



**United States Department of Agriculture, Rural Utilities Service**

USDA ReConnect Program, FY 2020 Funding Opportunity Announcement (FOA)

**Service Area Validation Execution Guide**

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## Document Overview

The purpose of this guide is to provide Service Area Validation (SAV) procedures.

## Process Overview

### *SAV Purpose*

USDA conducts SAVs to determine whether Proposed Funded Service Areas (PFSAs) submitted by ReConnect Program applicants meet the eligibility requirements described in the Funding Opportunity Announcement (FOA). To be eligible, 90% of households within a PFSA must lack sufficient access to broadband, defined as less than 10 megabits per second (Mbps) downstream speed and 1 Mbps upstream speed, or 10/1. The 90% 10/1 eligibility requirement applies to all product types, including 100% Grant, 100% Loan, and 50% Loan / 50% Grant.

### *SAV Approach Summary*

The SAV Review Team determines the percentage of households in a PFSA without sufficient broadband access. The Team applies a holistic approach and standardized process by leveraging experience and lessons learned from the ReConnect Program's first funding opportunity. The SAV process is designed to validate existing service, regardless of the availability of data and underlying characteristics for each service area in all applications.

The SAV Review Team adheres to USDA's guidelines (below) to thoroughly execute SAVs:

- The SAV Review Team bases final determinations on the information gathered from Desktop Research and evidence confirmed in the field.
- The SAV Review Team is permitted to use any publicly available information to assist with identifying potential providers in an area.

### *SAV Data Collection and Field Validation Approach*

SAV determinations result from two primary activities: Desktop Research and Field Research. Each activity includes a series of steps to collect a range of data points that ultimately support the overall determination. The SAV Review Team commits to the following Desktop Research and Field Research activities:

1. **Desktop Research:** The examination of publicly available data sources to inform Field Researchers about potential existing service. The research includes but is not limited to: applicant submitted data, FCC Form 477, USAC HUBB data, and other data sources determined as acceptable. Desktop Review also involves the initial review of Public Notice Responses (PNRs). Desktop Reviewers will identify phone numbers for the Field Reviewers to use for interviews.
2. **Field Research:** Field Research involves interviews, either in person or over the phone, with service provider technical personnel (including PNR respondents and other identified service providers), representatives of community anchor institutions, members of the general public, and subscribers of service providers found to be in the PFSA. During interviews with the providers' technical personnel, Field Reviewers seek a detailed understanding of the technologies providing service, the infrastructure

supporting the service, and the speeds being delivered. For interviews with subscribers located in the PFSA, Field Reviewers focus on the technology and speeds provided to homes. The SAV Review Team may also perform physical network observations in the PFSA regardless of PNR submissions. Network observations, such as taking pictures of infrastructure, are not required activities but may prove helpful in certain circumstances.

### ***Assumptions of the SAV Approach***

There are many links in any given data communications chain that ultimately determine speed. The SAV Review Team evaluates all links that are identified and necessary for providing broadband to the household. The SAV Review Team then documents their findings for determination of a PFSA's eligibility.

While the Execution Guide details the SAV approach to all applications submitted under the ReConnect Program, applications differ across a number of variables. These include:

- The number of PFSAs;
- The size of PFSAs;
- The number of households within an PFSA;
- The household density of the PFSA;
- The relative distance between PFSAs;
- The number of service providers operating in the PFSAs.

### ***Service Area Validation Findings and Determination***

The standards for service determination apply to all three funding categories. Service determination is based on available information and data. For each PFSA, the SAV Review Team compiles a report of data sources, data captured, and determination based on the dataset. The SAV Review Team's Field Researchers document their determinations accordingly:

1. If SAV activities, observations, and data points gathered in the activities described above find the service area has sufficient access to broadband service, defined as 10/1 Mbps, the determination states: "service found."
2. If activities described above indicate that the PFSA does not have sufficient access to broadband service to more than 10% of the PFSA households, defined as 10/1 Mbps, the determination states: "service not found."

### ***SAV Procedures***

SAV Execution follows a standard procedure consisting of Desktop and Field Research activities detailed in the following sections.

## 1.0 Desktop Research

Desktop Research activities serve as a core SAV exercise. The objective of Desktop Research is to provide supporting documentation regarding the availability of broadband service within PFSAAs based on four key sources of information: 1) Public Notice Responses (PNRs) submitted via the Public Notice Filing (PNF) process; 2) relevant information included in the application; 3) online research reviewing the FCC Form 477, USAC Hub information and all other publicly available information; and 4) USDA institutional knowledge about service areas and existing providers. The outputs of this procedure prepare the Field Researchers to properly assess the eligibility of an applicant's Proposed Funded Service Areas (PFSAAs). Desktop Researchers begin by reviewing application materials and conclude the process by completing a *Desktop Research Report*, which lists both potential providers in a given PFSA and the information source(s).

### *Desktop Research Procedure*

#### 1.1 Conduct Outreach to Tribes

The Desktop Researcher reviews the application and the tribal report pulled from the GIS system to analyze any overlap of PFSAAs with tribal land. Desktop Researchers identify where Field Researchers will need to conduct Field Research activities on tribal land and when they will be traveling there. Desktop Researchers provide the contact information for the tribe, available from the National Office, to the Field Researchers assigned to the SAV. Prior to SAV travel, Field Researchers contact tribal representatives to inform them of their intent to conduct Field Research activities on tribal land, and to inquire as to any protocols or procedures necessary to obtain permission to do so.

#### 1.2 Initiate Desktop Research and Conduct Data Collection

Using the information provided in the application materials, Desktop Researchers begin the review process. As previously mentioned, the data provided is used to prepare the *Desktop Research Report*, which includes their findings for the Field Reviewers. The Desktop Researcher collects data for each PFSA and includes the name of any potential service provider in the PFSA. Service providers are only included if located within the PFSA. If the Desktop Research Team finds evidence of a service provider in any portion of a PFSA, the location(s) and service provider(s) identified, including address and contact information, are provided to Field Researchers. Desktop Research provides a solid foundational understanding of potential service providers in the PFSA(s) as a whole for Field Research.

Desktop Research activities include four main components: 1) review Public Notice Response (PNR) submissions; 2) identify competitor service providers listed by the applicant; 3) research publicly available data to identify potential service providers; and, 4) USDA institutional knowledge about service areas and existing providers.

##### 1.2.1 Execute PNR Evaluation Procedure for the PFSA

Upon receipt of the PNR for a given application, the Desktop Researcher reviews the PNR. The Desktop Researcher then provides contact information to the Field Researchers. Field Researchers will then reach out to the PNR respondent. These steps are described in greater detail below:

- Review and record submitted information:** The Desktop Researcher reviews the information provided in the PNR and creates a summary report for each PNR submitted. In the case that multiple PNRs are submitted for a single PFSA, these summaries are listed within a single report. Each observation includes a summary of any supplementary information, a summary of the PNR map overlay(s) including geographic area covered, and local contact information if provided.
- Contact the respondent:** If contact information is missing for a local technician, Desktop Researchers use any means available to find this contact information. Field Researchers use the PNR respondent’s contact information to set up a phone interview or meeting and request additional information.

### 1.2.2 Identify Competitor Service Providers

Desktop Researchers review the competitor service providers as documented in the application, and supply a list of providers, advertised speeds, and contact information (when possible) to Field Researchers. Service offerings from mobile or satellite service are not included.

#### 1.2.2.1 Research Publicly Available Data

Desktop Researchers must adhere to the following procedures when reviewing the publicly available broadband speed test data provider websites:

- Data collected from each website is limited to information from the respective PFSA.
- Data is not to be collected from areas outside the PFSA.
- Observations of mobile and satellite service are not to be included.
- If a service provider is identified within a given PFSA, the following information is captured: provider name, type of service (i.e. Fiber, Fixed Wireless, etc.), advertised speed, and general location within the PFSA where service is available. The Desktop Researchers review the service providers’ websites to determine if there is additional information on service availability within the PFSAs. They also document local contact information when available.

Desktop Research staff are to adhere to the following procedures when reviewing the publicly available broadband data provider websites:

- Table 1** summarizes the data observations captured when the Desktop Researchers review third party publicly available speed test data for a particular PFSA in a given application.

**Table 1: Data Provider Fields**

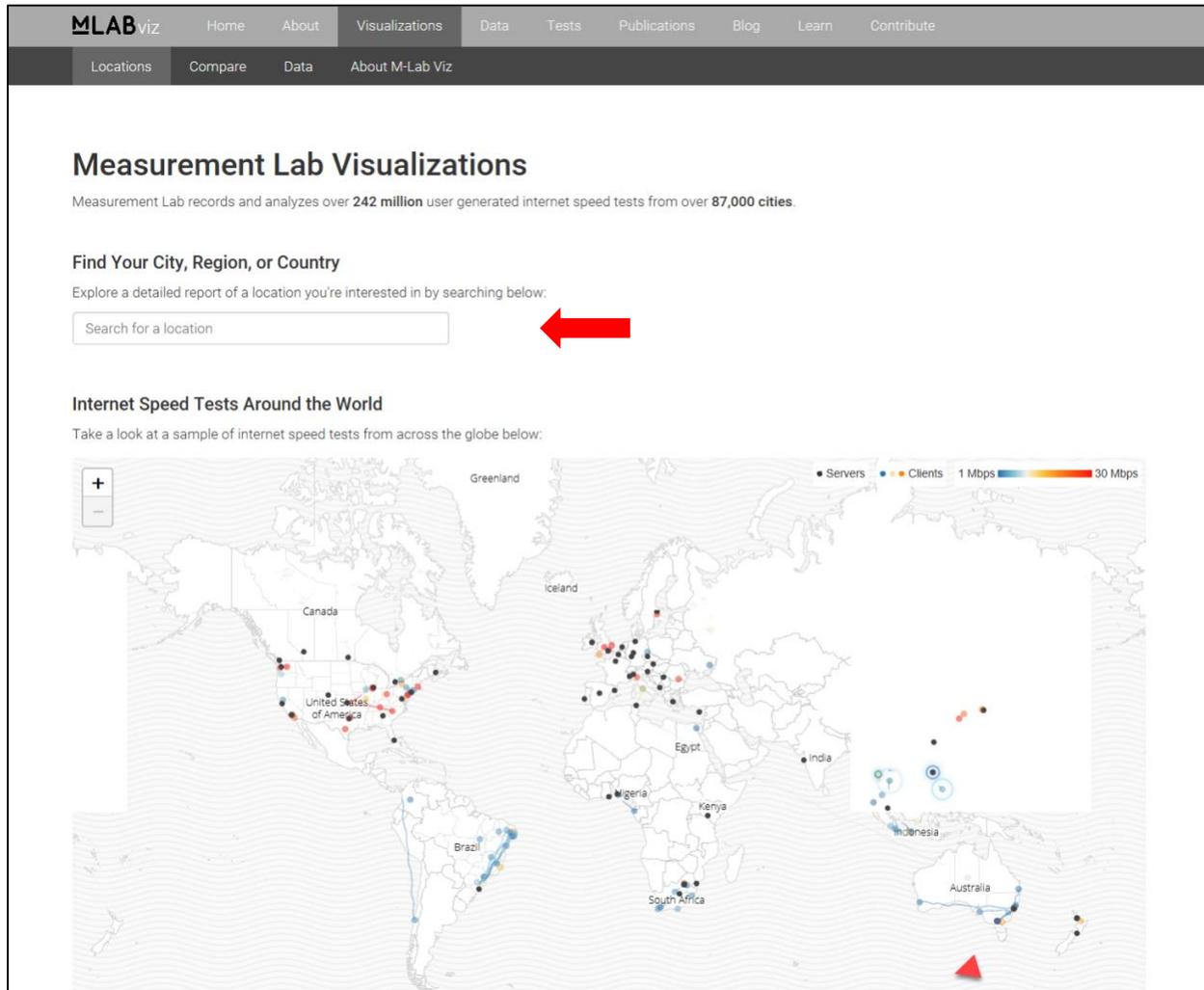
Form	Information Collected
<b>3rd Party Data Observations</b>	

Form	Information Collected
<b>M-Lab</b>	<ul style="list-style-type: none"> <li>● PFSA Observed</li> <li>● Service Provider Name</li> <li>● Service Location Description</li> <li>● Reported Speeds</li> <li>● Notes</li> </ul>
<b>USAC</b>	<ul style="list-style-type: none"> <li>● PFSA Observed</li> <li>● Service Provider Name</li> <li>● Fund</li> <li>● Longitude</li> <li>● Latitude</li> <li>● Reported Speeds</li> <li>● Notes</li> </ul>
<b>FCC Form 477</b>	<ul style="list-style-type: none"> <li>● PFSA Observed</li> <li>● Service Provider Name</li> <li>● Service Location Description</li> <li>● Reported Speeds</li> <li>● Notes</li> </ul>

*1—M-Lab*

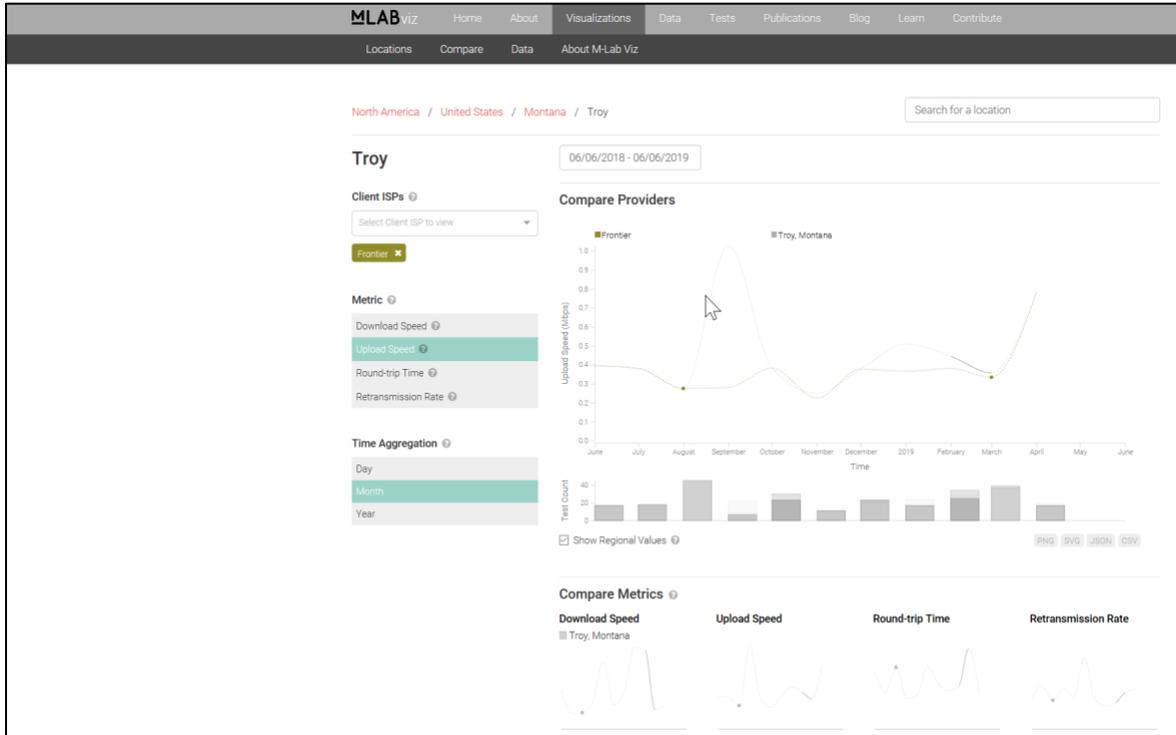
- Navigate to M-Lab: <https://viz.measurementlab.net>
- Once in the webpage, select Locations from the top menu. This page, detailed in **Figure 1**, allows you to search by City, Region, or Country, to obtain a detailed report of the selected location. Desktop Researchers select an appropriate location within the PFSA, such as large population centers, to conduct this search. Parameters for selection include population centers, towns, zip codes, etc. Desktop Researchers may select multiple locations to search if the size or irregularity of the PFSA shape dictates the need for multiple search areas.

Figure 1: M-Lab Locations Subpage Illustration



- Once the location is designated, a detailed comparison summary is provided at the end of the report. This report contains tested download/upload speed averages over the course of a year as shown in **Figure 2** and **Figure 3**.

**Figure 2: Additional M-Lab Speed Observations**



**Figure 3: Historical Download and Upload Speeds**

Summary Data													
Last Three Months													
Name	Tests	Download Speed (Mbps)					Upload Speed (Mbps)					Retransmit	RTT
		Median	Avg	SD	Min	Max	Median	Avg	SD	Min	Max	Avg	Avg
Frontier	81	1.4	3.0	4.7	0.0	36.7	0.4	0.7	1.6	0.0	8.5	3.1%	96.19ms
Troy, Montana	95	1.8	4.6	6.7	0.0	36.7	0.4	1.0	1.6	0.0	8.5	2.8%	92.92ms

Last Six Months													
Name	Tests	Download Speed (Mbps)					Upload Speed (Mbps)					Retransmit	RTT
		Median	Avg	SD	Min	Max	Median	Avg	SD	Min	Max	Avg	Avg
Frontier	141	1.6	3.3	4.7	0.0	36.7	0.4	0.6	1.2	0.0	8.5	3.2%	91.51ms
Troy, Montana	163	2.1	4.8	6.8	0.0	37.0	0.4	0.8	1.3	0.0	8.5	2.9%	84.36ms

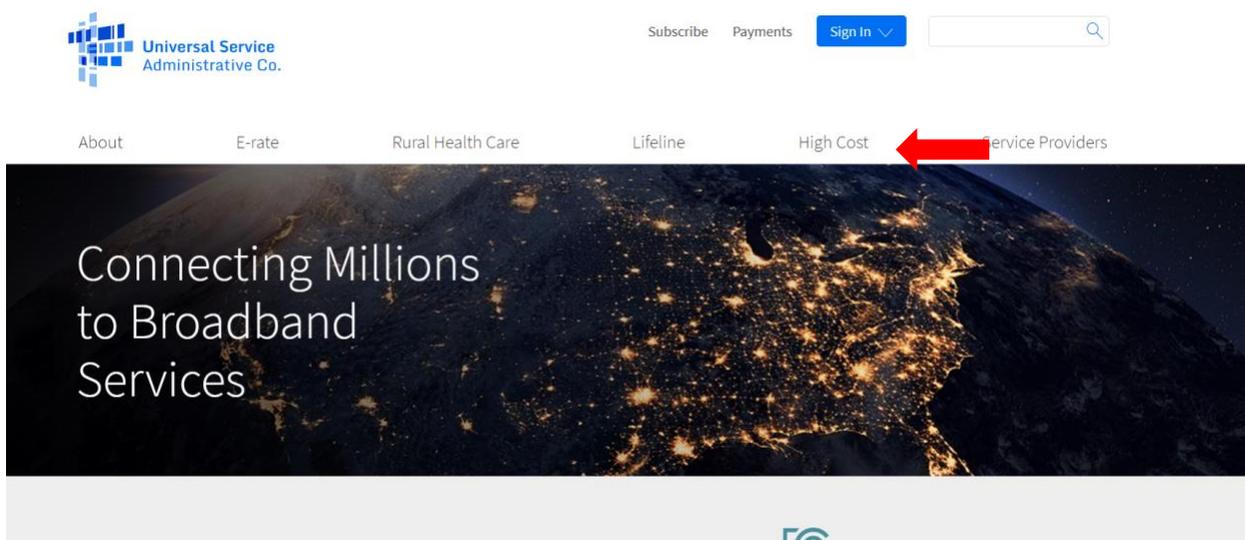
Last Year													
Name	Tests	Download Speed (Mbps)					Upload Speed (Mbps)					Retransmit	RTT
		Median	Avg	SD	Min	Max	Median	Avg	SD	Min	Max	Avg	Avg
Frontier	257	1.6	3.4	4.6	0.0	36.7	0.3	0.5	0.9	0.0	8.5	3.1%	94.08ms
Troy, Montana	301	1.8	4.6	6.7	0.0	37.0	0.4	0.7	1.0	0.0	8.5	2.9%	79.08ms

- For each PFSA, Desktop Researchers document any providers listed with service over 10/1 in the PFSA, and any service location details. If no service provider is listed, Desktop Researchers notate “no provider” found on M-Lab.

## 2—USAC HUBB Data

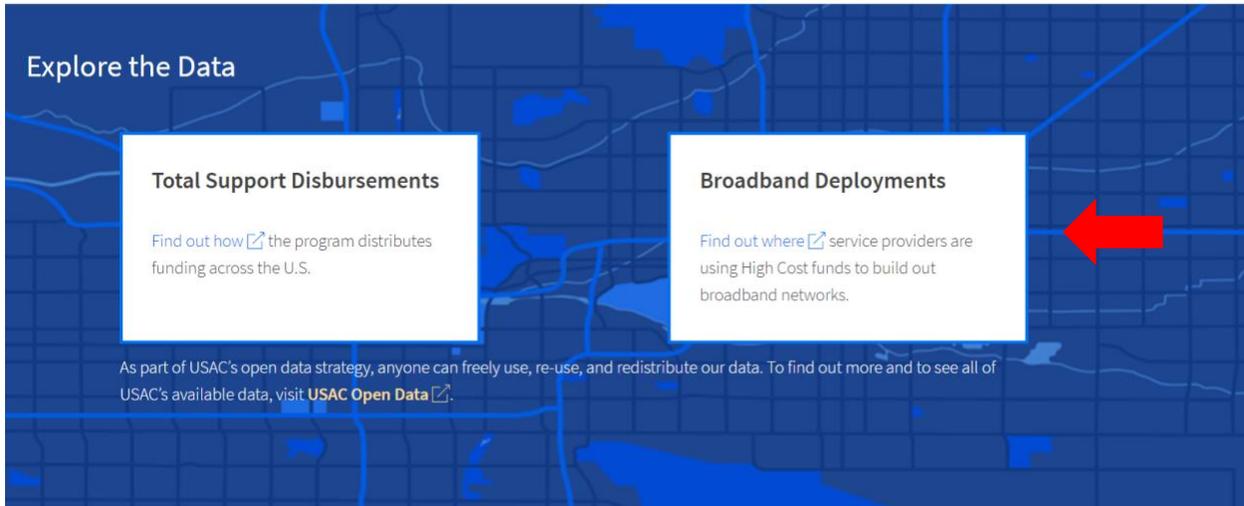
- Navigate to the USAC website: <https://www.usac.org/>
- Select the “High Cost” link at the top of the USAC home page as shown in **Figure 4**.

**Figure 4: Accessing USAC Speed Test Data**



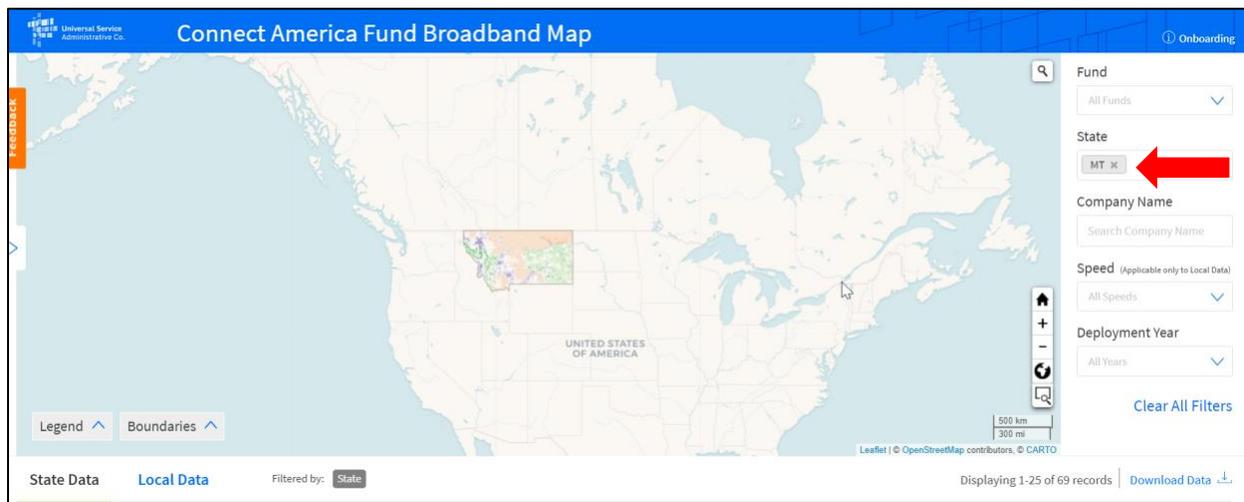
- Click the “Broadband Deployment” link highlighted in **Figure 5**. Once the map appears, search by state, then zoom in further to find the PFSA.

**Figure 5: The Connect America Fund Map**



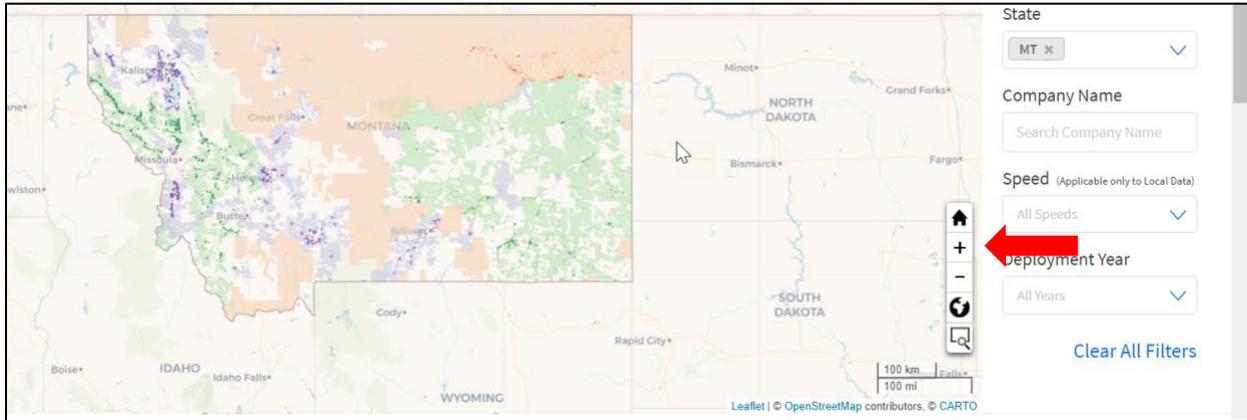
- Navigate to the “State” drop-down menu located on the right side of the page. Next, click and select the appropriate state for location details: in this example, Montana.

**Figure 6: Filter by State**



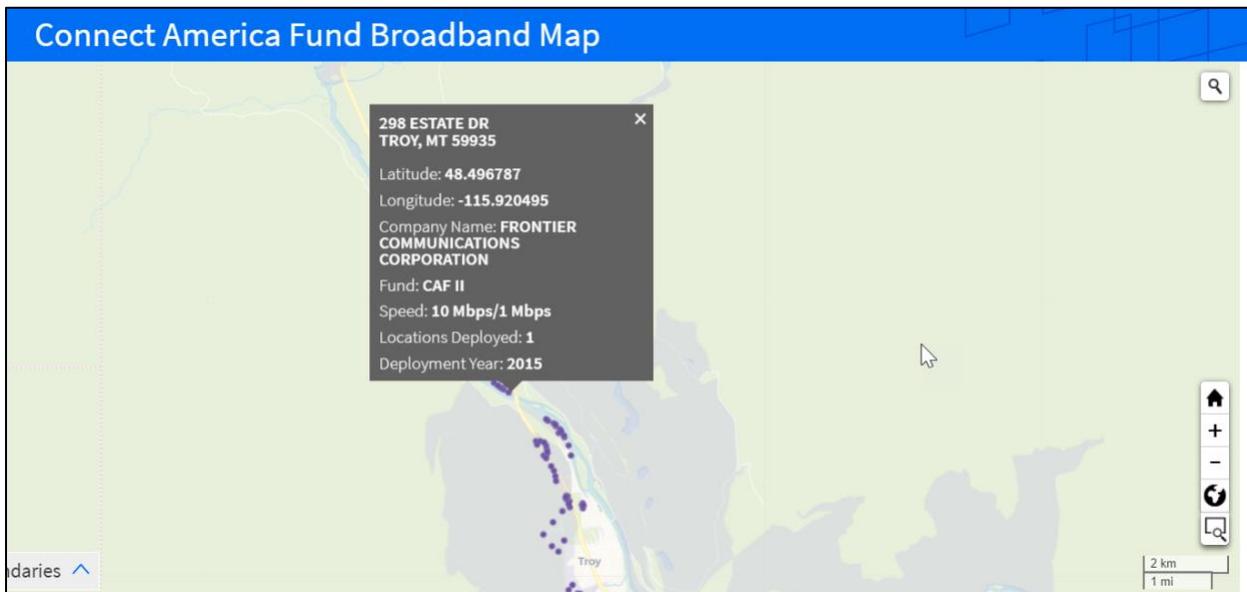
- Click on the desired region of the map in which the PFSA/county/zip code lies, then click the zoom “+” button on the map for a closer view of the region.

**Figure 7: Zoom into Desired Region**



- Once zoomed in, click any of the colored dots representing “deployed locations” in the PFSA/county/zip code to determine the download speeds. To ensure the deployment is located within the PFSA and not outside of the PFSA or within a donut hole, enter the coordinates provided on the map into the PFSA map.

**Figure 8: Service Area Details**

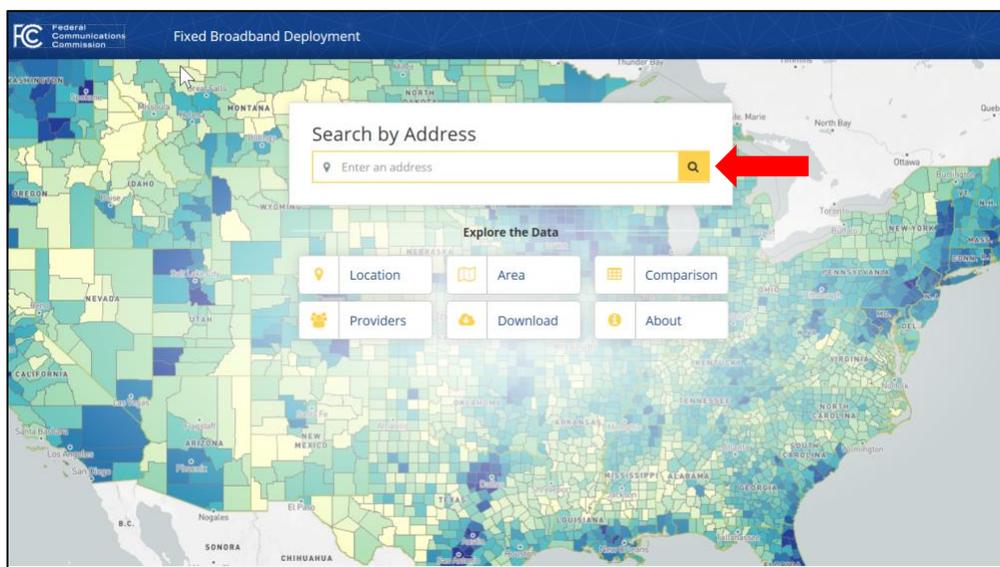


- Take a screenshot of the map on the website and save the screenshot to the appropriate application folder.
- For each PFSA, Desktop Researchers document any providers listed with service over 10/1 Mbps in the PFSA along with any service location details. In the event no service provider is listed, the Desktop Researcher notates “no provider” found on USAC.

### 3—FCC Form 477

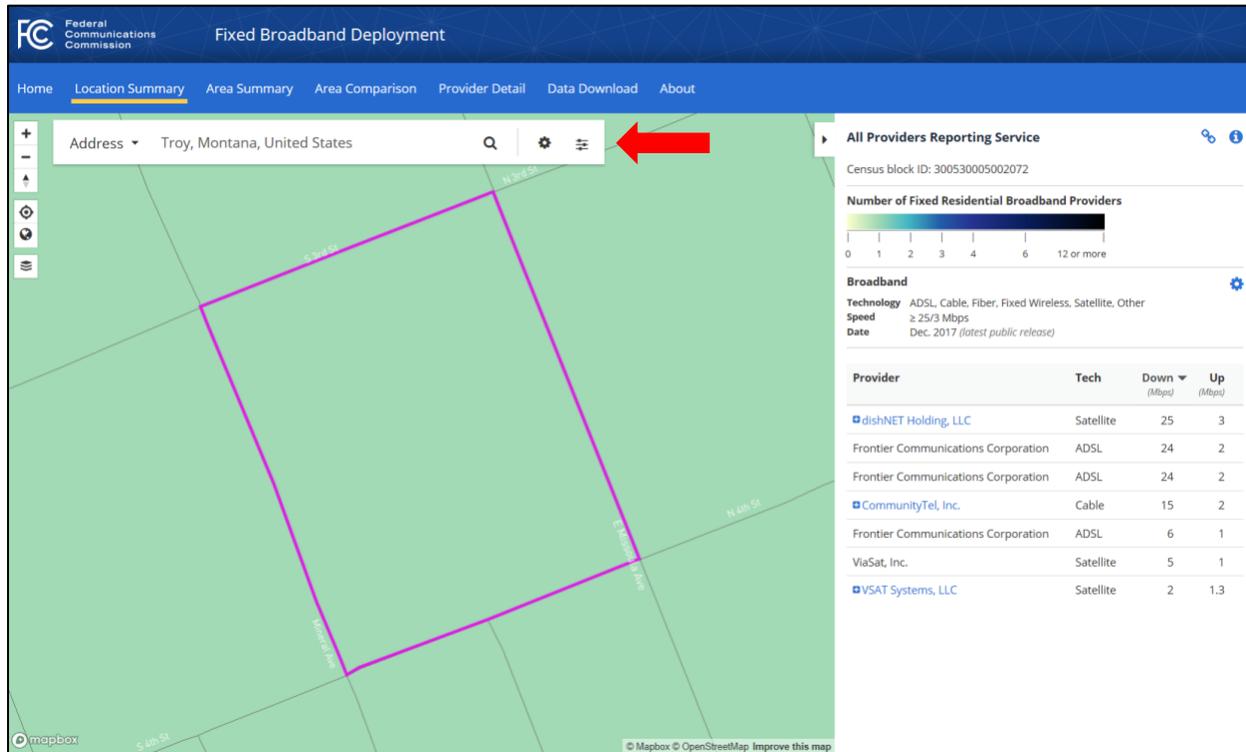
- Navigate to the Federal Communications Commission (FCC.gov) website:  
<https://broadbandmap.fcc.gov/#/>
  - *Note: Internet Explorer or Microsoft Edge may work best for the necessary functionality.*
- Search for the PFSA location as shown in **Figure 9**.

**Figure 9: Search by Address**



- After the search is complete, the speeds are generated in the Location Summary tab shown in **Figure 10**. In this section, users can see additional information, including the broadband providers, technology type, and speed comparison. Users can also filter for download and upload speeds by selecting the gear icon shown below.

**Figure 10: Location Summary**



- Filter for the 10/1 Mbps speeds in the area as seen in **Figure 11**.

**Figure 11: Filter by Speed**

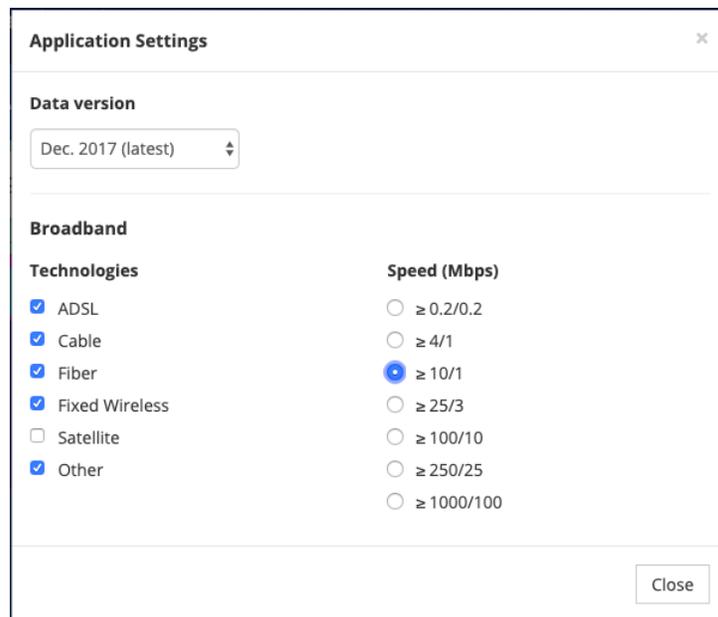
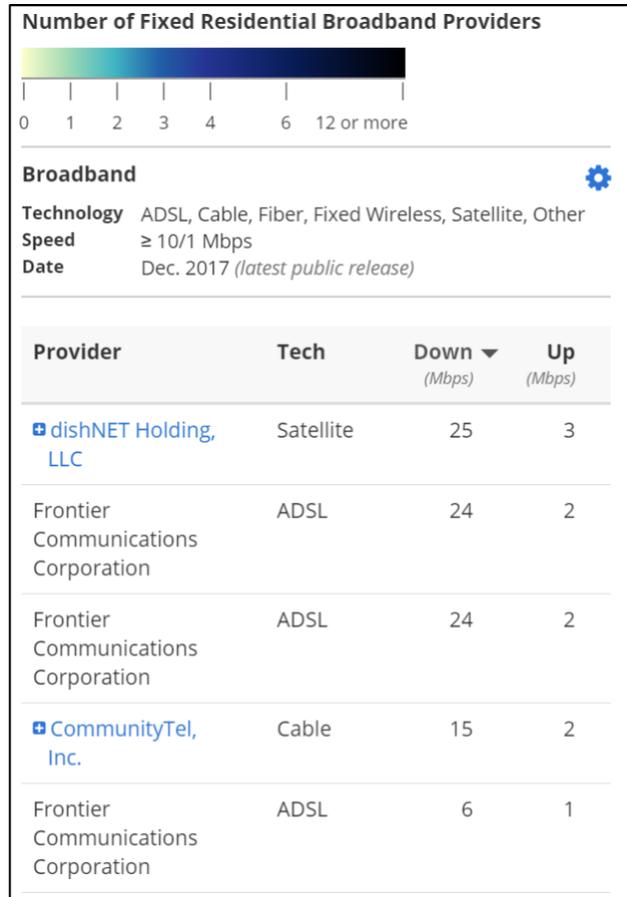


Figure 12: FCC Form 477 Service Provider Results



- Screenshot any appropriate findings and save in the corresponding application folder.
- For each PFSA, Desktop Research Team also documents any providers listed with service over 10/1 Mbps in the PFSA (see **Figure 12**), along with any service location details. In the event no service provider is listed, the Desktop Researcher notates “no provider” found on FCC.

### 1.3 Prepare Desktop Research Report

Desktop Researchers review data and develop the *Desktop Research Report*. Once the report is prepared, the assigned Desktop Researchers review the draft. Desktop Researchers write a short summary of each PFSA, documenting the type of service and providers that were identified. Additionally, Desktop Researchers note anything else about the PFSAs that could be useful for Field Researchers, such as any donut holes or if a PFSA consists of mostly park land.

The *Desktop Research Report* compiles information by PFSA, which includes but is not limited to the following:

1. PFSA Metadata (New or Existing, Geographic Footprint)

2. Desktop Report Summary by PFSA
3. Community Notes
4. ISP Summary
5. PNR Summary
6. Key Contacts
7. Household Data
8. State Broadband Maps, if available

The report will provide concise, complete, and sufficient information that will serve as a basis for the Field Researchers.

#### **1.4 Receive Input from General Field Representatives**

Desktop Researchers will utilize USDAs General Field Representatives' (GFRs) technical expertise on the regions they serve. While compiling the *Desktop Research Report*, Desktop Researchers contact GFRs who serve areas within or near the PFSA to gather additional input.

## 2.0 Field Research

Field Research procedure begins with the review of the desktop findings summary per PFSA and culminates with the production of the final *SAV Findings & Determination Report*.

### Field Research and Data Aggregation Procedure

#### 2.1 Review Desktop Research Findings Report

The Field Researchers review the *Desktop Research Report* for each PFSA (as represented by **Table 2**) and identify any sections/data included in the report that may be materially deficient.

**Table 2: PFSA Summary Information**

Field	Responses
PFSA Name	[As provided on the Application]
New or Existing PFSA	[“New” or “Existing” as provided on the Application]
Household or Alternative Household Data?	[Number]
Geographic Footprint	[Square miles from the map metadata]
Desktop Research Summary	[Summary of potential providers]

#### 2.2 Initiate Field Research

After Field Researchers review the *Desktop Research Report*, they prepare for in-field validation. For example, if a service provider or local stakeholder was found in the PFSA during Desktop Research and an interviewee was identified, the Field Researchers schedule a time to conduct an interview.

If applicable, after the initiation of desktop findings, Field Researchers document any PNRs associated with the PFSA undergoing validation. If any PNRs associated with the PFSA are documented, the Field Research team prioritizes the interviews of PNR respondents. These interviews can be conducted in-person or by phone.

#### 2.3 Conduct PNR Respondent Interviews

For each PNR submitted, the Field Researchers conduct PNR Respondent Interviews. They ask the questions on the PNR Respondent Questionnaire (**Table 3**) to collect data on the PNR and PFSA being validated. Field Researchers ask the PNR respondent to identify any additional information which may not have been submitted online in the PNR. The SAV Review Team requests and examines datasets from the PNR service provider, including data generated by certain network elements or Network Management Systems (NMSs). The request should include data during peak and non-peak network load timeframes. If no service provider responds to the application’s PNF, Field Researchers submit similar requests to any service providers found to be operating in the PFSA by the Desktop Researchers or via in-field validation activities.

**Table 3: PNR Respondent Questionnaire**

Question	Responses
Common Name of the Applicant	[Insert]
PFSA Name	[Insert as provided on application]
Type of Technology	[Fiber, Cable, DSL, Fixed Wireless]
Name of Interviewee	[Insert]
Interviewee Contact Information	[Insert]
Date of Interview	[MM/DD/YYYY]
Local Time of Interview (Start)	[Insert]
Local Time of Interview (End)	[Insert]
Location of Interview	[Insert town, county, state, location, address; or identify that information was collected through phone calls and electronic submissions]
Name of Field Researchers(s) Conducting Interview	[Insert]
How many residential customers within the applicant's service area are currently capable of purchasing broadband service, defined as at a minimum speed of 10 Mbps downstream and 1 Mbps upstream?	[Insert number]
What are the locations of those residential customers within the applicant's service area that are currently capable of purchasing broadband service, defined as at a minimum speed of 10 Mbps downstream and 1 Mbps upstream?	[Insert locations]
Where are the rates of data transmission being offered?	[Insert number]
Can you provide data generated by Network Management Systems (NMSs)?	[Yes/No- expect to have document associated]
How many households in the PFSA have 10/1 service per the NMSs documentation?	[Number]
If yes, please provide data during peak network load timeframes.	[Insert speed data at peak timeframes]

Question	Responses
If yes, please provide data during non-peak network load timeframes.	[Insert speed data at non-peak timeframes]
Please provide network generated speed data from at least one of the following: - Customer Premise Equipment (CPE) - Network Management Systems (NMS) - Self-developed ping-based speed data	[Insert applicable speed data]
What is the location of the speed test?	[Street address or location]
How many households in the PFSA can this infrastructure reasonably provide service to?	[Number]

## 2.4 Conduct Field Research Activities

The following procedures within this step can be executed at any time while the Field Researchers are in the field validating a PFSA. It is the responsibility of the Field Researchers to gather as much quantifiable information as possible while validating a PFSA.

### Conduct Field Interviews

Field Researchers conduct interviews with service provider technicians, representatives of community anchor institutions (as appropriate), and residents located in the PFSA. The interviews will be conducted by phone. The purpose of the interviews is for Field Researchers to better understand the technologies providing and the infrastructure supporting broadband service. Interviews also provide Field Researchers more context to identify infrastructure and service providers.

Types of interviews:

- Resident Interview – **Table 4**
- Digital Subscriber Line Technician Interview – **Table 5**
- Cable Modem Termination Systems (CMTS) Technician Interview – **Table 6**
- Fixed Wireless Technician Interview – **Table 7**
- Fiber to the Premises Technician Interview – **Table 8**

The interview questionnaires listed above in Tables 4, 5, 6, 7, and 8 will be made available to Field Researchers when conducting interviews.

Field Researchers attempt to conduct the different types of interviews in each visited PFSA. However, they acknowledge and document if they cannot conduct an interview in the PFSA and provide their reasoning. The time to complete each interview depends on how quickly the team is able to collect a sufficient amount of data.

In the event a scheduled interviewee does not show up or answer the call for a scheduled interview, the Field Researchers should attempt to contact the interviewee by another means to confirm if the interview is postponed or cancelled. Field Researchers should then document the communication on the appropriate questionnaire. Field Researchers also need to document the amount of time spent waiting on the interviewee to answer or arrive.

For all interviews the following data is captured:

1. Application Name
2. PFSA Name
3. Interviewee Name
4. Interviewer Name
5. Location

**Table 4: Resident Interview Questionnaire**

Resident Interview Questionnaire	
Question	Purpose/Reasoning
Who is your internet provider?	To determine if there are other ISPs that we have not identified and to establish linkage between ISPs and household network performance; note technology if known.
Are there alternate providers?	To determine if there are other service providers that we have not identified.
Do you know for what level of service you are paying and are there faster packages available?	i.e. service package of 25/3 Mbps. Provides Field Researchers with insight as to what service is being advertised and if it is actually available. Additionally, if there is a faster package available, why is the resident not using the faster package?
Other Resident Interview Notes	Free text area for the Field Researcher to input any additional notes on the interview.

**Table 5: Digital Subscriber Line Technician Questionnaire**

Digital Subscriber Line Technician Questionnaire	
Question	Purpose/Reasoning
What type of DSL, Asymmetric Digital Subscriber Line (ADSL), Very High-Speed Digital Subscriber Lines (VDSL), etc.?	Different flavors of DSL have different attenuation characteristics.

**Digital Subscriber Line Technician Questionnaire**

Is your flavor consistent throughout the network?	To gain an understanding of whether different speeds may be experienced by users depending on location.
When was the network deployed?	Hardware and software versions ultimately determine speed. The age of the infrastructure helps gain an understanding of what hardware and software is deployed.
Have any enhancements or modifications to the network been made since the initial deployment?	Hardware and software versions ultimately determine speed. The age of the infrastructure helps gain an understanding of what hardware and software is deployed.
How many Digital Subscriber Line Access Multiplexers (DSLAMs) do you have in the PFSA?	To understand the infrastructure in place within the PFSA.
How many DSLAMs do you have in the PFSA?	To understand the infrastructure in place within the PFSA.
Where are those DSLAMs located (i.e. How far is it from a DSLAM to the house or test location)?	To understand where the infrastructure is located within the PFSA.
Can you provide CPE generated evidence of household speed?	To determine network speed.
Can you provide NMS generated evidence of household speed?	To determine network speed.
Can you provide network generated evidence of household speed?	To determine network speed.
What is the maximum download speed your network can deliver?	To find out if the Service Provider is capable of providing 10/1 service.
What is the maximum upload speed your network can deliver?	To find out if the Service Provider is capable of providing 10/1 service.

**Table 6: Cable Modem Termination Systems Technician Questionnaire**

<b>Cable Modem Termination Systems (CMTS) Technician Questionnaire</b>	
<b>Question</b>	<b>Purpose/Reasoning</b>

**Cable Modem Termination Systems (CMTS) Technician Questionnaire**

How many subscribers does the network support in the PFSA?	Number of subscribers/capacity to address if 10% threshold is met within a PFSA.
Is your solution pure cable or Hybrid Fiber Coax (HFC)?	Fiber is a faster medium than cable plant and may indicate additional capacity in the network.
Where is your interconnect location? (if any)	To understand the distance traffic is required to travel before hitting the measurement point of demarcation.
Is all CPE in the network on the same DOCSIS version?	The network can only operate at speeds consistent with the lowest DOCSIS version deployed in the network.
What versions of DOCSIS are in CPE in the network?	To determine the lowest version of DOCSIS presently in the network.
Can you provide CPE generated evidence of household speed?	To determine network speed.
What is the maximum download speed your network can deliver?	To find out if the Service Provider is capable of providing 10/1 service.
What is the maximum upload speed your network can deliver?	To find out if the Service Provider is capable of providing 10/1 service.

**Table 7: Fixed Wireless Technician Questionnaire**

<b>Fixed Wireless Technician Questionnaire</b>	
<b>Question</b>	<b>Purpose/Reasoning</b>
How many sites do you have?	To determine overall Radio Frequency (RF) coverage footprint.
Where are your sites located?	To determine overall RF coverage footprint.
How many subscribers does your network support in the PFSA?	The number of subscribers on a network determines the load on the network.
What model and version of CPE do you use?	Assists in determining the difficulty of receiving signal at households.

**Fixed Wireless Technician Questionnaire**

What is your RF footprint (test line of sight)?	Assist in determining the number of households in a PFSA that are within coverage.
Do you have a receiver we could test in the field?	To validate information on household signal strength.
How do you backhaul traffic?	Assists in determining if sufficient backhaul capacity exists to enable service.
Where is your interconnect location (if any)?	To determine distance for interconnect.
Can you provide CPE generated evidence of household speed?	To determine network speed.
What is the maximum download speed your network can deliver?	To find out if the Service Provider is capable of providing 10/1 service.
What is the maximum upload speed your network can deliver?	To find out if the Service Provider is capable of providing 10/1 service.
Do you have a propagation study?	To provide additional context on service delivery.

**Table 8: Fiber to the Premises Technician Questionnaire**

<b>Fiber to the Premises Technician Questionnaire</b>	
<b>Question</b>	<b>Purpose/Reasoning</b>
Is the network passive or active?	Active networks have more routing equipment thus creating more potential choke points.
How many subscribers does your network support in the PFSA?	The number of subscribers on a network determines the load on the network.
Where is the traffic muxed?	Multiplexing almost always introduces latency and may be a good place to check speed.
What is the backplane capacity of your aggregation router?	To understand the capacity of the infrastructure.

**Fiber to the Premises Technician Questionnaire**

What is the maximum download speed your network can deliver?	To find out if the Service Provider is capable of providing 10/1 service.
What is the maximum upload speed your network can deliver?	To find out if the Service Provider is capable of providing 10/1 service.
What is the capacity of your transport facilities in place from your consolidation location?	To determine if transport facilities have appropriate bandwidth to provide service.

**Collect Information from Other Public Data Sources**

While Field Researchers are deployed in a PFSA, they observe and document any sources of public data that help to determine whether broadband exists in the PFSA. Examples of public data sources the team should look for while traveling include, but are not limited to:

1. Newspaper ads
2. Magazine articles
3. Billboards for advertised speeds of local service providers
4. Local television/radio advertisements
5. Unsolicited CPE speed data provided by one or multiple resident(s) located within the PFSA undergoing validation
6. Signs on/in businesses

The Field Researchers document any findings during the site visit on the Public Data Source Collection Form shown in **Table 9** and include pictures for evidence findings if they identify pictures as helpful in the determination process.

**Table 9: Public Data Source Collection Form**

Question	Observation
Common Name of the Applicant	[Insert]
Relative PFSA Name	[Insert as provided on application]
Type of public data source	[Newspaper ad, magazine article, billboard, unsolicited CPE speed data, signs, radio/television broadcast ad, etc.] If observed in field, include picture(s) of public data source.
Information provided by public data source	[Insert description]
Date of information found	[MM/DD/YYYY]
Local time of information found	[Insert]

Question	Observation
Location where information was found	[Address or approximate location; if radio/television, then means observed]
Download/Upload speeds advertised	[Numbers]

## 2.5 Additional Documentation

Field Researchers may want to collect photographic documentation of infrastructure or other resources observed while conducting activities in the field to support determinations, although this is not required. Field Researchers will also document summaries of routes driven, notate visiting all PNR submitted service areas, and document geolocations for all observations. Lastly, Field Researchers may note any unusual PFSA characteristics (i.e., different number of households, large national park coverage, etc.).

## 2.6 Service Determinations

Once the Field Researchers gather all data points, they must make a service determination of “Service Found” or “Service Not Found” per each PFSA.

### 2.6.1 Review Households Observed

The Field Researchers must make every effort to physically count as many households in the PFSAs as possible and will determine if the number counted is enough to satisfy a high level of assurance that a collected sample size of households meets minimum household threshold requirements and supports the determination.

## 2.7 Develop SAV Findings and Determination Report

After the Field Research procedures are completed, the SAV findings are compiled into the *SAV Findings and Determination Report*. This report contains a determination for each PFSA along with summaries of all information collected by the Field Researchers supporting the given determination. This report also includes relevant attachments, including but not limited to the *Desktop Research Report*, relevant supporting documentation, and photographs.