Co-ops Connect FYI

By Jonathan Chambers ● May 27, 2022

Smart Brevity® count: 7 mins... 1844 words

Updates and insights for electric cooperatives considering or operating rural broadband networks.

Will T-Mobile Distort the Broadband Funding Allocation to States?

The allocation formula for rural broadband in the Infrastructure Act depends upon self-reported data by over a thousand ISPs. With this data,

the FCC is using a new, untested, unverified approach to broadband mapping.

What could possibly go wrong?

The T-Mobile Example

Let's look at one example (and there will be thousands).

According to the T-Mobile website, customers of its Internet Freedom fixed wireless plan:

> **"See typical download speeds between 35-115 Mbps"** and
>
> **"Upload speeds are between 6 Mbps and 23 Mbps."**

So, which is it?

- On the low end, the service is 35/6 Mbps and on the high end 115/23 Mbps? Does one speed relate to LTE and the other 5G? T-Mobile maps refer to 5G Ultra capacity, 5G Extended Range, and 4G LTE.
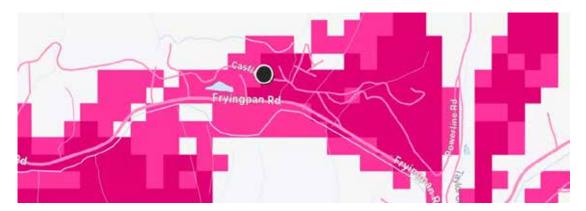
- **Those are weirdly specific numbers for such a wide range.**

Why it matters:

If T-Mobile's fixed wireless service is considered broadband, **the reported speeds are consequential.**

- At 100/20 Mbps, large rural areas will be blocked from funding.

- At 25/3 Mbps, T-Mobile's reporting will impact state broadband allocations.

I am intentionally referring to **T-Mobile's reporting.** At my home in rural Colorado, I can get a T-Mobile signal outside but not inside. T-Mobile's map for my neighborhood (below) reports 5G coverage.
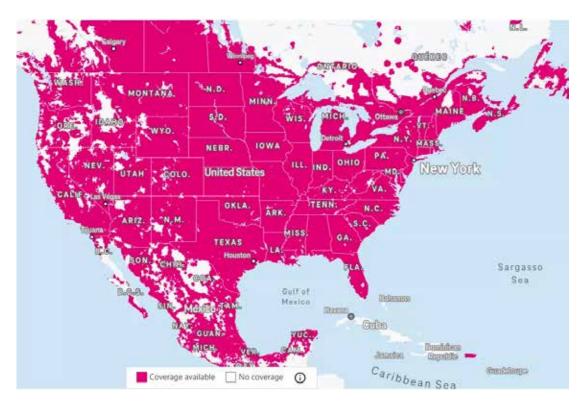

T-Mobile Coverage Map - Rural Colorado Neighborhood

- T-Mobile deserves credit for trying to identify coverage down to the household level. **As a guide to consumers, it's a useful tool.**

- But if T-Mobile's broad service claims **block funding in rural America, its coverage maps are a disservice.**

In past reporting to the FCC, T-Mobile has claimed its fixed wireless service speed as 25/3 Mbps.

- If they will claim 25/3 Mbps or 100/20 Mbps in this year's broadband data collection, **what are the implications for the state allocations?**

- Consider T-Mobile's **national coverage map**:

T-Mobile National Coverage Map

Here's a little FCC insider info:

The FCC spent a decade trying to map the coverage of all the wireless providers in order to produce a plan for the first and second Mobility Fund auctions. The purpose of the Mobility Fund was to improve wireless coverage in poorly served areas.

- **The data collection was so difficult and took so long** that the FCC switched from looking at 3G coverage to 4G coverage to the prospects for 5G coverage.

- How did the federal government's expert agency — *the agency in charge of allocating and assigning spectrum for commercial use* — resolve discrepancies in the data? **They essentially gave up.**

Anyone who uses mobile service understands the limitations of wireless service, especially in rural areas.
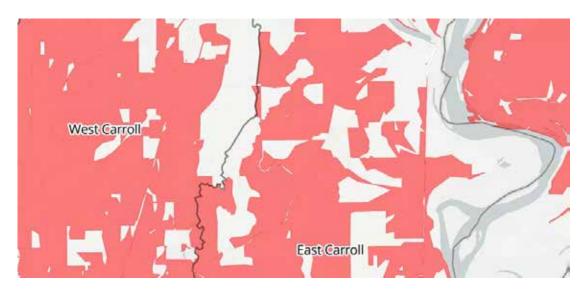
So, do T-Mobile's maps really matter?

- T-Mobile's reporting to the FCC **could fundamentally change the state broadband allocations.**

An Illustration: East and West Carroll Parishes, Louisiana

According to the FCC's most current publicly available data, *the poorest area in the country is also one of the most poorly served.*

In the map below, **the red areas lack 25/3 Mbps wireline service,** which was the guidance from the Treasury Department following passage of the American Rescue Plan Act (ARPA) as to where ARPA funds could be used for broadband.

ARPA Unserved Areas in West and East Carroll Parishes

Yes, but: Compare the ARPA red unserved areas (above) with T-Mobile's magenta served map (below) of the same geography.

T-Mobile Served Areas in West and East Carroll Parishes

Why it matters:

Apparently, our friends in East Carroll parish have been needlessly worried. Apparently, they've had broadband all along and didn't realize it.

We don't need to build a fiber network if T-Mobile has it covered, right?

The bottom line:

If T-Mobile reports to the FCC that these areas are served with 25/3 Mbps fixed wireless internet access, as it has reported in prior FCC 477 filings, **then East and West Carroll parishes would be considered served.**

If T-Mobile reports such service across the country, **the allocation calculation would be fundamentally altered.**

- If you are a parish, county, or state in this position, you won't know about it until it is too late.

A state might have expected a $500 million allocation or $1 billion allocation and instead get the minimum $100 million. **Thanks to T-Mobile's Internet Freedom plan.**

How? The Numbers Game

The FCC has been directed by Congress under the DATA Act to count the number of unserved locations with more granularity than previous broadband maps.

The DATA Act maps are required for only one purpose, which is to allocate the $42.45 billion to states according to the proportion of unserved locations in a state as compared to the number of unserved locations in the country.

- States are not required to use the FCC maps for their broadband plans, but NTIA must use them for the allocation.

- **The calculation is a simple arithmetic ratio, though described with typical legislative language.**

Let's go to the text of the Infrastructure Act.

First, 10 percent of the funding is to be allocated to high-cost areas, according to a formula:

> *"(c) ALLOCATION.— (1) ALLOCATION FOR HIGH-COST AREAS.—*
>
> *On or after the date on which the broadband DATA maps are made public, the Assistant Secretary shall allocate to eligible entities, in accordance with subparagraph (B) of this paragraph, 10 percent of the amount appropriated pursuant to subsection (b)(2)."*

As an initial point of clarification, eligible entities are states and U.S. territories, unserved means lacking 25/3 Mbps, and the amount appropriated pursuant to subsection (b)(2) is $42.45 billion.

> *"(B) FORMULA.—The Assistant Secretary shall calculate the amount allocated to an eligible entity under subparagraph (A) by — (i) dividing the number of unserved locations in high-cost areas in the eligible entity by the total number of unserved locations in high-cost areas in the United States; and (ii) multiplying the quotient obtained under clause (i) by the amount made available under subparagraph (A)."*

"High-cost" is defined in the Infrastructure Act as:

> *"The term "high-cost area" means an unserved area in which the cost of building out broadband service is higher, as compared with the average cost of building out broadband service in unserved areas in the United States (as determined by the Assistant Secretary, in consultation with the Commission), incorporating factors that include— (I) the remote location of the area; (II) the lack of population density of the area; (III) the unique topography of the area; (IV) a high rate of poverty in the area; or (V) any other factor identified by the Assistant Secretary"*

Of course, the reason that areas are unserved *is precisely* that the geography is remote, low-density, with a topography that is more difficult for construction and an area that is often impoverished.

So, NTIA is supposed to allocate 10% of the funding to unserved, high-cost areas and then the remainder of the 90% to unserved areas that have the same characteristics as high-cost areas. **Whatever, Congress.**

What's next:

Using the DATA Act maps, NTIA will count the number of unserved, high-cost locations in a state, divide that number by the number of unserved, high-cost locations in the nation, and multiply that by $4.245 billion. That's step 1.

Second, every state gets at least $100 million.

> *"(2) MINIMUM INITIAL ALLOCATION.—Of the amount appropriated pursuant to subsection (b)(2)— (A) except as provided in subparagraph (B) of this paragraph, $100,000,000 shall be allocated to each State; and (B) $100,000,000 shall be allocated to, and divided equally among, the United States Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands."*

That's $100 million each for Connecticut, Delaware, Hawaii, maybe New Hampshire, North Dakota, Rhode Island, maybe South Dakota, maybe Vermont. And U.S. territories (Virgin Islands, Guam, Samoa, CNMI) share $100 million.

Third, there's an allocation of the remaining $37.3 billion according to this formula:

> *"(3) ALLOCATION OF REMAINING AMOUNTS.— (A) IN GENERAL.—On or after the date on which the broadband DATA maps are made public, of the amount appropriated pursuant to*

> *subsection (b)(2), the Assistant Secretary shall allocate to eligible entities, in accordance with subparagraph (B) of this paragraph, the amount remaining after compliance with paragraphs (1) and (2) of this subsection. (B) ALLOCATION.—The amount allocated to an eligible entity under subparagraph (B) shall be calculated by— (i) dividing the number of unserved locations in the eligible entity by the total number of unserved locations in the United States; and (ii) multiplying the quotient obtained under clause (i) by the amount made available under subparagraph (A)."*

That's pretty much the same formula as the initial formula, ***but the modifier "high-cost" has been removed***.

So, this all comes down to a location-by-location count. How is the federal government counting unserved locations?

The first rule of counting is that there should be identifiable, observable things to count.

According to NTIA's NOFO, **here's what we're now counting:**

"Reliable" broadband, defined as:

- Either 25/3 Mbps or greater (not unserved) and 100/20 Mbps or greater (not underserved)

- Transmission medium is fiber, coaxial, copper, or licensed spectrum, except for licensed spectrum used by satellite.

- Availability at every household and business in the nation.

By September 1, over a thousand ISPs will report to the FCC coverage data **purporting to show broadband availability *by technology type and speed down to the address level.***

- The T-Mobile map of my neighborhood is an example of **how difficult it is to do this accurately at the household level.**

- Eventually, that data will produce the opportunity for every state and every community to have a household-by-household argument about the evidence.

- According to NTIA Administrator Davidson, the FCC will present its findings for **a challenge process this fall** — a house-by-house challenge process. What a nightmare.

The bottom line:

Every rural household without fiber is going to be a Schrödinger's cat of broadband: ***Both served and unserved at the same time,*** *depending upon how you conduct speed tests.*

Putting It All Together

Back to the Notice of Funding Opportunity.

While many states are beginning their planning process, it would be difficult to put together a statewide broadband plan without knowing the

allocation. **Our calculation for every state's allocation** can be found in the final column of **[this map](#)**.

For example:

- Colorado believes its allocation from BEAD is between $200 and $500 million.

- Our calculation for Colorado, using our construction data on high-cost areas, is that Colorado should receive $1.1 billion.

- A plan with $200 million and a plan with $1.1 billion in federal funds **are two very different plans.**

What should happen:

1) NTIA should produce a preliminary allocation to assist states.

- To date, NTIA is only telling states that they can count on the $100 million minimum the Infrastructure Act provides.

2) If NTIA won't produce an anticipatory allocation, another organization should step up.

- Since the FCC's work is not peer-reviewed (or even reviewed), the best way to anticipate whether the FCC's DATA maps are correct is to work in parallel.

Final thought:

Communities and states should begin to protect themselves from the DATA maps. **The best protection will come in the form of verification.**

- Otherwise, you risk losing hundreds of millions in rural broadband funding.

- Hiring a broadband consultant to produce a state broadband map will not protect you in the allocation process.

In coming weeks, I'll describe what we are doing to protect rural communities.