

# CONNECTMT BROADBAND 101

1. Broadband 101
2. State Broadband Map
3. ConnectMT Program
4. Questions

# Broadband 101



Terminology

What is Broadband?

Fixed Broadband vs. Mobile Broadband  
Served

Unserved

Underserved

Frontier

Last Mile

Middle Mile

Dark Fiber



Slide 2



# What is Broadband?

Advanced telecommunications capability = high-speed, switched, broadband that enables users to originate and receive high-quality voice, data, graphics, and video telecommunications using any technology.

FCC relies on single benchmark to analyze whether advanced service is deployed: SPEED

Speed = Bandwidth is a measure of how much data can be transferred from one point in a network to another within a specific amount of time. It's typically used to measure how much data you can download to your device from a server on the internet.

Your actual bandwidth (Speed) will often be less than your maximum bandwidth due to network congestion, network overhead, and other external factors.

For instance, your internet connection may support a wide bandwidth (freeway) of 1,000 Mbps, but your internet plan may close a few lanes and limit your bandwidth to 400 Mbps. Add on network congestion, local cabling issues, and so on and your top bandwidth may only be 300 Mbps.

Latency, usage allowances, consistency not used

In broadband terminology, the word latency refers to how long it takes a request to travel from your device to another device over the internet. When you do something online, you make a request to another computer, basically saying "I would like this data, please".



Slide 3





Download Speed	0-5 Mbps	5-40 Mbps	40-100 Mbps	100-500 Mbps	500-1,000+ Mbps
Tasks	Check email	Stream Netflix on one device	Multiple users play online at once	Watch videos in HD on 3+ devices	Stream in 4K on 3+ devices
	Browse on Google	Use FaceTime or other video conferencing apps	Stream in HD on 1-2 devices at the same time	Download large files	Have a house full of gamers play online at the same time
	Stream Spotify on a single device	Game online for a single user	Stream music on 1-2 devices	Listen to Spotify or other music streams on 3+ devices	Do basically anything
Technology	Capacity				
Fiber to the Premises	Yes	Yes	Yes	Yes	Yes
Fixed Wireless	Yes	Yes	Maybe	Maybe	No
Cable / Coax	Yes	Maybe	No	No	No
Digital Subscriber Line	Yes	No	No	No	No
Satellite	Yes	Maybe	Maybe	Maybe	Maybe
Mobile (Cellular)	Yes	Maybe	No	No	No
Mbps = megabits per second					
Fixed Wireless ----> How far are you from the tower, and how much interference is there?					
Throttling and Pricing!					



<https://www.speedtest.net/>

SHARE Result ID 12713957837 RESULTS SETTINGS

PING ms: 1 DOWNLOAD Mbps: 895.13 UPLOAD Mbps: 943.96

GO

Connections: Multi  
 CenturyLink  
 Helena, MT  
 Change Server  
 Montanta.gov  
 161.7.39.7

HOW LIKELY IS IT THAT YOU WOULD RECOMMEND MONTANTA.GOV TO A FRIEND OR COLLEAGUE?

0 1 2 3 4 5 6 7 8 9 10  
 Not at all likely Extremely Likely

Slide 4



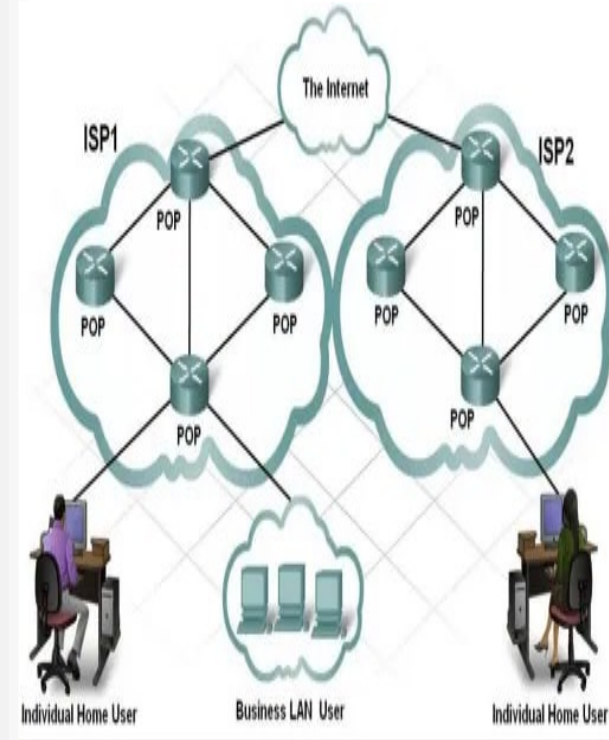


# What is Broadband?

" middle mile " is the segment of a telecommunications network linking a network operator's core network to the local network plant, typically situated in the incumbent telco's central office, that provides access to the local loop, or in the case of cable television operators, the local cable modem termination system.

Last mile broadband access: Communications technology that bridges the transmission distance between the broadband service provider infrastructure (central office, point of presence, or internet exchange point) and the customer premises equipment.

Like Electricity: Power Generation and Transmission (to substation) vs. Distribution (substation to meter)



Slide 5





## Access – Broadband Infrastructure and Availability

- **Broadband Access:** What wireline and fixed wireless broadband services are available in your area?
- **Mobile Access:** What cellular coverage and technology is available in your area?
- **Provider Engagement:** Are there opportunities to further strengthen partnerships with existing and new service providers?
- **Public Assets:** How do local policies support the use of public assets, enhance advanced telecommunications, and serve the public good?



Slide 6



## Adoption – Digital Inclusion and Workforce Skills

- **Adoption and Use:** Who is using the Internet?  
Are there digital divides?
- **Digital Inclusion:** What proactive measures are you taking to ensure digital equity?
- **Digital Skills:** Do programs provide a ladder for residents to gain digital proficiencies - from basics to coding?
- **Devices:** Do people have access to the devices they need to learn, create and participate?



Slide 7



## Community – Leadership and Context

- **Leadership:** Who are the broadband champions in your locality?
- **Community Priorities:** What issues draw us to take action to improve broadband?
- **Stakeholder Engagement:** How are you engaging stakeholders that can bring interest, influence, or support to local broadband initiatives?
- **Policy Environment:** Are there regional or state resources or regulations that impact local planning and investment?



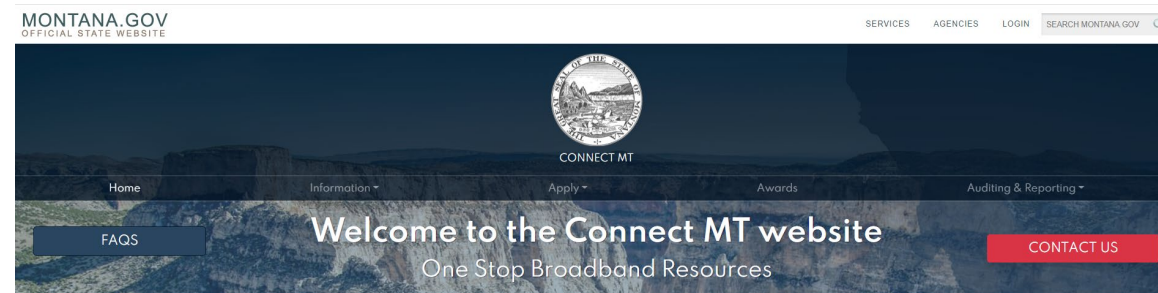
Slide 8



# ConnectMT Website Orientation



<https://connectmt.mt.gov/>



## DEPARTMENT OF ADMINISTRATION

### Broadband - Connect MT and Communications Advisory Commission

The 2021 Legislature passed and Governor Gianforte signed SB297 creating the ConnectMT Act. The Department of Administration (DOA) is responsible for establishing and administering the broadband infrastructure deployment program. The Department will be responsible for receiving and reviewing responsive proposals and awarding contracts. Before awarding any contracts, contracts will be reviewed by the Communications Advisory Commission created by HB632 to oversee Montana's American Rescue Plan Act dollars. The Governor will then approve any proposal recommended for funding by the Department. The Communications Commission's meetings will be noticed on this website.

The DOA is currently building the state's broadband program. Working with the Commission and the Governor's Office, DOA will develop the open process for submission of proposals for funding required in SB297. Eligible providers may be awarded funding for projects in unserved, underserved or frontier areas. DOA will hire broadband deployment experts to staff the Broadband Task Force within the department.

SB 297 defines Frontier and Unserved areas, and HB632 defines Underserved areas:

### Advisory Commission Members

- Senators Dan Solomon
- Jason Ellsworth
- Janet Ellis
- Representatives Mike Hopkins
- Ed Buttrely
- Katie Sullivan
- Director Misty Ann Giles
- Director Scott Osterman
- Director Scott Sales



## Website includes:

- FAQs
- Information about the statewide broadband map, federal resources, announcements, events, webinars, forms, and guides
- Application link and guidance
- Project challenge process
- Awards
- Auditing and reporting
- Contact information

Slide 9

- Locations**
- Frontier
  - Served
  - Underserved
  - Unserved
- FCC Rural Digital Opportunity Fund (RDOF)**
- Served
- USDA ReConnect Loan and Grant Program**
- Served
- FCC Connect America Fund (CAF)**
- Served
  - Unserved

**Description**

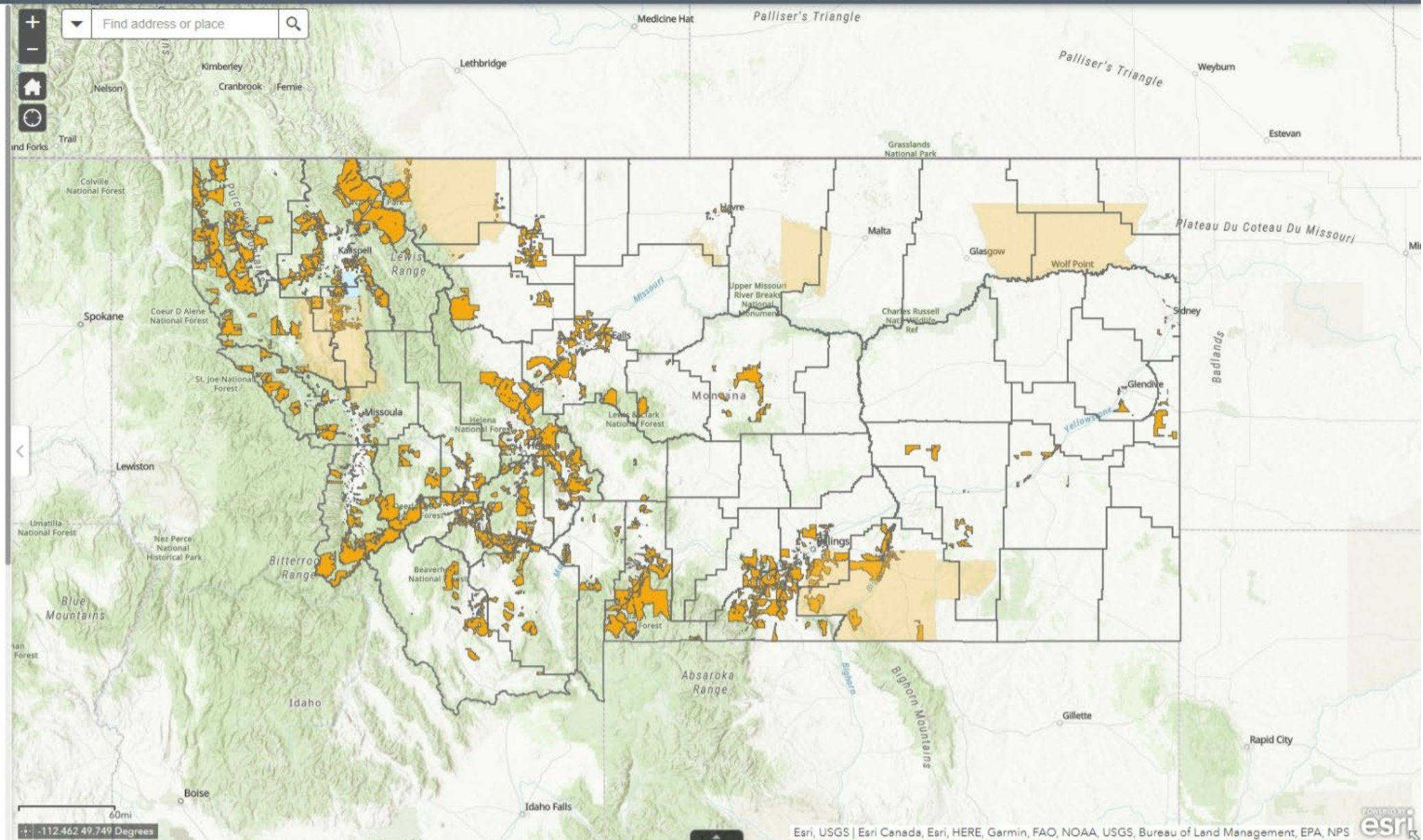
The map portrays broadband statistics for the State of Montana. Statistics are available by county and tribal lands boundaries.

Click in the map to see county statistics in a popup. Zoom in until county boundaries appear and click in the map to see relevant statistics. Zoom in still further to see Served / Unserved / Underserved / Frontier Locations in the map.

Use the map tools described below for additional searches.

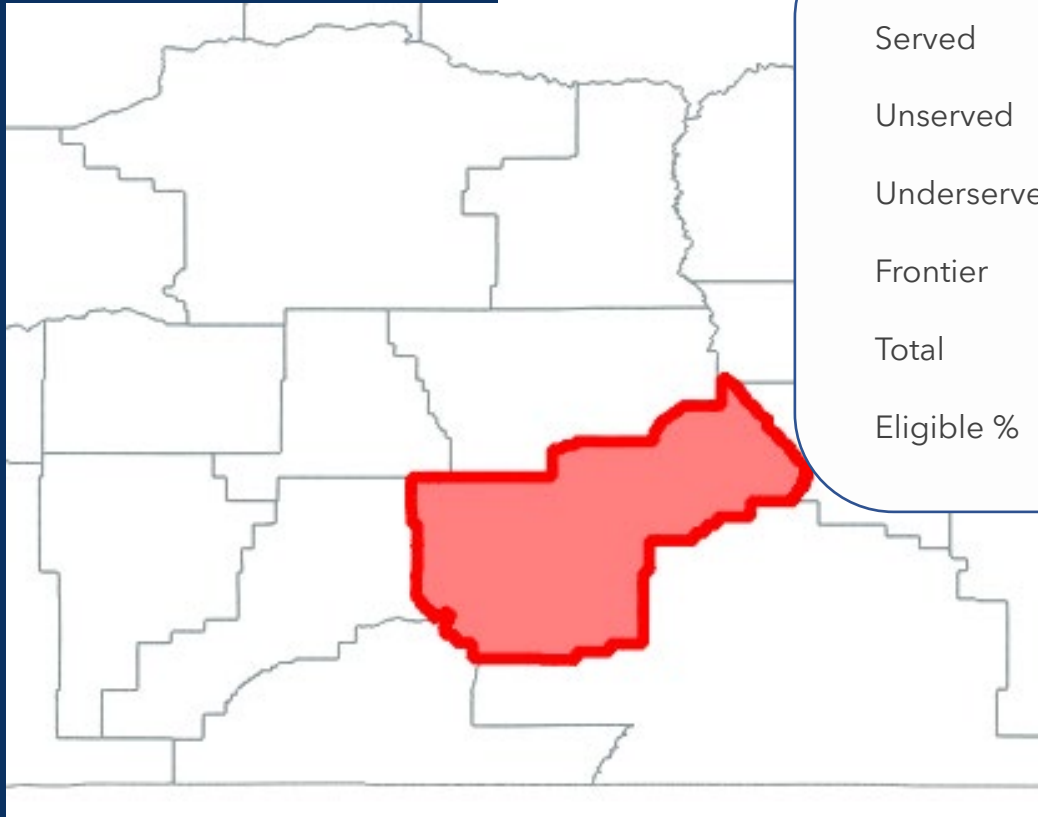
- Use the Search tool at the top of the map to locate an address
- Use the Legend to view the legend for all visible layers
- Use the Layer List to turn data layers on/off

As per advertised maxspeed values (Mbps down/up):



-112.462 49.749 Degrees

# Boundary Snapshot Example



County	Yellowstone
Served	65,789
Unserved	4,279
Underserved	3,469
Frontier	347
Total	73,884
Eligible %	11%



Slide 11

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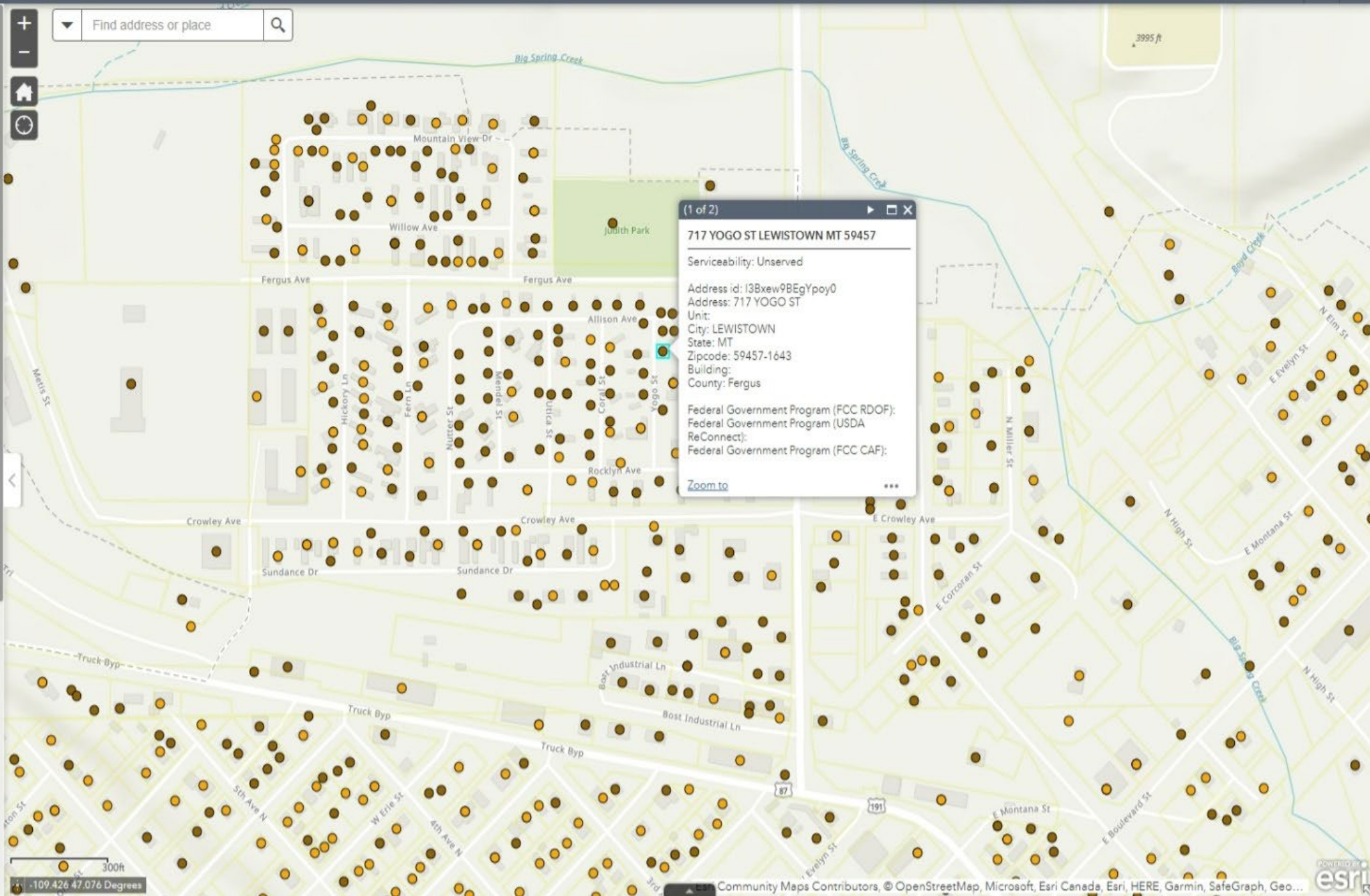
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As per advertised maxspeed values (Mbps down/up):



(1 of 2)

**717 YOGO ST LEWISTOWN MT 59457**

Serviceability: Unserved

Address id: I3Bxew9BEgYpoy0  
Address: 717 YOGO ST  
Unit:  
City: LEWISTOWN  
State: MT  
Zipcode: 59457-1643  
Building:  
County: Fergus

Federal Government Program (FCC RDOF):  
Federal Government Program (USDA ReConnect):  
Federal Government Program (FCC CAF):

[Zoom to](#)



Locations

- Frontier
- Served
- Underserved
- Unserved

FCC Rural Digital Opportunity Fund (RDOF)

- Served

USDA ReConnect Loan and Grant Program

- Served

FCC Connect America Fund (CAF)

- Served
- Unserved

Description

The Montana Broadband Grant Applicant/Challenge tool was created for the Montana ConnectMT program. Additionally, this map includes "served" locations which have been updated based on ISP information or they were awarded with USDA ReConnect, FCC RDOF funding, or CAF funding for terrestrial based broadband.

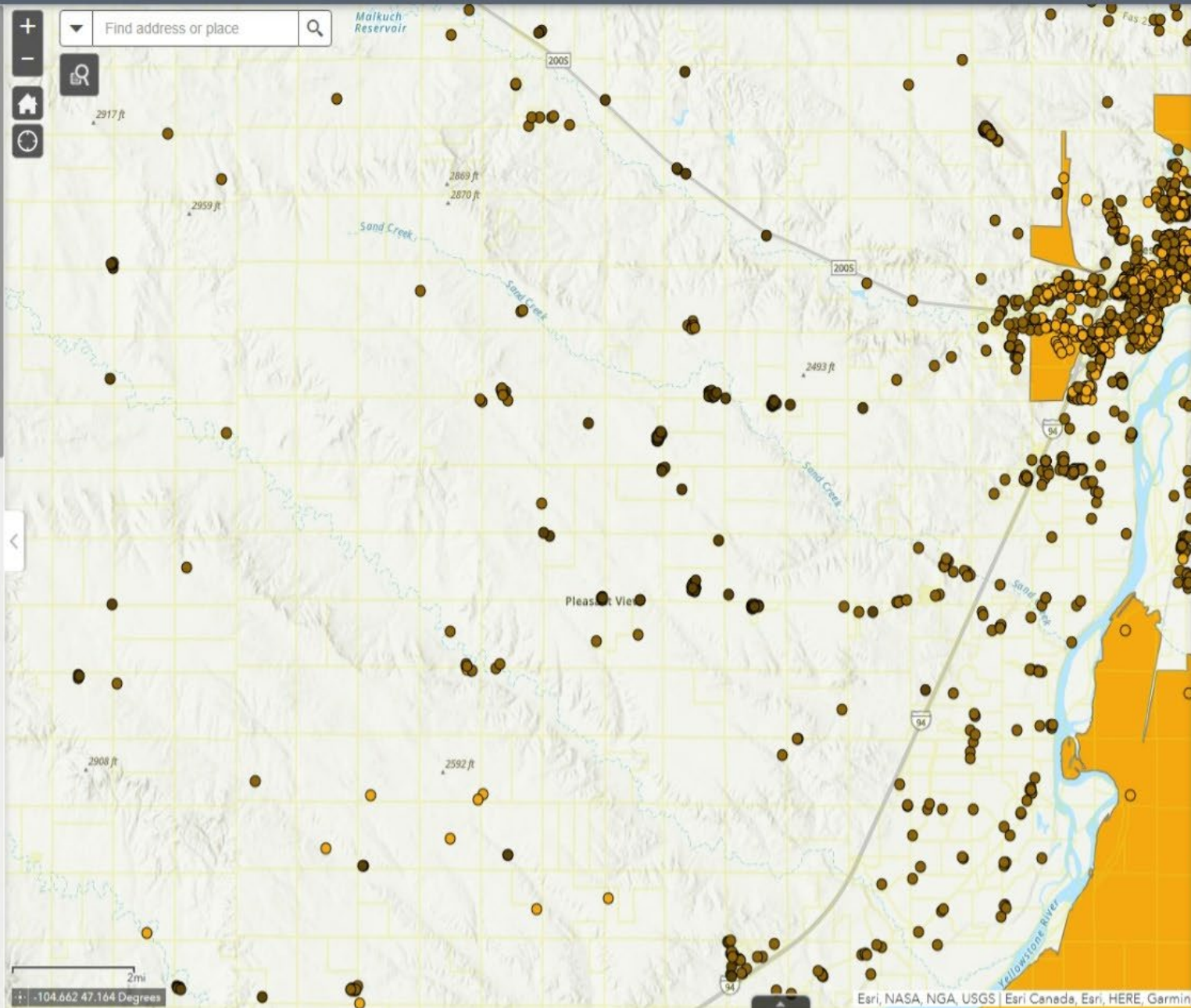
In order for a location to be eligible for the ConnectMT program funding, the location must meet the following criteria:

- Be unserved, underserved, frontier as per available 2022 Montana Broadband data

The purpose of the Montana ConnectMT program is to provide financial assistance that includes grants, loans and other forms of assistance to finance activities that lead to the installation or expansion of facilities and equipment which provide broadband services for unserved, underserved, frontier areas that are not currently served by such services.

Select and Download Eligible Locations

The purpose of the grant/challenge map is to provide grant applicants with a mechanism to visualize and download subsets of eligible locations in text (CSV)



**Select Eligible Locations**

Select Clear

Layer

- Select by rectangle
- Select by lasso

0



# Application Timeline Update



2/7/22-4/8/22

Statewide Application window

2/10/22

Application Webinar

4/13/22

Applications available for public review

4/14/22-5/12/22

30 day Challenge period

5/27/22

DOA responses to challenges

5/30/2022-6/3/22

Applicants open to modify applications

June 2022

Receive ARPA funds from US Treasury

6/4/22 – 6/30/22

Review eligible applications & determine awards

6/30/22

Obligate and announce awards



Slide 15