

The Mapping Problem

How Inaccurate Broadband Maps Hurt Rural Populations

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Both federal and state funding is based upon maps that often don't reflect ground truth – we need to fix the map problem. Today, the following data is being used by state and federal policy-makers to make decisions on broadband deployment.

<u>County</u>	<u>% Served</u>	<u>Broadband Investment Gap</u>	<u>Ongoing Support</u>
Mendocino	84%	\$55,000,000	\$45
Sonoma	98%	\$10,000,000	\$20
Lake	98%	\$2,600,000	\$5

Definitions for the Column Headings

- **% Served** - The percentage of housing units with available download speed of at least 4 mbps for each county.
- **Broadband Investment Gap** - The gap in each county is the sum of the broadband investment gap for all census blocks in that county. Since most counties have at least some census blocks with an investment gap (i.e., areas where the NPV less than 0), most counties have an investment gap. Census blocks with a positive NPV (i.e., blocks where the gap is negative) offset losses in census blocks that are NPV negative. Thus, counties can have no gap if they are currently fully served (i.e., have no unserved), or if the total NPV in the county is positive. Note that dark blue counties have a gap at least 20 times higher than the gap in the light green counties.
- **Ongoing Support for Each Housing Unit** - Ongoing support is the monthly annuity required per unserved housing unit to offset ongoing losses (i.e., the amount by which ongoing costs exceed revenues assuming the network buildout is paid for in its entirety).

About the Data

These maps are based on data from a variety of public and commercial sources and represent the Commission's best estimate today on the availability of broadband service that meets the National Broadband Availability Target and the finances associated with providing all homes access to broadband service that meets the Target.

The methodology used to create the maps of availability relies on statistical methods to fill-in data that are otherwise not available. Please see Chapter 2 of The Broadband Availability Gap , a Technical Paper published as part of the Omnibus Broadband Initiative, for more information. By definition, the output of any statistical model includes a margin of error - in this case, a possibility of over-stating or under-stating availability in any small geography. Aggregating results up to the county level, as in these maps, will mitigate but not eliminate the impact of the statistical predictions. Because these maps are based, in part, on statistical modeling of broadband availability, they should not be used as a definitive resource for broadband availability in any specific county.

Maps showing the Broadband Investment Gap or Ongoing Support are based in part on the data for availability of broadband service that meets the Availability Target. See The Broadband Availability Gap for more information. Because of the reliance on a statistical model for availability data, these financial estimates may over- or under-state the funding shortfall in any small geography.

Over time, the Commission plans to improve data collection and mapping of broadband availability. In addition, the Commission is working with the NTIA and state grantees under the Broadband Data Improvement Act to develop a detailed interactive map of the availability of 768 kbps service that will provide more granular geographic availability information for consumer use. The first (full) version of this National Broadband Map will be made public in early 2011.

Source: <http://www.broadband.gov/maps/availability.htm>

Comments From Brian Churm, Alliance Technology Chair

- 1) Our conclusion is that the source data is only vendor provided - at least for Mendocino county. I know of no community sources that have provided - or allowed to provide - input into the FCC mapping system.
- 2) By their own admission, "Because these maps are based, in part, on statistical modeling of broadband availability, they should not be used as a definitive resource for broadband availability in any specific county", yet these maps are being used as a definitive resource by organizations like the USDA in determining funding for broadband.
- 3) Any project we pursue, such as the Route 1 Corridor Project will require the Alliance to defend against this information. Likewise we will have to provide contrary data at the census block level in order to overcome this obstacle.