COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 1105, Richmond, Virginia 23218
www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

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Electronic Submission Only

Ms. Marlene Dortch
Office of the Secretary
Federal Communications Commission
445 12th Street, SW
Room TW-A325
Washington, DC 20554

RE: Rulemaking to Allocate the 1675-1680 MHz Band for Terrestrial Mobile Use Shared with Federal Use; Proceeding Number RM-11681

Dear Ms. Dortch,

The Virginia Department of Environmental Quality (VDEQ) appreciates the opportunity to comment on the proposed rulemaking to allow non-federal mobile use of the 1675-1680 MHz band. We understand the proposed rulemaking is in response to a petition filed with the Federal Communications Commission (FCC) requesting that the 1675-1680 MHz band be shared between its current users (federal and state agencies responsible for collecting weather and environmental data) and non-federal commercial mobile users. We further understand that many of the spectrum areas being considered for reallocation are crucial to the current and next-generation environmental technologies that federal agencies – especially the National Oceanic and Atmospheric Administration (NOAA) – have invested billions of dollars to sustain and enhance weather prediction now and into the future.

Commercial interests, working with the FCC, are seeking to set up "sharing" arrangements between NOAA and the wireless broadband industry. NOAA's geostationary weather satellites gather information from direct broadcast, for real-time information for weather forecasts, as well as rely on a network of stream, river and coastal gauges to predict flooding events. We believe that such sharing arrangements are risky and unproven since they make crucial real-time environmental data downlinks from satellites and other technologies vulnerable to interference, potentially causing contamination of crucial data, disrupting forecast accuracy, or delaying critical warnings, which have been shown to have considerable economic impact to state and local governments. Interference at the wrong moment can mean the difference between a timely, reliable weather warning being available with time for a citizen or industry to act - or not. While "protection zones" have been created for select federal government agencies to reduce or minimize interference, protection from interference will not be afforded to state, local and tribal governments, nor to private sector and academic users who all rely on real-time

downlinks from these satellites to develop information that impact citizen decision making in hazard conditions.

VDEQ's Office of Wetland & Stream Protection-Surface Water Investigation program maintains a network of 68 stream gages across the Commonwealth that feed streamflow information directly into the U.S. Geological Survey's (USGS's) real-time water data/streamflow system. These data are used by the National Weather Service (NWS), the Federal Emergency Management Agency (FEMA), the Virginia Department of Emergency Management (VDEM), the Virginia Department of Transportation (VDOT), and local government emergency responders to predict flood events and to assist with emergency response during flood events. Further, these data are also used by the Commonwealth's Drought Monitoring Taskforce to predict and manage water conservation measures during times of drought. Since this rulemaking does not propose to provide a "protection zone" for state government interests from commercial interference, our ability to collect and transmit these data –especially during times of natural emergencies – is vulnerable.

If this rulemaking is implemented as proposed, the Commonwealth would have to consider upgrading all of our streamflow equipment to reduce vulnerabilities from interference. Based on current equipment prices and installation costs, we have estimated between $350,000 and $375,000 to upgrade our system. In addition, the Commonwealth maintains 85 real-time groundwater monitoring wells that would also require equipment upgrades, and we have estimated between $450,000 and $475,000 for these groundwater wells. **Therefore, the Commonwealth could be faced with an unexpected cost of nearly $1,000,000 to upgrade real-time environmental data equipment just to maintain our current levels of service.**

Given the unproven nature of these "sharing" agreements, the critical uses of our streamflow data for disaster planning and emergency response, and the costs to upgrade our equipment if this proposal is implemented, we strongly urge the FCC not to share the 1675-1680 MHz band with commercial mobile uses, but rather maintain this spectrum for current and next-generation environmental and atmospheric technologies. Additionally, if the FCC implements this proposal, then we strongly urge you to afford the same "protection zones" in the spectrum for state and local governments, who also rely upon real-time environmental data for emergency preparedness and disaster response functions.

Should you have any questions regarding our comments, please contact me at 804-698-4105 or dave.davis@deq.virginia.gov. Thank you for the opportunity to comment.

Sincerely,

David L. Davis, CPWD, PWS
Director, Office of Wetlands & Stream Protection

CC: Shaun Wickline, USGS-Virginia Water Science Center (via email)
Steve Fitzgerald, National Hydrologic Warning Council (via email)
Mark Slauter, Virginia Department of Emergency Management (via email)