



June 21, 2016

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

RE: Letter in Response to RM-11681 Petition for Rulemaking: Ligado's Request to Allocate the 1675-1680 MHz Band for Terrestrial Mobile Use Shared With Federal Use

Dear Mrs. Dortch:

The Harris County Flood Control District (HCFCD) urges you to safeguard current meteorological, hydrological, and public safety uses of the 1675-1680 MHz spectrum band that specifically includes the Geostationary Orbiting Environmental Satellites (GOES) and the forthcoming GOES-Series-R satellites, which receive and transmit meteorological and hydrologic data to ground receiving/downlink stations from hundreds of sensors in Harris County and southeast Texas.

The HCFCD is responsible for more than 1,500 channels totaling about 2,500 miles in the 3<sup>rd</sup> largest populous county in the U.S. (4.4 million) and 34 cities including Houston. A primary goal is to reduce flood impacts by planning and implementing structural flood damage reduction projects and non-structural programs such as floodplain management, development criteria, public education, and flood warning. Major flood events can have severe health, safety, emotional, and economic impacts on the population and major local and nationally important economic drivers - petroleum, chemicals, medical, shipping, manufacturing, and services.

The HCFCD has significant concerns regarding the Federal Communication Commission's (FCC) plan to share 1675-1680 Megahertz radio spectrum between a new terrestrial broadband wireless provider venture and long established federal, state, and local government meteorological and hydrological data providers. Without reliable signal transmission and reception to and from the GOES Data Collection System (DCS), the United States Geological Survey (USGS) hydrological data collection and distribution system would not function reliably to provide essential information. Local examples of our region's dependency on uninterrupted data and information are as follows:

- Even though the HCFCD has an extensive local flood warning system, we are also a local cooperative funding partner with the USGS for 46 of the 56 USGS stream gages in Harris County and highly dependent on the near real time USGS streamgage data before, during, and after flood events.

June 21, 2016  
Federal Communications Commission  
Mrs. Marlene Dortch, Secretary

Page 2

- The HCFCF is dependent on flood forecasts from the National Weather Service (NWS) West Gulf River Forecast Center for river forecasts which are highly dependent on the GOES Data Collection System (DCS) meteorological data transmissions, as well.
- Two Corps of Engineers large stormwater detention facilities in western Harris County, Addicks and Barker Reservoirs, that are entirely dependent on USGS gage data from the multiple watersheds (upstream and downstream) for monitoring and operational decisions.
- During the 2015 Memorial Day flood, access to USGS gage data was interrupted at a critical time for several hours on certain internet providers (later found out it was due to an unsuccessful national software update). The reaction from the users was swift and voluminous. A similar or longer interruption of near real time USGS data due to radio frequency interference from sharing this spectrum with commercial terrestrial broadband towers, which are many times stronger than the weak signals relayed via these satellites from space, is a significant threat to Harris County, Texas.

Harris County citizens; Harris County and city emergency managers; and local, regional, and Texas public officials need to know local weather conditions, water heights in channels, rivers, etc. and associated real-time weather and flood forecasts to make decisions to minimize loss of life, injuries, property damage, school and business closures, and post-flood recovery time and costs. With the frequency and severity of rainfall and flood events in Harris County situated near the Gulf of Mexico, benefits from the near real-time GOES DCS accrue improved public safety, monetary flood damage reduction savings, fewer costly business interruptions, and reduced personal and family stress multiple times every year.

We urge the FCC to not move forward with this action unless:

1. adequate protection zones are extended to the USGS and other federal, state, and local hydrometeorological downlink sites;
2. provide protection and priority for the GOES and future GOES-R satellite downlink 1675-1680 MHz spectrum band;
3. require a "prove-it-will-work" period of several years showing that high-power commercial wireless service systems can safely co-occupy the nationally critical hydrometeorological spectrum without interrupting GOES downlink services; and
4. require a clear and fair process between the wireless service companies and the impacted federal and non-federal agencies for resolving spectrum use conflicts when they arise.

June 21, 2016  
Federal Communications Commission  
Mrs. Marlene Dortch, Secretary

Page 3

Reliable, accurate, and timely data is imperative for flood warnings, emergency management, operational hydrologic models, water supply management, reservoir operations, and recreation safety. Anything less than real-time information transmitted via the GOES and GOES-R satellites using this spectrum will threaten these important public safety, flood risk reduction, and economic activities in Harris County, Texas.

We thank you for considering our input.

Sincerely,

A handwritten signature in blue ink, appearing to read "Michael D. Talbott", with a checkmark at the end.

Michael D. Talbott, P.E.  
Executive Director

CC:

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

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

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 Ted Cruz

The Honorable John Cornyn

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

June 21, 2016  
Federal Communications Commission  
Mrs. Marlene Dortch, Secretary

Page 4

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 Ted Poe

The Honorable John Culberson

The Honorable Al Green

The Honorable Michael McCaul

The Honorable Sheila Jackson Lee

The Honorable Pete Olson

The Honorable Gene Green

The Honorable Brian Babin

The Honorable Kevin P. Brady

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

Lieutenant General Todd T. Semonite, Commanding General U.S. Army Corps of  
Engineers and Chief of Engineers

Director Suzette Kimball, United States Geological Survey

Commissioner Estevan López, U.S. Bureau of Reclamation