



June 11, 2019

The Honorable Roger Wicker
Chairman
Committee on Commerce, Science, and
Transportation
United States Senate
Washington, D.C. 20510

The Honorable Maria Cantwell
Ranking Member
Committee on Commerce, Science, and
Transportation
United States Senate
Washington, D.C. 20510

Dear Chairman Wicker and Ranking Member Cantwell:

As representatives of the nation's water sector professionals and utilities, we recently became aware of a Federal Communications Commission (FCC) plan to auction spectrum in the 24 GHz band to support commercial 5G broadband service. We understand that some stakeholders have raised concerns that the use of 5G in this band could negatively affect satellite data used for weather forecasting, so we therefore ask you to urge the FCC to refrain from taking any action that could carry detrimental effects to the nation's weather forecasting capabilities.

Modern meteorological forecasts rely on satellite-based observations from the National Oceanic and Atmospheric Administration (NOAA), and these observations include measurements of atmospheric water vapor that must be collected in the band of spectrum between 23.6 and 24 GHz. Meteorologists use this data to predict, among other things, local storm precipitation rates and totals, flood risk and sea-surface height variations, and tropical cyclone trajectories and intensities. But this narrow band of spectrum is also critical to ensuring consistent water service throughout the country.

Our organizations represent the local water systems and professionals that provide service to millions of Americans from coast to coast. To carry out this responsibility, water utilities employ skilled staff who are dedicated to monitoring and interpreting the latest long- and short-term weather forecasts that are informed in part by NOAA's water vapor measurements. This information is used to make critical water supply planning and storm preparedness decisions that ensure water service will continue uninterrupted, no matter the weather.

For example, Seattle Public Utilities uses NOAA's quantitative precipitation forecasts to prepare for and respond to urban flooding, comply with water quality regulations, manage regional water supply, and protect endangered species. The utility believes that a degradation of these forecasts as a result of spectrum interference would impair its ability to maintain public safety and environmental quality.

We understand that concerns have been raised in and out of government about the potential for 5G broadband uses in the 24 GHz band to interfere with NOAA's water vapor observations in the adjacent 23.6-24 GHz band. In particular, we are aware of a March 27, 2019 U.S. Navy memo that warned that this interference "will result in a partial-to-complete loss of remotely-sensed water-vapor measurements," with these impacts "concentrated in urban areas of the United States first."

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The loss of this key meteorological forecasting metric for the most populated regions of the United States would severely undercut the ability of water utility managers to manage resources in such a way as to ensure that ample water supplies remain available in times of drought, that sufficient storage capacity is available in times of heavy precipitation, and that all necessary preparedness activities have been undertaken in advance of extreme weather events. Denver Water, for example, uses NOAA data to forecast and manage streamflow rates, and less accurate information, particularly ahead of major weather events, could increase risks of flooding to downstream facilities and communities, resulting in increased costs to ratepayers. Additionally, less accurate forecasts could lead the utility to impose unnecessary water use restrictions on customers leading to loss in customer trust and increasing costs on users. Simply put, the loss of water vapor spectrum measurement data in the 24 GHz band would jeopardize the quality and reliability of municipal water service that Americans have come to expect.

As the Commerce, Science, and Transportation Committee conducts an oversight hearing of the FCC on June 12, our organizations ask you to make commissioners aware of the critical importance of preserving the 23.6-24 GHz spectrum band for NOAA's use, and demand that the FCC halt any activities that could threaten weather forecasting capabilities until the preservation of NOAA's band can be guaranteed.

Thank you for your attention to this important matter.

Sincerely,

Association of Metropolitan Water Agencies
Water Environment Federation
Water Utility Climate Alliance

CC: Commerce, Science, and Transportation Committee members