

**From:** Van Horn, Stuart  
**To:** [mappingrfc](#)  
**Subject:** NTIA notice requesting public comments  
**Date:** Friday, July 13, 2018 12:00:59 PM  
**Attachments:** [image001.png](#)  
[image002.png](#)

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Good morning from California's central valley. Thank you for the opportunity to submit public comments on improving the quality and accuracy of broadband availability data. As you may know, California's central valley is the epicenter of broadband inequity. West Hills Community College District serves a 3,500 square mile district and includes two comprehensive public, two-year community colleges and an educational center. Our district stretches into five central valley counties and is home to some of the nation's most disadvantaged students. The following comments are provided in respond to the NTIA request regarding broadband technology. On behalf of the entire citizenry of the West Hills district, thank you for the opportunity. Please do not hesitate to contact me with additional questions.

Begin public comments:

Broadband is essential for workforce training access and Ag technology. Ag technology is essential for economic development, farming efficiently, regulatory compliance and immense educational implications. Ag technology is poised, from seed to shelf, from sky to beneath the soil, to resolve many on-farm problems and to create next generation jobs. Ag technology is a powerful force with great potential in the valley, home of the ironic juxtaposition of the nation's top five farm gate counties where two-thirds of residents are disadvantaged. The qualitative findings of our groundbreaking research (West Hills CCD, 2017) and Western Growers Association show that growers are poised in 2018 to begin significant adoption of devices – like drones and many different types of sensors, integration software – connecting small blocks of permanent crops to input. Ag technology enables the mandatory management of inputs. This primary research, as well as dozens of other abstracts published throughout the nation, agree that rural communities are less likely to efficiently provide internet access to students. Rural schools lack access to high-speed fiber and pay more than twice as much for bandwidth technology deployment. In a growing world of personalized online curricula, internet-based research, and online testing, this severely restricts rural students from educational opportunities their urban counterparts enjoy (West Hills CCD, 2017). Rural communities are unable to access critical government services, from social security to FAFSA, governing services are transitioning to online access. Tax forms and services are being increasingly streamlined through online portals and tools (Brookings Institution, 2016). Broadband is more widely available in higher income and higher density areas in CA, and there are larges gaps in access between the urbanized coastal regions and the more rural inland areas (Kolko, 2007 PPIC). The epicenter is the west side of the central valley. Why do we value selectivity over mobility? Differences in broadband adoption rates between different racial and ethnic groups are also significant.

The technical features of broadband, including the scale economies in providing broadband and infrastructure, make some regions of CA more profitable to serve than others, leading to gaps in availability.

Educational institutions like West Hills Community College District (Coalinga, CA 93210) have incorporated digital and distance learning methodologies into educational programs; Emerging

technologies that are shaping the future of higher education include online collaboration tools, online and hybrid educational environments, immersive media, games and simulations, intelligent tutoring systems, augmented and virtual reality. Research indicates that using technologies like simulation-based games, mobile devices, and virtual environments can facilitate student—centered instruction and support student retention of information, engagement, skills training, and learning outcomes. These outcomes align with the California Community College Chancellor’s Office system wide strategic plan titled *Vision for Success* and its goals. Learning spaces are supported by online teaching tools and adaptive, embedded technologies offer faculty and students flexibility in structure, equipment, and access to materials, both in the natural, virtual, and augmented settings. They also can be designed to provide real-time, intelligent feedback cycles that facilitate new modes of learning and collaboration among peers and educators (Department of Education, 2016). Additionally, case studies suggest that hybrid teaching models and digital learning can have a profound impact on rural areas by addressing key challenges related to resources and geography, including lack of expertise and staff on-site or in the immediate community (American Institutes of Research, 2016).

For example, a pilot program conducted recently aimed to cost effectively and efficiently deliver rigorous and relevant STEM learning across broad geographical distances while creating a model that could be used in postsecondary programs to train new teachers. Accomplishing those goals was intended to strengthen the educational workforce pipeline. Establishing systems that take full advantage of distance learning technologies and computer software have the potential to be the driving change agent in STEM learning throughout our district and enable us to capitalize on our recent deployment of a MESA program and STEM-related federal grants. The rise of digital education has led to the ‘school to home broadband gap,’ which is often called the homework gap. Broadband wireless does not exist in rural California – without broadband, there is no wireless technology. This is true for distance learning/workforce training, remote healthcare delivery and inhibits implementation of next generation Ag technology. Currently, broadband infrastructure funding programs and statutes focus on population density, which automatically eliminates rural California. This project intends to deliver reliable broadband to rural, disadvantaged communities in our district. We must use broadband to empower rural California, which means adding economic development funding, and we are finalizing a multi-disciplinary solution, from end-to-end.

Led by a coalition of public and private sector stakeholders, West Hills has conducted myriad research over the past 12 months to determine the needs of the valley’s ag industry for broadband services, listed existing facilities, partners, and infrastructure that can be repositioned for a pilot project, determined the wireless technology best suited, tasked managers and charted next steps. The stakeholder group includes state cabinet level agency representatives, telecomm providers, and a diverse group of regional broadband consortia, CA public utilities commissioner, CA emerging technology fund, USDA, and other representatives. We’ve charted the service gaps using official state and federal sources, we’ve investigated the Spectrum licensure processes, we’ve engaged regional water districts, rural libraries and schools, and rights of way challenges with private sector landowners. We have sought private sector funding, submitted a legislative budget augmentation for FY 2019-20 consideration, and we have support from our locally-elected governing board. We are poised, prepared, and fully committed to deploying the project. Thank you for the opportunity and my personal best wishes in your continuing efforts to solve what is arguably one of the biggest

challenges faced by American communities as we strive to produce skilled-level technicians to help this nation compete in the 21<sup>st</sup> century global marketplace.

-end of comments-



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