

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
)	
Emission Mask Requirements for Digital)	PS Docket No. 13-209
Technologies on 800 MHz NSPAC Channels;)	RM-11663
Analog FM Capability on Mutual Aid and)	
Interoperability Channels)	

**COMMENTS OF
THE NATIONAL PUBLIC SAFETY TELECOMMUNICATIONS COUNCIL**

The National Public Safety Telecommunications Council (NPSTC) submits these Comments in response to the Commission’s Notice of Proposed Rulemaking in the above-captioned proceeding.¹ In these comments, NPSTC supports the Commission’s proposal to require the H mask in the 800 MHz NPSPAC channels to minimize adjacent channel interference. NPSTC also supports the Commission’s proposal regarding analog FM interoperability on the five NPSPAC mutual aid channels and the VHF/UHF interoperability calling channels.

¹ Emission Mask Requirements for Digital Technologies on 800 MHz NSPAC Channels; Analog FM Capability on Mutual Aid and Interoperability Channels, *Notice of Proposed Rulemaking* in PS Docket No. 13-209 and RM-1163, released Aug. 27, 2013.

The National Public Safety Telecommunications Council

The National Public Safety Telecommunications Council is a federation of public safety organizations whose mission is to improve public safety communications and interoperability through collaborative leadership. NPSTC pursues the role of resource and advocate for public safety organizations in the United States on matters relating to public safety telecommunications. NPSTC has promoted implementation of the Public Safety Wireless Advisory Committee (PSWAC) and the 700 MHz Public Safety National Coordination Committee (NCC) recommendations. NPSTC explores technologies and public policy involving public safety telecommunications, analyzes the ramifications of particular issues and submits comments to governmental bodies with the objective of furthering public safety telecommunications worldwide. NPSTC serves as a standing forum for the exchange of ideas and information for effective public safety telecommunications.

The following 15 organizations participate in NPSTC:

- American Association of State Highway and Transportation Officials
- American Radio Relay League
- Association of Fish and Wildlife Agencies
- Association of Public-Safety Communications Officials-International
- Forestry Conservation Communications Association
- International Association of Chiefs of Police
- International Association of Emergency Managers
- International Association of Fire Chiefs
- International Municipal Signal Association
- National Association of State Chief Information Officers
- National Association of State Emergency Medical Services Officials
- National Association of State Foresters
- National Association of State Technology Directors
- National Emergency Number Association
- National Sheriffs' Association

Several federal agencies are liaison members of NPSTC. These include the Department of Homeland Security (the Federal Emergency Management Agency, the Office of Emergency Communications, the Office for Interoperability and Compatibility, and the SAFECOM Program;

Department of Commerce (National Telecommunications and Information Administration); Department of the Interior; and the Department of Justice (National Institute of Justice, CommTech Program). In addition, Public Safety Europe is also a liaison member. NPSTC has relationships with associate members, the Telecommunications Industry Association, the Canadian Interoperability Technology Interest Group, the National Council of Statewide Interoperability Coordinators and the Utilities Telecom Council and the Alliance for Telecommunications Industry Solutions.

NPSTC Comments

In its Notice of Proposed Rulemaking (NPRM) in this proceeding, the Commission proposes to require digital technologies to comply with Emission Mask H when operated in the 800 MHz National Public Safety Planning Advisory Committee (NPSPAC) band (806-809/851-854 MHz). The Commission also proposes to require equipment to have analog FM capability when operating on 800 MHz, VHF, and UHF public safety mutual aid and interoperability calling channels. NPSTC concurs with the Commission that these proposals could help safeguard public safety licensees in the NPSPAC band from adjacent-channel interference and help preserve interoperability. Accordingly NPSTC supports the Commission's proposals.

Unlike other channels in the 800 MHz band, when the NPSPAC channels were allocated for public safety, the band was structured to provide for 25 kHz channels spaced 12.5 kHz apart. As a result, the NPSPAC channels are more susceptible to adjacent channel interference. To mitigate this susceptibility, provisions for tighter emissions than those allowed in the non-NPSPAC 800 MHz channels have long been incorporated into the equipment certification process. Also, public safety deployment in the NPSPAC band is subject to regional planning, which normally incorporates geographic spacing between adjacent channels.

The industry has made it a practice to apply the “H mask” to digital technologies as specified in Section 90.210(h) of the Commission’s rules. Analog FM equipment in the NPSPAC band has traditionally used the less stringent mask B, however, such equipment also was deployed with a reduced deviation signal that helped minimize adjacent channel interference. The specific application of the emission masks and low pass filter were questioned as part of the Commission’s examination of the use of TETRA equipment in the U.S.²

The Commission has now proposed to ensure the rules are clear and in essence match industry practice by requiring in the NPSPAC portion of the 800 MHz band that:

Transmitters utilizing analog emissions that are equipped with an audio low-pass filter must meet Emission Mask B. All transmitters utilizing digital emissions and those transmitters using analog emissions without an audio low-pass filter must meet emission mask H.³

NPSTC supports this amendment to the rules. In NPSTC’s view, adjacent channel interference must be minimized in the NPSPAC band, regardless of the technology used.

The Commission also requested comment of the costs and benefits associated with requiring digital systems in the NPSPAC band to comply with emission mask H. As noted previously in these comments, industry practice has been to apply the H mask to equipment designed for use in the NPSPAC channels. Accordingly, NPSTC does not envision any extra costs will be incurred by clarifying and further codifying this requirement. In contrast, if protection against adjacent channel interference were lessened for the NPSPAC channels by deliberately providing a free pass for equipment certification in that band without the use of the H mask, significant changes may be needed to regional plans, including re-coordination of incumbent operations. This could encroach on public safety resources which are already stretched thin and result in less flexibility to locate public safety transmitter sites in the band. NPSTC applauds the Commission for proposing modifications to the rules for the NPSPAC band which should help avoid that result.

² Amendment of Part 90 of the Commission’s Rules to Permit Terrestrial Trunked Radio (TETRA) Technology, WT Docket No. 11-69, ET Docket No. 09-234.

³ NPRM, Appendix A, Proposed Rules at page 13.

In addition to the NPSPAC band emission mask issue, the NPRM addresses technology capabilities for interoperable communications. As noted in the NPRM, the Commission has dedicated five mutual aid channels in the 800 MHz NPSPAC band and a nationwide interoperability calling channel in both the VHF and UHF bands. The current rules require equipment certified and marketed for public safety use in the 800 MHz, VHF and UHF bands to be capable of operating on the applicable mutual aid or interoperability calling channels.⁴

When the rules were being crafted for the 800 MHz NPSPAC channels, the Final NPSPAC Report recommended analog FM as the interoperability mode of operation. The practice of the public safety community and industry continues to be to use analog FM as the interoperability mode for 800 MHz, VHF and UHF mutual aid and interoperability calling channels. Other technologies developed with U.S. public safety requirements and operational environment in mind such as the Project 25 standard have incorporated backward compatibility with analog FM. NPSTC supports the Commission's proposal to clarify the rules to be consistent with that of public safety and industry practice, i.e., to require analog FM capability for the 800 MHz NPSPAC mutual aid and VHF/UHF interoperability calling channels.

⁴ Section 90.203(i) addresses this requirement regarding the 800 MHz NPSPAC channels and Section 90.203(j)(1) addresses the requirement for the public safety VHF and UHF channels.

Conclusion

In summary, NPSTC supports the Commission's proposal regarding the requirement for the H mask in the 800 MHz NPSPAC channels and analog FM for interoperability on the five NPSPAC mutual aid and VHF/UHF interoperability calling channels. NPSTC believes these modifications to the rules essentially clarify the requirement for long-standing public safety and industry practices.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Ralph A. Haller", written over a light gray horizontal line.

Ralph A. Haller, Chairman

National Public Safety Telecommunications Council
8191 Southpark Lane, Suite 205
Littleton, Colorado 80120-4641
866-807-4755

November 14, 2013