

**Before the  
Federal Communications Commission  
Washington, DC 20554**

In the Matter of )  
 )  
Connect America Fund ) WC Docket No. 10-90  
Universal Service Reform – Mobility Fund ) WT Docket No. 10-208

**APPLICATION FOR REVIEW OF THE RURAL WIRELESS ASSOCIATION, INC.**

The Rural Wireless Association, Inc. (“RWA”)<sup>1</sup>, pursuant to Section 1.115 of the rules and regulations of the Federal Communications Commission (“FCC” or “Commission”),<sup>2</sup> seeks review of certain procedures established in a Public Notice issued on February 27, 2018 by the FCC’s Rural Broadband Auctions Task Force, Wireless Telecommunications Bureau, and Wireline Competition Bureau (collectively, “the Bureaus”) in the above-captioned proceeding.<sup>3</sup> Specifically, RWA seeks review of the Bureaus’ decision in the *Challenge Notice* to establish a one kilometer grid cell size and one quarter kilometer “buffer” for assessing challenges to areas deemed ineligible for Mobility Fund Phase II (“MFII”) support.

**I. SUMMARY OF FACTS**

Under the challenge process framework established by the Commission, mobile providers were required to submit current coverage data reflecting qualified 4G LTE service, with such data to be used to establish the map of areas presumptively eligible for MFII support. Government entities and all service providers required to file Form 477 data with the Commission were to be given an opportunity to challenge an initial determination that an area is ineligible for MFII

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<sup>1</sup> RWA is a Washington, DC – based trade association that ensures wireless carriers with fewer than 100,000 subscribers have a strong voice in our nation’s capital. RWA’s members have joined together to speed the delivery of new, efficient, and innovative communications technologies to underserved rural communities across the United States of America. RWA’s members are comprised of both independent wireless carriers and wireless carriers that are affiliated with rural telephone/broadband companies that are passionate about ensuring rural America is not left behind.

<sup>2</sup> 47 C.F.R. § 1.115.

<sup>3</sup> *Procedures for the Mobility Fund Phase II Challenge Process*, Public Notice, DA 18-186, WC Docket No. 10-90, WT Docket No. 10-208, rel. Feb. 27, 2018 (“*Challenge Notice*”).

support.<sup>4</sup> In a Public Notice issued on October 18, 2017, the Bureaus sought comment on a variety of issues related to MFII, including the challenge process.<sup>5</sup> In that Public Notice, the Bureaus proposed to generate a map of unsubsidized qualified 4G LTE coverage for each provider by overlaying a uniform grid with cells of one square kilometer on the provider's coverage map, while using speed test points with a buffered ¼ kilometer radius.<sup>6</sup> RWA filed comments and reply comments in response to the *Comment Notice*, pointing out that in the majority of rural America, roads are situated directly on the borders of a one *mile* by one *mile* grid, leaving no access to drive a one square kilometer grid cell in most instances, and thereby preventing viable challenges to coverage in such grid cells.<sup>7</sup> On February 27, 2018, the Bureaus issued the *Challenge Notice*, in which it adopted the one kilometer grid cell and ¼ kilometer buffer radius.

## II. QUESTION PRESENTED FOR REVIEW

The question presented for review is whether the Bureaus' decision to adopt a one kilometer grid cell size and ¼ kilometer buffer radius conflicts with established Commission policy, involves application of a policy which should be overturned or revised, involves an erroneous finding as to an important or material question of fact, or constitutes prejudicial procedural error. The remainder of this Application for Review answers each of these questions in the affirmative.

## III. ARGUMENT

### A. The Bureaus' action conflicts with established Commission policy that speed test parameters "strike the correct balance between the benefits of increased accuracy,

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<sup>4</sup> *Connect America Fund; Universal Service Reform - Mobility Fund*, Order on Reconsideration and Second Report and Order, 32 FCC Rcd 6282,6303 ¶ 42 (2017) (challenge process limited to "government entities (state, local, and Tribal) and all service providers required to file Form 477 data with the Commission") ("*Second Report and Order*").

<sup>5</sup> *Comment Sought on Mobility Fund Phase II Challenge Process Procedures and Technical Implementation*, Public Notice, DA 17-1017, WC Docket No. 10-90, WT Docket No. 10-208, rel. Oct. 18, 2017 ("*Comment Notice*").

<sup>6</sup> *Comment Notice* at par. 4.

<sup>7</sup> RWA Comments, filed November 8, 2017, at pp. 3-4. With respect to use of a ¼ kilometer buffer radius, RWA argued that a larger buffer radius would reduce the burden of conducting speed tests to a manageable level for small carriers. RWA Reply Comments, filed November 29, 2017, at p. 7.

**and the harms of burdens on small carriers” and “accurately reflect[] consumer experience in the challenged area,”<sup>8</sup> and the Bureaus should modify such parameters to be based on miles rather than kilometers.**

In its *Second Report and Order*, the Commission found it necessary to adopt “parameters on speed test data to ensure that the evidence submitted by challengers is reliable, accurately reflects consumer experience in the challenged area, and can be analyzed quickly and efficiently.”<sup>9</sup> The Commission directed the Bureaus to adopt a maximum distance between speed tests (a distance of up to one mile) that “will strike the correct balance between the benefits of increased accuracy, and the harms of burdens on small carriers and to the efficient administration of challenges” and to implement additional parameters “to ensure that speed tests accurately reflect consumer experience in the challenged area.”<sup>10</sup>

The parameters adopted by the Bureaus do not strike the correct balance between the benefits of increased accuracy and the harms of burdens on small carriers, nor do they accurately reflect consumer experience in the challenged area. Indeed, the parameters adopted by the Bureaus will not only impose harmful burdens on small carriers, they will actually result in *less accurate data* on the level of existing service in challenged areas. As pointed out in RWA’s comment filings, the use of a one square kilometer grid in conjunction with a ¼ kilometer buffer radius will act as a substantial deterrent to challenges, and thus allow an inaccurate picture of mobile wireless coverage to stand unchallenged in most places. The use of such standards will ultimately prevent the delivery of needed service to many rural areas – for ten years – in contravention of the stated purpose of MFII.

In the majority of rural America, roads are laid out directly on the borders of a one *mile* by one *mile* square grid. By utilizing a one square kilometer grid for the determination of challenge

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<sup>8</sup> *Second Report and Order* at par. 49, 51.

<sup>9</sup> *Second Report and Order* at par. 49.

<sup>10</sup> *Id.* at par. 51-52.

areas, the Bureaus have created a situation where thousands of kilometer grid squares lack the necessary roads to access and test the claimed unsubsidized 4G LTE coverage using drive tests. For example, 80.3 percent of one area's kilometer grid squares would be unmeasurable using drive tests, while only 46 percent of the same area would be unmeasurable using a mile grid square.<sup>11</sup>

The only alternatives to drive testing – which is the most accurate and most economical means of testing coverage – are testing on foot, or via drones, horseback, four-wheeler, or crop duster. Given that most of the road-inaccessible challenge areas are on private property, permission from the landowner(s) would be required to conduct speed tests, permission which is likely to be difficult and sometimes impossible to obtain. Even if permission can be obtained, such speed testing will be substantially more costly to conduct than drive tests, to the point that many potential challengers are expected to forgo challenges altogether rather than incur such expense. Moreover, the challenges that *do* take place will yield less accurate data (as tests conducted from the air can overstate the availability of 4G LTE service on the ground, where terrain and foliage often impede signal reception and data speeds) and fail to fully illustrate the consumer experience as desired by the Commission.

Consumer experience in many areas across the country will not be accurately reflected if the challenge process relies on data derived from testing in square kilometer grid cells. Further, the use of a one kilometer grid cell in conjunction with a ¼ kilometer buffer radius will impose additional burdens on small rural carriers that will not be outweighed by the purported increase in accuracy because, as shown herein, such testing parameters will actually result in *reduced* accuracy. The grid cell size and buffer radius adopted by the Bureaus therefore conflict with the Commission policy established in the *Second Report and Order*, and should be modified as set

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<sup>11</sup> See *Notice of Ex Parte* filed by RWA on March 21, 2008; WT Docket No. 10-208, WC Docket No. 10-90. This filing provided several additional, similar examples.

forth in RWA's comments and reply comments and herein to require a one square mile grid size and proportionate ¼ square mile buffer radius.

**B. The Bureaus' determination that a one square kilometer grid cell size and ¼ kilometer buffer radius will result in more accurate mapping data is an erroneous finding of material fact.**

As discussed above, the Bureau's decision that a kilometer-based, rather than mile-based, grid cell size and buffer radius would yield the most accurate mapping data was incorrect. Due to the inability to take sufficient drive test measurements in the majority of square kilometer grid cells and the physical, legal, and economic impediments to challengers using alternative forms of testing, the Bureaus' use of a kilometer-based grid cell size and buffer radius will result in far less accurate data than allowing challenges to be made based on imperial (e.g. mile) parameters.

**1. The Bureaus' Conclusion that a One Kilometer Square Grid Size Will Result in More Accurate Mapping is Unsupported and Contradicted by Record Evidence**

In the *Challenge Notice*, the Bureaus provided a mere two reasons to use kilometers instead of miles: (1) "to be consistent with the *de minimis* challenge size adopted by the Commission;" and (2) "to be consistent with the units used for the 'equal area' map projection that we will use when processing geospatial data."<sup>12</sup> Neither of these reasons supports the Bureaus' decision to use kilometers instead of miles.

The Bureaus' desire for the grid cell size to be consistent with the *de minimis* challenge size does not necessitate the use of a one square kilometer grid cell. The Commission stated that it would "require...that any challenged area be of a minimum size of *at least one square kilometer*."<sup>13</sup> Accordingly, a one square mile grid cell would be equally consistent with the *de minimis* challenge size, and consistency with this size provides no basis for basing grid cell size on kilometers rather than miles. Further, the Bureaus will also allow challenged areas to be less than

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<sup>12</sup> *Challenge Notice* at par. 21.

<sup>13</sup> *Second Report and Order* at par. 46 (emphasis added).

one square kilometer if they are part of a challenge where the total size of area being challenged exceeds the *de minimis* size requirement.<sup>14</sup>

The Bureaus also stated that they adopted the proposal to use kilometers instead of miles “to be consistent with the units used for the ‘equal area’ map projection that [they] will use when processing geospatial data.”<sup>15</sup> However, the Bureau chose kilometers as the unit for the equal area map projection at exactly the same time as it chose to adopt kilometers as the grid cell size, and without any additional support. Moreover, the equal area map units *are* grid cells. In other words, the Bureaus justified the choice to use kilometers instead of miles for the grid cell size by citing to its choice to use kilometers instead of miles as the grid cell size. This circular reasoning provides no support for the Bureaus’ decision.

As support for its statement that kilometers were adopted to be consistent with the units used for the equal area map projection, the Bureaus cited to a Commission rule regarding the use of metric units as support for its adoption of kilometers.<sup>16</sup> While the title of this rule *is* “Use of Metric Units Required,” the rule *does not* require the Commission to use metric units rather than English units. Instead, the rule states:

Where parenthesized English units accompany metric units throughout this chapter, and the two figures are not precisely equivalent, the metric unit shall be considered the sole requirement; except, however, that the use of metric paper sizes is not currently required, and compliance with the English unit shall be considered sufficient when the Commission form requests that data showing compliance with that particular standard be submitted in English units.

## **2. The Bureau’s Conclusions that a One Quarter Kilometer Buffer Radius will Result in More Accurate Mapping and Will Not Impose Undue Burdens are Unsupported and Contradicted by Record Evidence**

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<sup>14</sup> *Second Report and Order* at n. 130.

<sup>15</sup> *Challenge Notice* at par. 21.

<sup>16</sup> 47 C.F.R. § 1.19.

The Bureaus adopted a buffer radius of ¼ kilometer to be “[c]onsistent with the Commission’s direction to adopt a maximum distance value.”<sup>17</sup> Given that the Commission set the maximum distance value at one mile,<sup>18</sup> a buffer radius of ¼ mile is equally “consistent with the Commission’s direction to adopt a maximum distance value.”

The Bureaus rejected an argument that adopting a buffer radius of ¼ kilometer “would be unduly burdensome, as it would require a challenger to obtain at least four measurements per square kilometer grid cell.”<sup>19</sup> However, the Bureaus supported this decision based on their conclusion that “requiring a challenger to collect four speed test measurements per square kilometer grid” would not amount to an “insurmountable burden for many potential challengers.”<sup>20</sup> The Bureau applies a flawed analysis in rejecting an argument that requiring a challenger to obtain at least four measurements per square kilometer grid cell based on its conclusion that a requirement that challengers collect four speed test measurements per square kilometer grid is not unduly burdensome. There is a big difference between “four measurements” and “*at least* four measurements.”<sup>21</sup> Under the Bureaus’ logic, a requirement that a challenger collect *hundreds* of measurements would not be unduly burdensome because it believes that four measurements are not burdensome. Such logic is completely flawed and does not support the Bureau’s factual determination.

In concluding that a need for four measurements was not unduly burdensome, the Bureaus attempted to support such conclusion by noting that “participation in the challenge process is

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<sup>17</sup> *Challenge Notice* at par. 21.

<sup>18</sup> *Second Report and Order* at par. 19.

<sup>19</sup> *Challenge Notice* at par. 22.

<sup>20</sup> *Id.*

<sup>21</sup> In its comments filed in response to the *Comment Notice*, ATN International, Inc. stated that based on the Bureau’s proposal, “challengers would be required to obtain *at least* four measurements per square kilometer grid cell in order to reach the 75 percent coverage threshold for a successful challenge.” ATN International, Inc. Comments at pp. 6-7, filed Nov. 8, 2017 (emphasis added). Based on discussions with RF engineers, RWA’s understanding is that in order to collect sufficient measurements to meet the 75 percent coverage requirement, carriers would likely need to collect at least eight measurements per kilometer grid cell, double the number assumed by the Bureaus.

voluntary.” While true that participation is voluntary, this fact carries no weight when assessing the burdens imposed by the measurement requirement. The Bureaus would surely agree that requiring spectrum auction applicants to complete a 1,000,000 page application in order to participate in a spectrum auction would be burdensome. The fact that auction participation is voluntary does not change the fact that the requirement is burdensome. If the Bureaus wish to set up a challenge process that attracts few participants due to the associated burdens, they can do so, but such actions would completely undermine the Commission’s intent.

The Bureaus’ conclusion that the burden of excessive measurements is outweighed by the increased accuracy of the data collected is refuted by the evidence discussed in Section III.A., *supra*. The use of the ¼ kilometer buffer radius in conjunction with the one square kilometer grid cell size would result in the failure of the challenge process to yield reliable data.

The Bureaus claim that “increasing the buffer radius” would reduce the number of speed tests needed to support a successful challenge and, in doing so, reduce the accuracy and reliability of a challenger’s speed test data.”<sup>22</sup> Two paragraphs later, the Bureaus note that they “likewise decline to increase the size of the grid cell to one square mile” because, since the Bureaus were “not increasing the size of the buffer radius, increasing the size of the grid cell to one square mile will not achieve the result sought by the commenter that made the proposal.”<sup>23</sup> The conclusion that the Bureaus’ circular logic fails to yield is that *both* the grid cell *and* the buffer radius could be increased. RWA proposes utilizing a one square mile grid with a ¼ mile buffer radius – measurements that retain the same ratios as the Bureaus’ adopted rules. Increasing the buffer radius from ¼ kilometer to ¼ mile keeps the measurement ratio consistent – it would not “reduce the number of speed tests needed to support a successful challenge,” nor “reduce the accuracy and

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<sup>22</sup> *Challenge Notice* at par. 23.

<sup>23</sup> *Id.* at par. 25.

reliability of a challenger’s speed test data” as purported by the Bureaus.<sup>24</sup> Meanwhile, by retaining a ¼ kilometer buffer radius, the Bureaus create a situation where any accuracy gained by increasing the number of speed tests is more than offset by the accuracy lost due to the deterrent effect of the need for additional testing.

**C. The *Challenge Notice* Violated the Administrative Procedure Act by Ignoring and Failing to Address Important Record Evidence.**

The *Challenge Notice* violated the Administrative Procedure Act (“APA”) by ignoring record evidence that a one square kilometer grid cell and ¼ kilometer buffer radius will lead to inaccurate mapping data, and failing to address record evidence that a ¼ kilometer buffer radius will lead to excessive measurements and amount to an insurmountable burden. The Bureaus’ decisions constitute prejudicial procedural error requiring modification of the procedures adopted in the *Challenge Notice*.

Pursuant to Section 553 of the APA, the FCC, via the *Challenge Notice*, must first provide interested persons an opportunity to participate in the rulemaking through submission of written data, views or arguments and then engage in “consideration of the relevant matter presented.”<sup>25</sup> The Bureaus clearly ignored the important record evidence that its proposed grid cell and buffer radius size will undermine the effectiveness of the challenge process by deterring challenges due to (1) the technical and legal inability to access many challenge areas to conduct the necessary testing and (2) the economic impediments to employing less effective alternative methods of testing in those areas where legally permitted. The Bureaus also failed to address the evidence of the burdens imposed on small challengers by the need for additional testing by misinterpreting the scope of the burdens articulated by commenters. As the courts have noted, “the opportunity to

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<sup>24</sup> *Challenge Notice* at par. 23.

<sup>25</sup> 5 U.S.C. § 553(c).

comment is meaningless unless the agency responds to significant points raised by the public.”<sup>26</sup>

By ignoring strong record evidence refuting the basis for its proposed challenge procedures, the Bureaus have failed to articulate a rational connection between the facts in the record and the decision it made, thereby resulting in a decision that is arbitrary and capricious in violation of their obligations under the APA.

**IV. The Commission Should Modify the Challenge Process Parameters Adopted by the Bureaus to Employ a One Square Mile Grid Cell Size and a One Quarter Mile Buffer Radius.**

In light of the Bureaus’ failure to consider or adequately address record evidence that use of a one square kilometer grid cell size and ¼ kilometer buffer radius will result in fewer challenges to areas eligible for MFII funding, and its erroneous findings that such parameters will result in more accurate mapping data that will accurately reflect consumer experience, the Commission should modify the *Challenge* Notice to require the use of a one square mile grid cell size and ¼ mile buffer radius for eligible area challenges or remand the matter to the Bureaus with instructions to do the same.

Respectfully submitted,

**RURAL WIRELESS ASSOCIATION, INC.**

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<sup>26</sup> *Home Box Office, Inc. v. FCC*, 567 F. 2d 9, 35-36, 185 U.S. App. D.C. 142 (D.C. Cir. 1977).

## **CERTIFICATE OF SERVICE**

I hereby certify that I have on this day of March 29, 2018, served a true copy of the foregoing document by electronic mail upon the following:

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