

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Establishing the Digital Opportunity Data Collection)	WC Docket No. 19-195
)	
Modernizing the FCC Form 477 Data Program)	WC Docket No. 11-10

**Reply Comments of
WTA – Advocates for Rural Broadband**

WTA – Advocates for Rural Broadband (“WTA”) files these reply comments in response to the Report and Order and Second Further Notice of Proposed Rulemaking adopted by the Commission on August 1, 2019 and the initial comments filed in the record on September 23, 2019.¹

In our initial comments, WTA supported the Commission’s efforts to collect more granular data but advocated that a formal challenge process is needed to verify the data. WTA also raised concerns with the Commission’s crowdsourcing proposal citing multiple factors that could lead to a sub-optimal crowdsourced result being submitted. WTA further supported latency reporting as well as reporting fiber connections to schools.²

Of note, WTA also argued that fixed wireless providers should report their coverage with the highest certainty. In these reply comments, WTA argues that any fixed wireless reporting model must include clutter data with adequate resolution. The model must also not overstate

¹ Establishing the Digital Opportunity Data Collection, WC Docket Nos. 19-195, 11-10, Report and Order and Second Further Notice of Proposed Rulemaking, adopted August 1, 2019, “Report and Order and Further Notice,” “Report and Order,” or “Further Notice.”

² Comments of WTA – Advocates for Rural Broadband, WC Docket Nos. 19-195, 11-10, filed on Sept. 23, 2019.

typical fixed wireless antenna heights as well as ensure there is enough capacity for all considered to be “served” under a model. Further, since a technician must physically visit a location before the viability of fixed wireless service at a location can be confirmed, the Commission must adopt a formal challenge process to ensure locations are not made ineligible for federal funding due to a false competitive overlap.

**Fixed Wireless Propagation Reporting Must Take
into Account Issues with Clutter, Antenna Heights, and Capacity**

In our initial comments, WTA outlined concerns with fixed wireless providers overstating their coverage territory and noted that technicians must visit a home to verify whether or not service can actually be offered via fixed wireless.³ In its comments, WISPA noted the same stating a “fixed wireless broadband provider may not be able to determine with absolute certainty whether its service is “available” until a skilled installer is on site at the potential customer’s premises”⁴ and that “[e]ach installation is unique because each customer’s geographic location, building, other structures and obstacles may provide different challenges.”⁵ It further added “location of access points, the propagation characteristics of the various spectrum bands used, obstructions between the tower and the customer, and the presence of sources of potential harmful interference are controlling parameters for where service is currently provided or may be made available.”⁶ For these reasons, WTA again advocates for a challenge process that should occur before any decisions are made in regards to eligibility for funding. The

³ Id. at 14.

⁴ Comments of Wireless Internet Service Providers Association, WC Docket Nos. 19-195, 11-10, filed on Sept. 23, 2019, at 3-4.

⁵ Id.

⁶ Id.

Commission should not take fixed wireless maps as being automatically accurate and should use a challenge process as a means of verifying the data.⁷

In its comments, WISPA re-raised its request for the Commission to adopt a two-pronged approach for the “submission of geospatial data using more uniform parameters.” The first prong gives providers a safe harbor as long as they use standardized parameters for stating their coverage in each frequency. The second allows the provider to deviate if there are “material differences in their networks that warrant divergence from the typical safe harbor rubric in order to provide accurate coverage data.”⁸

WTA believes an accurate propagation model must take into account clutter and other potential interferences. Clutter consists of “environmental features such as buildings, other structures, and vegetation that cause signal loss due to scattering and absorption.”⁹ The WISPA proposal notes “[p]roviders will need to factor “local parameters” used by a propagation model (e.g., height of trees, buildings)” but also suggests the use of inexpensive models with “enhancements for clutter.”¹⁰ WTA members who utilize fixed wireless technology are familiar with TowerCoverage.com (WISPA’s example) and note that it is a useful tool to estimate coverage, but it has limitations when considering clutter. As a result, they state they must actually visit sites to verify true coverage. Clutter data is critical to estimating the actual coverage of a signal and should be considered standard information and not just an “enhancement.” WTA recommends that any propagation model must set a standard for including clutter data with adequate resolution so that service can be more accurately estimated. Without

⁷ WTA Comments at 6.

⁸ WISPA Comments at 4-5.

⁹ Keith Gremban, Understanding Spectrum Clutter—It’s Not About Neatness!, NTIA, November 02, 2016, <https://www.ntia.doc.gov/blog/2016/understanding-spectrum-clutter-it-s-not-about-neatness>.

¹⁰ WISPA at Attachment.

standardized clutter data, propagation models will vary significantly from model to model, potentially overstating coverage in areas that are unable to receive signals due to foliage or other interferences.

WTA is also concerned that WISPA's proposal will lead to overstated coverage data if it greatly overestimates the average antenna height used by customers on premise. Specifically, WISPA's proposal across all four frequencies assumes "[c]ustomer antenna up to 10 meters above ground; or higher or lower antenna heights as needed to reach the customer and as explained by the provider."¹¹ Clear or almost clear line of sight is critical to the feasibility of fixed wireless service and the height of the receiving antenna increases the potential viability of a signal. However, it is very unlikely that an antenna higher than 10 meters (32 feet) above the ground would be used except in the rarest of cases and typically not for residential customers. Such a large antenna would likely cost thousands of dollars for the customer to purchase and install such that the customer would be unlikely to accept service – despite the model showing the customer as served. Further, an antenna higher than 10 meters would likely require the construction of a tower detached from the house that must be put into the ground and solidified with concrete – a process that would take more than 10 days to fully install and prepare for service. Instead, the typical residential antenna is at most 3 or 4 meters and attached to the side of the customer's house – placing it roughly 10 meters in total above the ground. As such, any propagation model should not assume an antenna higher than 10 meters above the ground under any circumstance.

¹¹ Id.

It is also critical that fixed wireless reporting take into account issues with capacity. If locations are marked as served, all the locations should be capable of receiving service simultaneously free of capacity limitations. WTA agrees with NTCA's example that:

a fixed wireless provider using a particular spectrum band should not be able to claim coverage for an individual coverage polygon at 100/20 Mbps speed with latency sufficient for real-time applications absent actual access to enough spectrum that has the necessary propagation characteristics in place to actually serve every customer within that polygon.¹²

Submitting coverage maps alleging the ability to serve all those locations without actually being able to would undercut the Commission's goal of closing the digital divide.

Again, regardless of the propagation model used, there is no replacement for "boots on the ground" that verify service. Therefore, the adoption of a formal challenge process will be critical to ensuring that areas most in need remain or become eligible for funding, and such a challenge process should occur before any decisions are made in regards to that funding.

¹² Comments of NTCA – Rural Broadband Association, WC Docket Nos. 19-195, 11-10, filed on Sept. 23, 2019, at 5.

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