



June 17, 2016

Federal Communications Commission  
Ms. Marlene Dortch, Secretary  
445 12<sup>th</sup> Street, S.W.  
Washington, DC 20554

RE: Proceeding RM-11681 – Ligado Request Allocation 1675-1680 MHz Band

Dear Ms. Dortch:

The American Weather and Climate Industry Association (AWCIA) is the trade association for the professionals who make weather their business. AWCIA represents a diverse weather industry, and our members have a significant impact on how weather information is collected, disseminated and enhanced to provide custom services to weather-sensitive sections of the economy and the general public. AWCIA members build weather sensors, implement government weather programs, broadcast weather information to the nation, disseminate raw government and privately-owned weather data, generate weather products and services, and provide specialized services to a variety of markets. We are the “value-added provider” or extension to government supplied weather data because we assimilate and tailor information for specific commercial and consumer uses.

Our members utilize the direct broadcasts from the Geostationary Operational Environmental Satellite (GOES) and will use the direct broadcasts from GOES-R series satellites in the 1675-1695 MHz radio spectrum. As we develop and issue value-added meteorological and hydrological products for use by our customers, the timely and reliable reception of data from NOAA’s geostationary satellites is a very important component of the information needed to create products and services. Some of our members own satellite earth stations that currently receive GOES Variable (GVAR) broadcasts direct from NOAA’s operational satellites. We believe that radio frequency interference that can be generated from strong terrestrial downlinks, which share the same spectrum as the relatively weak signals from GOES in space, would have a devastating impact on our members.

Warnings to protect lives and property must be issued as rapidly as possible and be available under all conditions and situations. Although we may depend upon more than one means to acquire data, we know that cellular networks and Internet capabilities are often taxed to their maximum during severe weather and natural disasters, whereas the GOES / GOES-R direct broadcasts are always there and have very little infrastructure that is subject to failure during stressing conditions.



We would like to restate a quotation contained in a Washington Post Capital Weather Gang<sup>1</sup> article on May 6, 2016:

“[T]he choice of which spectrum bands are shared should not endanger the reliability or the effectiveness of public safety meteorological and hydrological data flow from NOAA satellites. We note that the Presidential Memorandum [ ] on the wireless broadband revolution in 2010 directed that spectrum repurposing must ... “take into account the need to ensure no loss of critical existing and planned Federal, State, local and tribal government capabilities.”

While we understand the FCC’s interest in advancing technology, AWCIA knows that the dissemination of life saving weather information to the nation done every day by its members is important and interference in AWCIA’s opinion would endanger the reliability and the effectiveness of public safety meteorological and hydrological data flow. We applaud the transmission of weather warnings via smartphones and tablet computers, but it is critical to note that Federal data received from NOAA satellites contributes substantially to the content developed by AWCIA members that are made available on wireless broadband devices in the first place.

The weather enterprise is on the verge of launching a new generation of GOES satellites. GOES-R series satellites are a giant leap forward in technology. These satellites will offer more and different types of data products that will be more accurate, of higher resolution and greater quantity than the current system. And that data will be available faster than the current satellite – in large part attributable to the direct broadcast downlink and the environmental/hydrological data relay in 1675-1695 MHz band.

Today’s NEXRAD weather radar data is routinely available over approximately five-minute intervals and are essential to forecast meteorologists. However, the higher resolution, faster data that will be available from GOES-R is likely to make comparable cloud top data taken at 5-minute rapid intervals a new tool to compliment this weather radar data. The new products that may be possible from these two time-comparable sources are only now under consideration by the weather enterprise. This will be a generational change in meteorology and hydrology; why would we want to handicap the fastest and most reliable means of disseminating this new satellite capability before the \$8.5 million dollar satellite series is even

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<sup>1</sup> <https://www.washingtonpost.com/news/capital-weather-gang/wp/2016/05/06/opinion-commercial-interests-may-block-transmission-of-vital-weather-data-we-cant-allow-it/>



brought into use? The satellites<sup>2</sup> are already designed and the first and second ones are either built or under construction, using the 1675-1695 MHz spectrum in their transmitters.

The interference caused by the sharing of the 1675-1680 megahertz band will significantly threaten the distribution of crucial weather information by AWCIA members like AccuWeather, UNISYS Weather and WeatherBank, Inc., that the nation relies on to respond immediately with the highest quality information to dangerous weather like tornados, hurricanes and wildfires.

AWCIA recommends that this spectrum not be shared with commercial interests.

Thank you for giving us an opportunity to share our views in this matter.

Sincerely,

A handwritten signature in black ink, appearing to read 'S. Root', enclosed within a large, loopy oval.

Steven A. Root,  
Certified Consulting Meteorologist  
AMS Fellow Meteorologist  
Weatherbank, Inc.  
1015 Waterwood Parkway, Suite J  
Edmond, OK 73034  
405-359-0773

CC:

The Honorable John Thune, Chairman, Senate Commerce, Science and Transportation  
Committee

The Honorable Bill Nelson, Ranking Member, Senate Commerce, Science and Transportation  
Committee

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<sup>2</sup> GOES-R and GOES-S satellites under construction showing L-band transmit antennas  
[http://farm2.staticflickr.com/1493/23884245579\\_32ac3a2311\\_b.jpg](http://farm2.staticflickr.com/1493/23884245579_32ac3a2311_b.jpg)



The Honorable Marco Rubio, Chairman, Subcommittee on Oceans, Atmosphere, Fisheries, and Coast Guard

The Honorable Cory Booker, Ranking Member, Subcommittee on Oceans, Atmosphere, Fisheries and Coast Guard

The Honorable James Imhofe (OK)

The Honorable James Lankford (OK)

The Honorable Fred Upton, Chairman, House Energy and Commerce Committee

The Honorable Frank Pallone, Jr, Ranking Member, House Energy and Commerce Committee

The Honorable Greg Walden, Chairman, Communications and Technology Subcommittee

The Honorable Anna G. Eshoo, Ranking Member, Communications and Technology Subcommittee

The Honorable Jim Bridenstine, Chairman, Subcommittee on Environment, House Science, Space and Technology Committee

The Honorable Suzanne Bonamici, Ranking Member, Subcommittee on Environment, House Science, Space and Technology Committee

The Honorable John Fleming, Chairman, Subcommittee on Water, Power and Oceans, House Natural Resources Committee

The Honorable Jared Huffman, Ranking Member, Subcommittee on Water, Power and Oceans, House Natural Resources Committee

The Honorable Steve Russell (OK-5)

The Honorable Lawrence E. Strickling, Assistant Secretary for Communications and Information and NTIA Administrator, Department of Commerce

The Honorable Dr. Kathryn D. Sullivan, Under Secretary of Commerce for Oceans and Atmosphere and NOAA Administrator