Connection map and latest FCC Broadband maps. We also imported the BEAD eligible locations from the state into our mapping system.

Amherst County

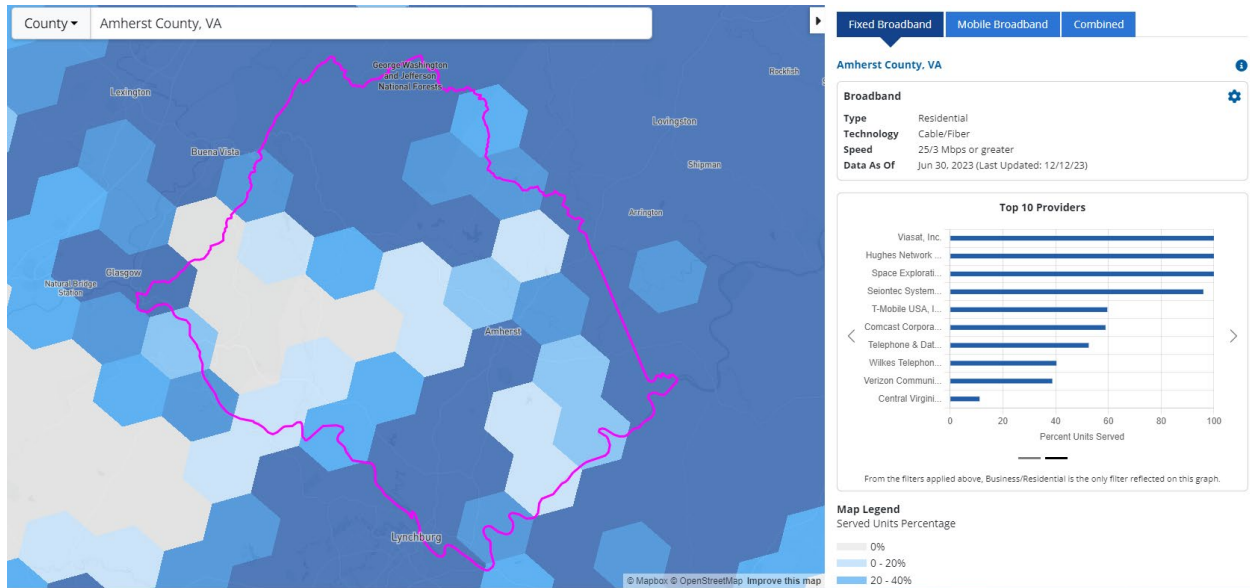
Project locations shown in red.



Amherst County – FCC Broadband map (dated June 30, 2023) of 100x20Mbps service.



Amherst County - FCC Broadband map (dated June 30, 2023) of 25/3Mbps service.



Amherst County - Even in areas that have Cable providers, locations with long extensions have no service.

FCC National Broadband Map

Home | Location Summary | Provider Detail | Area Summary | Data Download | About | Broadband Funding Map

1682 WINESAP RD MADISON HTS, VA 24572

Fixed Broadband | Mobile Broadband

Selected Location

1682 WINESAP RD
MADISON HTS, VA 24572
Status: **Not Served** | Residential | Unit Count: 1

Broadband

Type: Residential
Technology: Cable/Fiber
Speed: 100/20 Mbps or greater
Data As Of: Jun 30, 2023 (Last Updated: 12/12/23)

Residential | Business | Availability Challenge

Provider	Technology	Down (Mbps)	Up (Mbps)	Chall.
Hughes Network Systems, LLC	GSO Satellite	25	3	
Seiontec Systems, LLC	Unlicensed Fixed Wireless	200	25	
Space Exploration Technologies Corp.	NGSO Satellite	220	25	
T-Mobile USA, Inc.	Licensed Fixed Wireless	0.2	0.2	

Map Legend

- Coverage available
- Coverage not available
- Available service location

Zoom Level: 15.00

Amherst County mapping from Commonwealth Connection.

Speed Test
Download Speed, Upload Speed, and Latency

Broadband Coverage
FCC vs. Virginia Broadband, Speed, Technology

Broadband coverage is based on the amount of addresses served within a Census Block.

MAP LAYERS

- Virginia Collected (Mar 2023)
- FCC Broadband Data Collection (Dec 2022)

MAP FILTERS

Speed

- 25 mbps / 3 mbps
- 100 mbps / 20 mbps
- 100 mbps / Any
- 250 mbps / Any
- 1000 mbps / Any

Broadband Technology

- Any Broadband Technology
- Cable / DSL/Copper
- Fiber / Fixed Wireless

Broadband Coverage

Broadband Coverage in Census Blocks

- At least one address
- 80%
- 85%
- 95%

Boundaries
Census, Counties/Cities, Government Districts

Assets and Programs
WiFi, Towers, State and Non-Profit Programs

Locality
Amherst County

All broadband information is aggregated from all census blocks contained within the locality or jurisdiction.

VA Collected - Mar 2023 | FCC BDC - Dec 2022

Broadband Coverage

78% of addresses in this jurisdiction are served

Broadband Speed Coverage

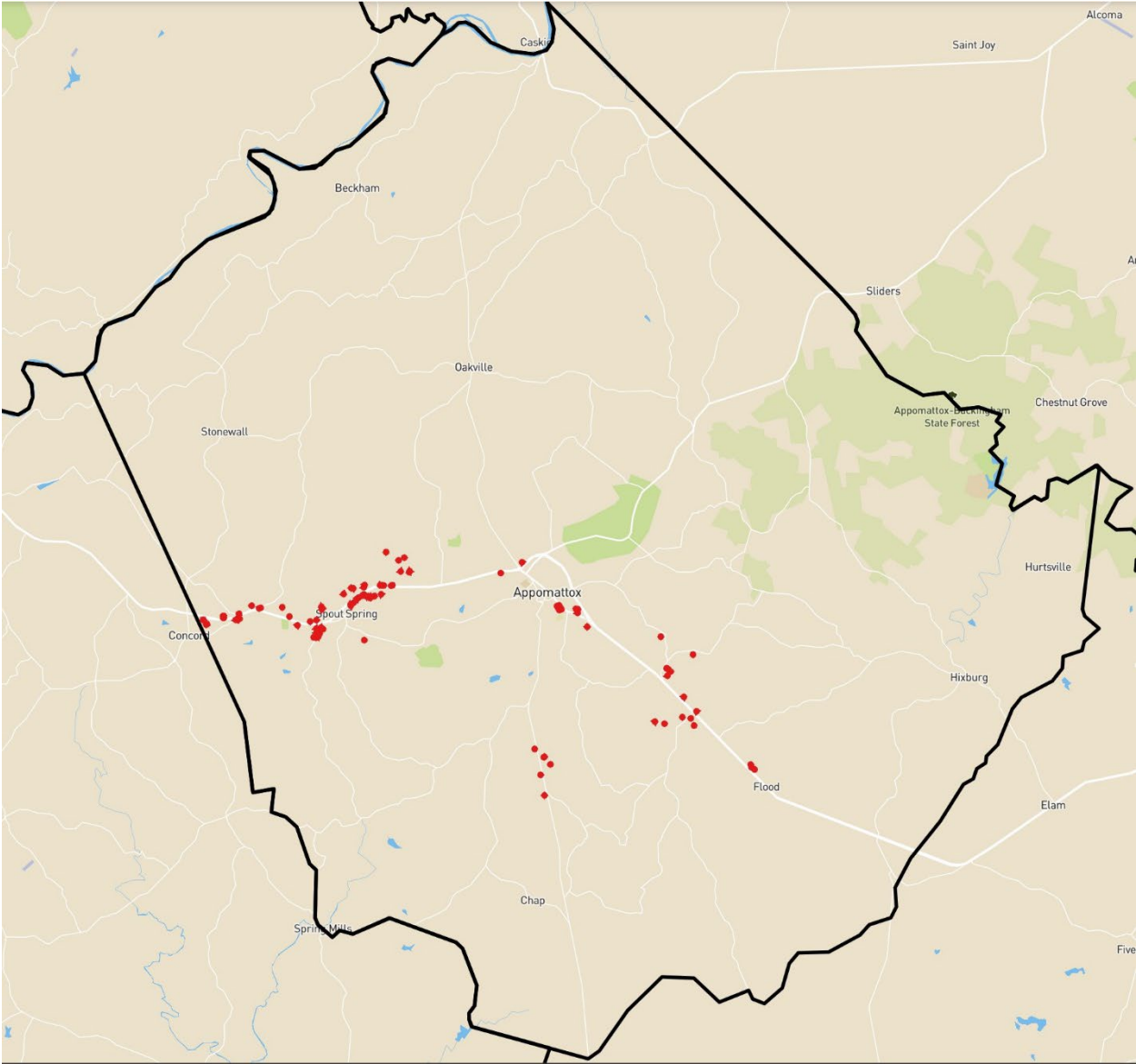
Line graph showing Total % Served vs Download Speeds (in mbps). The x-axis ranges from 254 / 31 to 10001. The y-axis ranges from 0 to 100. The line shows a high percentage of addresses served across all speed ranges.

Internet Service Providers

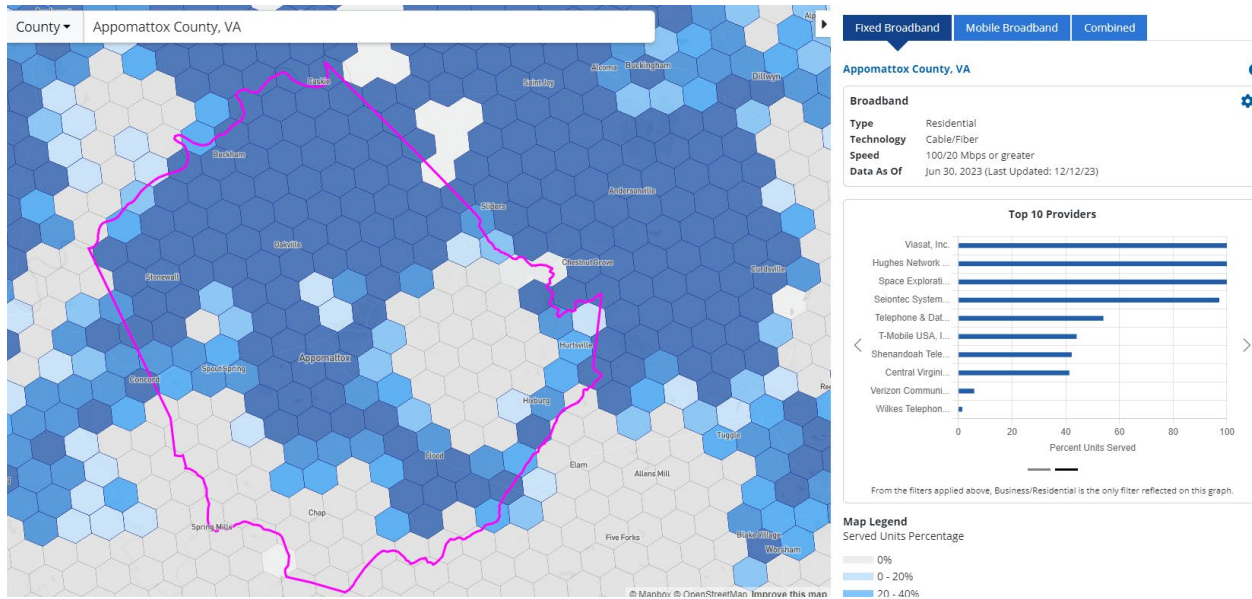
- Firefly Fiber Broadband**
↓ 1000 mbps | ↑ 1000 mbps | Optical/Fiber
- InfinaFiber**
↓ 250 mbps | ↑ 50 mbps | Optical/Fiber
- RIVERSTREET NETWORKS**
↓ 25 mbps | ↑ 3 mbps | undefined
- Shentel**
↓ 10000 mbps | ↑ 10000 mbps | Optical/Fiber

Appomattox County

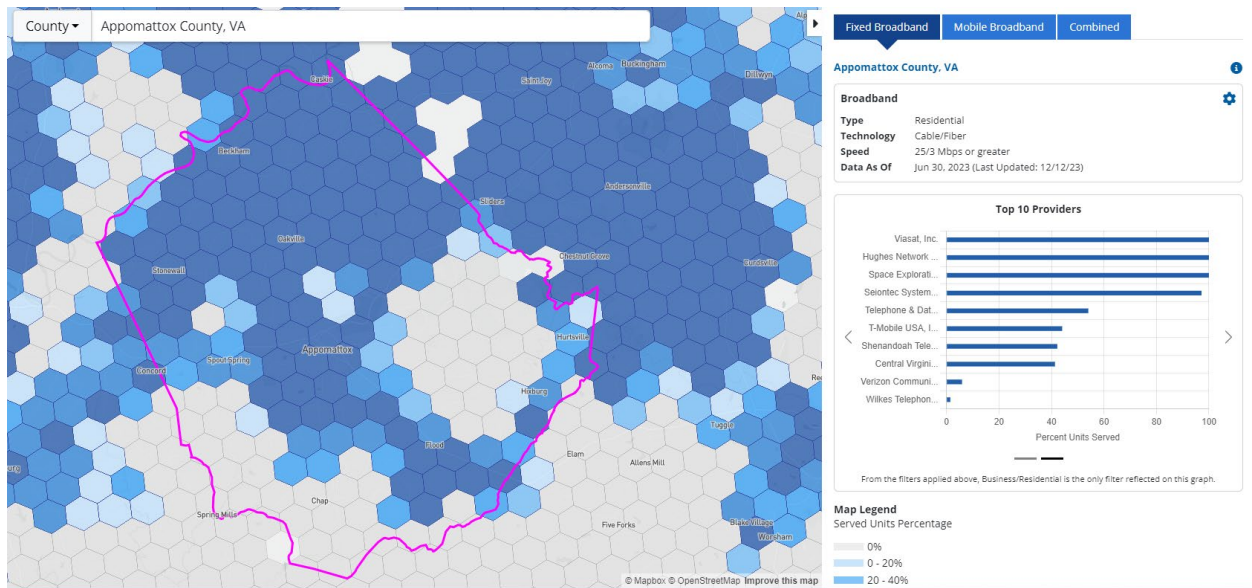
Project locations shown in red.



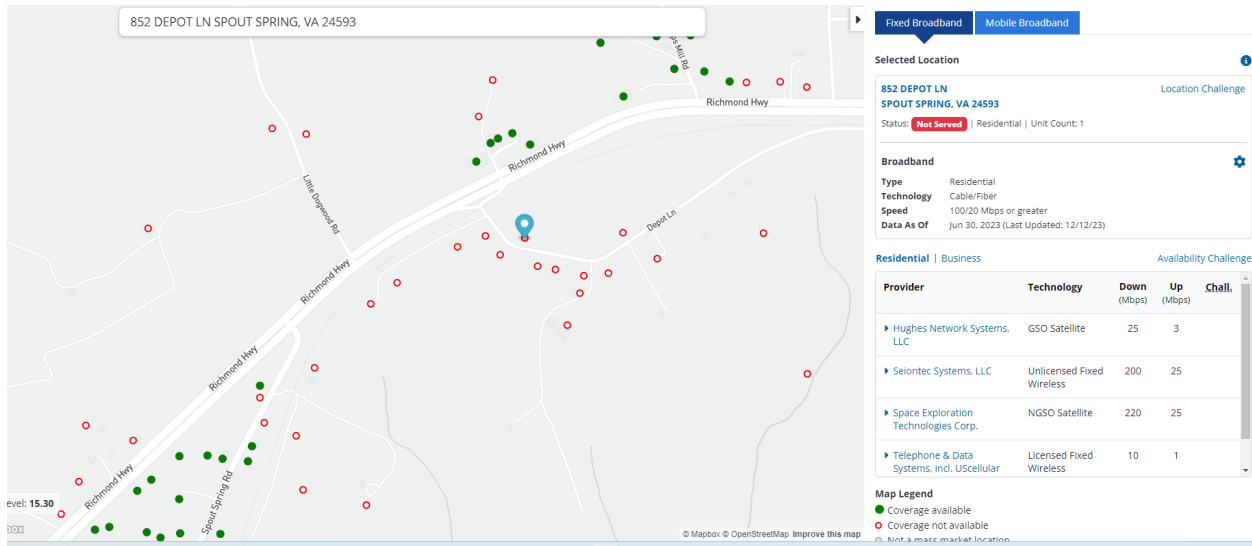
Appomattox County – FCC Broadband map (dated June 30, 2023) of 100x20Mbps service.



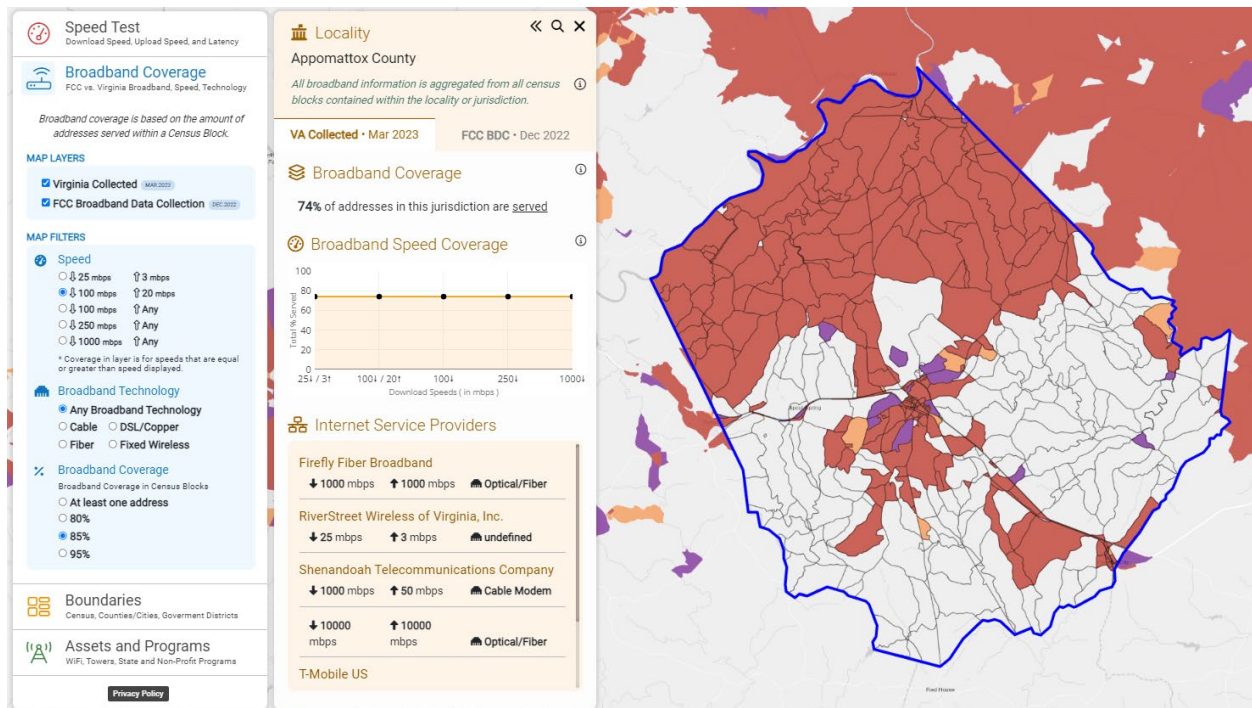
Appomattox County - FCC Broadband map (dated June 30, 2023) of 25/3Mbps service.



Even in areas that have Cable providers, locations with long extensions have no service.

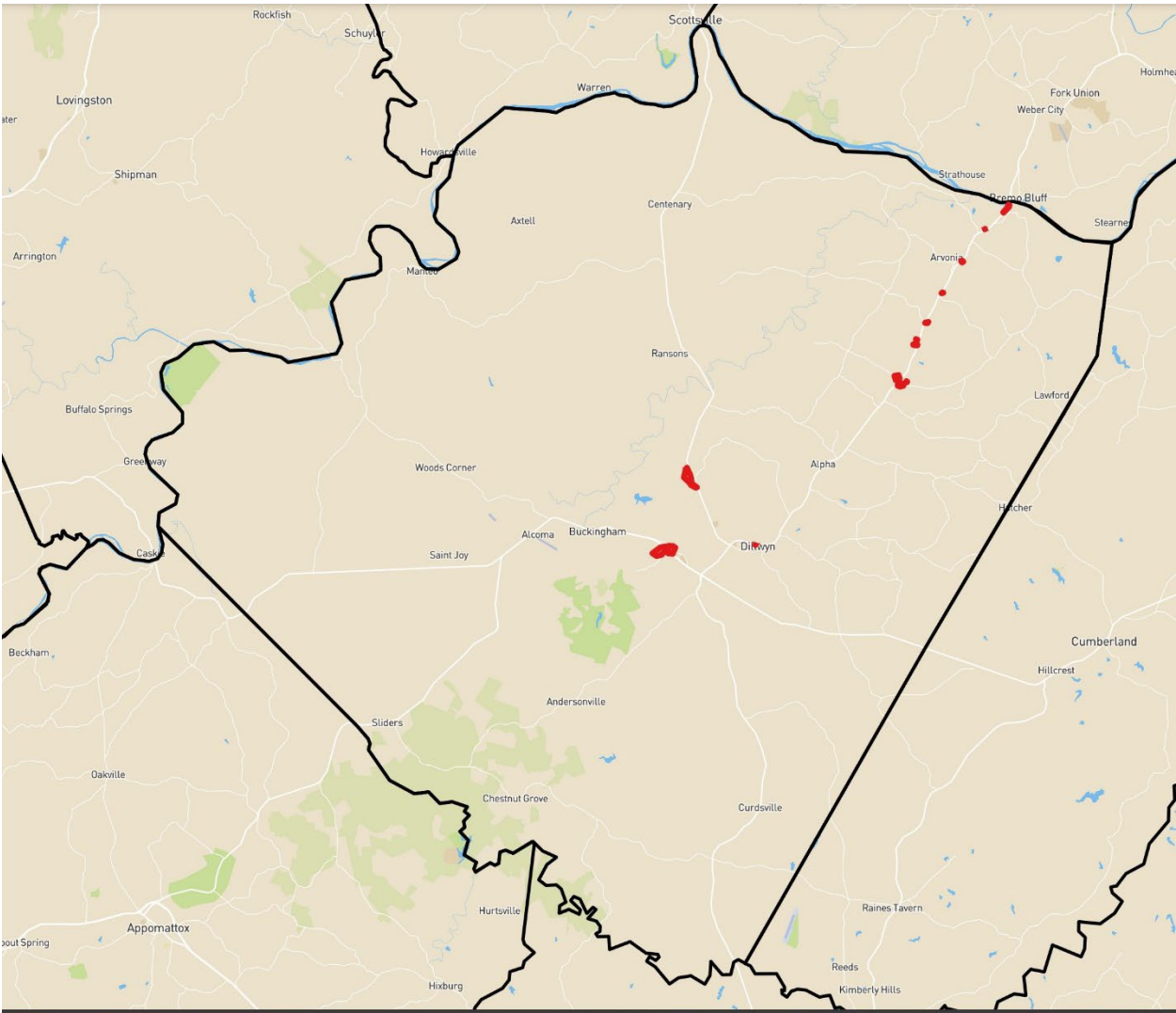


Appomattox County mapping from Commonwealth Connection.

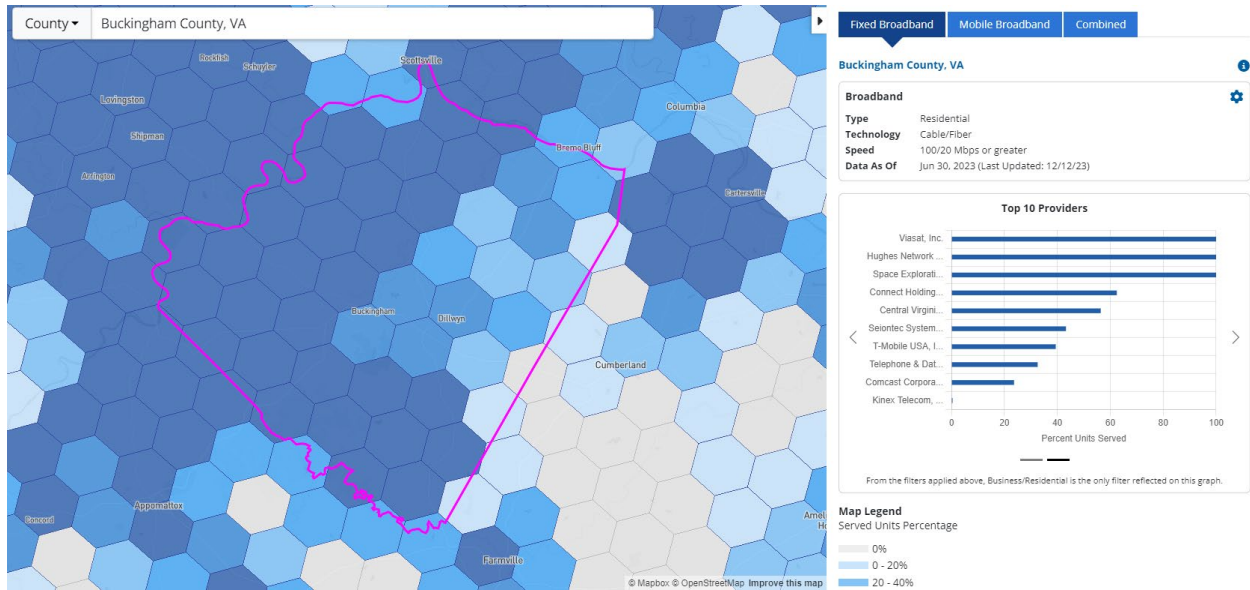


Buckingham County

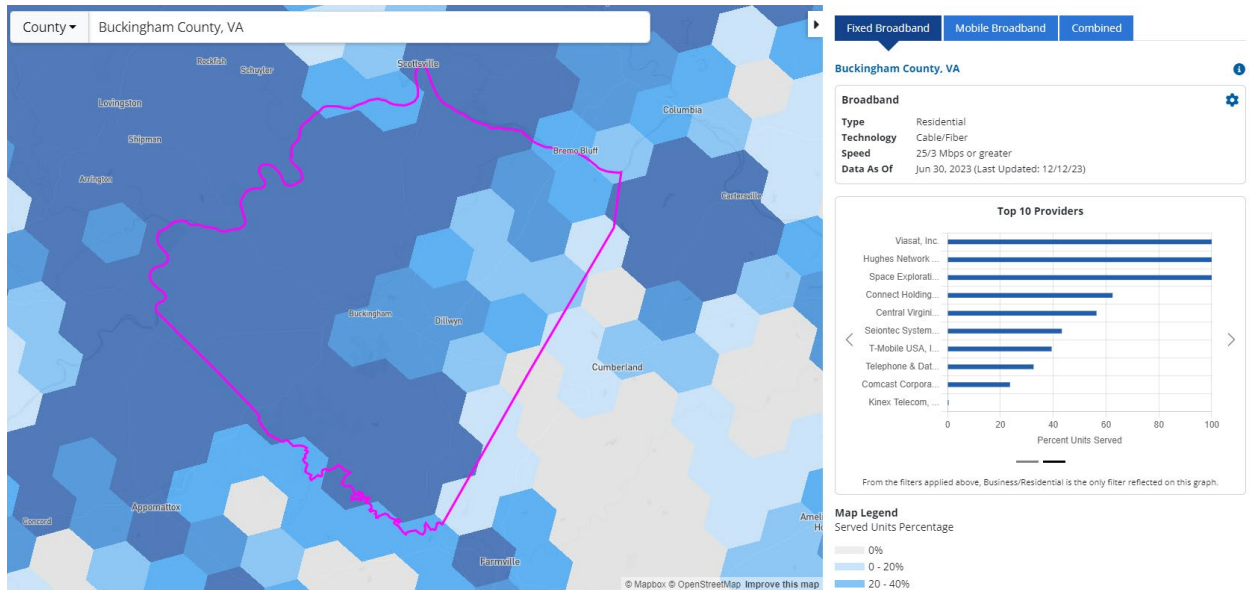
Buckingham County - Project locations shown in red.



Buckingham County – FCC Broadband map (dated June 30, 2023) of 100x20Mbps service.



Buckingham County - FCC Broadband map (dated June 30, 2023) of 25/3Mbps service.



Even in areas that have Cable providers, locations with long extensions have no service.

99 WINDY KNOLL LN DILLWYN, VA 23936

Fixed Broadband | Mobile Broadband

Selected Location

99 WINDY KNOLL LN
DILLWYN, VA 23936

Status: **Not Served** | Residential | Unit Count: 1

Broadband

Type: Residential
Technology: Cable/Fiber
Speed: 100/20 Mbps or greater
Data As Of: Jun 30, 2023 (Last Updated: 12/12/23)

Residential | Business | Availability Challenge

Provider	Technology	Down (Mbps)	Up (Mbps)	Chall.
Connect Holding II LLC	Copper	10	1	
Hughes Network Systems, LLC	GSO Satellite	25	3	
Space Exploration Technologies Corp.	NGSO Satellite	220	25	
T-Mobile USA, Inc.	Licensed Fixed Wireless	0.2	0.2	

Map Legend

- Coverage available
- Coverage not available
- 📍 Not a major market location

Buckingham County mapping from Commonwealth Connection.

Speed Test
Download Speed, Upload Speed, and Latency

Broadband Coverage
FCC vs. Virginia Broadband, Speed, Technology

Broadband coverage is based on the amount of addresses served within a Census Block.

MAP LAYERS

- Virginia Collected (MAR 2023)
- FCC Broadband Data Collection (DEC 2022)

MAP FILTERS

Speed

- 25 mbps
- 100 mbps
- 100 mbps
- 250 mbps
- 1000 mbps

Broadband Technology

- Any Broadband Technology
- Cable
- Fiber

Broadband Coverage

- At least one address
- 80%
- 85%
- 95%

Localities
Buckingham County

All broadband information is aggregated from all census blocks contained within the locality or jurisdiction.

VA Collected - Mar 2023 | FCC BDC - Dec 2022

Broadband Coverage

87% of addresses in this jurisdiction are served

Broadband Speed Coverage

Total % Served

Download Speeds (in mbps)

Internet Service Providers

Brightspeed

- 1000 mbps
- 200 mbps
- DSL
- Optical/Fiber

Comcast Cable Communications

- 1200 mbps
- 35 mbps
- Cable Modem

Firefly Fiber Broadband

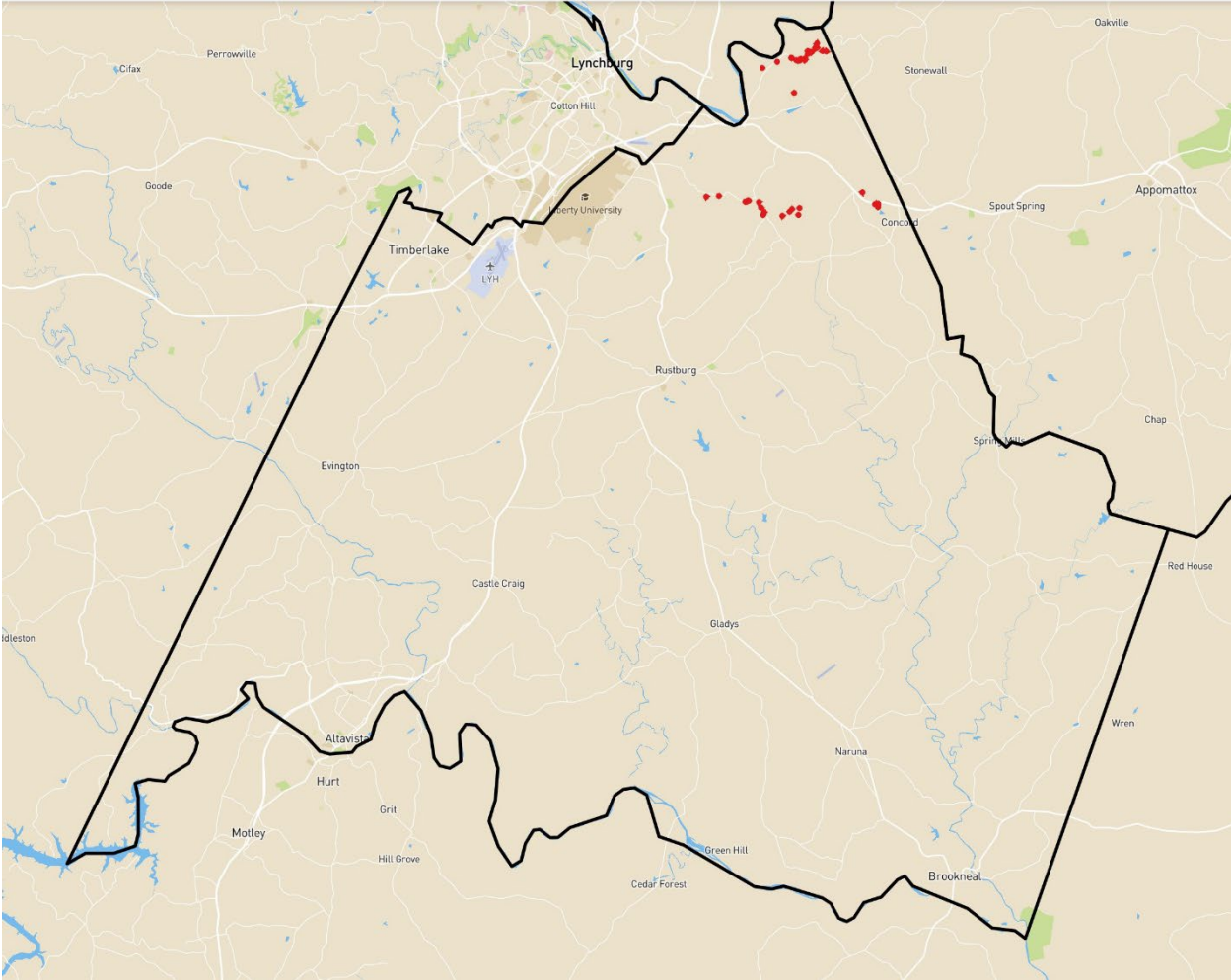
- 1000 mbps
- Optical/Fiber

Kinex Telecom, Inc.

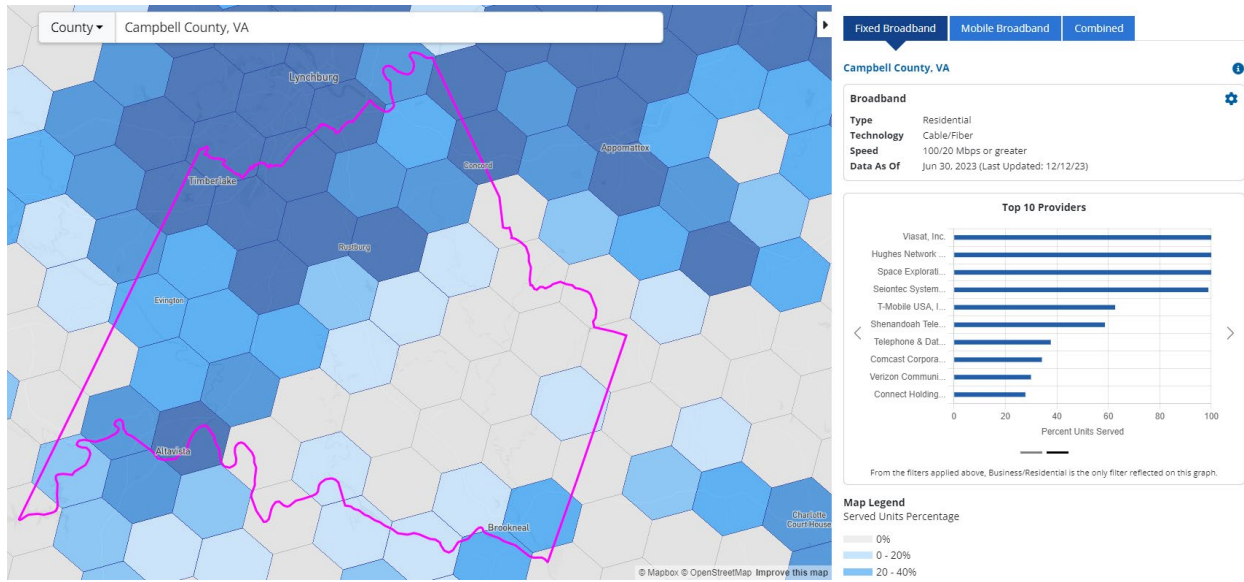
- 1000 mbps
- Optical/Fiber

Campbell County

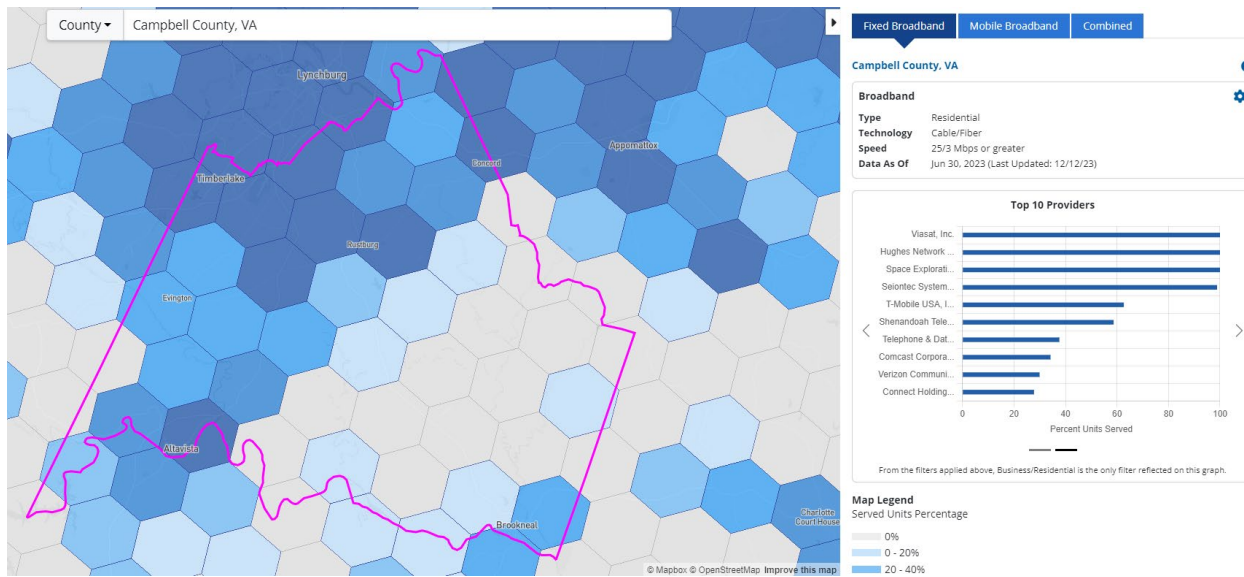
Campbell County - Project locations shown in red.



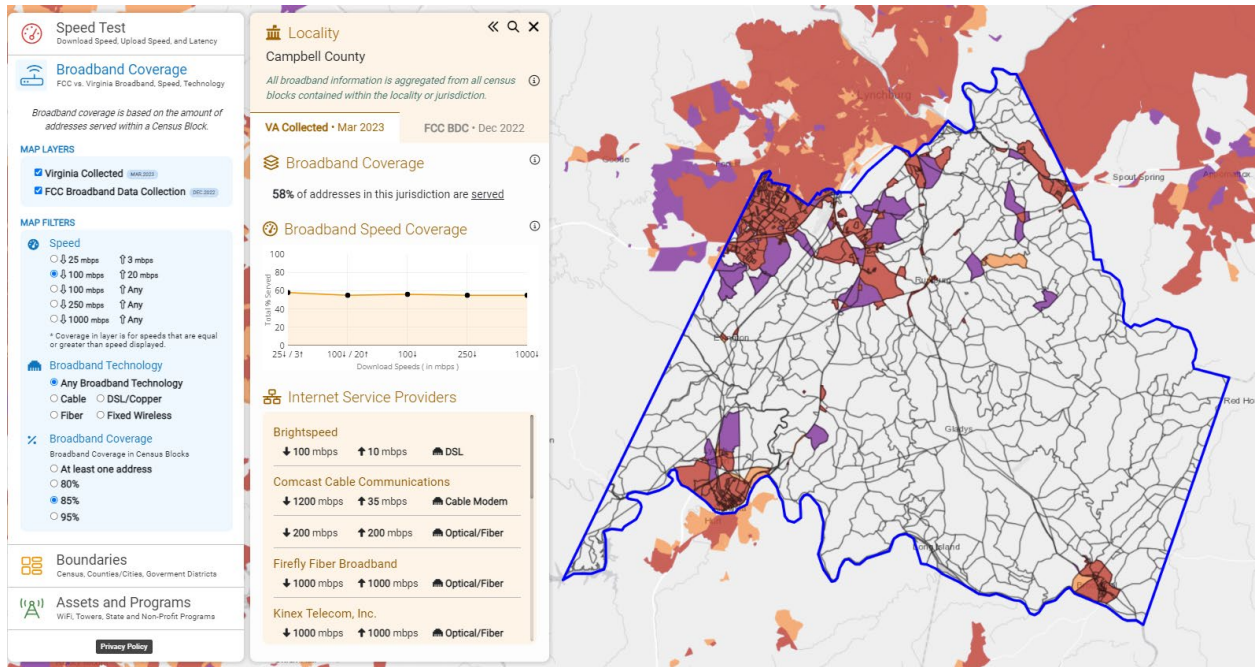
Campbell County – FCC Broadband map (dated June 30, 2023) of 100x20Mbps service.



Campbell County - FCC Broadband map (dated June 30, 2023) of 25/3Mbps service.

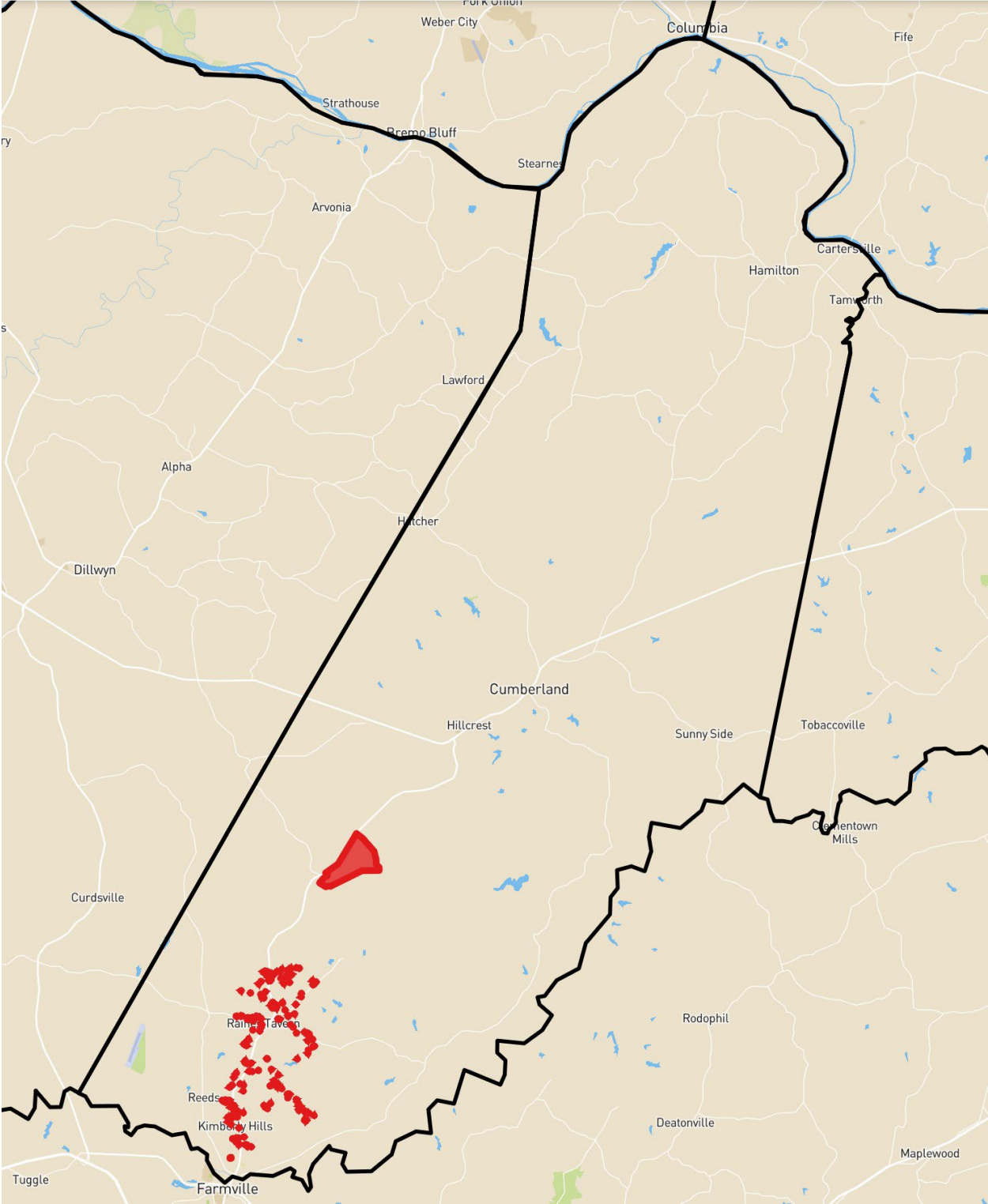


Campbell County mapping from Commonwealth Connection.

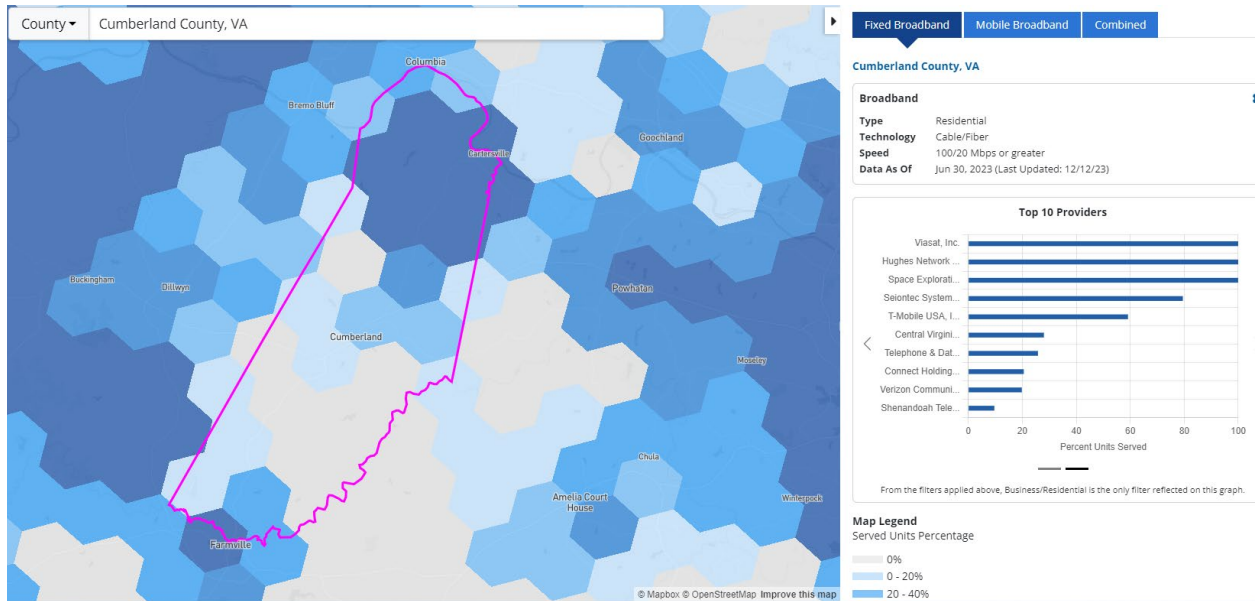


Cumberland County

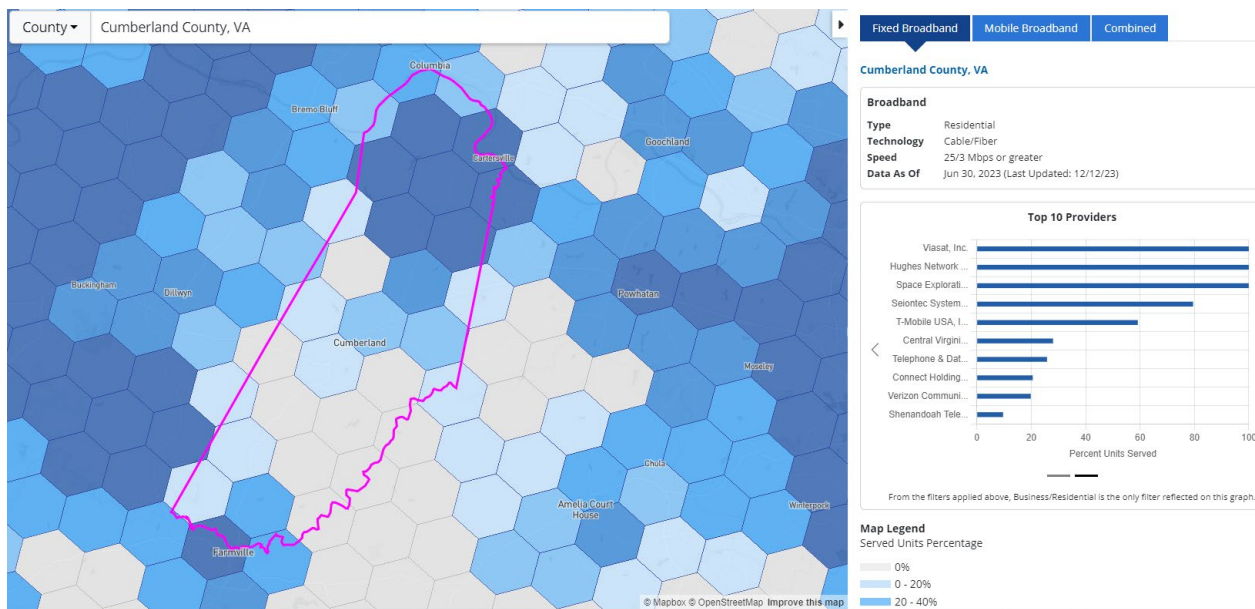
Cumberland County – Project areas and locations shown in red.



Cumberland County – FCC Broadband map (dated June 30, 2023) of 100x20Mbps service.



Cumberland County - FCC Broadband map (dated June 30, 2023) of 25/3Mbps service.



Even in areas that have Cable providers, locations with long extensions have no service.

Fixed Broadband | **Mobile Broadband**

Selected Location

2199 CUMBERLAND RD
FARMVILLE, VA 23901

Status: **Not Served** | Business | Unit Count: 1

Broadband

Type: Residential
Technology: Cable/Fiber
Speed: 100/20 Mbps or greater
Data As Of: Jun 30, 2023 (Last Updated: 12/12/23)

Residential | **Business** | Availability Challenge

Provider	Technology	Down (Mbps)	Up (Mbps)	Chall.
Hughes Network Systems, LLC	GSO Satellite	25	3	
Seiontec Systems, LLC	Unlicensed Fixed Wireless	200	25	
Space Exploration Technologies Corp.	NGSO Satellite	220	25	
Viasat, Inc.	GSO Satellite	30	3	

Map Legend

- Coverage available
- Coverage not available
- Not a mass market location

Cumberland County mapping from Commonwealth Connection.

Speed Test
Download Speed, Upload Speed, and Latency

Broadband Coverage
FCC vs. Virginia Broadband, Speed, Technology

Broadband coverage is based on the amount of addresses served within a Census Block.

MAP LAYERS

- Virginia Collected (MAR 2023)
- FCC Broadband Data Collection (DEC 2022)

MAP FILTERS

Speed

- 25 mbps
- 100 mbps
- 1000 mbps
- Any

Broadband Technology

- Any Broadband Technology
- Cable
- DSL/Copper
- Fiber
- Fixed Wireless

Broadband Coverage

Broadband Coverage in Census Blocks

- At least one address
- 80%
- 85%
- 95%

Localities
Cumberland County

All broadband information is aggregated from all census blocks contained within the locality or jurisdiction.

VA Collected - Mar 2023 | FCC BDC - Dec 2022

Broadband Coverage

37% of addresses in this jurisdiction are served

Broadband Speed Coverage

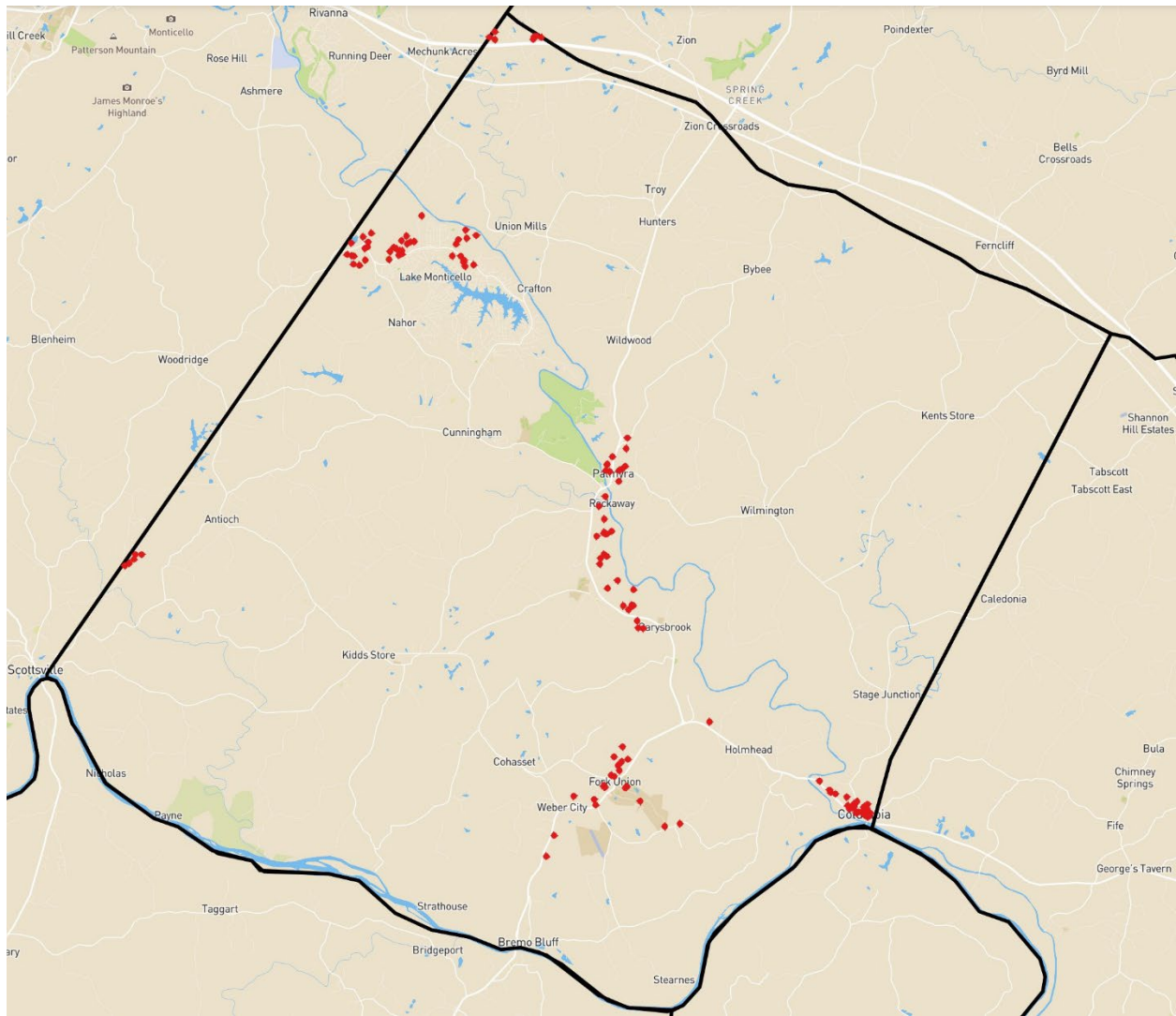
Total % Served vs Download Speeds (in mbps)

Internet Service Providers

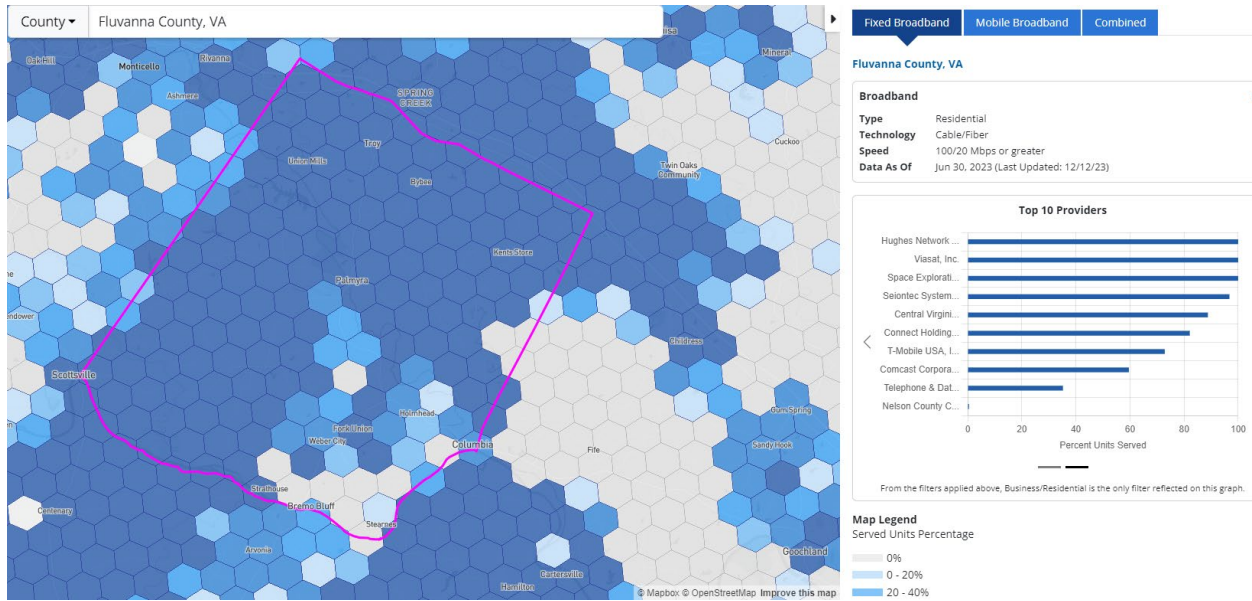
- Brightspeed**
↓ 100 mbps | ↑ 10 mbps | DSL
- Firefly Fiber Broadband**
↓ 1000 mbps | ↑ 1000 mbps | Optical/Fiber
- Kinex Telecom, Inc.**
↓ 1000 mbps | ↑ 1000 mbps | Optical/Fiber
↓ 25 mbps | ↑ 5 mbps | Fixed Wireless
- Shenandoah Telecommunications Company**
↓ 1000 mbps | ↑ 50 mbps | Cable Modem

Fluvanna County

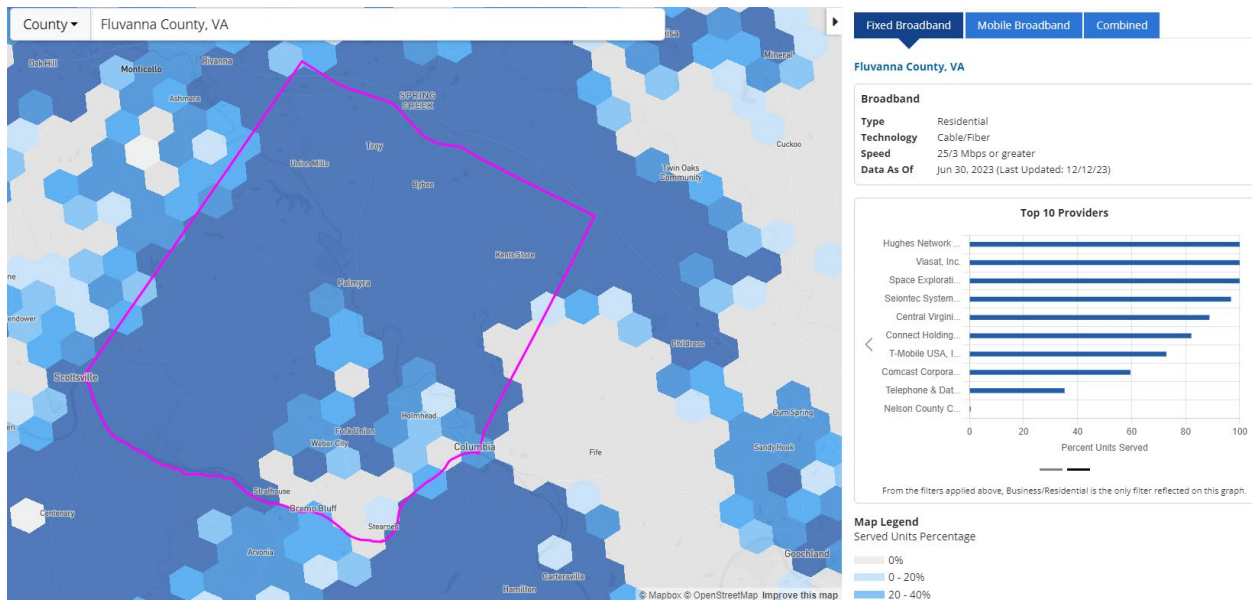
Fluvanna County – Project areas and locations shown in red.



Fluvanna County – FCC Broadband map (dated June 30, 2023) of 100x20Mbps service.



Fluvanna County - FCC Broadband map (dated June 30, 2023) of 25/3Mbps service.



Even in areas that have Cable providers, locations with long extensions have no service.

440 TERRE HAUTE LN PALMYRA, VA 22963

Fixed Broadband | Mobile Broadband

Selected Location

440 TERRE HAUTE LN PALMYRA, VA 22963 Location Challenge

Status: **Not Served** Residential | Unit Count: 1

Broadband

Type: Residential
 Technology: Cable/Fiber
 Speed: 100/20 Mbps or greater
 Data As Of: Jun 30, 2023 (Last Updated: 12/12/23)

Residential | Business Availability Challenge

Provider	Technology	Down (Mbps)	Up (Mbps)	Chall.
Connect Holding II LLC	Copper	0.2	0.2	
Hughes Network Systems, LLC	GSO Satellite	25	3	
Seintec Systems, LLC	Unlicensed Fixed Wireless	200	25	
Space Exploration Technologies Corp.	NGSO Satellite	220	25	

Map Legend

- Coverage available
- Coverage not available

Fluvanna County mapping from Commonwealth Connection.

Speed Test
Download Speed, Upload Speed, and Latency

Broadband Coverage
FCC vs. Virginia Broadband, Speed, Technology

Broadband coverage is based on the amount of addresses served within a Census Block.

MAP LAYERS

- Virginia Collected (Mar 2023)
- FCC Broadband Data Collection (Dec 2022)

MAP FILTERS

Speed

- 25 mbps
- 100 mbps
- 100 mbps
- 250 mbps
- 1000 mbps
- 3 mbps
- 20 mbps
- Any
- Any
- Any

Broadband Technology

- Any Broadband Technology
- DSL/Copper
- Fiber
- Fixed Wireless

Broadband Coverage

Broadband Coverage in Census Blocks

- At least one address
- 80%
- 85%
- 95%

Boundaries
Census, Counties/Cities, Government Districts

Assets and Programs
WIR, Towers, State and Non-Profit Programs

Locality
Fluvanna County

All broadband information is aggregated from all census blocks contained within the locality or jurisdiction.

VA Collected · Mar 2023 | FCC BDC · Dec 2022

Broadband Coverage

96% of addresses in this jurisdiction are served

Broadband Speed Coverage

Total % of Addresses

Download Speeds (in mbps)

Internet Service Providers

Brightspeed

- 1000 mbps
- 1000 mbps
- DSL
- 200 mbps
- 200 mbps
- Optical/Fiber

Comcast Cable Communications

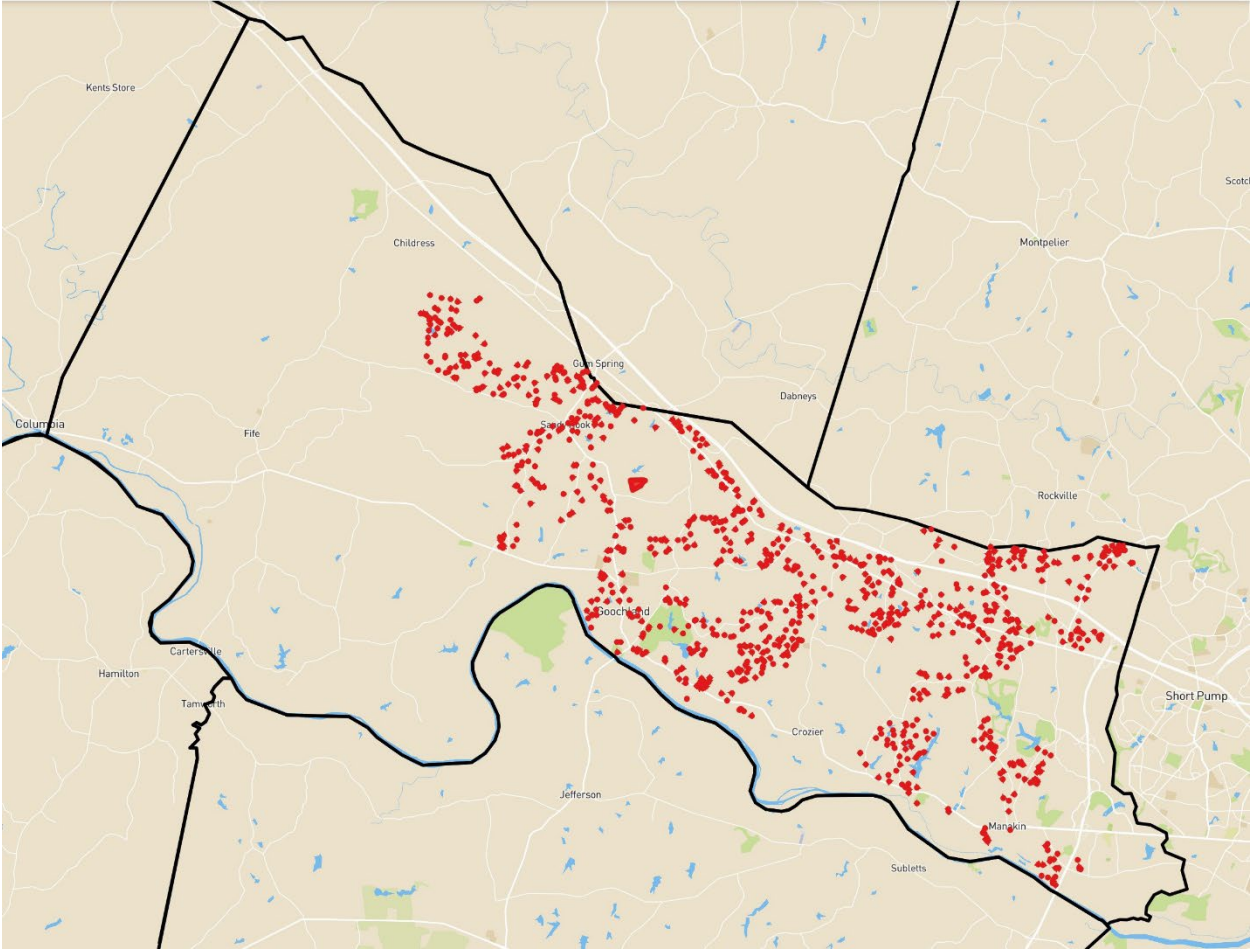
- 1200 mbps
- 35 mbps
- Cable Modem
- 900 mbps
- 900 mbps
- Optical/Fiber

Firefly Fiber Broadband

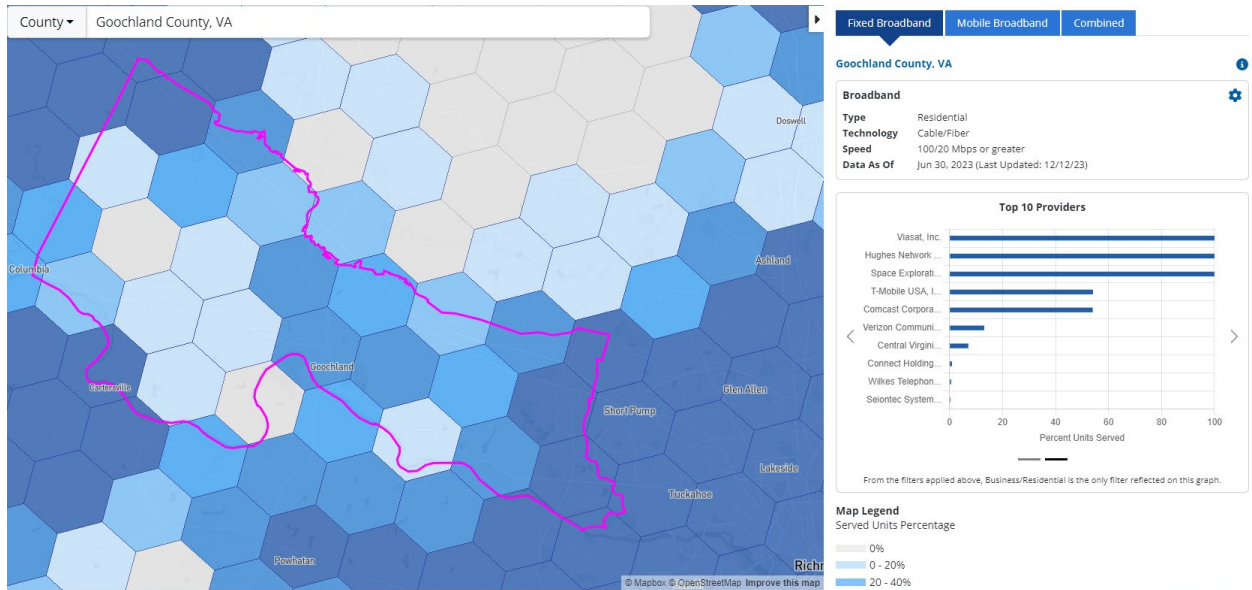
- 1000 mbps
- 1000 mbps
- Optical/Fiber

Goochland County

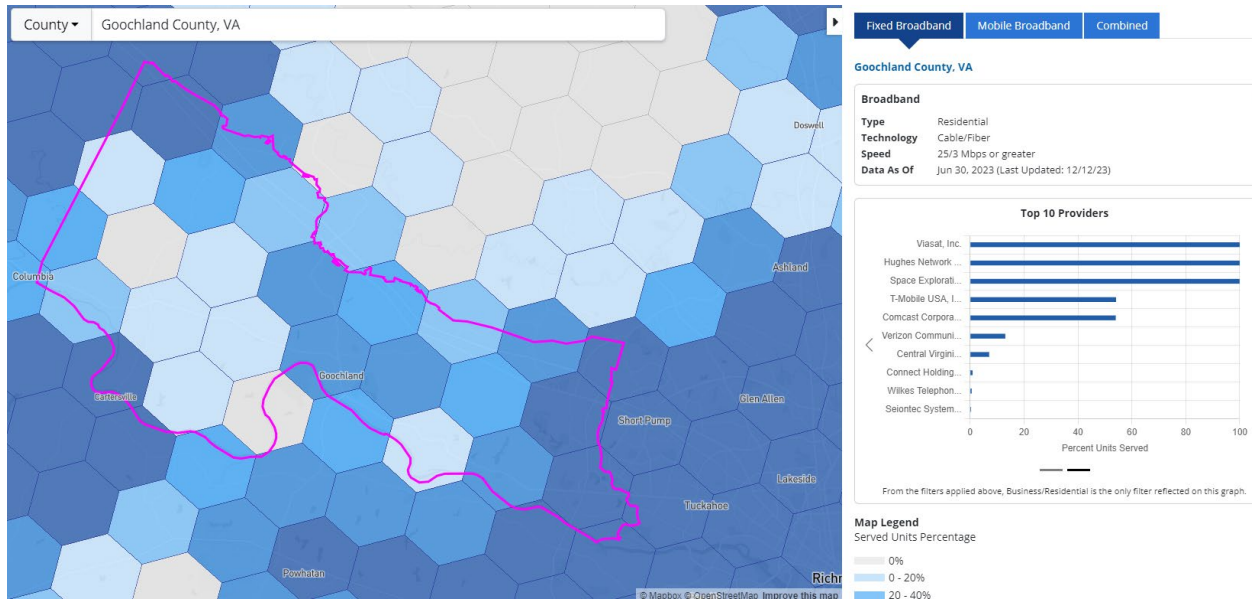
Goochland County – Project areas and locations shown in red.



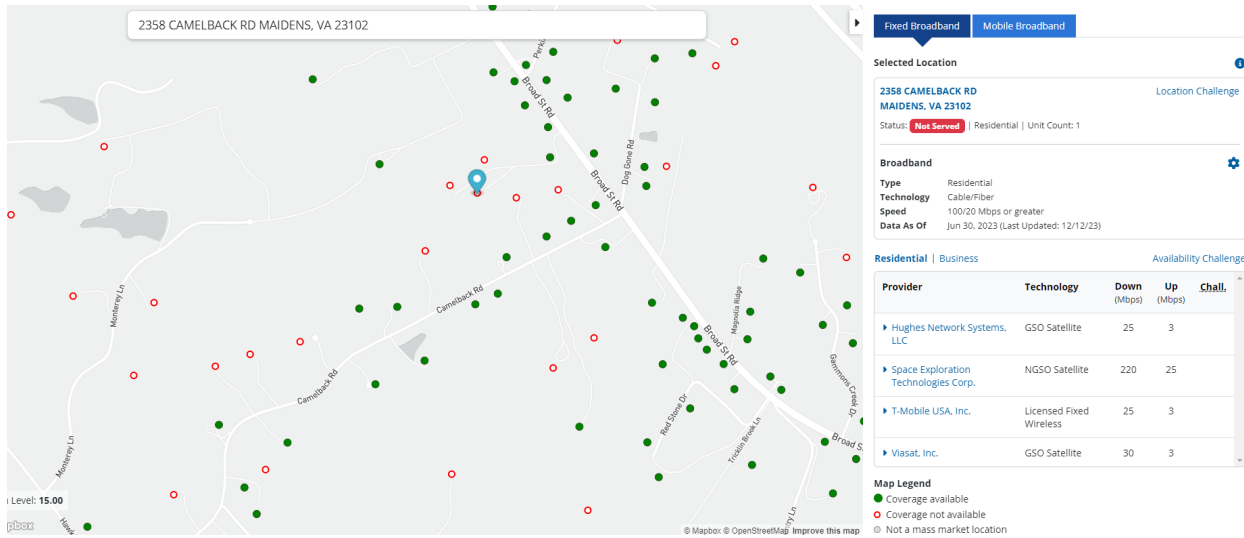
Goochland County – FCC Broadband map (dated June 30, 2023) of 100x20Mbps service.



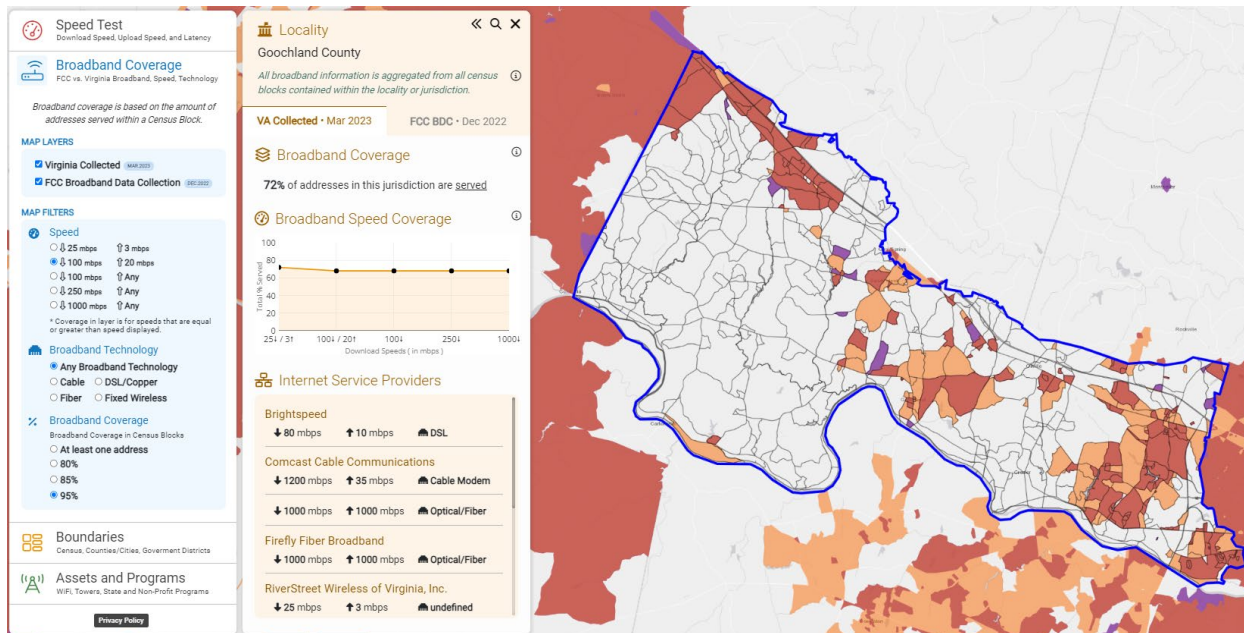
Goochland County - FCC Broadband map (dated June 30, 2023) of 25/3Mbps service.



Even in areas that have Cable providers, locations with long extensions have no service.

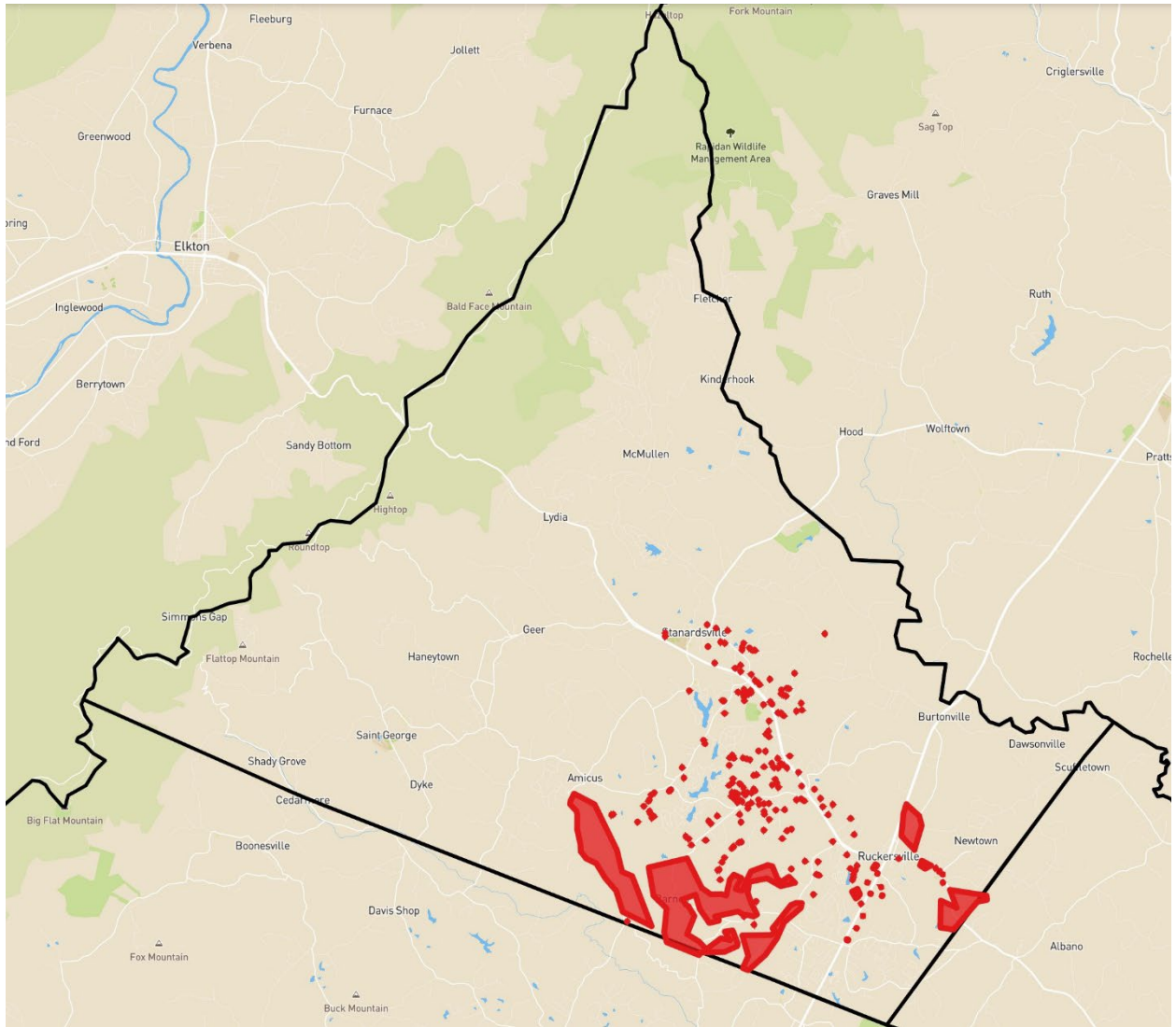


Goochland County mapping from Commonwealth Connection.

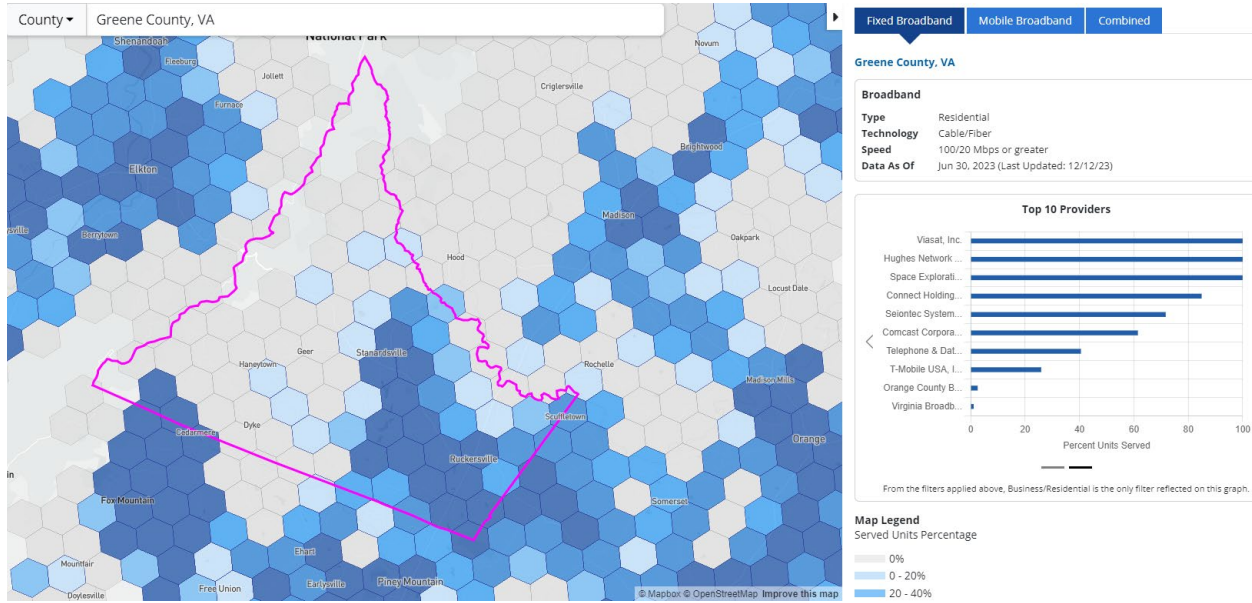


Greene County

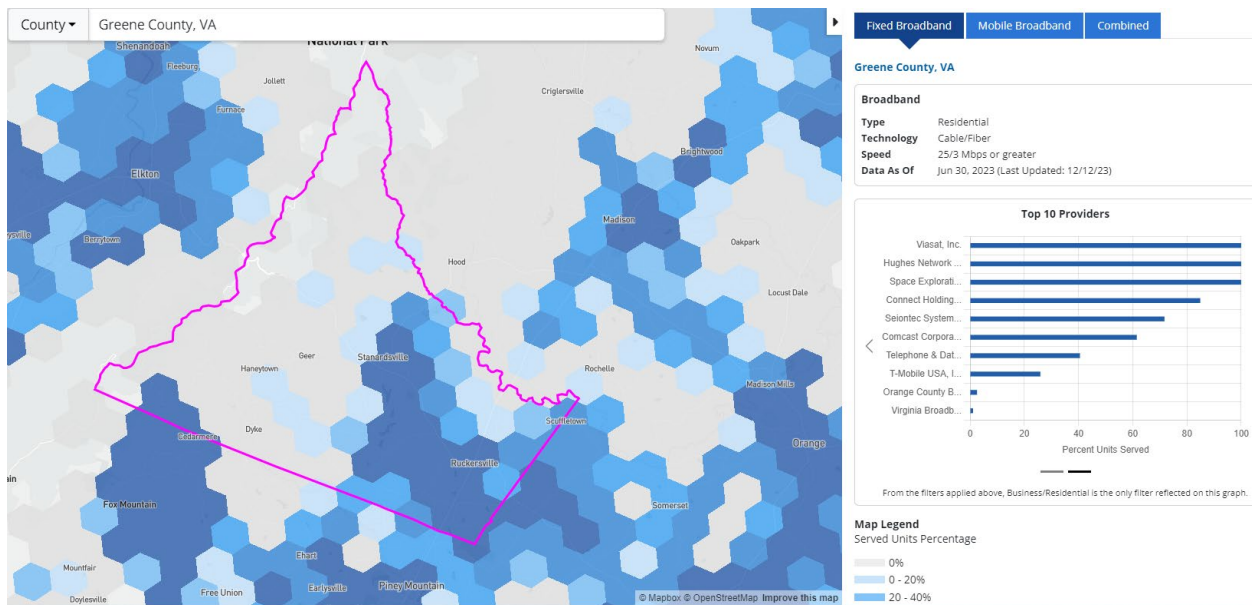
Greene County – Project areas and locations shown in red.



Greene County – FCC Broadband map (dated June 30, 2023) of 100x20Mbps service.



Greene County - FCC Broadband map (dated June 30, 2023) of 25/3Mbps service.



Even in areas that have Cable providers, locations with long extensions have no service.

118 LEWIS DR RUCKERSVILLE, VA 22968

Fixed Broadband | Mobile Broadband

Selected Location

118 LEWIS DR
RUCKERSVILLE, VA 22968 Location Challenge

Status: **Not Served** Residential | Unit Count: 1

Broadband

Type: Residential
Technology: Cable/Fiber
Speed: 100/20 Mbps or greater
Data As Of: Jun 30, 2023 (Last Updated: 12/12/23)

Residential | Business Availability Challenge

Provider	Technology	Down (Mbps)	Up (Mbps)	Chall.
Connect Holding II LLC	Copper	0.2	0.2	
Hughes Network Systems, LLC	GSO Satellite	25	3	
Seiontec Systems, LLC	Unlicensed Fixed Wireless	200	25	
Space Exploration Technologies Corp.	NGSO Satellite	220	25	

Map Legend

- Coverage available
- Coverage not available

Greene County mapping from Commonwealth Connection.

Speed Test
Download Speed, Upload Speed, and Latency

Broadband Coverage
FCC vs. Virginia Broadband, Speed, Technology

Broadband coverage is based on the amount of addresses served within a Census Block.

MAP LAYERS

- Virginia Collected Mar 2023
- FCC Broadband Data Collection Dec 2022

MAP FILTERS

Speed

- 25 mbps
- 100 mbps
- 100 mbps
- 250 mbps
- 1000 mbps

Broadband Technology

- Any Broadband Technology
- Cable
- DSL/Copper
- Fiber
- Fixed Wireless

Broadband Coverage

- Broadband Coverage in Census Blocks
- At least one address
- 80%
- 85%
- 95%

Boundaries
Census, Counties/Cities, Government Districts

Assets and Programs
WiFi, Towers, State and Non-Profit Programs

Locality
Greene County

All broadband information is aggregated from all census blocks contained within the locality or jurisdiction.

VA Collected • Mar 2023 | FCC BDC • Dec 2022

Broadband Coverage

75% of addresses in this jurisdiction are served

Broadband Speed Coverage

Total % Served

Download Speeds (in mbps)

Internet Service Providers

BrightSpeed

- 1000 mbps
- 1000 mbps
- DSL

Comcast Cable Communications

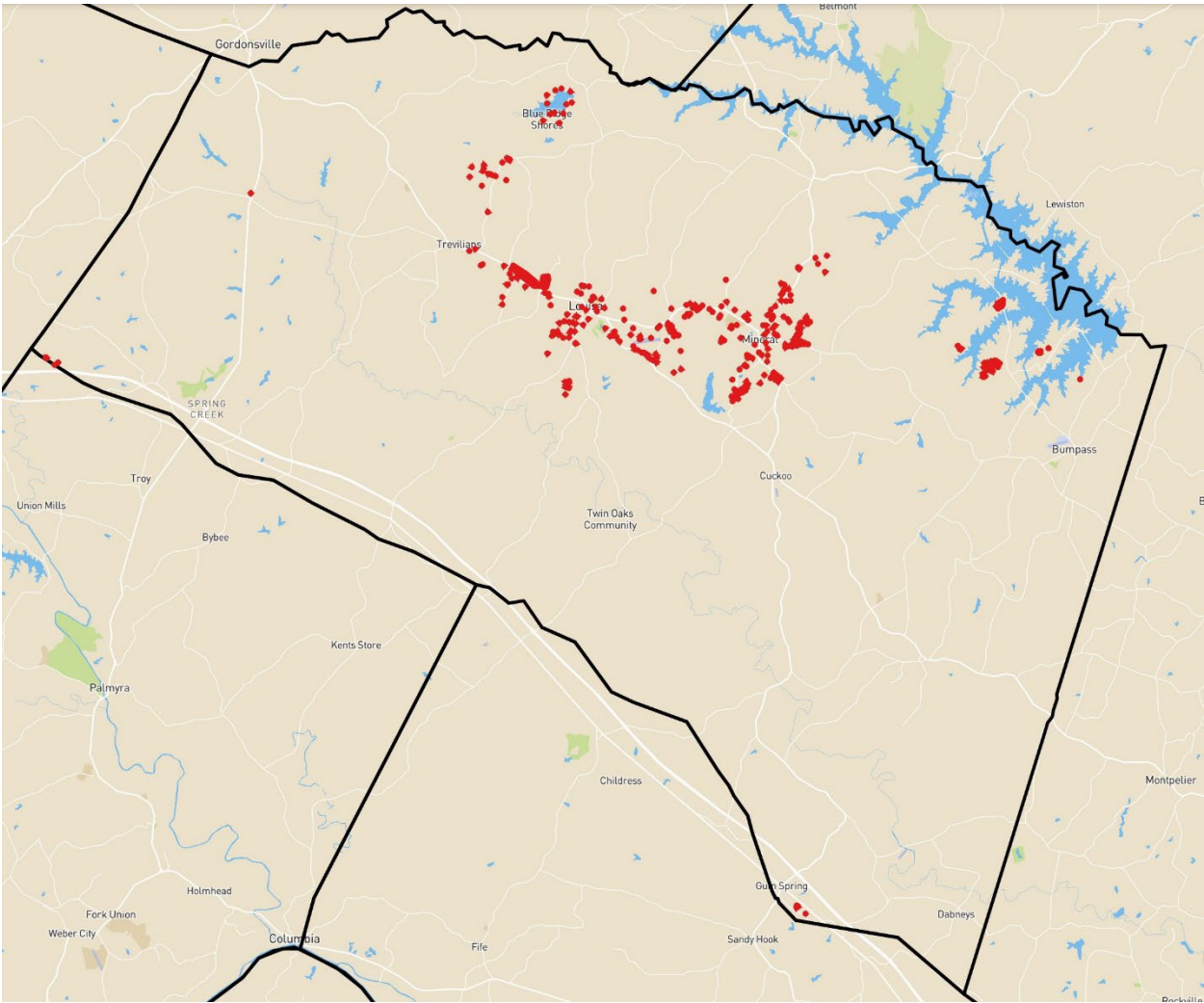
- 1200 mbps
- 35 mbps
- Cable Modem

FiberLync

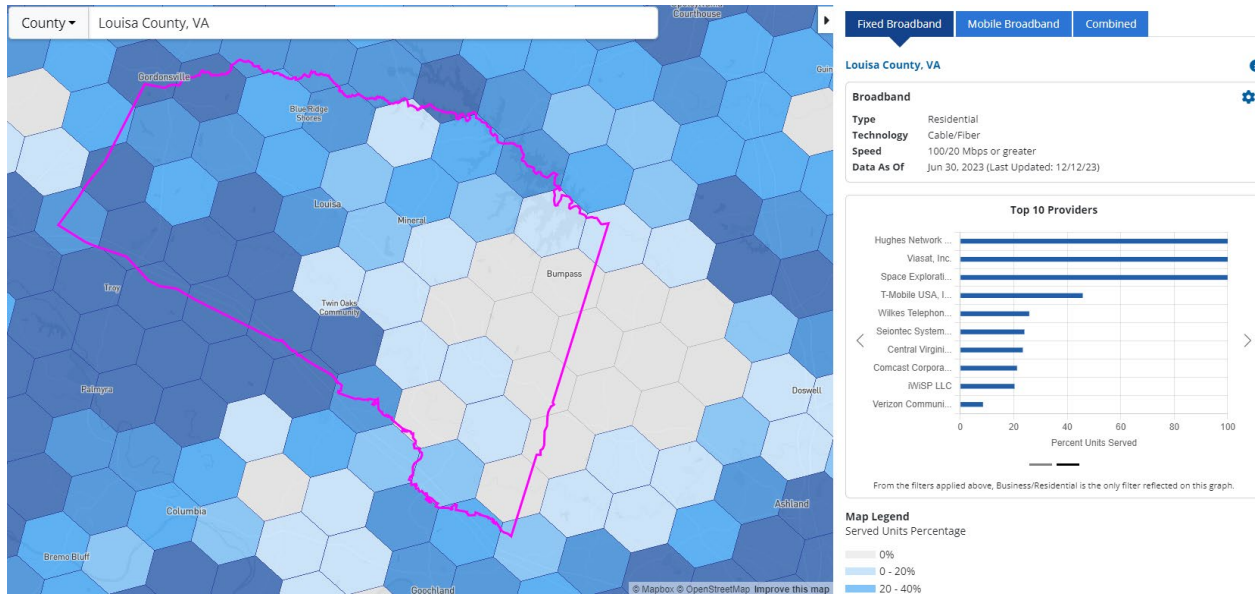
- 1000 mbps
- 500 mbps
- Optical/Fiber

Louisa County

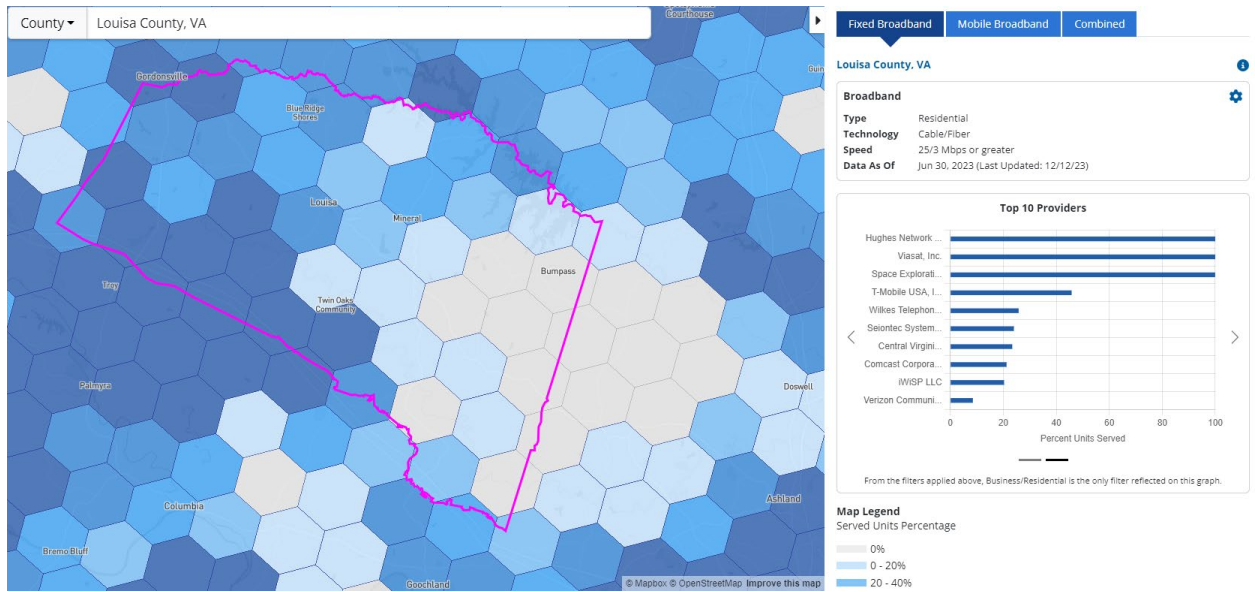
Louisa County – Project areas and locations shown in red.



Louisa County – FCC Broadband map (dated June 30, 2023) of 100x20Mbps service.



Louisa County - FCC Broadband map (dated June 30, 2023) of 25/3Mbps service.



Even in areas that have Cable providers, locations with long extensions have no service.

1444 SCHOOL BUS RD LOUISA, VA 23093

Fixed Broadband | Mobile Broadband

Selected Location

1444 SCHOOL BUS RD
LOUISA, VA 23093
Location Challenge

Status: **Not Served** | Residential | Unit Count: 1

Broadband

Type: Residential
Technology: Cable/Fiber
Speed: 100/20 Mbps or greater
Data As Of: Jun 30, 2023 (Last Updated: 12/12/23)

Residential | Business | Availability Challenge

Provider	Technology	Down (Mbps)	Up (Mbps)	Chall.
Hughes Network Systems, LLC	GSO Satellite	25	3	
Space Exploration Technologies Corp.	NGSO Satellite	220	25	
Viasat, Inc.	GSO Satellite	100	3	

Map Legend

- Coverage available
- Coverage not available
- ⊙ Not a mass market location

Louisa County mapping from Commonwealth Connection.

Speed Test
Download Speed, Upload Speed, and Latency

Broadband Coverage
FCC vs. Virginia Broadband, Speed, Technology

Broadband coverage is based on the amount of addresses served within a Census Block.

MAP LAYERS

- Virginia Collected (2023)
- FCC Broadband Data Collection (2022)

MAP FILTERS

Speed

- 25 mbps
- 100 mbps
- 250 mbps
- 1000 mbps

Broadband Technology

- Any Broadband Technology
- Cable
- DSL/Copper
- Fiber
- Fixed Wireless

Broadband Coverage

- Broadband Coverage in Census Blocks
- At least one address
- 80%
- 85%
- 95%

Localities
Louisa County

All broadband information is aggregated from all census blocks contained within the locality or jurisdiction.

VA Collected - Mar 2023 | FCC BDC - Dec 2022

Broadband Coverage

47% of addresses in this jurisdiction are served

Broadband Speed Coverage

Line graph showing % of addresses served vs Download Speeds (in mbps)

Internet Service Providers

Brightspeed

- 100 mbps
- 10 mbps
- DSL

Comcast Cable Communications

- 1200 mbps
- 35 mbps
- Cable Modem
- 200 mbps
- 200 mbps
- Optical/Fiber

Firefly Fiber Broadband

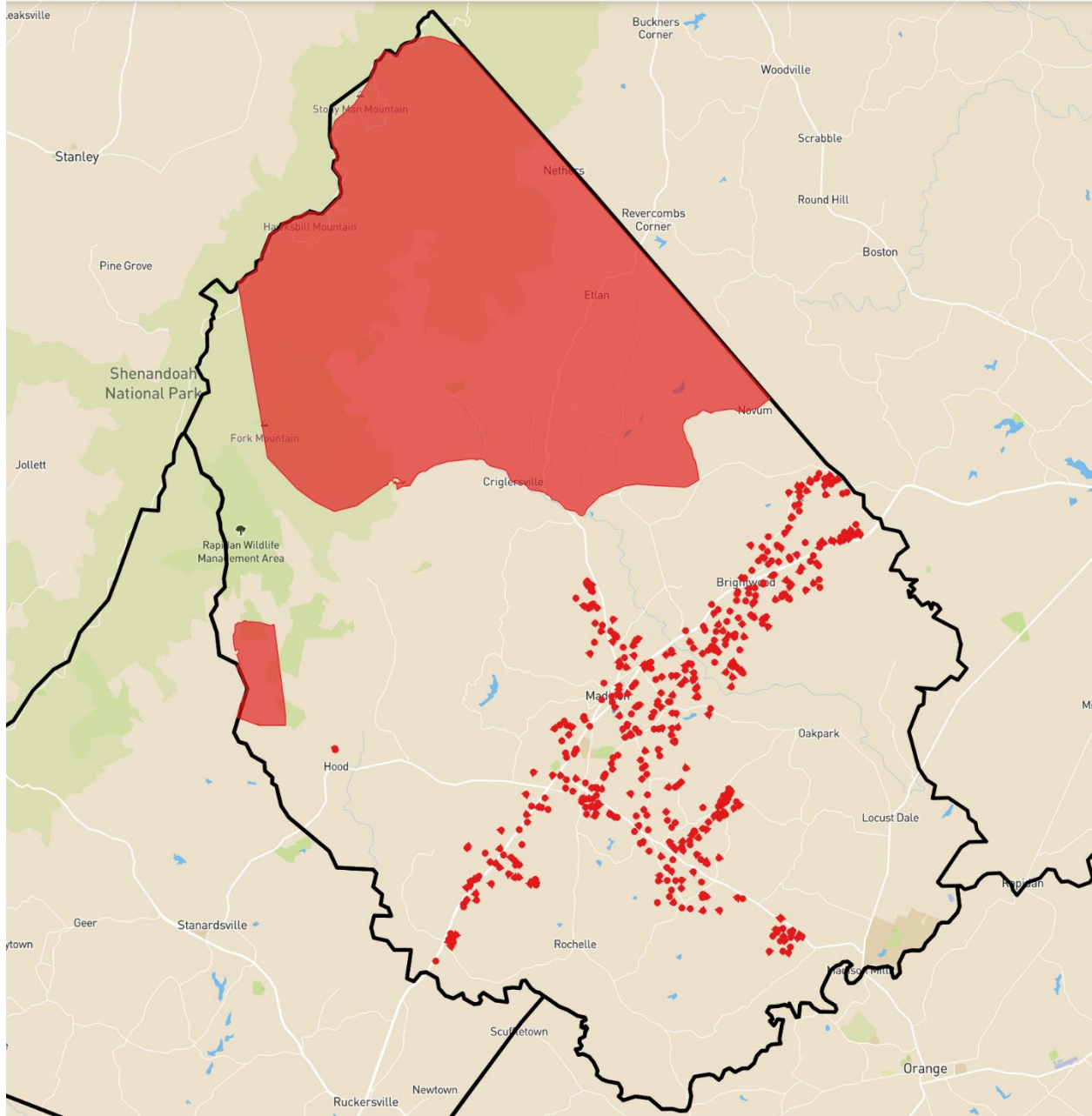
- 1000 mbps
- 1000 mbps
- Optical/Fiber

IWISP LLC

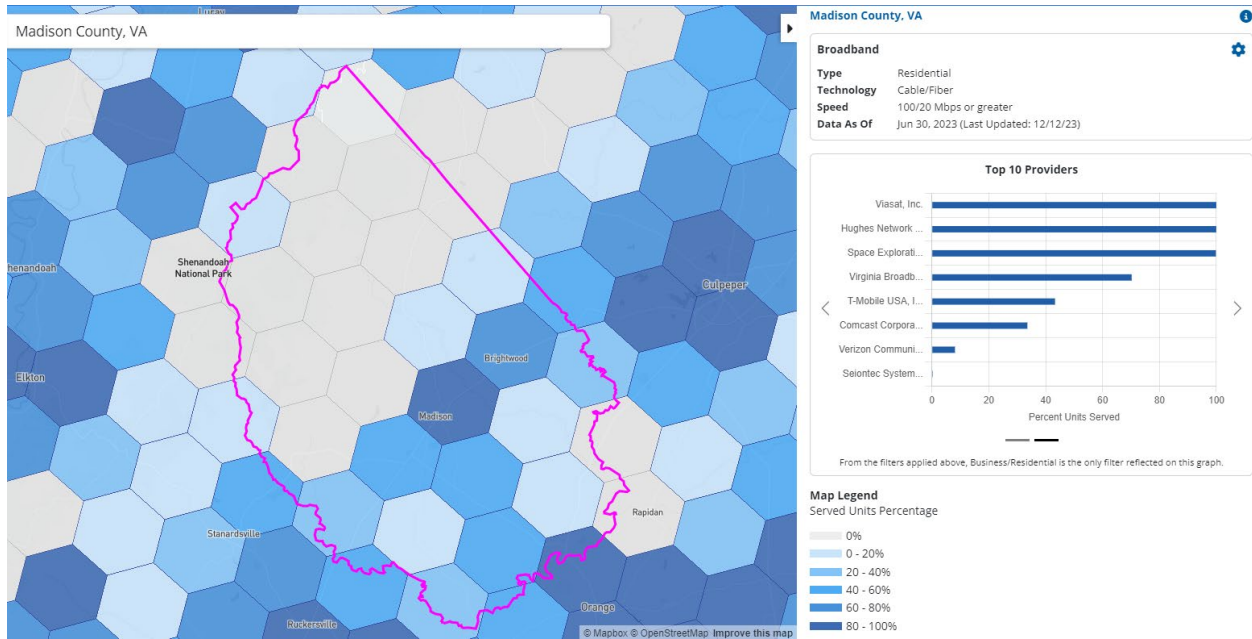
- 150 mbps
- 150 mbps
- Optical/Fiber

Madison County

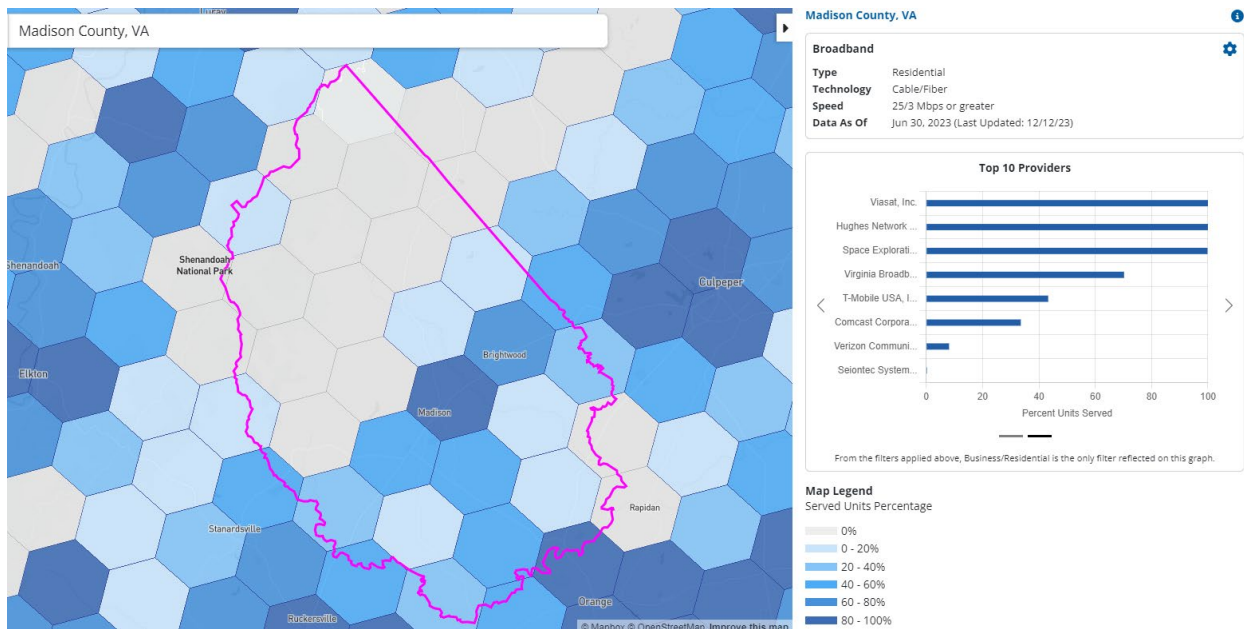
Madison County – Project areas shown in red.



Madison County – FCC Broadband map (dated June 30, 2023) of 100x20Mbps service.



Madison County - FCC Broadband map (dated June 30, 2023) of 25/3Mbps service.



Even in areas that have Cable providers, locations with long extensions have no service.

84 SPRING BRANCH RD BLDG 2 BRIGHTWOOD, VA 22715

Selected Location

84 SPRING BRANCH RD BLDG 2
BRIGHTWOOD, VA 22715

Status: **Not Served** | Residential | Unit Count: 1

Broadband

Type: Residential
Technology: Cable/Fiber
Speed: 100/20 Mbps or greater
Data As Of: Jun 30, 2023 (Last Updated: 12/12/23)

Residential | Business

Provider	Technology	Down (Mbps)	Up (Mbps)	Chall.
Hughes Network Systems, LLC	GSO Satellite	25	3	
Space Exploration Technologies Corp.	NGSO Satellite	220	25	
T-Mobile USA, Inc.	Licensed Fixed Wireless	0.2	0.2	
Viasat, Inc.	GSO Satellite	100	3	

Map Legend

- Coverage available
- Coverage not available
- Not a mass market location

Madison County mapping from Commonwealth Connection.

COMMONWEALTH CONNECTION
Mapping Virginia's Expanding Broadband Access

Cities and Counties | Madison County

Speed Test
Download Speed, Upload Speed, and Latency

Broadband Coverage
FCC vs. Virginia Broadband, Speed, Technology

Broadband coverage is based on the amount of addresses served within a Census Block.

MAP LAYERS

- Virginia Collected (MAR 2023)
- FCC Broadband Data Collection (DEC 2022)

MAP FILTERS

Speed

- 25 mbps
- 100 mbps
- 250 mbps
- 1000 mbps

Broadband Technology

- Any Broadband Technology
- Cable
- DSL/Copper
- Fiber
- Fixed Wireless

Broadband Coverage

- At least one address
- 80%
- 85%
- 95%

Localities
Madison County

All broadband information is aggregated from all census blocks contained within the locality or jurisdiction.

VA Collected · Mar 2023 | FCC BDC · Dec 2022

Broadband Coverage

37% of addresses in this jurisdiction are served

Broadband Speed Coverage

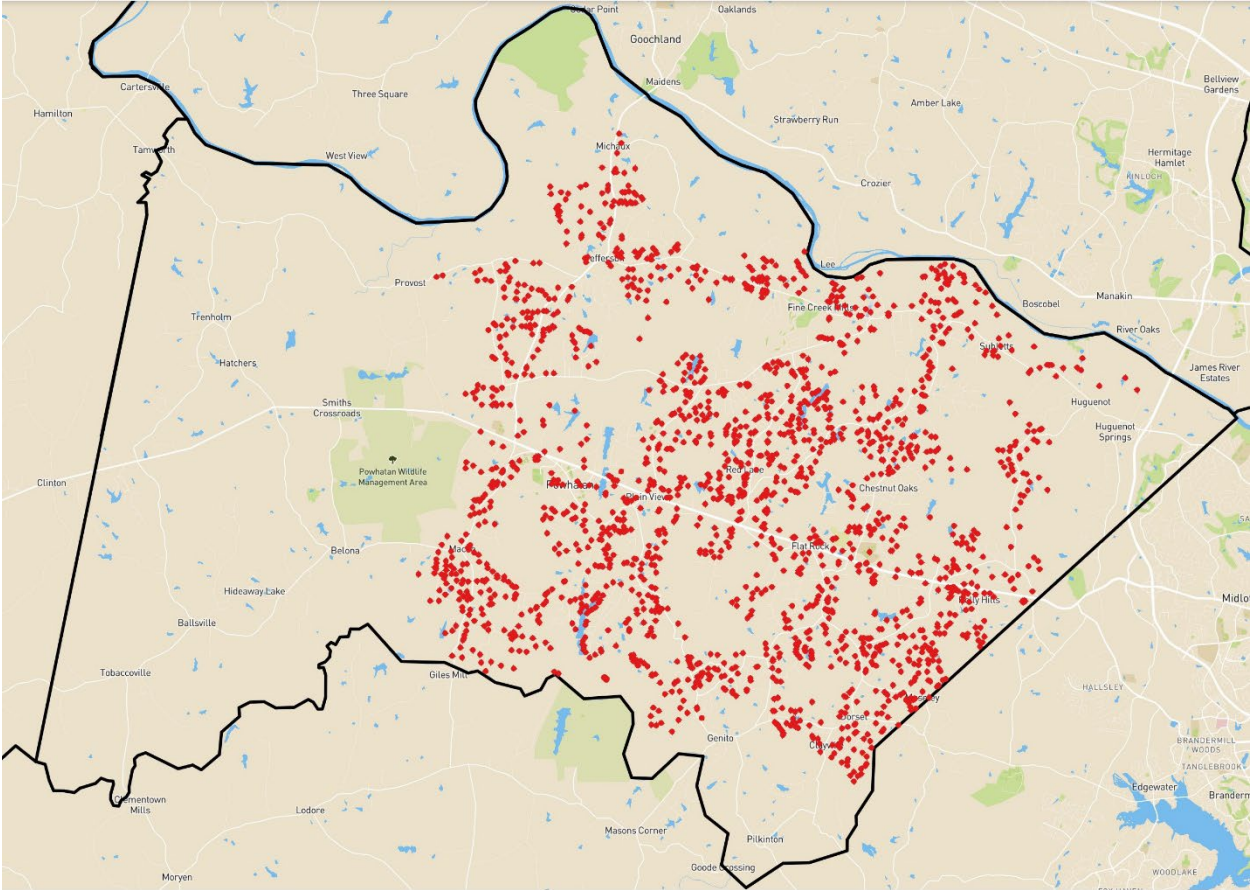
Total % Served vs. Download Speeds (in mbps)

Internet Service Providers

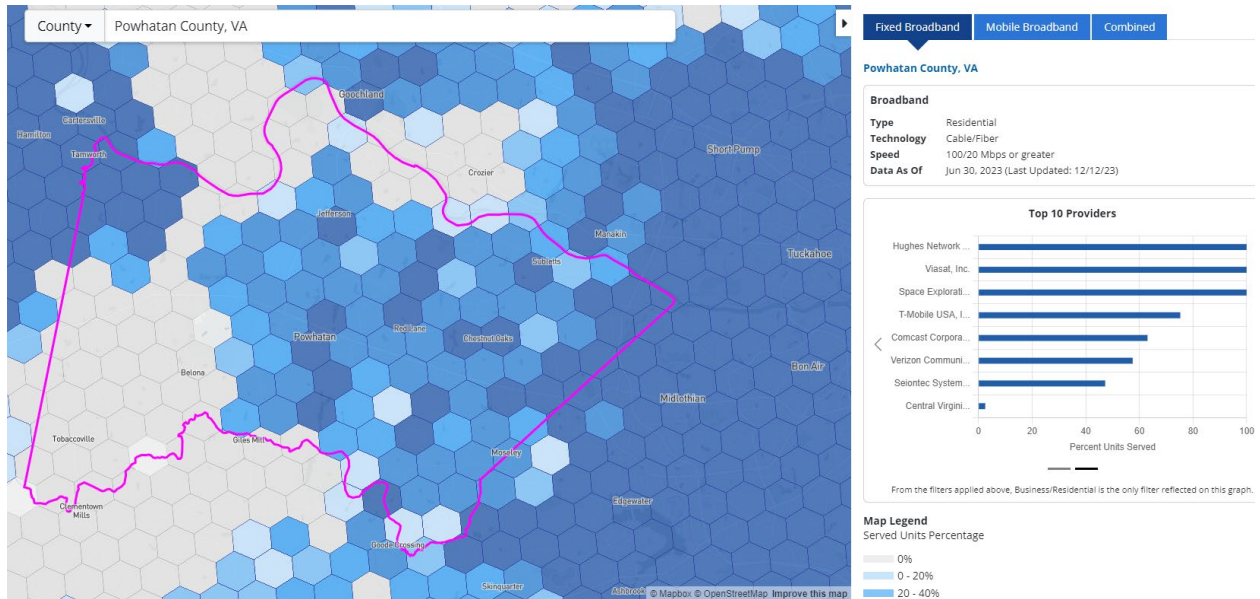
- T-Mobile US**
↓ 100 mbps | ↑ 20 mbps | undefined
- Verizon**
↓ 940 mbps | ↑ 880 mbps | Optical/Fiber
- ↓ 300 mbps | ↑ 10 mbps | undefined
- Xfinity**
↓ 1200 mbps | ↑ 35 mbps | Cable Modem

Powhatan County

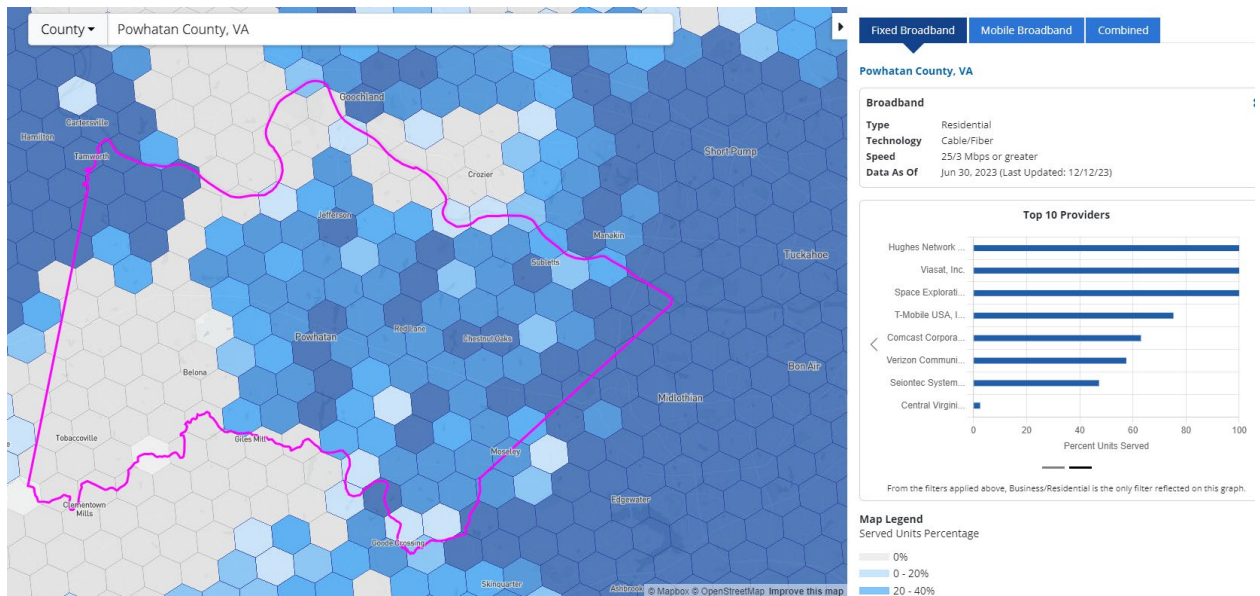
Powhatan County – Project areas shown in red.



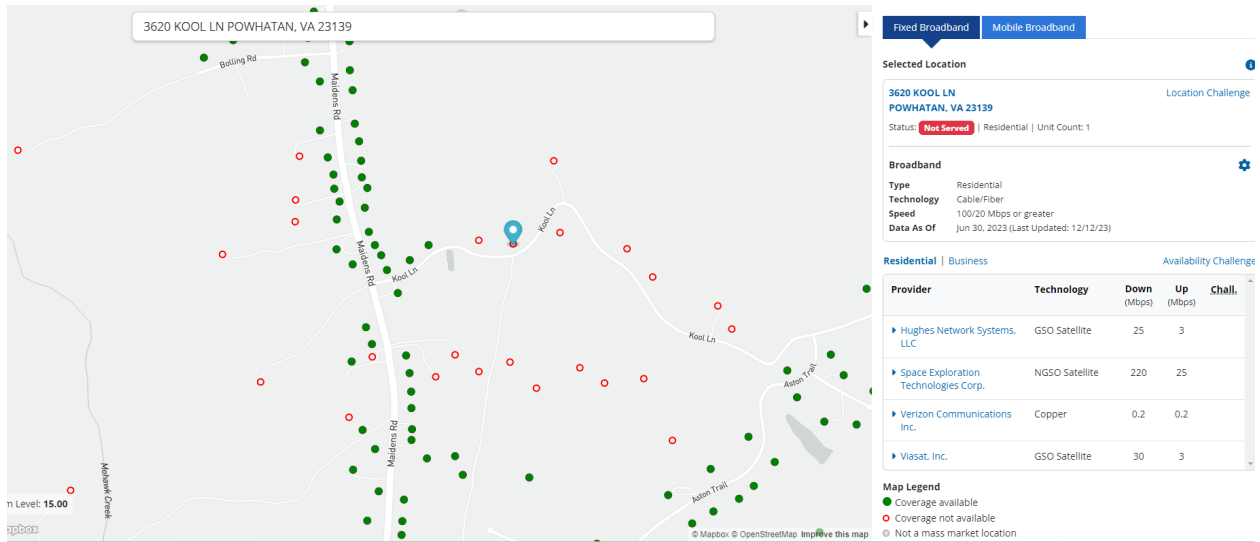
Powhatan County – FCC Broadband map (dated June 30, 2023) of 100x20Mbps service.



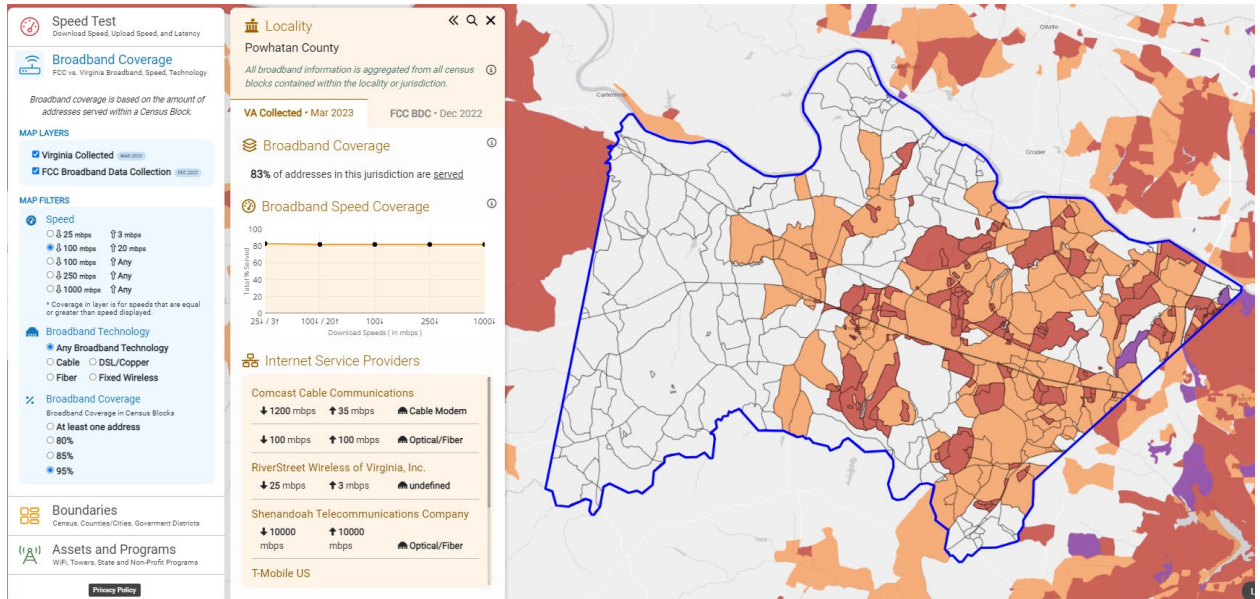
Powhatan County - FCC Broadband map (dated June 30, 2023) of 25/3Mbps service.



Even in areas that have Cable providers, locations with long extensions have no service.



Powhatan County mapping from Commonwealth Connection.



2024 Virginia Telecommunication Initiative (VATI) RDOF Passings Form

Type of Passings	Total Number of Passings in the Project Area that lie within Preliminarily Awarded RDOF Areas ¹
Residential	44
Businesses (non-home based)	8
Businesses (home-based)	3
Community Anchors	1
Non-residential	3
Total Number of RDOF Passings	59

*Note: The Total Number of RDOF Passings **MUST** be equal to the Residential, Business (non-home based), Non-residential and Community Anchors sum.*

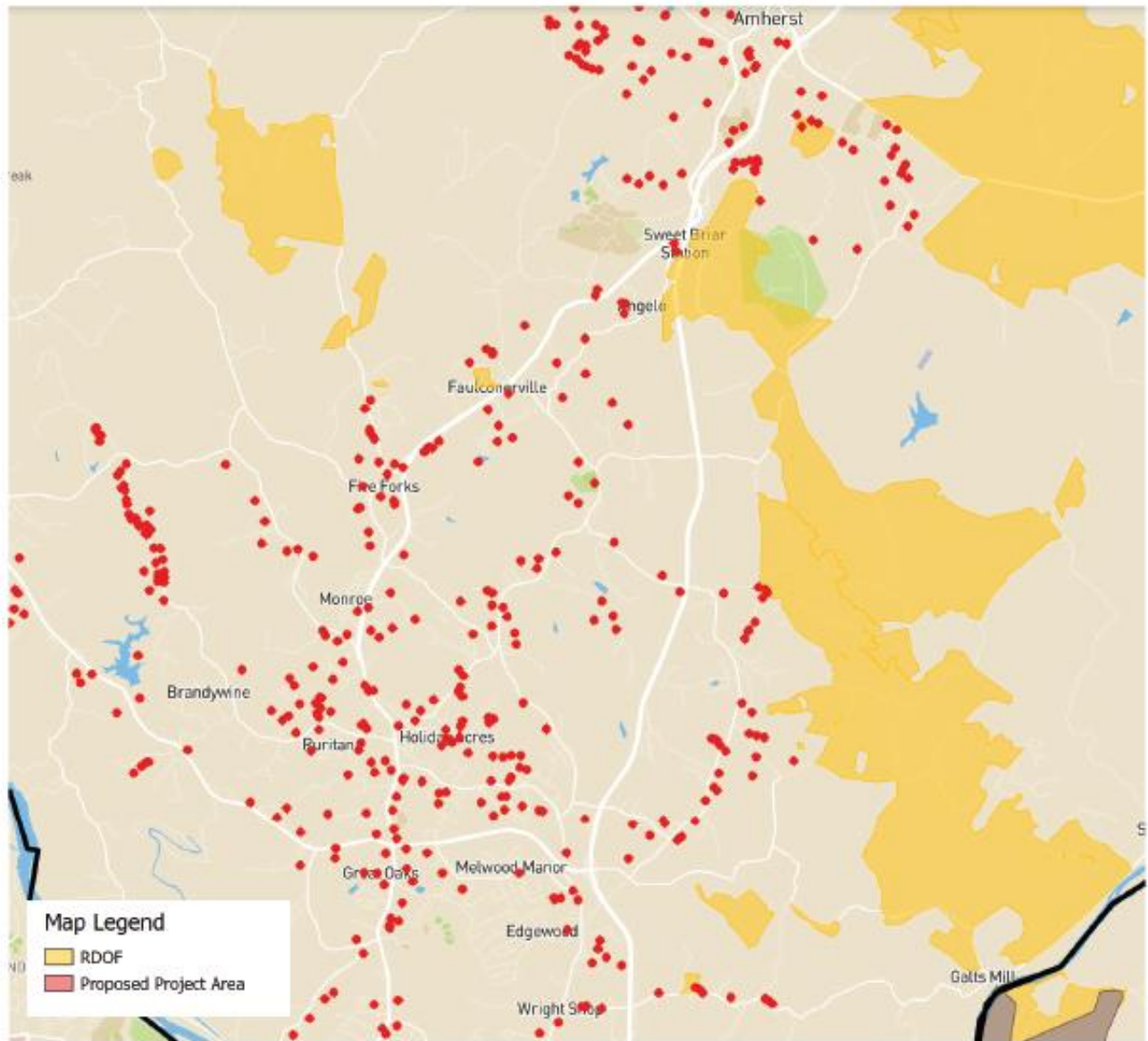
Definitions

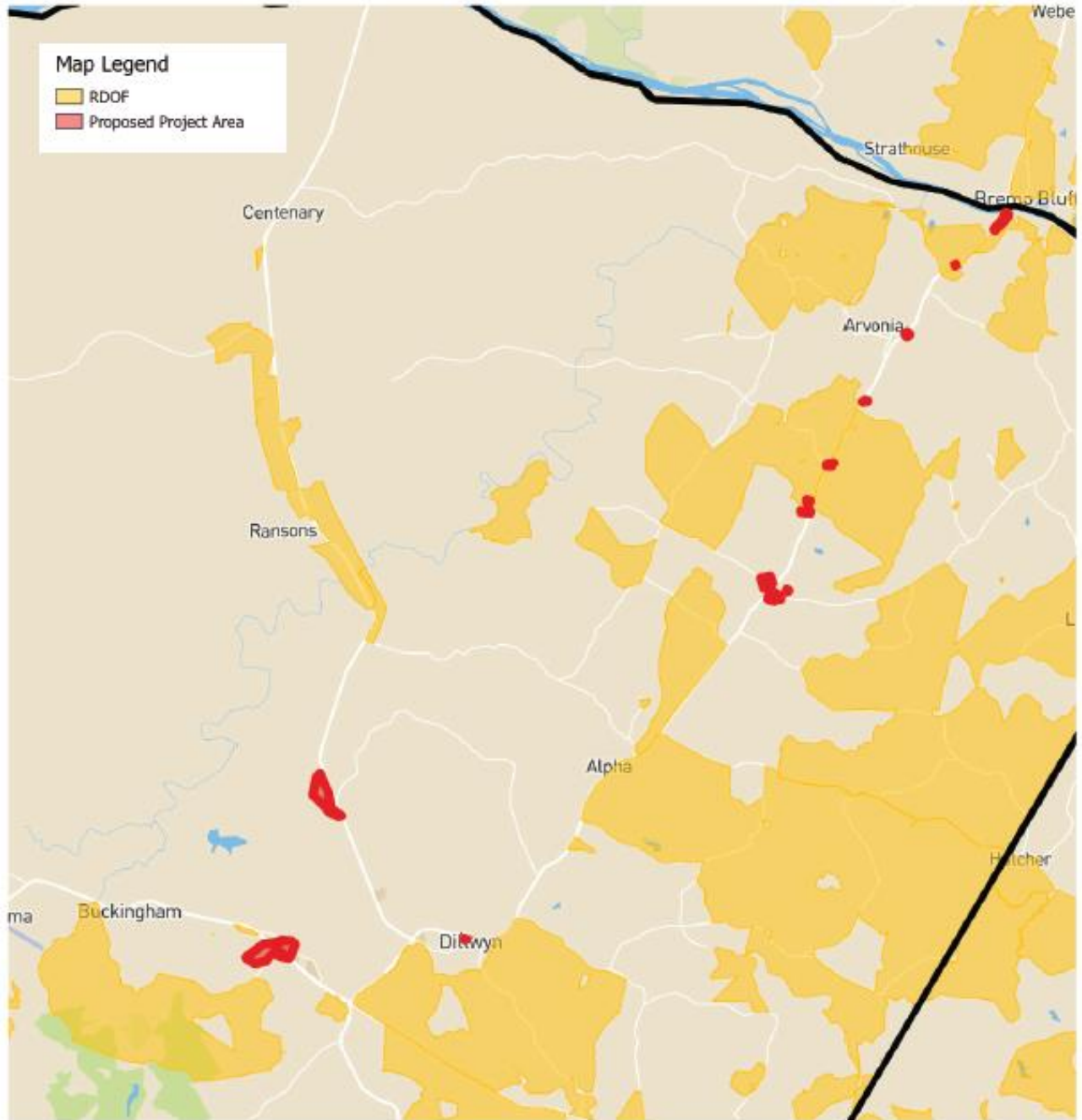
Passing – any structure that can receive service. Multi-unit structures may be counted as more than 1 passing, provided individual connections and account are planned at that structure.

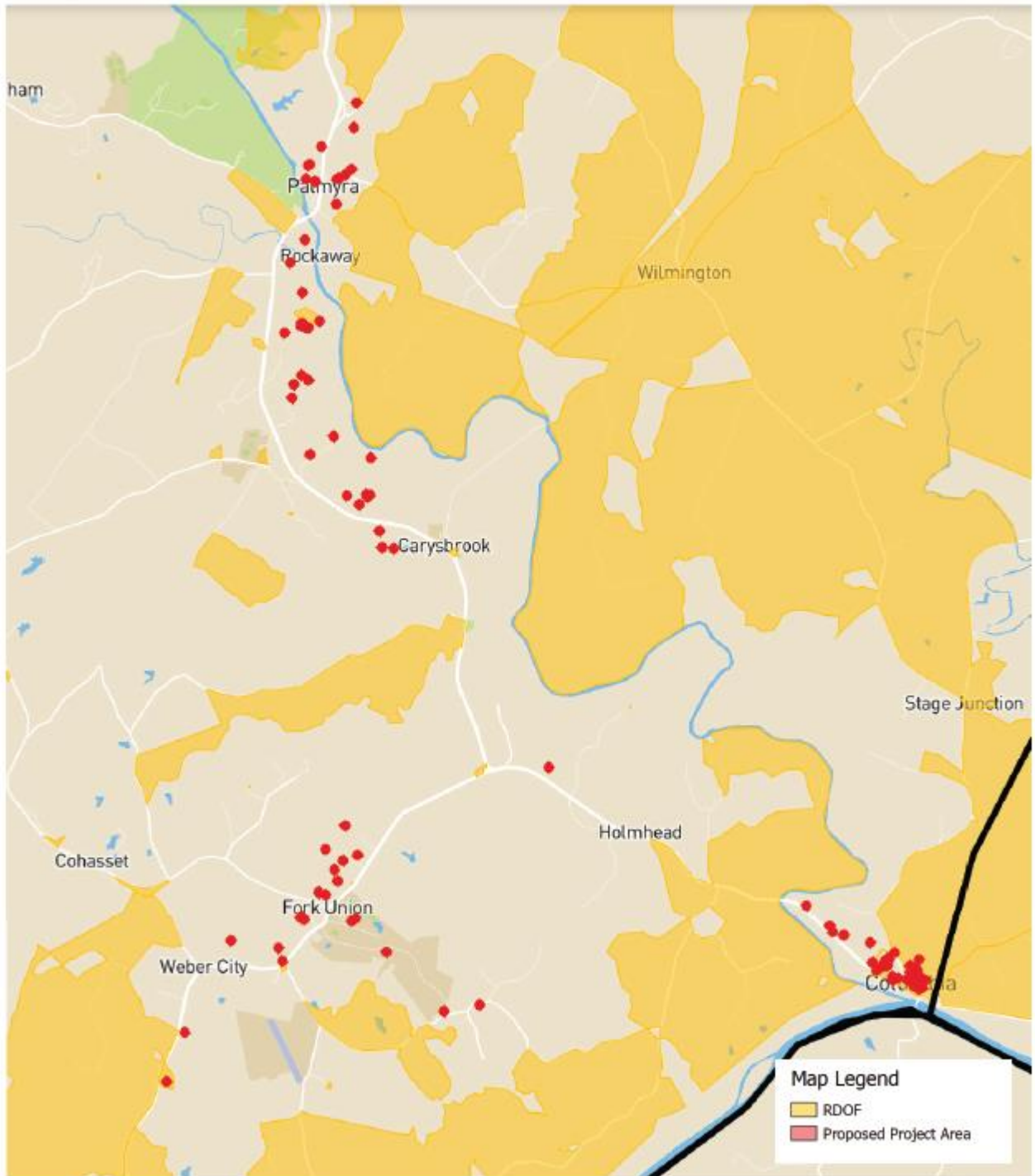
Business – An organization or entity that provides goods or services in order to generate profit. Businesses based in residential homes can count if they are a registered business (BPOL, LLC, etc.).

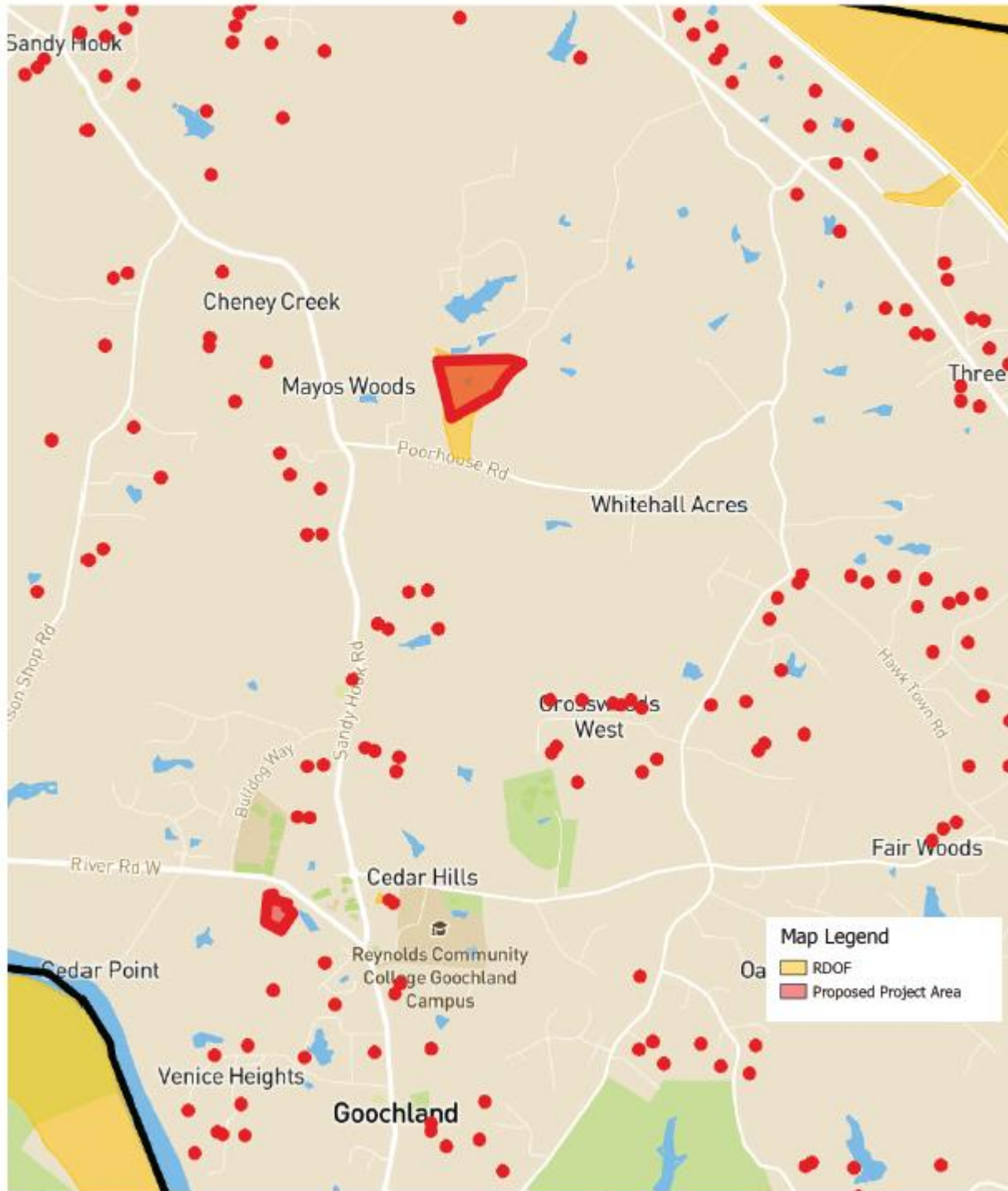
Community Anchor - schools, libraries, medical and health care providers, public safety entities, community colleges and other institutions of higher education, and other community support organizations and agencies that provide outreach, access, equipment, and support services to facilitate greater use of broadband service by vulnerable populations, including low-income, unemployed, and the aged.

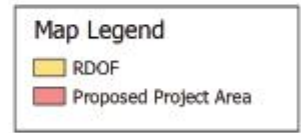
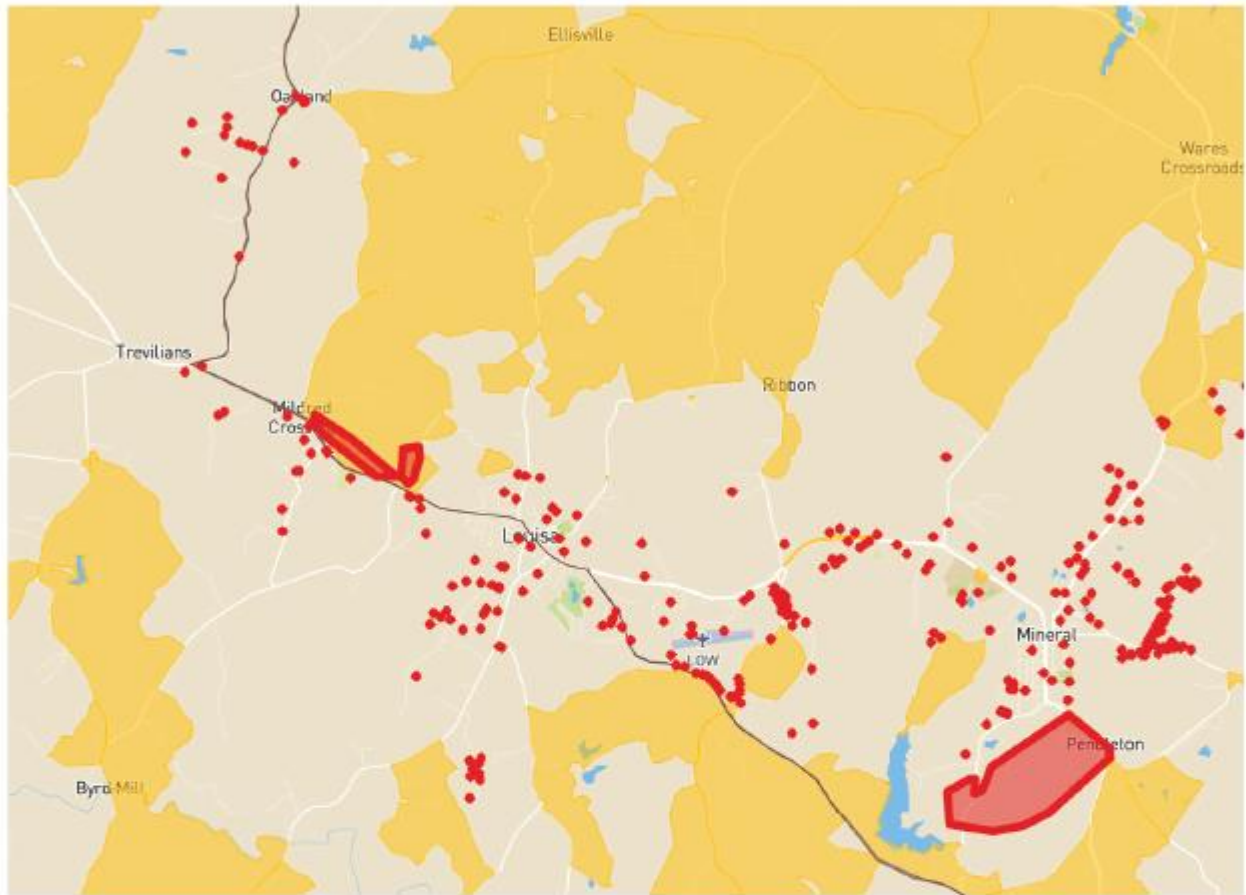
Non-Residential Passing – places of worship, federal, state, or local facilities or other potential customers that are neither a residence, business or a community anchor as defined above.

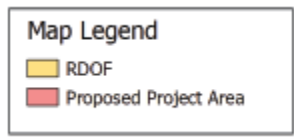
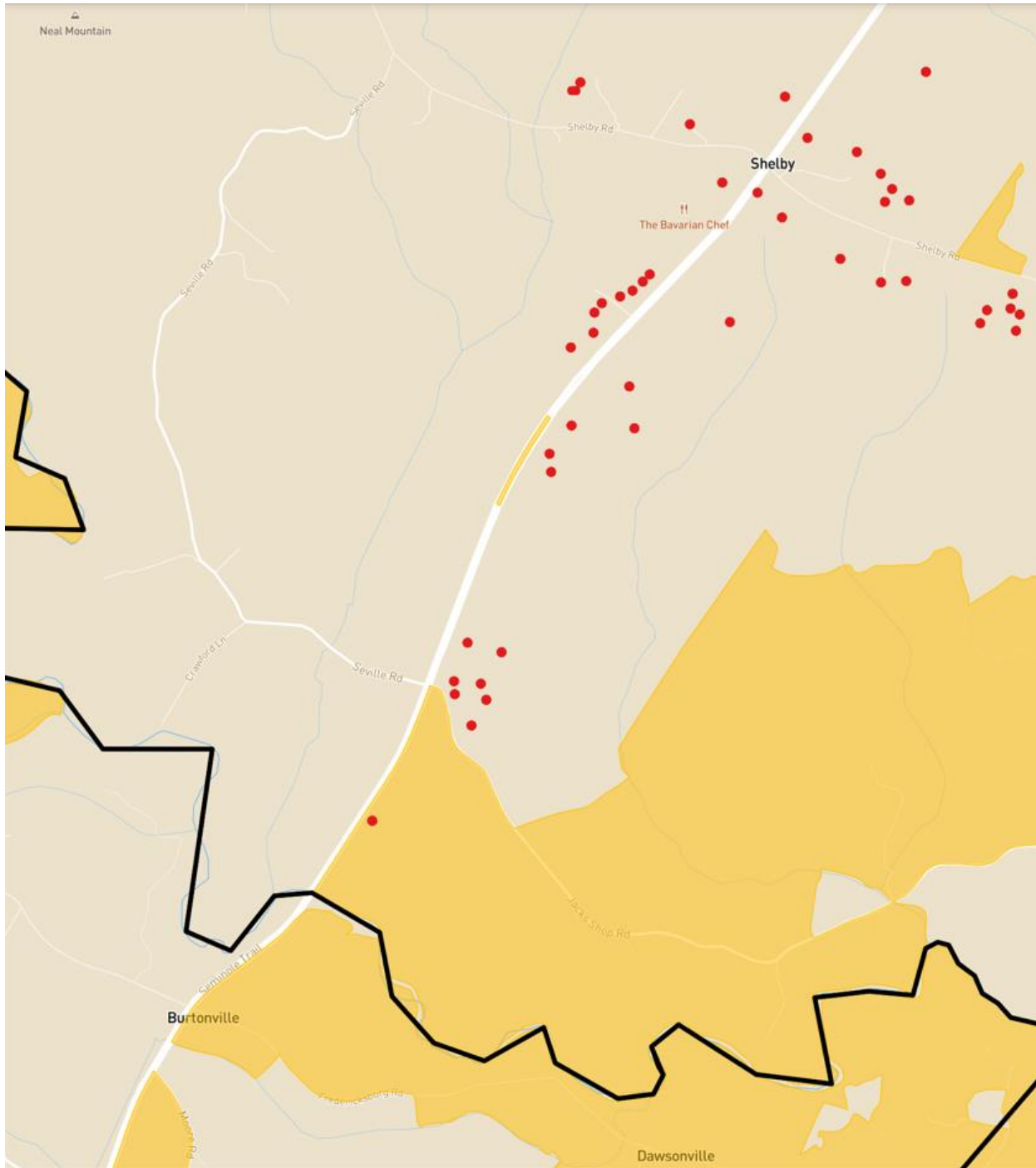












2024 Virginia Telecommunication Initiative (VATI)

SUMMARY Passing Form

Type of Passings	Total Number of Passings in the Project Area ¹	Passings in the Project Area, without Special Construction Costs Required ²	Passings with Special Construction Costs budgeted in the Application ³	Number of Passings with Speeds at 25/3 or below in Project Area ⁴
Residential	4,995	4,995	0	2,836
Businesses (non-home based)	516	516	0	349
Businesses (home-based)	490	490	0	337
Community Anchors	24	24	0	11
Non-residential	182	182	0	131
Total	6,207	6,207	0	3,664

- Based on the BEAD locations identified and downloaded from the DHCD, there are 3,664 locations lacking access to 25/3Mbps service; that is 59% of the identified locations. Due to the large scope of this project, we could not look at every location individually, but by reviewing the latest FCC Broadband Maps, dated June 30,2023, we believe that half of the remaining locations in this project also lack access to 25/3Mbps service; bringing the total to 80%.

Note: The Total Number of Passings **MUST** be equal to the Residential, Business (non-home based), Non-residential and Community Anchors sum.

Note: Do not include passings in RDOF awarded areas that were awarded to the co-applicant; these passings should be included in the RDOF Passings Form. Passings included in this application in RDOF awarded areas that were not awarded to the co-applicant, unless successfully challenged, are considered unserved and should be counted as passings in this form.

¹The total number of structures in the project area that can receive service. See definition of passing below for more detail.

²The number of structures in the project area that will not require special construction costs to provide service to. These passings fall within the broadband provider's standard service connection drop length and do not require nonstandard equipment or any additional fees above normal service connection fees required to provide broadband access to a premise.

³The number of structures in the project area with all construction costs budgeted in the application. These passings will not require any additional special construction costs beyond those budgeted for in the VATI application.

⁴The number of structures in the project area that do not have access to internet at speeds of at least 25 mbps download and 3 mbps upload.

2024 Virginia Telecommunication Initiative (VATI) Amherst County Service Area Passing Form

Type of Passings	Total Number of Passings in the Project Area ¹	Passings in the Project Area, without Special Construction Costs Required ²	Passings with Special Construction Costs budgeted in the Application ³	Number of Passings with Speeds at 25/3 or below in Project Area ⁴
Residential	453	453	0	238
Businesses (non-home based)	21	21	0	6
Businesses (home-based)	25	25	0	9
Community Anchors	6	6	0	0
Non-residential	10	10	0	5
Total	516	516	0	258

2024 Virginia Telecommunication Initiative (VATI) Appomattox County Service Area Passing Form

Type of Passings	Total Number of Passings in the Project Area ¹	Passings in the Project Area, without Special Construction Costs Required ²	Passings with Special Construction Costs budgeted in the Application ³	Number of Passings with Speeds at 25/3 or below in Project Area ⁴
Residential	62	62	0	42
Businesses (non-home based)	13	13	0	5
Businesses (home-based)	9	9	0	9
Community Anchors	1	1	0	0
Non-residential	12	12	0	4
Total	97	97	0	60

2024 Virginia Telecommunication Initiative (VATI) Buckingham County Service Area Passing Form

Type of Passings	Total Number of Passings in the Project Area ¹	Passings in the Project Area, without Special Construction Costs Required ²	Passings with Special Construction Costs budgeted in the Application ³	Number of Passings with Speeds at 25/3 or below in Project Area ⁴
Residential	29	29	0	8
Businesses (non-home based)	5	5	0	1
Businesses (home-based)	2	2	0	1
Community Anchors	3	3	0	0
Non-residential	3	3	0	1
Total	42	42	0	11

**2024 Virginia Telecommunication Initiative (VATI)
Campbell County Service Area Passing Form**

Type of Passings	Total Number of Passings in the Project Area ¹	Passings in the Project Area, without Special Construction Costs Required²	Passings with Special Construction Costs budgeted in the Application ³	Number of Passings with Speeds at 25/3 or below in Project Area ⁴
Residential	32	32	0	32
Businesses (non-home based)	4	4	0	4
Businesses (home-based)	2	2	0	2
Community Anchors	0	0	0	0
Non-residential	4	4	0	4
Total	42	42	0	42

2024 Virginia Telecommunication Initiative (VATI) Cumberland County Service Area Passing Form

Type of Passings	Total Number of Passings in the Project Area ¹	Passings in the Project Area, without Special Construction Costs Required ²	Passings with Special Construction Costs budgeted in the Application ³	Number of Passings with Speeds at 25/3 or below in Project Area ⁴
Residential	190	190	0	100
Businesses (non-home based)	19	19	0	13
Businesses (home-based)	26	26	0	16
Community Anchors	0	0	0	0
Non-residential	12	12	0	9
Total	247	247	0	139

2024 Virginia Telecommunication Initiative (VATI) Fluvanna County Service Area Passing Form

Type of Passings	Total Number of Passings in the Project Area ¹	Passings in the Project Area, without Special Construction Costs Required ²	Passings with Special Construction Costs budgeted in the Application ³	Number of Passings with Speeds at 25/3 or below in Project Area ⁴
Residential	106	106	0	52
Businesses (non-home based)	3	3	0	3
Businesses (home-based)	6	6	0	4
Community Anchors	0	0	0	0
Non-residential	2	2	0	0
Total	117	117	0	59

2024 Virginia Telecommunication Initiative (VATI)
Goochland County Service Area Passing Form

Type of Passings	Total Number of Passings in the Project Area ¹	Passings in the Project Area, without Special Construction Costs Required²	Passings with Special Construction Costs budgeted in the Application ³	Number of Passings with Speeds at 25/3 or below in Project Area ⁴
Residential	785	785	0	342
Businesses (non-home based)	87	87	0	44
Businesses (home-based)	52	52	0	24
Community Anchors	3	3	0	2
Non-residential	60	60	0	43
Total	987	987	0	455

2024 Virginia Telecommunication Initiative (VATI)
Greene County Service Area Passing Form

Type of Passings	Total Number of Passings in the Project Area ¹	Passings in the Project Area, without Special Construction Costs Required²	Passings with Special Construction Costs budgeted in the Application ³	Number of Passings with Speeds at 25/3 or below in Project Area ⁴
Residential	344	344	0	261
Businesses (non-home based)	35	35	0	26
Businesses (home-based)	25	25	0	19
Community Anchors	2	2	0	2
Non-residential	11	11	0	7
Total	417	417	0	315

2024 Virginia Telecommunication Initiative (VATI) Louisa County Service Area Passing Form

Type of Passings	Total Number of Passings in the Project Area ¹	Passings in the Project Area, without Special Construction Costs Required ²	Passings with Special Construction Costs budgeted in the Application ³	Number of Passings with Speeds at 25/3 or below in Project Area ⁴
Residential	342	342	0	322
Businesses (non-home based)	34	34	0	32
Businesses (home-based)	28	28	0	26
Community Anchors	4	4	0	3
Non-residential	11	11	0	11
Total	419	419	0	394

2024 Virginia Telecommunication Initiative (VATI)
Madison County Service Area Passing Form

Type of Passings	Total Number of Passings in the Project Area ¹	Passings in the Project Area, without Special Construction Costs Required²	Passings with Special Construction Costs budgeted in the Application ³	Number of Passings with Speeds at 25/3 or below in Project Area ⁴
Residential	1,010	1,010	0	822
Businesses (non-home based)	214	214	0	184
Businesses (home-based)	204	204	0	174
Community Anchors	4	4	0	4
Non-residential	35	35	0	30
Total	1,467	1,467	0	1,214

2024 Virginia Telecommunication Initiative (VATI) Powhatan County Service Area Passing Form

Type of Passings	Total Number of Passings in the Project Area ¹	Passings in the Project Area, without Special Construction Costs Required ²	Passings with Special Construction Costs budgeted in the Application ³	Number of Passings with Speeds at 25/3 or below in Project Area ⁴
Residential	1,642	1,642	0	617
Businesses (non-home based)	81	81	0	31
Businesses (home-based)	111	111	0	53
Community Anchors	1	1	0	0
Non-residential	22	22	0	17
Total	1,857	1,857	0	718

Definitions

Passing – any structure that can receive service. Multi-unit structures may be counted as more than 1 passing, provided individual connections and account are planned at that structure.

Business – An organization or entity that provides goods or services in order to generate profit. Businesses based in residential homes can count if they are a registered business (BPOL, LLC, etc.).

Community Anchor - schools, libraries, medical and health care providers, public safety entities, community colleges and other institutions of higher education, and other community support organizations and agencies that provide outreach, access, equipment, and support services to facilitate greater use of broadband service by vulnerable populations, including low-income, unemployed, and the aged.

Non-Residential Passing – places of worship, federal, state, or local facilities or other potential customers that are neither a residence, business or a community anchor as defined above.

2024

Milestones (Cumulative Totals)		Metric	Sep	Oct	Nov	Dec
Field Data Collection	Miles		25	50	75	100
	Percentage		8%	17%	26%	35%
Fiber Design	Miles		40	80	120	160
	Percentage		7%	15%	23%	31%
Make Ready Construction	Miles		0	20	40	60
	Percentage		0.0%	7%	14%	21%
Aerial Fiber Placement	Miles		0	0	10	30
	Percentage		0%	0%	4%	11%
Underground Fiber Placement	Miles		0	0	0	0
	Percentage		0%	0%	0%	0%
Splicing	Miles		0	0	0	5
	Percentage		0%	0%	0%	1%
Achievement of benefit						
Installation of network access points	Passings		200	400	600	800
	Percentage		3.2%	6.4%	9.6%	12.8%
Dominion Construction	Miles		8	16	24	32
	Percentage		5.4%	10.7%	16.1%	21.5%

2025

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
125	150	175	200	225	250	275	290	290	290	290	290
43%	52%	60%	69%	78%	86%	95%	100%	100%	100%	100%	100%
200	240	280	320	360	400	440	480	524	524	524	524
38%	46%	53%	61%	69%	76%	84%	92%	100%	100%	100%	100%
80	100	120	140	160	180	200	220	240	260	280	283
28%	35%	42%	49%	57%	64%	71%	78%	85%	92%	99%	100%
50	70	90	110	130	150	170	190	210	230	250	270
18%	25%	32%	39%	46%	53%	60%	67%	74%	81%	88%	95%
0	0	0	20	40	60	80	100	120	140	160	180
0%	0%	0%	8%	17%	25%	33%	41%	50%	58%	66%	75%
20	40	60	80	110	150	190	230	270	310	350	390
4%	8%	11%	15%	21%	29%	36%	44%	52%	59%	67%	74%
1000	1200	1400	1600	1800	2000	2200	2500	2800	3100	3400	3700
16.0%	19.2%	22.3%	25.5%	28.7%	31.9%	35.1%	39.9%	44.7%	49.5%	54.3%	59.0%
40	48	56	64	72	80	88	96	104	112	120	128
26.8%	32.2%	37.6%	43.0%	48.3%	53.7%	59.1%	64.4%	69.8%	75.2%	80.5%	85.9%

**Agreement between Central Virginia Services, Inc, Rappahannock Electric Cooperative
and Thomas Jefferson Planning District Commission**

This Agreement dated this ____ day of _____, 2023, is entered into by and between the Thomas Jefferson Planning District Commission (TJDC) and Central Virginia Services, Inc. doing business as Firefly Fiber Broadband (Firefly).

WHEREAS, by letter dated _____, the Virginia Department of Housing and Community Development (“DCHD”) offered the Thomas Jefferson Planning District Commission (“TJPDC”) a total of \$15,708,077 in funding under the Virginia Telecommunications Initiative (VATI) program in response to the joint application of TJPDC and Firefly; and

WHEREAS, DHCD requires TJPDC to establish and execute an agreement with Firefly, which is binding and enforceable to assure that Firefly can adequately meet its contractual obligations under the grant awarded through the VATI grant-making process.

WHEREAS, the grant application included commitments of \$1,330,000 from the 5 counties in which significant construction will take place (Cumberland, Goochland, Greene, Madison and Powhatan); and

WHEREAS, Firefly, Dominion, and Rappahannock Electric Cooperative (“REC”), will provide a minimum of \$37,310,511 in matching funds for this project; and

WHEREAS, pursuant to the program guidelines and statutory authority, the primary objective of the VATI 2024 grant program is to provide financial assistance to supplement construction costs by private sector broadband providers, in partnership with local units of government, to extend service to areas that presently are unserved by any broadband provider; and

WHEREAS, Firefly will own the fiber facilities built with funds from this grant in the Dominion Energy, Appalachian Power, and Southside Electric service territories, and REC will own the facilities built in its service territory under this grant agreement, with those facilities leased to Firefly for the purpose of delivering retail internet service; and

WHEREAS, agreements signed with each county will provide the structure for their participation and payment of their matching funds; and

WHEREAS, TJPDC and Firefly are counter parties to eleven agreements between TJPDC, Firefly and the participating counties. The county agreements are identified in Attachment A and are incorporated herein by reference.

WHEREAS, VATIISF# _____ Agreement between DHCD and the TJPDC (the “DHCD Agreement”) imposes certain responsibilities on TJPDC as the “GRANTEE” and Firefly as the “COMPANY” in accepting the VATI grant. The DHCD agreement, upon execution by the parties thereto will be incorporated herein and attached hereto as Attachment B.

As anticipated in the joint application for funding submitted by TJPDC and Firefly, the parties wish to outline the roles of each party now that the grant has been awarded.

NOW, THEREFORE, the parties hereto do mutually agree as follows:

TJPDC and Firefly will carry out a broadband construction project designed to provide access to broadband services to 6,266 serviceable units in Amherst, Appomattox, Buckingham, Campbell, Cumberland, Fluvanna, Goochland, Greene, Louisa, Madison and Powhatan counties.

Firefly, as the COMPANY, shall perform, oversee and coordinate all work as described and in compliance with all aspects of the DHCD Agreement, and all DHCD approved contract negotiation record documents, including the submitted application. Firefly will complete all work herein within two years from the date of this agreement. Specifically, Firefly shall

complete all Grant Activities as described and in compliance with all aspects of the DHCD Agreement. Firefly shall oversee construction of 673 miles of fiber network.

Firefly will be responsible for the make ready engineering and construction, as well as providing the funding and payments for fiber construction, including all necessary labor and construction for the materials to provide gigabit speed service to each location-within the project territory. Firefly shall provide the fiber network design as well as oversee and administer the contracts for fiber construction, up to and including approving invoices for payment and as built drawings on the REC system.

Invoices will be paid on a cost-reimbursement basis. Firefly will submit a reimbursement request with invoices to TJPDC monthly. All reimbursement requests will include all DHCD required supporting documentation including the VATI Cost Performance Index form. The invoices and reimbursement requests will be separated into work on the REC system and all other work. Invoices for all work shall also be broken out for each of the counties in which the work was performed. TJPDC shall review all invoices, and verify completion of deliverables, approve, and submit the request to DHCD and the affected counties for reimbursement. Upon receipt of grant funds from the state and matching funds from the counties. TJPDC shall promptly transfer payment to Firefly.

Firefly will provide TJPDC speed validation data in accordance with the DHCD Agreement to ensure that the project outcomes have been met and the system constructed is capable of providing broadband speeds that meet VATI criteria. No VATI or county matching funds shall be distributed unless and until (a) Firefly has submitted all requested documents applicable to the construction project and (b) Firefly has verified that pre-construction and/or construction work has been completed or equipment has been ordered and received.

Firefly and TJPDC will exercise due diligence and best efforts on community outreach and marketing the availability of service, which is the intent of the program. The parties understand, however, that the actual number of customers who choose to subscribe is beyond the parties' control. The parties also understand that the intent of DHCD is that the parties exercise due

diligence and best efforts to reach the program goals, and the intent is to not return funds to DHCD nor have funds retained by TJPDC.

Recognizing the scale and complexity of this project, to the extent that changes to the project management schedule arise due to requirements imposed by DHCD or for any other reason not caused by the action or failure to act by any party to this agreement, including, but not limited to, Acts of God, weather events, or construction supply and/or labor shortages, the Parties agree to engage in good faith discussions to undertake modifications to the schedule. All agreed-upon changes to the project management schedule shall be set forth in a new written schedule and provided to all Parties. A formal amendment to this Agreement shall not be required, but the Parties will cooperate to request a project completion date extension from DHCD as needed.

Firefly will provide a progress update to the Counties and TJPDC as required by and in the format that is required by DHCD, every 30 days until project completion.

Pursuant to Section 10 of the DHCD Agreement, Firefly will provide TJPDC with broadband service and coverage data and information in the time and formats established by DHCD in its Internet Service Provider Service Territory Data Submission Guidelines.

Firefly agrees to assume responsibility for keeping TJPDC updated per the project timeline included in the grant. The project timeline of the grant states that all activities are to be completed by August 2026. Firefly agrees to provide TJPDC post-closeout subscriber reports after construction is complete, and six months later, so that TJPDC can report to DHCD in accordance with its agreement with the DHCD Agreement.

Firefly shall maintain all data and records related to the project for a period of five years following the conclusion of the project.

Firefly will publicly recognize DHCD's support in efforts to expand broadband.

All information and documentation submitted to TJPDC and DHCD in connection with or which accompanied the application out of which this Agreement arises and/or in connection with any contract or agreement that may result from an award arising out of said application are true and accurate in all material respects.

Firefly hereby represents and warrants that the certifications are true and correct in all respects and that the GRANTEE and DHCD may reasonably rely upon such certifications as statements of preexisting facts.

Without limiting any legal or equitable remedies available to Firefly, in the event that TJPDC fails to remit sums due Firefly in a timely manner, Firefly shall have the right to cease work until payment is made.

Firefly shall maintain policies of liability to insure coverage of tort liability to the public and employees and to enable the continued operation of the qualifying project.

Firefly shall file any required financial statements on a periodic basis which statements are confidential and proprietary pursuant to Virginia Code Section 2.2-3705.6 (11) and shall not be made available for public inspection.

TJPDC retains the right to:

- a) Inspect the qualifying project to ensure that Firefly's activities are acceptable to TJPDC and in accordance with the provisions of the comprehensive agreement.
- b) Monitor the practices related to the execution of this agreement by Firefly to ensure proper maintenance.
- c) Review and approval of plans and specifications for the qualifying project by TJPDC.

General Conditions:

This Agreement constitutes the entire agreement as to the Project and any associated VATI grant and may not be amended or modified except in writing, signed by each of the parties hereto.

This Agreement is made and is intended to be performed in the Commonwealth of Virginia and must be construed and enforced in accordance with the laws of the Commonwealth of Virginia.

The parties agree that the clause of the DHCD Agreement regarding repayment of the DHCD grant and providing corrective action plans apply and both parties agree to be subject to the terms of the DHCD Agreement. In the event that the comprehensive agreement is terminated or there is a material default by the operator, TJPDC may refer the matter to the OAG as outlined above.

Firefly confirms that no principal, partner, shareholder, director, officer, member, manager or other employee of Firefly with managerial control or responsibility over said entity or any significant aspect of its operations in the Commonwealth of Virginia were employed (i) by the awarding agency and involved in the evaluation and scoring of applications received for consideration of award during a period of one (1) year prior to the date of the announcement of project awards, or (ii) by the Governor's administration during a period of two (2) years prior to the date of the execution of this Agreement.

If TJPDC should decide to contribute financial resources to the project, this Agreement will be amended to set forth the terms and conditions of such contribution.

CENTRAL VIRGINIA SERVICE, INC
d/b/a "FIREFLY FIBER BROADBAND"

THOMAS JEFFERSON PLANNING DISTRICT

By: _____ [SEAL]

By: _____ [SEAL]
Executive Director

_____ [PRINT]

Date: _____

_____ [TITLE]

Date: _____

DRAFT

14. Matching Funds
Attachment 9 - Funding Source Table

Source	Amount	%	Status
Requested VATI	\$ 15,730,592	29.4%	Pending
County Match Contribution - Local	\$ 1,330,000	2.5%	Secured
Firefly/Dominion/Rappahannock - Private	\$ 36,495,981	68.1%	Partially Secured
Total	\$ 53,556,573	100%	

Board of Supervisors

Brian Stanley, Chairman
First Election District

Eurika Tyree, Vice Chair
Third Election District

Gene Brooks
Fourth Election District

Robert Saunders, Jr.
Fifth Election District

Ronald Tavernier
Second Election District



County Administration

Derek L. Stamey
County Administrator

PO Box 110

1 Courthouse Circle
Cumberland, VA 23040

Phone: (804) 492-3800
Fax: (804) 492-9224

info@cumberlandcounty.virginia.gov
www.cumberlandcounty.virginia.gov

Date: December 13, 2023

To: Dr. Tamarah Holmes, Office of Broadband Department of Housing and Community Development
600 East Main Street, Site 300, Richmond, Va 23219

Re: Cumberland County Support of Application – 2024 VATI Grant Application from Firefly

Dear Dr. Holmes:

On behalf of Cumberland County, I would like to express our support of the 2024 VATI application from Firefly. The County is committed to creating universal access to high-speed internet for all residents and businesses. In order to increase coverage in unserved and underserved areas within the county, the Board of Supervisors supports the regional 2023 VATI Application submitted by lead applicant Thomas Jefferson Planning District Commission with ISP partner FireFly Fiber Broadband.

The Cumberland County Board of Supervisors is committed to the effort and is prepared to match the requested amount of 5% or approximately \$250,000. We thank you for your efforts on behalf of the partnering localities for this application and we look forward to working with all of the partnering organizations involved.

Sincerely,

A handwritten signature in black ink, appearing to be "Derek L. Stamey", written in a cursive style.

Derek L. Stamey



December 14, 2023

Tamarah Holmes, Ph.D
Director, Office of Broadband
Virginia Department of Housing and Community Development
600 East Main Street, Suite 300
Richmond, Virginia 23219

RE: 2024 VATI Applications from Firefly

Dear Ms. Holmes:

Dominion Energy Virginia ("Dominion") is pleased to be a party to a Memoranda of Understanding with Firefly, CVEC Electric Cooperative and the Counties of Cumberland, Goochland and Powhatan (each, a "Participating County").

Dominion, Firefly, and our electric cooperative partners have developed a unique approach for achieving universal broadband access with individual Counties, and through broader, regional approaches. Dominion's participation in each of these projects will be pursuant to, and in a manner consistent with the provisions of, Virginia Code § 56-585.1:9 (the "Utility Leverage Statute").

This letter confirms Dominion's support for the application to the 2024 Virginia Telecommunication Initiative submitted by Firefly and our Participating County partners named above. Dominion's specific investments that will support each proposed project will be set forth in petitions under the Utility Leverage Statute that will be submitted to the State Corporation Commission ("SCC"). Dominion's participation in each project, and its specific level of related investment, will be subject to the approval of the SCC and the terms set forth in the SCC's Final Order related to each project.

Dominion is pleased to be part of these important County-wide and regional initiatives in the manner contemplated by the Utility Leverage Statute.

Sincerely,

A handwritten signature in black ink, appearing to read "D.F. Walker", written in a cursive style.

David F. Walker
Director, DEV Strategic Customer Programs

BOARD OF SUPERVISORS

Susan F. Lascolette, District 1
Neil Spoonhower, Chair, District 2
John Lumpkins, Jr., District 3
Charles B. Vaughters, Vice-Chair, District 4
Kendall C. Peterson, District 5



Victor Carpenter
County Administrator

www.goochlandva.us

December 6, 2023

Gary E. Wood
President and CEO
Firefly Fiber Broadband
PO Box 359
Lovingston, VA 22949

RE: Goochland County and Firefly Fiber Broadband Partnership for VATI 2024

Dear Mr. Wood:

I write on behalf of the Goochland County Board of Supervisors and Goochland County, Virginia to confirm our partnership with Firefly Fiber Broadband to pursue grant funding through the Commonwealth of Virginia's Virginia Telecommunication Initiative (VATI). In addition to confirming our partnership, this letter also serves to outline the financial contribution we commit to providing upon a successful award.

Goochland County believes broadband internet access is essential for our community to support rural agriculture, business, education endeavors, public safety, and everyday life. On September 9th, 2019, the County kicked off our 10 Steps to Broadband Internet Initiative which includes a commitment to provide all interested Goochland citizens access and options for universal broadband service provision. Fostering partnerships with providers in order to incentivize expansion of service to unserved and underserved areas of the county is a priority of our 10 Steps to Broadband Internet initiative.

We understand Firefly Fiber Broadband has developed a grant application with the Thomas Jefferson Planning District serving as the lead applicant with the county being one of multiple counties included in the project to make fiber to the home broadband internet service available to additional unserved locations in the county.

Preliminary planning for the RISE regional project has identified over 981 locations in the county as being unserved without access to speeds faster than 100 mbps download or 20 mbps upload, and the preliminary design includes over 112 miles of fiber optic cable to be installed in the county to make service available to those locations, with a total cost estimate of \$10,200,000 creating a need for additional grant funding to make the project financially feasible.

Gary E. Wood
President & CEO
Firefly Fiber Broadband
December 6, 2023
Page 2

The Goochland County Board of Supervisors and Goochland County support this project and the seeking of grant funds from the Virginia Department of Housing and Community Development through VATI with an application on or before December 19, 2023.

Additionally, the Goochland County Board of Supervisors and Goochland County fully supports the RISE regional project and commits to providing local matching funding not to exceed \$250,000 upon a successful VATI award to help ensure unserved and underserved citizens have access to highspeed internet broadband. The local matching funding is subject to approval and appropriation by the Goochland County Board of Supervisors in 2024 and pursuant to a negotiated final agreement for the project's scheduling and performance terms.

Thank you for the opportunity to partner and support Firefly Fiber Broadband's expansion of fiber broadband via a VATI application. Please do not hesitate to reach out to Paul Drumwright, Community Affairs Manager (pdrumwright@goochlandva.us) or myself (vcarpenter@goochlandva.us) if we can be of further assistance in this partnership.

Respectfully,



Vic Carpenter
County Administrator

**RESOLUTION OF THE BOARD OF SUPERVISORS OF
GREENE COUNTY, VIRGINIA, FOR SUPPORT OF THE
APPLICATION FOR BROADBAND PROJECT**

WHEREAS, Greene County is committed to bringing universal broadband internet access to its citizens across the county, and

WHEREAS, Firefly Fiber Broadband has developed a grant application with the Thomas Jefferson Planning District serving as the lead applicant with the County being one of multiple counties included in the project to make fiber to the home broadband internet service available to the unserved locations in the county, and

WHEREAS, the preliminary planning for the regional project has identified **391 locations** in the county as being unserved without access to speeds faster than 100 mbps download or 20 mbps upload, and the preliminary design includes **48 miles** of fiber optic cable to be installed in the county to make service available to those locations, with a total cost estimate of **\$2,650,000** for the construction, creating a need for additional grant funding to make the project financially feasible, and

WHEREAS this project will seek grant funds from the Virginia Department of Housing and Community Development through its Virginia Telecommunications Initiative (VATI) with an application on or before 19 December 2023,

NOW THEREFORE BE IT RESOLVED that Greene County fully supports the regional project and commits to providing local matching funding **not to exceed \$80,000.00 in ARPA funds** to help ensure every unserved and underserved citizen has access to highspeed broadband.


BE IT FURTHER RESOLVED that the County Administrator of Greene County, Virginia, is authorized to make the appropriate accounting adjustments in the budget to do all things necessary to give this resolution effect.

Adopted this 12th day of December, 2023.

Motion: Steve Bowman
Second: Marie Durrer


Recorded Vote:

Steve Bowman	<u>Yes</u>
Marie C. Durrer	<u>Yes</u>
Steve Catalano	<u>Yes</u>
Dale R. Herring	<u>Yes</u>
Davis Lamb	<u>Yes</u>



Dale R. Herring, Chair
Greene County Board of Supervisors

ATTEST:



Cathy Schafrik, Clerk
Greene County Board of Supervisors

Chairman
R. Clay Jackson

Vice-Chairman
Carty Yowell

BOARD MEMBERS
Charlotte Hoffman
Dustin Dawson
James Jewett



**Madison County Board of
Supervisors**

Jonathon Weakley
County Administrator

Hannon Wright
County Attorney

414 N. Main Street
P. O. Box 705
Madison, Virginia 22727
(540) 948-7500 (ph)
(540) 948-3843 (fax)

November 28, 2023

Gary Wood, President and CEO
CVEC & Firefly Fiber Broadband
P.O. Box 359
Lovingsston, VA 22949

RE: FY24 VATI Internet Initiative – Letter of Support

Dear Mr. Wood :

The Madison County Board of Supervisors were notified that the Thomas Jefferson Planning District approved Firefly's unsolicited proposal per the TJPDC's PPEA guidelines. TJPDC will be the lead applicant for the FY24 VATI application which is a similar approach to last year's VATI application process.

Madison looks forward to continuing our relationship with Firefly to provide universal broadband coverage. Firefly has a history of managing these projects and we have a unique partnership to include a regional approach which will score well with DHCD.

As part of the FY24 VATI grant application, the Madison County Board of Supervisors is providing this letter of support for the VATI grant application and hereby commits to provide local funding for the FY24 VATI project. Madison County hereby pledges a not to exceed local contribution of \$400,000. This local funding contribution was originally approved by the Board of Supervisors during the FY23 VATI application and therefore, those funds remain earmarked and designated for this project should we be successful with the FY24 VATI award.

We look forward to a successful grant cycle and universal broadband coverage in Madison County.

Sincerely,



Jonathon Weakley

RESOLUTION SUPPORTING THE 2024 VATI GRANT APPLICATION

WHEREAS, Powhatan County is committed to bringing universal broadband internet access to its citizens across the county; and

WHEREAS, Firefly Fiber Broadband has developed a grant application with the Thomas Jefferson Planning District serving as the lead applicant with the county being one of multiple counties included in the project to make fiber to the home broadband internet service available to the unserved locations in the county; and

WHEREAS, the preliminary planning for the regional project has identified **1,831 locations** in the county as being unserved without access to speeds faster than 100 mbps download or 20 mbps upload, and the preliminary design includes **208 miles** of fiber optic cable to be installed in the county to make service available to those locations, with a total cost estimate of **\$19,000,000** for the construction, creating a need for additional grant funding to make the project financially feasible; and

WHEREAS, this project will seek grant funds from the Virginia Department of Housing and Community Development through its Virginia Telecommunications Initiative (VATI) with an application on or before 19 December 2023.

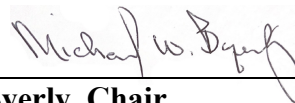
NOW, THEREFORE, BE IT RESOLVED that Powhatan County fully supports the regional project and commits to providing local matching funding **not to exceed \$350,000** to help ensure every unserved and underserved citizen has access to highspeed broadband.

**ADOPTED BY THE POWHATAN COUNTY BOARD OF SUPERVISORS ON
FEBRUARY December 18, 2023.**

ATTEST:



**Bret Schardein, Clerk
Powhatan County Board of Supervisors**



**Mike Byerly, Chair
Powhatan County Board of Supervisors**

Recorded Vote:

David T. Williams

_____ Aye _____

Steven McClung

_____ Aye _____

Michael W. Byerly

_____ Aye _____

Bill L. Cox

_____ Aye _____

Karin M. Carmack

_____ Aye _____

December 14, 2023

Tamarah Holmes, Ph.D.
Director, Office of Broadband
Virginia Department of Housing and Community Development
600 East Main Street, Suite 300
Richmond, Virginia 23219

RE: Firefly Fiber Broadband Deployment Initiative

Dr. Holmes:

On behalf of Rappahannock Electric Cooperative (REC), I am pleased to submit this letter in support of the applications that Firefly Fiber Broadband (Firefly) is submitting for grant funding from the 2024 Virginia Telecommunication Initiative.

We appreciate the focus from the Commonwealth on this critical need to make high-quality broadband internet service available in our unserved and underserved communities. REC is a member-owned, member-focused electric cooperative serving portions of 22 counties. The partnership between us and Firefly is a wonderful example of a key principle for cooperatives – cooperation among cooperatives. With this collaboration, REC intends to own and lease fiber to Firefly, and Firefly will serve as the internet service provider. REC has applied to RUS and approval has been granted for financing the fiber plant construction required to accomplish this project. Our efforts have facilitated commitments that will deliver universal, fiber-to-the-home broadband access in the partnered counties served by REC. Additionally, since 2018, REC has been constructing a utility fiber backbone network, and the partnership with Firefly will leverage that network, as it was designed, to facilitate the successful completion of broadband partnership solutions.

This cooperation among cooperatives creates opportunities to simultaneously address critical needs such as modernizing the energy grid and strengthening the reliability and security of our electric infrastructure, while making broadband access universally available. REC is proud to be a facilitator of this internet solution and to contribute to these important projects. We also look forward to continuing our work with Firefly.

Thank you for your consideration of awarding the funding necessary to complete these important projects.

Sincerely,



Peter Muhoro, Ph.D.
Chief Strategy, Technology and Innovation Officer
Rappahannock Electric Cooperative

Project Summary Derivation of Costs

Product	Total	VATI	Non-VATI	Source of Estimate	Date
Hut Electronics	\$ 203,906	\$ 91,758	\$ 112,148	Present Construction	12/12/2023
additional ports					
UG Construction	\$ 17,891,105	\$ 8,050,997	\$ 9,840,108	Present Construction	12/12/2023
Total Build (241 miles)					
OH Construction	\$ 14,033,200	\$ 6,314,940	\$ 7,718,260	Present Construction	12/12/2023
Total Build including Make Ready (283 miles)					
Dominion Construction	\$ 17,450,000	\$ -	\$ 17,450,000	Dominion	12/12/2023
Total Build (149 miles)					
Service Installations	\$ 2,206,300	\$ 992,835	\$ 1,213,465	Present Construction	12/12/2023
Service Drops (3137 drops)					
VATI Construction Totals	\$ 51,784,511	\$ 15,450,530	\$ 36,333,981		
Additional Project Costs (includes home installs, marketing and management)	\$ 1,772,062	\$ 280,062	\$ 1,492,000	Present Construction	12/12/2023
VATI Project Totals	\$ 53,556,573	\$ 15,730,592	\$ 37,825,981		
County Match Contributions			\$ (1,330,000)	County Approvals	12/12/2023
Non VATI/After Contributions			\$ 36,495,981		

Amherst County Derivation of Costs

Product	Total	VATI	Non-VATI	Source of Estimate	Date
Hut Electronics	\$ 16,900	\$ 7,605	\$ 9,295	Present Construction	12/12/2023
additional ports					
UG Construction	\$ 150,400	\$ 67,680	\$ 82,720	Present Construction	12/12/2023
Total Build (51 miles)					
OH Construction	\$ 1,461,600	\$ 657,720	\$ 803,880	Present Construction	12/12/2023
Total Build including Make Ready (288 miles)					
Service Installations	\$ 182,000	\$ 81,900	\$ 100,100	Present Construction	12/12/2023
Service Drops (260 drops)					
VATI Construction Totals	\$ 1,810,900	\$ 814,905	\$ 995,995		
Additional Project Costs	\$ 144,250		\$ 144,250	Present Construction	12/12/2023
(includes home installs, marketing and management)					
VATI Project Totals	\$ 1,955,150	\$ 814,905	\$ 1,140,245		
(187 miles 739 service drops)					
Non VATI/After Contributions			\$ 1,140,245		

Appomattox County Derivation of Costs

Product	Total	VATI	Non-VATI	Source of Estimate	Date
Hut Electronics	\$ 3,185	\$ 1,433	\$ 1,752	Present Construction	12/12/2023
(includes routers, switches, power supply, cross connect, and patch panels, etc.)					
UG Construction	\$ 165,440	\$ 74,448	\$ 90,992	Present Construction	12/12/2023
Total Build (2.2 miles)					
Service Installations	\$ 34,300	\$ 15,435	\$ 18,865	Present Construction	12/12/2023
Service Drops (1,157 drops)					
VATI Construction Totals	\$ 202,925	\$ 91,316	\$ 111,609		
Additional Project Costs	\$ 21,375		\$ 21,375	Present Construction	12/12/2023
(includes home installs, marketing and management)					
VATI Project Totals	\$ 224,300	\$ 91,316	\$ 132,984		
Non VATI/After Contributions			\$ 132,984		

Buckingham County Derivation of Costs

Product	Total	VATI	Non-VATI	Source of Estimate	Date
Hut Electronics	\$ 1,495	\$ 673	\$ 822	Present Construction	12/12/2023
additional ports					
UG Construction	\$ 75,200	\$ 33,840	\$ 41,360	Present Construction	12/12/2023
Total Build (123 miles)					
Service Installations	\$ 13,800	\$ 6,210	\$ 7,590	Present Construction	12/12/2023
Service Drops (1,717 drops)					
VATI Construction Totals	\$ 90,495	\$ 40,723	\$ 49,772		
Additional Project Costs	\$ 10,025		\$ 10,025	Present Construction	12/12/2023
(includes home installs, marketing and management)					
VATI Project Totals	\$ 100,520	\$ 40,723	\$ 59,797		

Campbell County Derivation of Costs

Product	Total	VATI	Non-VATI	Source of Estimate	Date
Hut Electronics	\$ 1,365	\$ 614	\$ 751	Present Construction	12/12/2023
(includes routers, switches, power supply, cross connect, and patch panels, etc.)					
OH Construction	\$ 100,800	\$ 45,360	\$ 55,440	Present Construction	12/12/2023
Total Build including Make Ready (146 miles)					
Service Installations	\$ 14,700	\$ 6,615	\$ 8,085	Present Construction	12/12/2023
Service Drops (928 drops)					
VATI Construction Totals	\$ 116,865	\$ 52,589	\$ 64,276		
Additional Project Costs	\$ 11,525		\$ 11,525	Present Construction	12/12/2023
(includes home installs, marketing and management)					
VATI Project Totals	\$ 128,390	\$ 52,589	\$ 75,801		

Cumberland County Derivation of Costs

Product	Total	VATI	Non-VATI	Source of Estimate	Date
Hut Electronics	\$ 8,060	\$ 3,627	\$ 4,433	Present Construction	12/12/2023
(includes routers, switches, power supply, cross connect, and patch panels, etc.)					
UG Construction	\$ 523,240	\$ 235,458	\$ 287,782	Present Construction	12/12/2023
Total Build (8 miles)					
Dominion Construction Costs					
24 miles at \$110000 per mile	\$ 2,640,000	0	\$ 2,640,000	Dominion	12/12/2023
Service Installations	\$ 86,800	\$ 39,060	\$ 47,740	Present Construction	12/12/2023
Service Drops (149 drops)					
VATI Construction Totals	\$ 3,258,100	\$ 278,145	\$ 2,979,955		
Additional Project Costs	\$ 54,700	\$ -	\$ 54,700	Present Construction	12/12/2023
(includes home installs, marketing and management)					
VATI Project Totals	\$ 3,312,800	\$ 278,145	\$ 3,034,655		
Cumberland Match Contribution			\$ (250,000)	County Approval	12/12/2023
Non VATI/After Contributions			\$ 2,784,655		

Fluvanna County Derivation of Costs

Product	Total	VATI	Non-VATI	Source of Estimate	Date
Hut Electronics	\$ 4,810	\$ 2,165	\$ 2,646	Present Construction	12/12/2023
(includes routers, switches, power supply, cross connect, and patch panels, etc.)					
UG Construction	\$ 413,600	\$ 186,120	\$ 227,480	Present Construction	12/12/2023
Total Build (6 miles)					
Service Installations	\$ 44,400	\$ 19,980	\$ 24,420	Present Construction	12/12/2023
Service Drops (89 drops)					
VATI Construction Totals	\$ 462,810	\$ 208,265	\$ 254,546		
Additional Project Costs	\$ 32,825		\$ 32,825	Present Construction	12/12/2023
(includes home installs, marketing and management)					
VATI Project Totals	\$ 495,635	\$ 208,265	\$ 287,371		
Non VATI/After Contributions			\$ 287,371		

Goochland County Derivation of Costs

Product	Total	VATI	Non-VATI	Source of Estimate	Date
Hut Electronics	\$ 32,305	\$ 14,537	\$ 17,768	Present Construction	12/12/2023
(includes routers, switches, power supply, cross connect, and patch panels, etc.)					
UG Construction	\$ 3,827,600	\$ 1,722,420	\$ 2,105,180	Present Construction	12/12/2023
Total Build (51 miles)					
OH Construction	\$ 400,000	\$ 180,000	\$ 220,000	Present Construction	12/12/2023
Total Build (8 miles)					
Dominion Construction Costs	\$ 6,890,000		\$ 6,890,000	Dominion	12/12/2023
Total Build (53 miles)					
Service Installations	\$ 298,200	\$ 134,190	\$ 164,010	Present Construction	12/12/2023
Service Drops (499 drops)					
VATI Construction Totals	\$ 11,448,105	\$ 2,051,147	\$ 9,396,958		
Additional Project Costs	\$ 225,975		\$ 225,975	Present Construction	12/12/2023
(includes home installs, marketing and management)					
VATI Project Totals	\$ 11,674,080	\$ 2,051,147	\$ 9,622,933		
Goochland Match Contribution			\$ (250,000)	County Approval	12/12/2023
Non VATI/After Contributions			\$ 9,372,933		

Greene County Derivation of Costs

Product	Total	VATI	Non-VATI	Source of Estimate	Date
Hut Electronics	\$ 13,585	\$ 6,113	\$ 7,472	Present Construction	12/12/2023
additional ports					
UG Construction	\$ 325,025	\$ 146,261	\$ 178,764	Present Construction	12/12/2023
Total Build (5 miles)					
OH Construction	\$ 2,100,000	\$ 945,000	\$ 1,155,000	Present Construction	12/12/2023
Total Build including Make Ready (42 miles)					
Service Installations	\$ 125,400	\$ 56,430	\$ 68,970	Present Construction	12/12/2023
Service Drops (227 drops)					
VATI Construction Totals	\$ 2,564,010	\$ 1,153,805	\$ 1,410,206		
Additional Project Costs	\$ 100,575		\$ 100,575	Present Construction	12/12/2023
(includes home installs, marketing and management)					
VATI Project Totals	\$ 2,664,585	\$ 1,153,805	\$ 1,510,781		
Greene Match Contribution			\$ (80,000)	County Approval	12/12/2023
Non VATI/After Contributions			\$ 1,430,781		

Louisa County Derivation of Costs

Product	Total	VATI	Non-VATI	Source of Estimate	Date
Hut Electronics	\$ 14,105	\$ 6,347	\$ 7,758	Present Construction	12/12/2023
additional ports					
UG Construction	\$ 966,200	\$ 434,790	\$ 531,410	Present Construction	12/12/2023
Total Build (354 miles)					
OH Construction	\$ 150,000	\$ 67,500	\$ 82,500	Present Construction	12/12/2023
Total Build including Make Ready (681 miles)					
Service Installations	\$ 130,200	\$ 58,590	\$ 71,610	Present Construction	12/12/2023
Service Drops (5255 drops)					
VATI Construction Totals	\$ 1,260,505	\$ 567,227	\$ 693,278		
Additional Project Costs	\$ 96,225		\$ 96,225	Present Construction	12/12/2023
(includes home installs, marketing and management)					
VATI Project Totals	\$ 1,356,730	\$ 567,227	\$ 789,503		
Non VATI/After Contributions			\$ 789,503		

Madison County Derivation of Costs

Product	Total	VATI	Non-VATI	Source of Estimate	Date
Hut Electronics	\$ 47,710	\$ 21,470	\$ 26,241	Present Construction	12/12/2023
additional ports					
UG Construction (17 miles)	\$ 1,217,200	\$ 547,740	\$ 669,460	Present Construction	12/12/2023
OH Construction (198 miles)	\$ 9,820,800	\$ 4,419,360	\$ 5,401,440	Present Construction	12/12/2023
(includes make ready)					
Service Installations (1468 drops)	\$ 440,400	\$ 198,180	\$ 242,220	Present Construction	12/12/2023
VATI Construction Totals	\$ 11,526,110	\$ 5,186,750	\$ 6,339,361		
Additional Project Costs	\$ 365,700		\$ 365,700	Present Construction	12/12/2023
(includes home installs, marketing , management)					
VATI Project Totals	\$ 11,891,810	\$ 5,186,750	\$ 6,705,061		
Madison Match Contribution			\$ (400,000)	County Approval	12/12/2023
Non VATI/After Contributions			\$ 6,305,061		

Powhatan County Derivation of Costs

Product	Total	VATI	Non-VATI	Source of Estimate	Date
Hut Electronics	\$ 60,385	\$ 27,173	\$ 33,212	Present Construction	12/12/2023
additional ports					
UG Construction (136 miles)	\$ 10,227,200	\$ 4,602,240	\$ 5,624,960	Present Construction	12/12/2023
Dominion Construction Costs	\$ 7,920,000		\$ 7,920,000		
Service Installations (929 drops)	\$ 836,100	\$ 376,245	\$ 459,855	Present Construction	12/12/2023
VATI Construction Totals	\$ 19,043,685	\$ 5,005,658	\$ 14,038,027	Dominion	12/12/2023
Additional Project Costs	\$ 428,825	\$ -	\$ 428,825	Present Construction	12/12/2023
(includes home installs, marketing , management)					
VATI Project Totals	\$ 19,472,510	\$ 5,005,658	\$ 14,466,852		
Powhatan Matching Grant Contribution			\$ (350,000)		
Non VATI/After Contributions			\$ 14,116,852		

Attachment 13 – Documentation of Supporting Cost Estimate

FOIA Exemption Details for Budget

Firefly has ongoing agreements with a number of partners based on its five year long ongoing project. The estimates here include the continued use of those agreements which is why we do not have specific vendor quotes for the proposal. We are including a list of units that were provided for a recent RUS grant, which use the ongoing labor rates for various project design units.

Firefly is partnered with Conexon for design and contract administration. [REDACTED]

Firefly has an agreement with S&N Communications to provide labor and equipment based for all fiber construction. [REDACTED]

Make ready costs are based on ongoing payments for construction. [REDACTED]

[REDACTED] We have included those costs.

Since the estimate is based on actual costs, with the same project team and partners, it is the best and most accurate projection for all costs for the proposal.

Unit Name	Unit	RUS Unit Reference	
AERIAL UNITS			
C6M Strand	FT	Included in CO	\$
PM2-A	EA	Included in CO	\$
PE1-3	EA	NPE1-2	\$
PM11	EA	PM11	\$
PF3-3 Aux	EA	None	\$
PF3-3	EA	PF3-3	\$
PM4	EA	PM4	\$
PM4-A	EA	PM4-A	\$
PMSL	EA	PM21	\$
PM-SR	EA	PM21	\$
CO(count)	FT	CO(count)	\$
CO(count)D	FT	CO(count)D	\$
CO(count)E	FT	CO(count)E	\$
WD	EA	Section W-Special Units	\$
MR-S	EA	Section W-Special Units	\$
MR-C	EA	Section W-Special Units	\$
MR-DE	EA	Section W-Special Units	\$
WC-1	EA	Section W-Special Units	\$
MR-A	EA	Section W-Special Units	\$
WCT	FT	Section W-Special Units	\$
DCT	FT	Section W-Special Units	\$
RCD	EA	Section W-Special Units	\$
BM80T	EA	PM21	\$
RPE1-3	EA	NONE	\$
REOH	EA	NONE	\$
RCO(count)	FT	NONE	\$
PP	EA	RETIRE A UNIT	\$
RA	EA	RETIRE PF UNIT	\$
OTHER UNITS			
EAS	HR	NONE	\$
EACA	HR	NONE	\$
EACU	HR	NONE	\$
UNDERGROUND UNITS			
BFO2 VT	FT	UD(1-2)	\$
BF02(2) VT (24")	FT	UD(2-2)	\$
BF02(2) VP (24")	FT	UD(1-2) PLOW	\$
BF02 VP	FT	UD(1-2) DEEP PLOW	\$
BM60(2)D	FT	UD(1-2) DIR BORE	\$
BM60(2)A	FT	UD(2-2) DIR BORE	\$
BF03 VT	FT	UD(1-3)	\$
BF03 VP	FT	UD(1-3) PLOW	\$

Unit Name	Unit	RUS Unit Reference	
BM60(3)D	FT	UD(1-3) DIR BORE	\$
BM60(2)R	FT	BM71	\$
BF02 VT-R(24)	FT	BM71	\$
BF02 VT-R(18)	FT	BM71	\$
BF02 VT-R(12)	FT	BM71	\$
BF02 VT-R(06)	FT	BM71	\$
BM80	EA	SECTION BM-MISCELLANEOUS	\$
BM72	SQ FT	SECTION BM-MISCELLANEOUS	\$
BM73	SQ FT	SECTION BM-MISCELLANEOUS	\$
BM53	EA	SECTION BM-MISCELLANEOUS	\$
BD5RV	EA	HU	\$
BD5RL	EA	HU	\$
BDV	EA	UM	\$
BDVL	EA	UM	\$
BDHH	EA	UH	\$
BDMV	EA	UM	\$
BF02(2)(CO)ED	FT	UO	\$
BFO1(count)	FT	UO	\$
BFO1(count)D	FT	UO	\$
BFO1(count)E	FT	UO	\$
BFO_TRACE	FT	UO	\$
BFOPS	FT	UO	\$
COMPOSITE UNDERGROUND UNITS			
CUG	Sheath FT	NONE	\$
CUG-R	FT	NONE	\$
SPLICING UNITS			
HAFO (A)	EA	SIMILAR HR1	\$
HAFO (B)	EA	SIMILAR HR1	\$
HAFO (C)	EA	SIMILAR HR1	\$
HAFO (D)	EA	SIMILAR HR1	\$
HAFO (2T)	EA	SIMILAR HR2	\$
HAFO (4T)	EA	SIMILAR HR2	\$
HAFO (8T)	EA	SIMILAR HR2	\$
HBFO (A)	EA	SIMILAR HUO	\$
HBFO (B)	EA	SIMILAR HUO	\$
HBFO (C)	EA	SIMILAR HUO	\$
HBFO (D)	EA	SIMILAR HUO	\$
HBFO (2T)	EA	SIMILAR HUO	\$
HBFO (4T)	EA	SIMILAR HUO	\$

Unit Name	Unit	RUS Unit Reference	
HBFO (8T)	EA	SIMILAR HUO	\$
XXHAFO (A)	EA		\$
XXHAFO (B)	EA		\$
XXHAFO (C)	EA		\$
XXHAFO (D)	EA		\$
XXHAFO (2T)	EA		\$
XXHAFO (4T)	EA		\$
XXHAFO (8T)	EA		\$
XXHBFO (A)	EA		\$
XXHBFO (B)	EA		\$
XXHBFO (C)	EA		\$
XXHBFO (D)	EA		\$
XXHBFO (2T)	EA		\$
XXHBFO (4T)	EA		\$
XXHBFO (8T)	EA		\$
HO1 (1-12 cnt)	EA	HO1	\$
HO1 (13-48 cnt)	EA	HO1	\$
HO1 (49-96 cnt)	EA	HO1	\$
HO1 (>96 cnt)	EA	HO1	\$
HO1T	EA	Included in HAFO(6)	\$
Fiber Optic Service Drops			
SEA02 (<125)	FT	SEA2	\$
SEA02 (<250)	FT	SEA2	\$
SEA02 (>250)	FT	SEA2	\$
C6M	FT	INCLUDED IN SEA	\$
SEB02 (MP)	FT	SEB2	\$
SEB02	FT	SEB2	\$
BM60 (.75)	FT	BM MISCELLANEOUS	\$
BF01 (Drop)	FT		\$
BM50	EA	BM MISCELLANEOUS	\$
HAFO (6)	EA	NID	\$
HO1(Drop)	EA	HO1	\$
HO2	EA	HO2	\$
TEMP	FT	NONE	\$
Additional Amendment Units			
Traffic Control		NOT APPLICABLE	
DP-ADM	HR	NOT APPLICABLE	\$
CD-OT	FT	NOT APPLICABLE	\$
MT-SC	FT	NONE	\$
MT-WG	FT	NONE	\$

Unit Name	Unit	RUS Unit Reference	
MT-SPGC	FT	NONE	\$
BM60(2)RS	FT	NONE	\$
WP-Trim	Span	R2-5	\$
BH-ROW	FT	R2-5	\$
UG ROW	FT	R2-5	\$
SUPT-01	HR	NOT APPLICABLE	\$
SST-01	HR	NOT APPLICABLE	\$
AMC01	HR	NOT APPLICABLE	\$
BMC01	HR	NOT APPLICABLE	\$
ADC01	HR	NOT APPLICABLE	\$
BDC01	HR	NOT APPLICABLE	\$
SPLT01	HR	NOT APPLICABLE	\$
MRC(LC)	HR	NOT APPLICABLE	\$
MRC-LT	HR	NOT APPLICABLE	\$
MRC(DM)	HR	NOT APPLICABLE	\$
MRC(PT)	HR	NOT APPLICABLE	\$
MRC-ATV	HR	NOT APPLICABLE	\$
MRC(A)	HR	NOT APPLICABLE	\$
HUT GROUNDING	EA	MATERIALS PROVIDED BY S&N	\$
NEW UNIT - ADD DROP TO TAP	EA	ADD DROP TO EXISTING TAP LOCATION	\$
Closure Entry (A)	EA	Additional splice enclosure entry equivalent of Tyco "A"	\$
Closure Entry (B)	EA	Additional splice enclosure entry equivalent of Tyco "B"	\$
Closure Entry (C)	EA	Additional splice enclosure entry equivalent of Tyco "C"	\$
Closure Entry (D)	EA	Additional splice enclosure entry equivalent of Tyco "D"	\$
Panel Prep (144)	EA	Prep patch panel - 144 count	\$
Panel Prep (96)	EA	Prep patch panel - 96 count	\$



Amherst County Board of Supervisors
County Resolution No. 2023-18-R

For consideration on December 5, 2023

A RESOLUTION, NO. 2023-18-R

**Resolution of the Board of Supervisors of the County of Amherst, Virginia,
Supporting and Encouraging the award of the Firefly/TJPDC VATI 2024 grant
application.**

Approved as to form and legality by the County Attorney

WHEREAS, Amherst County is committed to bringing universal broadband internet access to its citizens across the county, and

WHEREAS, Firefly Fiber Broadband has developed a grant application with the Thomas Jefferson Planning District serving as the lead applicant with the county being one of multiple counties included in the project to make fiber to the home broadband internet service available to the unserved locations in the county, and

WHEREAS, the preliminary planning for the application has identified 410 additional locations in the county as being unserved without access to speeds faster than 100 mbps download or 20 mbps upload, and the preliminary design includes 32 miles of fiber optic cable to be installed in the county to make service available to those locations, with a total project cost estimate of \$1.9 million, creating a need for additional grant funding to make the project financially feasible, and

WHEREAS, this project will seek grant funds from the Virginia Department of Housing and Community Development through its Virginia Telecommunications Initiative (VATI) with an application on or before 19 December 2023,

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF SUPERVISORS OF THE COUNTY OF AMHERST, VIRGINIA: That Amherst County fully supports and encourages the award of the Firefly/TJPDC VATI 2024 grant application to help ensure every unserved and underserved citizen has access to highspeed broadband.

I. That this resolution shall be in force and effect upon adoption.

Adopted this 5th day of December, 2023.



Tom Martin, Chair
Amherst County Board of Supervisors

Member

Vote

Tom Martin, Chair.....	<u>Aye</u>
Claudia D. Tucker.....	<u>Aye</u>
Drew Wade.....	<u>Aye</u>
David W. Pugh, Jr.,	<u>Aye</u>

ATTEST:



Jeremy S. Bryant, County Administrator



Karl R. Carter
County Administrator

E M. Wright, Jr.
County Attorney

Buckingham County
Board of Supervisors
Office of the County Administrator
13380 W. James Anderson Highway
Post Office Box 252
Buckingham, Virginia 23921 -0252
Telephone 434-969-4242
Fax 434-969-1638
www.buckinghamcountyva.org

Joe N. Chambers, Jr.
District 6 Supervisor
Chairman

Dennis H. Davis
District 1 Supervisor
Vice-Chairman

Cameron Gilliam
District 2 Supervisor

Donald R. Matthews, Jr.
District 3 Supervisor

T. Jordan Miles, III
District 4 Supervisor

Harry W. Bryant, Jr.
District 5 Supervisor

Danny R. Allen
District 7 Supervisor

Dr. Tamarah Holmes
Office of Broadband
600 East Main Street, Ste 300
Richmond, VA 23219

RE: Letter of Support for Firefly Fiber Broadband/TJPDC 2023 VATI Application

Dear Dr. Holmes:

I am writing to support the TJPDC/Firefly Fiber Broadband application for a Virginia Telecommunication Initiative grant to provide broadband to unserved areas in Buckingham County. Reliable communications and access to high speed data are increasingly important for a modern, vibrant, successful community.

The Buckingham County Board of Supervisors believes that universal broadband service is needed to support economic growth and education in an increasingly digitally connected world. Broadband is an important tool to help educators, students, health care providers, and small businesses meet the challenges of the 21st century. The County's economic welfare and long-term success depends on supporting business and entrepreneurial growth and broadband-enabled solutions hold tremendous promise in creating market access and new business opportunities. With broadband, students, teachers, health care providers and businesses can expand well beyond the confines of their physical location. Broadband can improve the flow of information, allowing employees and students to work and learn from home, making them more efficient while helping businesses to be more competitive.

In this application, Firefly has identified remaining unserved locations in the County and proposes to continue their commitment to universal service in the County by using VATI funding to ensure no citizen is left behind. Expanding broadband will provide opportunity that currently does not exist. I strongly support the application for the VATI 2024 grant and encourage its award to reach the remaining unserved locations in Buckingham County.

Sincerely,

Karl Carter
County Administrator

At the regular meeting of the Campbell County Board of Supervisors held on the 5th day of December 2023 in the Board of Supervisors Meeting Room of the Haberer Building, Rustburg, Virginia, on motion of Supervisor Hardie, the following resolution was adopted:

SUPPORT OF FIREFLY BROADBAND GRANT APPLICATION

WHEREAS, Campbell County is committed to bringing universal broadband internet access to its citizens across the County; and

WHEREAS, Firefly Fiber Broadband has developed a grant application with the Thomas Jefferson Planning District serving as the lead applicant with the County being one of multiple counties included in the project to make fiber to the home broadband internet service available to the unserved locations in the County; and

WHEREAS, the preliminary planning for the application has identified 37 additional locations in the County as being unserved without access to speeds faster than 100 mbps download or 20 mbps upload, and the preliminary design includes two (2) miles of fiber optic cable to be installed in the County to make service available to those locations, with a cost estimate of \$135,000 for the construction, creating a need for additional grant funding to make the project financially feasible; and

WHEREAS, this project will seek grant funds from the Virginia Department of Housing and Community Development through its Virginia Telecommunications Initiative (VATI) with an application on or before 19 December 2023, but will not require any local matching funds.

NOW, THEREFORE BE IT RESOLVED that Campbell County fully supports and encourages the award of the Firefly/TJPDC VATI 2024 grant application to help ensure every unserved and underserved citizen has access to high-speed broadband.

The vote was: Aye: Brown, Carwile, Cline, Hardie, Moore, Shockley, Watts

Nay: None

Absent: None



Catherine H. Moore, Clerk

Campbell County Board of Supervisors

Board of Supervisors

Brian Stanley, Chairman
First Election District

Eurika Tyree, Vice Chair
Third Election District

Gene Brooks
Fourth Election District

Robert Saunders, Jr.
Fifth Election District

Ronald Tavernier
Second Election District



County Administration

Derek L. Stamey
County Administrator

PO Box 110

1 Courthouse Circle
Cumberland, VA 23040

Phone: (804) 492-3800
Fax: (804) 492-9224

info@cumberlandcounty.virginia.gov
www.cumberlandcounty.virginia.gov

Date: December 13, 2023

To: Dr. Tamarah Holmes, Office of Broadband Department of Housing and Community Development
600 East Main Street, Site 300, Richmond, Va 23219

Re: Cumberland County Support of Application – 2024 VATI Grant Application from Firefly

Dear Dr. Holmes:

On behalf of Cumberland County, I would like to express our support of the 2024 VATI application from Firefly. The County is committed to creating universal access to high-speed internet for all residents and businesses. In order to increase coverage in unserved and underserved areas within the county, the Board of Supervisors supports the regional 2023 VATI Application submitted by lead applicant Thomas Jefferson Planning District Commission with ISP partner FireFly Fiber Broadband.

The Cumberland County Board of Supervisors is committed to the effort and is prepared to match the requested amount of 5% or approximately \$250,000. We thank you for your efforts on behalf of the partnering localities for this application and we look forward to working with all of the partnering organizations involved.

Sincerely,

Derek L. Stamey



December 14, 2023

Tamarah Holmes, Ph.D
Director, Office of Broadband
Virginia Department of Housing and Community Development
600 East Main Street, Suite 300
Richmond, Virginia 23219

RE: 2024 VATI Applications from Firefly

Dear Ms. Holmes:

Dominion Energy Virginia ("Dominion") is pleased to be a party to a Memoranda of Understanding with Firefly, CVEC Electric Cooperative and the Counties of Cumberland, Goochland and Powhatan (each, a "Participating County").

Dominion, Firefly, and our electric cooperative partners have developed a unique approach for achieving universal broadband access with individual Counties, and through broader, regional approaches. Dominion's participation in each of these projects will be pursuant to, and in a manner consistent with the provisions of, Virginia Code § 56-585.1:9 (the "Utility Leverage Statute").

This letter confirms Dominion's support for the application to the 2024 Virginia Telecommunication Initiative submitted by Firefly and our Participating County partners named above. Dominion's specific investments that will support each proposed project will be set forth in petitions under the Utility Leverage Statute that will be submitted to the State Corporation Commission ("SCC"). Dominion's participation in each project, and its specific level of related investment, will be subject to the approval of the SCC and the terms set forth in the SCC's Final Order related to each project.

Dominion is pleased to be part of these important County-wide and regional initiatives in the manner contemplated by the Utility Leverage Statute.

Sincerely,

A handwritten signature in black ink, appearing to read "D.F. Walker", written in a cursive style.

David F. Walker
Director, DEV Strategic Customer Programs



BOARD OF SUPERVISORS
County of Fluvanna
Palmyra, Virginia
RESOLUTION No. 41-2023

**A RESOLUTION OF SUPPORT FOR THE AWARD OF THE FIREFLY/TJPDC
VATI 2024 GRANT APPLICATION**

WHEREAS, Fluvanna County is committed to bringing universal broadband internet access to its citizens across the county; and

WHEREAS, Firefly Fiber Broadband has developed a grant application with the Thomas Jefferson Planning District serving as the lead applicant with the county being one of multiple counties included in the project to make fiber to the home broadband internet service available to the unserved locations in the county; and

WHEREAS, the preliminary planning for the application has identified 110 additional locations in the county as being unserved without access to speeds faster than 100 mbps download or 20 mbps upload, and the preliminary design includes 3 miles of fiber optic cable to be installed in the county to make service available to those locations, with a cost estimate of \$240,000 for the construction, creating a need for additional grant funding to make the project financially feasible; and

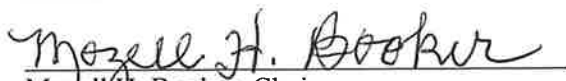
WHEREAS, this project will seek grant funds from the Virginia Department of Housing and Community Development through its Virginia Telecommunications Initiative (VATI) with an application on or before 19 December 2023; and

Be it resolved that Fluvanna County fully supports and encourages the award of the Firefly/TJPDC VATI 2024 grant application to help ensure every unserved and underserved citizen has access to high speed broadband;

THE FOREGOING RESOLUTION WAS DULY AND REGULARLY ADOPTED by the Fluvanna County Board of Supervisors on this 6th day of December 2023.

	AYE	NAY	ABSTAIN	ABSENT	MOTION	SECOND
Mozell H. Booker, Fork Union District	X					
Patricia B. Eager, Palmyra District				X		
Chris Fairchild, Cunningham District	X					
Anthony P. O'Brien, Rivanna District	X					X
John M. Sheridan, Columbia District	X				X	

Attest:


Mozell H. Booker, Chair
Fluvanna County Board of Supervisors

BOARD OF SUPERVISORS

Susan F. Lascolette, District 1
Neil Spoonhower, Chair, District 2
John Lumpkins, Jr., District 3
Charles B. Vaughters, Vice-Chair, District 4
Kendall C. Peterson, District 5



Victor Carpenter
County Administrator

www.goochlandva.us

December 6, 2023

Gary E. Wood
President and CEO
Firefly Fiber Broadband
PO Box 359
Lovingston, VA 22949

RE: Goochland County and Firefly Fiber Broadband Partnership for VATI 2024

Dear Mr. Wood:

I write on behalf of the Goochland County Board of Supervisors and Goochland County, Virginia to confirm our partnership with Firefly Fiber Broadband to pursue grant funding through the Commonwealth of Virginia's Virginia Telecommunication Initiative (VATI). In addition to confirming our partnership, this letter also serves to outline the financial contribution we commit to providing upon a successful award.

Goochland County believes broadband internet access is essential for our community to support rural agriculture, business, education endeavors, public safety, and everyday life. On September 9th, 2019, the County kicked off our 10 Steps to Broadband Internet Initiative which includes a commitment to provide all interested Goochland citizens access and options for universal broadband service provision. Fostering partnerships with providers in order to incentivize expansion of service to unserved and underserved areas of the county is a priority of our 10 Steps to Broadband Internet initiative.

We understand Firefly Fiber Broadband has developed a grant application with the Thomas Jefferson Planning District serving as the lead applicant with the county being one of multiple counties included in the project to make fiber to the home broadband internet service available to additional unserved locations in the county.

Preliminary planning for the RISE regional project has identified over 981 locations in the county as being unserved without access to speeds faster than 100 mbps download or 20 mbps upload, and the preliminary design includes over 112 miles of fiber optic cable to be installed in the county to make service available to those locations, with a total cost estimate of \$10,200,000 creating a need for additional grant funding to make the project financially feasible.

Gary E. Wood
President & CEO
Firefly Fiber Broadband
December 6, 2023
Page 2

The Goochland County Board of Supervisors and Goochland County support this project and the seeking of grant funds from the Virginia Department of Housing and Community Development through VATI with an application on or before December 19, 2023.

Additionally, the Goochland County Board of Supervisors and Goochland County fully supports the RISE regional project and commits to providing local matching funding not to exceed \$250,000 upon a successful VATI award to help ensure unserved and underserved citizens have access to highspeed internet broadband. The local matching funding is subject to approval and appropriation by the Goochland County Board of Supervisors in 2024 and pursuant to a negotiated final agreement for the project's scheduling and performance terms.

Thank you for the opportunity to partner and support Firefly Fiber Broadband's expansion of fiber broadband via a VATI application. Please do not hesitate to reach out to Paul Drumwright, Community Affairs Manager (pdrumwright@goochlandva.us) or myself (vcarpenter@goochlandva.us) if we can be of further assistance in this partnership.

Respectfully,



Vic Carpenter
County Administrator

**RESOLUTION OF THE BOARD OF SUPERVISORS OF
GREENE COUNTY, VIRGINIA, FOR SUPPORT OF THE
APPLICATION FOR BROADBAND PROJECT**

WHEREAS, Greene County is committed to bringing universal broadband internet access to its citizens across the county, and

WHEREAS, Firefly Fiber Broadband has developed a grant application with the Thomas Jefferson Planning District serving as the lead applicant with the County being one of multiple counties included in the project to make fiber to the home broadband internet service available to the unserved locations in the county, and

WHEREAS, the preliminary planning for the regional project has identified **391 locations** in the county as being unserved without access to speeds faster than 100 mbps download or 20 mbps upload, and the preliminary design includes **48 miles** of fiber optic cable to be installed in the county to make service available to those locations, with a total cost estimate of **\$2,650,000** for the construction, creating a need for additional grant funding to make the project financially feasible, and

WHEREAS this project will seek grant funds from the Virginia Department of Housing and Community Development through its Virginia Telecommunications Initiative (VATI) with an application on or before 19 December 2023,

NOW THEREFORE BE IT RESOLVED that Greene County fully supports the regional project and commits to providing local matching funding **not to exceed \$80,000.00 in ARPA funds** to help ensure every unserved and underserved citizen has access to highspeed broadband.


BE IT FURTHER RESOLVED that the County Administrator of Greene County, Virginia, is authorized to make the appropriate accounting adjustments in the budget to do all things necessary to give this resolution effect.

Adopted this 12th day of December, 2023.

Motion: Steve Bowman
Second: Marie Durrer

Recorded Vote:

Steve Bowman Yes
Marie C. Durrer Yes
Steve Catalano Yes
Dale R. Herring Yes
Davis Lamb Yes



Dale R. Herring, Chair
Greene County Board of Supervisors

ATTEST:



Cathy Schafrik, Clerk
Greene County Board of Supervisors

**BOARD OF SUPERVISORS
COUNTY OF LOUISA
RESOLUTION**

At a regular meeting of the Board of Supervisors of the County of Louisa held in the Louisa County Public Meeting Room at 5:00 PM on the 20th day of November 2023, at which the following members were present, the following resolution was adopted by a majority of all members of the Board of Supervisors, the vote being recorded in the minutes of the meeting as shown below:

RESULT:	Passed
MOVER:	Board of Supervisors - Patrick Henry District Fitzgerald Barnes
SECONDER:	Board of Supervisors - Jackson District R.T. "Toni" Williams
AYES:	Duane Adams , Tommy Barlow , R.T. "Toni" Williams, Rachel Jones , Fitzgerald Barnes , Eric Purcell, Willie Gentry

**A RESOLUTION SUPPORTING AND ENCOURAGING THE AWARD OF THE
FIREFLY/TJPDC VATI 2024 GRANT APPLICATION**


WHEREAS, Louisa County is committed to bringing universal broadband internet access to its citizens across the county, and

WHEREAS, Firefly Fiber Broadband has developed a grant application with the Thomas Jefferson Planning District serving as the lead applicant with the county being one of multiple counties included in the project to make fiber to the home broadband internet service more widely available to the unserved locations in the county, and

WHEREAS, this project will seek grant funds from the Virginia Department of Housing and Community Development through its Virginia Telecommunications Initiative (VATI) with an application on or before 19 December 2023.

NOW, THEREFORE, BE IT RESOLVED, on this 20th day of November, 2023, that the Louisa County Board of Supervisors fully supports and encourages the award of the Firefly/TJPDC VATI 2024 grant application to help ensure every unserved and underserved citizen has access to highspeed broadband.

A Copy, teste:



Christian R. Goodwin, Clerk

Board of Supervisors
Louisa County, Virginia



COUNTY OF LOUISA

November 21, 2023

Tamarah Holmes, Ph.D.
Director, Office of Broadband
Office of Broadband Department of Housing and Community Development
600 East Main Street, Ste 300
Richmond, VA 23219

Dear Dr. Holmes:

I am providing this VATI Application Notice to notify the Virginia Department of Housing and Community Development that Louisa County and Firefly/Thomas Jefferson Planning District (TJPDC) may submit an application for the FY2024 Virginia Telecommunication Initiative (VATI).

Louisa County and Firefly/TJPDC intends to submit an application for Broadband Equity Access, and Deployment (BEAD) program funding to expand broadband services within our County.

Louisa County and Firefly/TJPDC understands that this VATI Application Notice is required in order to submit an application for the 2024 Virginia Telecommunication Initiative and that this notice is not binding on the entity represented by the undersigned, Virginia Department of Housing and Community Development.

Respectfully,

Christian R. Goodwin, ICMA-CM
County Administrator

Chairman
R. Clay Jackson

Vice-Chairman
Carty Yowell

BOARD MEMBERS
Charlotte Hoffman
Dustin Dawson
James Jewett



**Madison County Board of
Supervisors**

Jonathon Weakley
County Administrator

Hannon Wright
County Attorney

414 N. Main Street
P. O. Box 705
Madison, Virginia 22727
(540) 948-7500 (ph)
(540) 948-3843 (fax)

November 28, 2023

Gary Wood, President and CEO
CVEC & Firefly Fiber Broadband
P.O. Box 359
Lovingsston, VA 22949

RE: FY24 VATI Internet Initiative – Letter of Support

Dear Mr. Wood :

The Madison County Board of Supervisors were notified that the Thomas Jefferson Planning District approved Firefly's unsolicited proposal per the TJPDC's PPEA guidelines. TJPDC will be the lead applicant for the FY24 VATI application which is a similar approach to last year's VATI application process.

Madison looks forward to continuing our relationship with Firefly to provide universal broadband coverage. Firefly has a history of managing these projects and we have a unique partnership to include a regional approach which will score well with DHCD.

As part of the FY24 VATI grant application, the Madison County Board of Supervisors is providing this letter of support for the VATI grant application and hereby commits to provide local funding for the FY24 VATI project. Madison County hereby pledges a not to exceed local contribution of \$400,000. This local funding contribution was originally approved by the Board of Supervisors during the FY23 VATI application and therefore, those funds remain earmarked and designated for this project should we be successful with the FY24 VATI award.

We look forward to a successful grant cycle and universal broadband coverage in Madison County.

Sincerely,



Jonathon Weakley

RESOLUTION SUPPORTING THE 2024 VATI GRANT APPLICATION

WHEREAS, Powhatan County is committed to bringing universal broadband internet access to its citizens across the county; and

WHEREAS, Firefly Fiber Broadband has developed a grant application with the Thomas Jefferson Planning District serving as the lead applicant with the county being one of multiple counties included in the project to make fiber to the home broadband internet service available to the unserved locations in the county; and

WHEREAS, the preliminary planning for the regional project has identified **1,831 locations** in the county as being unserved without access to speeds faster than 100 mbps download or 20 mbps upload, and the preliminary design includes **208 miles** of fiber optic cable to be installed in the county to make service available to those locations, with a total cost estimate of **\$19,000,000** for the construction, creating a need for additional grant funding to make the project financially feasible; and

WHEREAS, this project will seek grant funds from the Virginia Department of Housing and Community Development through its Virginia Telecommunications Initiative (VATI) with an application on or before 19 December 2023.

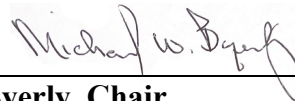
NOW, THEREFORE, BE IT RESOLVED that Powhatan County fully supports the regional project and commits to providing local matching funding **not to exceed \$350,000** to help ensure every unserved and underserved citizen has access to highspeed broadband.

**ADOPTED BY THE POWHATAN COUNTY BOARD OF SUPERVISORS ON
FEBRUARY December 18, 2023.**

ATTEST:



**Bret Schardein, Clerk
Powhatan County Board of Supervisors**



**Mike Byerly, Chair
Powhatan County Board of Supervisors**

Recorded Vote:

David T. Williams
Steven McClung
Michael W. Byerly
Bill L. Cox
Karin M. Carmack

_____ Aye _____
_____ Aye _____
_____ Aye _____
_____ Aye _____
_____ Aye _____

December 14, 2023

Tamarah Holmes, Ph.D.
Director, Office of Broadband
Virginia Department of Housing and Community Development
600 East Main Street, Suite 300
Richmond, Virginia 23219

RE: Firefly Fiber Broadband Deployment Initiative

Dr. Holmes:

On behalf of Rappahannock Electric Cooperative (REC), I am pleased to submit this letter in support of the applications that Firefly Fiber Broadband (Firefly) is submitting for grant funding from the 2024 Virginia Telecommunication Initiative.

We appreciate the focus from the Commonwealth on this critical need to make high-quality broadband internet service available in our unserved and underserved communities. REC is a member-owned, member-focused electric cooperative serving portions of 22 counties. The partnership between us and Firefly is a wonderful example of a key principle for cooperatives – cooperation among cooperatives. With this collaboration, REC intends to own and lease fiber to Firefly, and Firefly will serve as the internet service provider. REC has applied to RUS and approval has been granted for financing the fiber plant construction required to accomplish this project. Our efforts have facilitated commitments that will deliver universal, fiber-to-the-home broadband access in the partnered counties served by REC. Additionally, since 2018, REC has been constructing a utility fiber backbone network, and the partnership with Firefly will leverage that network, as it was designed, to facilitate the successful completion of broadband partnership solutions.

This cooperation among cooperatives creates opportunities to simultaneously address critical needs such as modernizing the energy grid and strengthening the reliability and security of our electric infrastructure, while making broadband access universally available. REC is proud to be a facilitator of this internet solution and to contribute to these important projects. We also look forward to continuing our work with Firefly.

Thank you for your consideration of awarding the funding necessary to complete these important projects.

Sincerely,



Peter Muhoro, Ph.D.
Chief Strategy, Technology and Innovation Officer
Rappahannock Electric Cooperative

Submission Overview

ERN: 0027729573 | Service Provider | Central Virginia Services, Inc.

SUBMISSION CERTIFIED

Data as of June 30, 2023

Biannual Filing Window

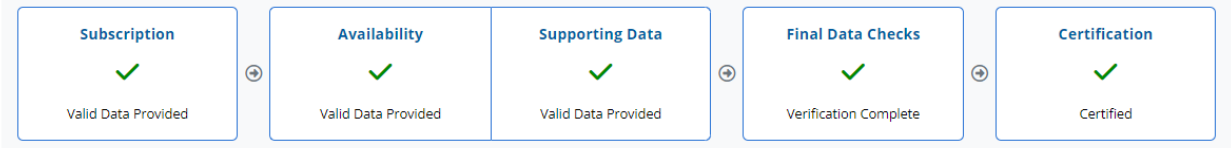
DATA AS-OF DATE	WINDOW OPEN	WINDOW STATUS
Jun 30, 2023	Jul 3, 2023	CLOSED
TODAY'S DATE	WINDOW CLOSE	FILING STATUS
Dec 15, 2023	Sep 15, 2023	Original - Certified

Fixed Data Requests

Fixed Challenges	0
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Submission Steps

[Decertify Submission](#)



Fixed Submission Data

Service	Subscription Data Files Currently Processing (0)		Availability Data Files Currently Processing (0)	
	Subscribers	Locations	Supporting Data	
Fixed Broadband	21,567	42,992	✓ 1 of 1	
Fiber to the Premises	21,567	42,992	✓ 1 of 1	
Fixed Voice	3,742			
Non-ILEC	3,742			

Submission Overview

ERN: 0027729573 | Service Provider | Central Virginia Services, Inc.

SUBMISSION CERTIFIED

Data as of December 31, 2022

Biannual Filing Window

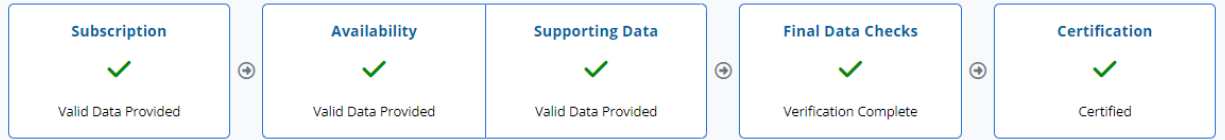
DATA AS-OF DATE	WINDOW OPEN	WINDOW STATUS
Dec 31, 2022	Jan 3, 2023	CLOSED
TODAY'S DATE	WINDOW CLOSE	FILING STATUS
Dec 15, 2023	Mar 1, 2023	Original - Certified

Fixed Data Requests

Fixed Challenges 0

Submission Steps

[Decertify Submission](#)



Fixed Submission Data

Service	Subscription Data	Availability Data	
	Subscribers	Locations	Supporting Data
Fixed Broadband	18,773	37,105	✓ 1 of 1
Fiber to the Premises	18,773	37,105	✓ 1 of 1
Fixed Voice	3,263		
Non-ILEC	3,263		

Firefly Performance: Setting the Standard

Grant funds are limited and many have hard time limits on their availability. Given the significant needs for broadband access in today's world, the speed of making broadband service available and the performance of the network delivering the service should be important factors in choosing to whom grant awards are issued.

Firefly Fiber Broadband has not only a proven record for timely and efficient construction of its network, it is the leader among all companies of all sizes in the Commonwealth of Virginia in rural deployment for the last five years. Funds awarded to Firefly are put to work immediately and the service they help make available is a world-class service that is economically accessible to all.

Firefly Fiber Broadband was created by its parent company, the not-for-profit Central Virginia Electric Cooperative (CVEC), in 2018. The sole purpose for Firefly's existence is to overcome the digital divide in rural central Virginia. Since its inception five years ago, Firefly has been involved with the construction of more than 5,000 miles of fiber optic cable in a robust and reliable regional network. Along the way, it has developed a reputation for overcoming challenges and finding solutions to stay in budget and stay on schedule. It has also exhibited a true commitment to universal access.

When the first two make-ready contractors on the CVEC fiber build were not able to reach the pace of construction or stay within costs, they were replaced. When COVID became widespread, Firefly did not slow down, but instead sped up its deployment seeing the increased need for broadband access. When the 811 underground locating system was overwhelmed and the railroads dragged their feet on permits, Firefly worked to find solutions to limit the impact on the buildout. Just in the last six weeks, Firefly has made 13 Norfolk Southern crossings after having zero in the previous 12 months.

Throughout the aggressive build schedule, weather difficulties, labor market shortages, supply chain issues and other unplanned hurdles that have created opportunities for roadblocks, Firefly has addressed each one and continued its construction. We find solutions and stay focused on our goal of delivering universal access to broadband as soon as possible to the families and small businesses in need in our rural area. We are working to set a standard for meeting commitments.

When we do have the occasional dig in or bird shot damage, Firefly does not follow the industry path of slow or sluggish response. If a subscriber is not receiving the service for which they are paying, Firefly considers it an outage and works to clear the problem just like its parent electric company does. Trucks roll on weekends and holidays, and contractors are called in immediately if other assistance is needed. Our outages have been limited; as one example, during Winter Storm Frida there were more than 25,000 electric outages on the CVEC system but only 800 internet accounts had down time. If a subscriber had battery backup or a generator to power their router, the data was still moving at gigabit speed. When the service does go out, our employees respond promptly to restore the service. We are changing the industry standard.

We often get questions from other ISPs about how our take rate is so high. In new areas opened for service in Louisa and Powhatan in recent months we had over 70% of passed locations register for service. Our reputation as a high-quality provider helps; we scored a 90 on the American Consumer Satisfaction Index in the fiber internet industry which averages below 70 on that scale. Our local presence that assures subscribers that the person they talk to on the phone and the person working on

their lines are neighbors who understand the importance of having dependable internet service in rural areas. Our prices provide service at under \$50, and lower with ACP assistance, making the service accessible. The goal of our company is service and connectivity for all, not maximum profits or returns to hedge funds or shareholders. The focus on service and customer satisfaction is driving the extremely high take rates and creating a new standard for rural internet providers.

When grant funds are awarded to Firefly they are put to work promptly and efficiently. They help as Firefly works each day to achieve its vision: transforming lives.

Attachment 19 – Why This TJPDC Firefly Proposal Should Be Awarded in VATI 2024

The Department of Housing and Community Development (DHCD) is in an excellent position to assure every location in Virginia has access to broadband access. With the combination of the state funds for Virginia Telecommunications Initiative (VATI) 2024 plus the upcoming federal BEAD funding distribution in 2024, there are adequate grant funds to fully achieve the ambitious goal of universal access.

To optimize the efficiency of the application of those funds, DHCD has indicated it reserves the right to make decisions on which applications are the best fit for each funding source. The correct answer for this Thomas Jefferson Planning District Commission (TJPDC) Firefly application for VATI 2024 is to be funded in this round from the state funds.

There are three primary reasons for the TJPDC Firefly proposal to be funded in the earliest round and from state funds. The reasons are cost, efficiency of resources, and timing.

BEAD funding provides plenty of grant dollars to fund proposals to reach every location in the state. The cost for each proposal should still be considered when selecting which projects to fund from each source. The Firefly project has been optimized in design to minimize cost by continuing and overlapping the ongoing TJPDC Firefly VATI 2022 project and other leveraged projects such as the ReConnect Round 2 award to Firefly in Buckingham, Cumberland, Goochland, Louisa and Powhatan counties. The ability to keep previously engaged crews, working under the same cost terms, same labor requirements and in the same area allows for the VATI 2024 project to be the equivalent to an expansion of the VATI 2022 project. Should the project be BEAD funded, there will be delays due to the nature of being in the early stages of a federal grant program with decisions still being made about its details. There will be delays due to the environmental review, even though there are no anticipated changes that will be required after the review. There will be delays as the language of new state contracts with the grantees are developed and as the full reporting and compliance process is developed and approved. With these delays, contract employees and partner resources will be reallocated, many of them possibly moving out of state to other ongoing projects. The startup cost of establishing a new team, the learning process for getting the logistics of a large project coordinated, and the strong possibility of significant market pressures on costs due to the national expansion of fiber construction will push prices much higher for Firefly for this area. The underlying revenue to support private investment will not change, so all of the increased costs would need to be covered with grant funds which makes this ready-to-build project much, much more expensive if funded in a future BEAD round.

The Firefly construction team, which includes the locally assigned Conexon personnel, the five short term Graybar warehouses being operated throughout the service area to manage material supply, the 24 make-ready construction crews, the 20 aerial crews and 20 underground crews, the full fleet of splicing technicians, the service drop crews, the contract field data gathering team, and all of the other associated personnel who contribute to the Firefly build daily, are building for the Commonwealth as well. They are creating the fiber network to serve unserved locations today and that is capable of serving all future growth in rural central Virginia for decades to come. Over 300 people each day are building infrastructure in Virginia on this project. If the project pauses, those resources do not stay in Virginia and they may not come back. Restarting a project instead of continuing one will add to the pressures that will already naturally be created when the BEAD funds are awarded. With enough pay, hopefully enough contract support will be located, but the lack of teamwork and familiarity will lead to lost time, longer

schedules, and the requirement for even more resources to try to make up for the lost efficiency of halting a smoothly operating ongoing project.

The worst impact for local families and businesses will be the delay if this project is not funded in this round. The ongoing lack of access will create very acute issues and anxiety in these communities. In the very same counties and adjacent areas to those in this proposal, Firefly is constructing more than 30 miles per week and ramping up this year to 40 miles per week. The project is making service available today to another 300 locations per week which will increase to more than 400 per week in the first quarter of 2024. Each week 200 new connections are made at homes and businesses that have no other option, with that number planned to grow to 250 per week also in the first quarter. From Campbell to Madison County and from Amherst to Powhatan, communities are realizing the benefits of having truly high speed, reliable, affordable broadband available. The word is spreading. The only complaints Firefly gets is that we cannot move fast enough because the need for every single household is so great in today's world. To complete the buildout across 90% of the area by August 2025, and not continue to reach the other 6,266 locations identified in this application within the year after, will have a huge impact on those left behind. In counties where everyone has broadband access for the computers issued by the schools, only a small handful will still need to drive to McDonalds or find a public hotspot for the family to visit and complete homework. For mothers and fathers who have the option to work from home but inadequate access, they will need to make the drive from their rural area to their offices, wasting energy, raising travel risks and missing family time compared to their neighbors who have broadband. Seniors will need to drive to their doctor appointments instead of having access to telemedicine. The same shortcomings that have been so well documented will still be there, but only for a few families in this central Virginia region where broadband will become so accessible for all others.

In 2018, in Nelson County only the homes in Wintergreen, portions of Lovingston and just a few along a county fiber project had broadband access. Today, the FCC Broadband map shows 97.2% of all Nelson County homes have not just broadband access, but gigabit-speed access available. After VATI 2022 that number will be 100%. In Fluvanna today, the number with access is 94.6%. After VATI 2022, only 147 homes will be without access. This same review can be done for all 11 counties in this proposal. The speed of deployment of the Firefly project will only make further delays for the remaining unserved locations seem unbearable. How long will they need to wait? The correct answer is not to have them wait at all and have them see the same crews that finish work at the end of the road move onto their street.

The Commonwealth has an opportunity to complete a region of the state, 13 counties in the heart of Virginia, with broadband access for all, with this proposal. It can be completed by fall 2026. It can be a showcase of how to truly reach universal coverage, with every location from Lynchburg to the Culpeper line and from Richmond west to the Blue Ridge Parkway having broadband access. It will be the largest rural region with fiber deployment in America. It will shine the spotlight on the success of Virginia as it checks off the first completed region.

The TJPDC Firefly proposal should be funded with VATI 2024 funding. We ask that you once again honor the people of central Virginia with a VATI grant award.

Commonwealth Priorities (50 points) – **Expanded version because we would like to offer more information in the answers to each section than the 6,000 characters limit permits.**

Question 20. Additional points will be awarded to proposed projects that reflect Commonwealth priorities. If applicable, describe the following:

- a. **Businesses, community anchors, or other passings in the proposed project area that will have a significant impact on the locality or region because of access to broadband.***

The proposed deployment of fiber optic broadband service within this application represents a transformative step towards empowering local businesses, community anchor institutions, and various other entities. The inclusion of 25 specific community anchor institutions, spanning educational, healthcare, recreational, and civic organizations, underscores the comprehensive impact that improved broadband connectivity can have on these communities.

In Amherst County, the inclusion of vital community assets such as the Amherst food pantry, 2 preschools, the Field House of Amherst County High School, a maintenance building for Amherst County Public Schools, and the Virginia Center for the Creative Arts (VCCA) signifies a holistic approach to community development. Particularly noteworthy is the unserved status of the VCCA and Amherst County High School's Field House, highlighting the urgent need for broadband access to serve the educational requirements of school children and staff in this facility.

In Appomattox County we have included an unserved community sports complex as a community anchor institution emphasizes the role of broadband in enhancing recreational activities, fostering community engagement, and potentially creating new economic opportunities related to sports and events.

In Buckingham County we have included three unserved locations on the campus of Buckingham County High School, including the office building and the Buckingham County Preschool, this addresses critical gaps in educational infrastructure. The inclusion of these sites, reported as unserved on FCC broadband maps, emphasizes the importance of closing the digital divide to ensure equitable access to educational resources.

In Fluvanna County, the integration of an unserved U.S. Government Post Office as part of the project area recognizes the essential role broadband plays in facilitating efficient government services and communication.

The Goochland Free Clinic and Family Services office in Goochland County emerges as a significant community anchor institution, underlining the vital role of broadband in supporting essential healthcare services. The impact of fiber broadband on the Goochland Free Clinic can be transformative, improving healthcare delivery, enabling telemedicine, and enhancing overall community well-being.

The inclusion of Camp T. Brady Saunders of the Boy Scouts of America in the grant project area highlights the importance of broadband in supporting recreational and educational programs, fostering youth development, and enhancing the camp experience.

In Greene County, we propose to serve two unserved locations at the Greene County Youth Center which highlights the need for broadband access in facilities serving youth, ensuring that educational and recreational opportunities are not limited by digital disparities.

In Madison County, we have included in our project area Criglersville Mountain Museum, a vital bastion of history and education dedicated to those displaced by the Shenandoah National Park and Blue Ridge

Parkway. We have also included an extremely remote federal government site owned and managed by the national park service- Rapidan Camp, which served as the retreat for President Herbert Hoover. In addition, Old Rag Mountain Rangers Station, Berry Hollow Trailhead, Rose River Fire Road would all be covered in this project providing vital coverage in the Blue Ridge Mountains bringing service to trail heads and fire road entrances that provide benefits to hikers and providing emergency communications for first responders services in areas without cell coverage.

In Louisa County's we include four unserved locations on the campus of Louisa County High School within our project area, this reflects a commitment to addressing educational connectivity gaps, ensuring that students have equal access to online resources and learning opportunities.

Additionally, we have identified and included in our proposed project area over 400 unserved farms in the proposed project area as we have acknowledged the transformative potential of extending fiber optic service to agricultural communities. Improved broadband connectivity enables technological advances in farming, including precision agriculture and smart farming practices. The integration of fiber optics can enhance efficiency, productivity, and sustainability in farming operations, contributing to the economic development of rural areas.

In conclusion, the proposed deployment of fiber optic broadband within this application is poised to have a multifaceted impact on education, healthcare, recreation, and agriculture, fostering overall community development and bridging the digital divide for a more inclusive and connected future.

b. Unique partnerships involved in the proposed project. Examples include electric utilities, universities, and federal/state agencies.

Firefly is partnering with Rappahannock Electric Cooperative (REC) and Dominion Energy (DE), utilizing fiber optic assets they will own to help deliver broadband service access in their electric territories. Firefly will also build fiber in coordination with Appalachian Power (APCo) territory in southern Albemarle County.

The four counties have collectively committed \$1,170,000 in matching funds, proving their commitment to make broadband access available to every location in their county. Dollars aside, county partners have given support to boost survey participation, provide demographics, and publicize milestones for the project.

The partnership benefits several higher education facilities since many of their students, faculty and staff live in the project area that closely surrounds campus and will be able to enjoy distance learning: The University of Virginia, Longwood University, Hampden-Sydney College, and Piedmont Virginia Community College.

c. Digital equity efforts to ensure low to moderate income households in the proposed project area will have affordable access to speeds at or above 100/20 Mbps, include information regarding the internet service provider's participation in the Affordable Connectivity Program.

Firefly goes above and beyond to help with the cost of the fiber drop to the premise by covering the cost of all fiber drops up to 2,500 feet. For low-to-moderate income (LMI) homes, Firefly covers the cost of the fiber drop entirely. The generous allowance for the fiber drop to all

households and the commitment to build to all LMI households, regardless of the distance of the drop, ensures digital equity and that no homes are left behind due to exorbitant costs associated with building a fiber drop.

Firefly services are affordable and easy to understand. We offer two internet packages and one phone package for residential service: 100 Mbps (symmetrical) at \$49.99/month and 1 Gbps (symmetrical) at \$79.99/month. The phone is \$34.99 (or \$29.99 with a \$5 discount when bundled with internet service) and includes unlimited calling in the Continental US. There is no fine print, no introductory rates, no contracts, no installation fee.

Devices are included at no additional charge to subscribers and include a cutting-edge modem and router. The hardware provided to each subscriber has built-in privacy and security protections and the Firefly mobile app offers basic parental controls and troubleshooting abilities. Firefly offers 24/7 technical support via phone and chat. In addition, managed Wi-Fi enables technical support representatives to help troubleshoot remotely to regain access again without an in-person appointment. Firefly offers a library of online resources on how to use their equipment, how to stream and other educational videos about broadband both on their website and YouTube channel. Firefly will launch a newsletter in 2024 for its subscribers that includes information about security, tech tips, and other timely information that will help to educate customers. As detailed in question 16, Firefly is committed to boosting digital literacy for its 25,000+ subscribers and to communities in central Virginia.

Firefly encourages participation in the Affordability Connectivity Program (ACP). Firefly raises availability for services they provide by sharing pricing and information about the ACP to social services partners, school principals and County officials. This information is also included on their website, in literature (like rack cards, handouts and door hangers) and through social media posts.. For current customers, Firefly provides information about the ACP via email and bill messaging.

d. The co-applicant's efforts to mitigate supply chain constraints, including labor shortages and order-to-delivery delays on telecommunications materials required to construct broadband networks.

Firefly has a proven track record of successfully navigating supply chain issues by planning ahead for material needs and keeping ample stock of critical supplies on hand. Firefly contracts with Graybar, who specializes in supply chain management services, to operate storage facilities for Firefly in each division and secures materials for the fiber build. Firefly plans for hardware, electronics and huts over a year in advance and orders accordingly to stay in front of the construction and installation schedule.

Firefly has partnered with its construction and installation contractors for five years and built solid relationships to ensure that the job is done with their labor force. Most contractors are local to our area and simply move from job to job across Firefly's service territory.

e. The co-applicant's efforts to mitigate costs and delays that may be associated with make-ready and other permitting requirements anticipated for network deployment.

Firefly has a long and successful history of overcoming challenges of every type to stay on pace with fiber construction. Make ready and permitting are two of our success stories.

For make ready construction, Firefly intends to maintain ongoing relationships with Rappahannock Electric Cooperative and AEP. Firefly has worked closely with both companies for over 18 months to establish the necessary planning, logistics, handoffs and coordination to allow construction to continue at an aggressive pace of about 25 miles per week between the two areas. There are 24 make ready crews from multiple contractors assisting and both companies supplement with in house crews occasionally when available.

Weekly meetings with REC and biweekly meetings with AEP allow for continuous exchange of information and updates to any known changes in schedules, priorities, etc. Firefly has helped find additional resources for everything from make ready engineering to make ready construction and vegetation management. A project this size requires focus on the every day logistics combined with a nimbleness to alter schedules and shift crews when issues such as property access, vegetation clearing, or material or equipment availability affect planned schedules.

Firefly has again developed relationships to facilitate all permitting. Recent success includes completing 13 Norfolk Southern crossings in the last 6 weeks. Firefly has worked to mitigate impacts of the delays that occur and work ahead to avoid delays where possible.

f. The applicant's and co-applicant's efforts to promote broadband adoption, including, but not limited to telehealth, smart farming, e-entrepreneurship, and distance learning.

In addition to the outreach plan detailed in question 16, Firefly partners with area agencies to advance education, health, and commerce: Chambers of Commerce, Economic Development, schools, colleges and universities, Social Services, first responders, and local cooperative exchanges.

Firefly's partnership with Blue Ridge Health District on the Digital Access + Literacy Workgroup will boost awareness of and trust in Firefly, resulting in increased adoption of broadband services. The partnership directly reaches the elderly with JABA, low-to-moderate income families with social services, adults of all ages with PVCC, and all other audiences young and old who utilize local libraries for books and internet access with JMRL.

Broadband has become a critical utility that opens the door for telehealth, especially in rural towns that do not have a medical facility within a 60-mile radius. Broadband allows medical professionals to login at home and deliver remote medical evaluations and services and allows patients to access remote doctors for regular checkups and virtual visits for private ailments. New medical devices, such as pacemakers, require reliable broadband connections for daily uploads of health data to the monitoring physicians.

Firefly has made efforts to include public safety facilities in this grant application and in its project areas whenever feasible. In a recent interview with a volunteer fire department chief, he noted that having information delivered quickly with reliable broadband slashes response time and literally saves lives.

Firefly serves many small businesses who benefit from internet access for the first time in a rural area. Firefly works with new startups and all businesses to assure business level services for internet connections and VoIP telephone are reliable and affordable to support their startup efforts.

Distance learning is one of the most important benefits recognized during COVID in rural areas. Students and faculty benefit from being able to attend class virtually. The new project will bring that option to thousands more locations.

Firefly has connected many farms and agribusinesses that use their services to improve production and efficiency. Two of Firefly's customers, a small family farm and a vineyard, were featured by the USDA to showcase how rural broadband has transformed their business. Virginia Farm Bureau's RealVA featured smart farming as a topic for an episode in March 2023, and outlined how rural broadband, including Firefly's services, has changed the world of farming today. Working with local Farm Bureaus and agribusiness organizations, Firefly will use this project to encourage faster adaptation of smart farming techniques.