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DEPARTMENT OF AGRICULTURE

Farm Service Agency

Current and Anticipated Future Spectrum Requirements for Commercial

Agriculture, Forestry, Mining, and Rural Manufacturing

AGENCY: Farm Service Agency, USDA.

ACTION: Notice of inquiry and request for comments.

SUMMARY: The Farm Service Agency (FSA), an agency of the United States Department of Agriculture (USDA), invites comment on the radio spectrum requirements of commercial agriculture, forestry, mining, and rural manufacturing. The information received will advise USDA regarding non-Federal spectrum policy needs in rural settings and offer insight into the technology needs and potential applications in commercial agriculture.

DATES: Comments are due on or before 5 p.m. Eastern Daylight Time on April 1, 2019.

ADDRESSES: We invite you to submit comments on this notice. In your comments, specify "Spectrum Requirements." You may submit comments by the following method:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov> and, in the lower "Search Regulations and Federal Actions" box, select "Farm Service Agency" from the agency drop-down menu, then click on "Submit." Information on using Regulations.gov, including instructions for accessing documents, submitting comments, and viewing the docket after the close of the comment period, is available through the site's "User Tips" link.

Other Information: Additional information about Farm Service Agency and its programs is available on the Internet at www.fsa.usda.gov.

All written comments received will be publicly available on www.regulations.gov.

FOR FURTHER INFORMATION CONTACT: Andrew Fisher; phone: (202) 692-5298 or e-mail: Andrew.Fisher@osec.usda.gov. Persons with disabilities who require alternative means for communication should contact the USDA Target Center at (202) 720-2600 (voice).

SUPPLEMENTARY INFORMATION:

Background

On October 25, 2018, President Donald Trump issued a Presidential Memorandum, directing the development of a sustainable spectrum strategy for America's future. The Presidential Memorandum stated that it "is the policy of the United States to use radio frequency spectrum (spectrum) as efficiently and effectively as possible to help meet our economic, national security, science, safety, and other Federal mission goals now and in the future" using "a balanced, forward-looking, flexible, and sustainable approach to spectrum management."

Section 2 of the Presidential Memorandum directs Executive Departments and agencies to report to the National Telecommunications Information Administration (NTIA) on their anticipated future spectrum requirements and to initiate a review of their current frequency assignments and quantification of their spectrum usage. Section 2 also directs the Office of Science and Technology Policy (OSTP) to submit separate reports to the President "on emerging technologies and their expected impact on non-Federal

spectrum demand” and “on recommendations for research and development priorities that advance spectrum access and efficiency.” Section 4 of the Presidential Memorandum also calls for development of a long-term National Spectrum Strategy and Section 5 establishes a Spectrum Strategy Task Force.

USDA invites comment on the radio spectrum demands of commercial agriculture, forestry, mining, and rural manufacturing and for any potential future USDA support of these economic activities. USDA will review the information obtained through comments to advise its development of a report to NTIA on anticipated future spectrum requirements, and to provide input to OSTP on emerging technologies in rural settings and their expected impact on non-Federal spectrum demand and on recommendations for research and development priorities that advance spectrum access and efficiency.

The information sought in this Notice of Inquiry will also provide USDA with additional insight into the technology needs and potential applications for farmers, ranchers, foresters and others who use advanced agriculture technology in operations and management. These tools are considered essential for American producers to meet world demand for agricultural products in the future. Accordingly, the importance of broadband service – wired and wireless – to farms was recognized as part of the scoring criteria for the recently-announced USDA ReConnect Broadband program. The program is being administered as a pilot to demonstrate various policies to incentivize private sector deployment of infrastructure for high-speed internet connectivity in rural areas. Lessons learned in the pilot program, including effective methods to connect farmland

and ranchland to broadband, can be applied to the implementation of future programs, including those in the Agriculture Improvement Act of 2018.

Request for Comments

USDA requests responses to questions concerning spectrum requirements for non-Federal spectrum users and what USDA can do to improve technology availability in rural areas. These relate to current frequency assignments, potential future spectrum requirements, quantification of spectrum usage, and non-Federal spectrum needs for emerging technologies in commercial agriculture, mining, forestry, rural manufacturing, and broadband connectivity. Comments are also requested concerning research and development efforts that advance rural spectrum access and efficiency. Comments are requested from all stakeholders with an interest in current and anticipated rural spectrum needs. Commenters are not required to respond to all the questions and may provide responsive comments to any one or more of the questions posed below. Specifically, USDA requests comments on the following:

- 1) What are current and emerging uses for licensed and unlicensed wireless communication technologies in commercial agriculture, mining, forestry, rural manufacturing, and broadband connectivity to rural homes and businesses, and what are their economic benefits? What impact, if any, may these emerging uses have on USDA spectrum allocations? Please provide examples that support the comment when available.
- 2) What frequencies are currently being utilized in rural areas or are expected to be used in the future and for what non-Federal purpose? Are frequency bandwidths sufficient to meet current and emerging demands for greater

data communications throughput, including adequate speed, latency, reliability, energy efficiency, mobility and connection density?

- 3) What level and type of growth in spectrum demand is expected in rural areas (including licensed and unlicensed) and frequency bands (low, mid and high-band), and where might that growth occur?
- 4) How does the level of fiber deployment in low-density areas affect the spectrum allocation and frequency assignment needs (low, middle, high) in those areas? Please offer public policy options to meet these needs.
- 5) Are there frequencies that, if practicable, should be protected from encroachment or interference? Please provide information on the frequencies that need such protection. What would be the economic impact for withholding use of these frequencies?
- 6) What are the current and anticipated uses of traditional manned aircraft and Unmanned Aircraft Systems (UAS) to support commercial agriculture, mining, forestry, and rural manufacturing, their economic benefit and how will their use impact rural spectrum demand because of use of spectrum for control and data transmission? If viable and practicable, would it be beneficial or detrimental to allocate portions of the spectrum be designated for licensed commercial and government UAS activities? If so, what would the benefits or drawbacks be for licensed operations rather than currently largely unlicensed UAS activities?
- 7) What research and development efforts are being made to advance access to fixed and mobile wireless technologies in rural areas? Identify public

policy options that could be considered for increasing these research and development activities.

- 8) What are other relevant facts, factors and concerns involving current and anticipated future spectrum requirements for commercial agriculture, forestry, mining, and rural manufacturing and their implications for USDA? Provide any details and case studies that may be available.
- 9) What USDA spectrum changes may be required to allow the agency to implement programs to support agriculture, mining, and forestry?
- 10) USDA requests information about options to create flexible models for spectrum management, including incentives, standards, and enforcement mechanisms, that promote efficient and effective spectrum use to benefit rural America and drive innovation and value to commercial activities in less populated areas.

William H. Northey,

Under Secretary,

Farm Production and Conservation.

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