

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

In the Matter of:	)	
	)	
A National Broadband Plan	)	GN Docket Nos. 09-47, 09-51, 09-137
for Our Future: Public Safety,	)	
Homeland Security and Cybersecurity	)	
Elements of the National Broadband Plan	)	

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

The National Public Safety Telecommunications Council (NPSTC) submits these Comments regarding the needs of the public safety community. The information provided addresses issues posed within its Public Notice No. 26 concerning repurposing of broadcast spectrum for wireless broadband use.¹ In particular, these NPSTC comments focus on public safety use of spectrum at 470-512 MHz, NPSTC's previously filed petition for greater flexibility in 470-512 MHz use, and a new NPSTC initiative to update the assessment of public safety spectrum and technology needs through the year 2020.

¹ NBP Public Notice # 26, DA-09-2518, released December 2, 2009.

The National Public Safety Telecommunications Council

The National Public Safety Telecommunications Council (NPSTC) 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 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
- 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 of 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). NPSTC has liaison relationships with associate members, the Telecommunications Industry Association and the Canadian Interoperability Technology Interest Group (CITIG).

I. Public Safety Operations Must be Protected

In its Notice, the Commission references requirements in Section 336 (g) of the Telecommunications Act of 1996 which require the Commission to conduct “an assessment of alternative uses, including public safety use, of the spectrum used for advanced television broadcasts...” and “an evaluation of the extent to which the Commission may be able to reduce the amount of spectrum assigned to advanced television broadcast licensees.”²

NPSTC welcomes the Commission’s initiative in issuing the Public Notice (“Notice”) to focus on issues pertinent to the potential repurposing of broadcast spectrum. Given public safety’s extensive use of the 470-512 MHz band (TV channels 14-20) in select markets, this Notice and any related follow-up Commission proposals and action are of key importance to NPSTC. Any follow-up proposals or actions must protect public safety uses of the 470-512 MHz band.

Currently, Public Safety and land mobile users have access to the 470-512 MHz band in eleven markets across the country and use this spectrum extensively to support critical operational

² Notice at page 2.

requirements.³ This band supports public safety mission critical operations in the major urban areas where use of the spectrum is allowed. For example, the NYPD, the Los Angeles County Sheriff, and the Los Angeles City Police and Fire Departments, among many others, rely on spectrum in the 470-512 MHz band for lifeline voice operations. Also, the band supports important enterprise and critical infrastructure land mobile operations that do not qualify for public safety status under the Commission's rules, but which are nonetheless important to the country's economy, commerce and efficient services to the public.

NPSTC would also like to reaffirm that public safety personnel are not the only ones who benefit from improved public safety communications. Each and every citizen and business in this country is in some way protected by the nation's public safety community. Homeland security, the abatement of crime, and the expeditious response to firefighting and emergency medical needs are essential services for a jurisdiction to protect its citizens, attract business and grow its economy. Therefore, providing communications solutions for these public safety operational requirements also provides significant benefits to the entire public.

This Notice specifically asks for data on the uses of spectrum. The following table summarizes the number of licenses and the population in each of the 11 metropolitan markets that benefit where public safety uses 470-512 MHz spectrum to support its operational requirements of protecting life and property. The number of licenses is for reference only and the variation across the 11 markets does not indicate any differences in importance of use in a given area. The amount of spectrum available within the 470-512 MHz band, as well as the number of jurisdictions within the 80 km radius, varies by metro area. Each and every public safety system is important to

³ The original rules envisioned 470-512 MHz band operations in thirteen metros, however, agreement was never reached with Canada to allow such operations in the Detroit and Cleveland areas.

protect the lives and property of the population served. In aggregate, there are over 2800 public safety licenses in the 470-512 MHz band (TV channels 14-20) according to Commission records.

Metro Area	Number of Public Safety Licenses in the 470-512 MHz Band⁴	Estimated Population that Benefits from Public Safety Use of this Spectrum⁵
Boston, MA	503	4.5M
Chicago, IL	244	8.0M
Dallas/Fort Worth, TX	54	6.3 M
Houston, TX	8	5.7M
Los Angeles, CA	651	12.9M
Miami, FL	40	5.4M
New York/NE New Jersey	678	19.0M
Philadelphia, PA	285	5.8M
Pittsburgh, PA	74	2.4M
San Francisco/Oakland	201	4.3M
Washington, DC/MD/VA	71	5.4M

As the Commission considers what, if any further action to take on repurposing broadcast spectrum, it is essential that public safety, public service and enterprise use in the 470-512 MHz

⁴ Based on a point/radius search of the Commission's Universal Licensing System data base with an 80 km radius around the reference coordinates of each metro area as specified in 90.303(b) of the rules. Each license represents multiple sites, frequencies and serves many first responders.

⁵ U.S. Census Bureau, Annual Estimates of the Population of Metropolitan and Micropolitan Statistical Areas April 1, 2000 to July 1, 2008. The July 1, 2008 estimates were used and rounded for entry into the above table. <http://www.census.gov/popest/metro/tables/2008/CBSA-EST2008-01.xls>

band be protected. This includes operations allowed both by rule and by waivers granted by the Commission.

II. The NPSTC Petition for Greater Flexibility at 470-512 MHz Must Be Considered

The benefit to the public is limited to the 11 markets listed above only because of the limitations imposed by current Commission rules. Expansion of public safety and other critical public service and enterprise operations beyond the current limitations in the rules would also serve to expand the benefit to a larger segment of the public.

In each of the 11 metro areas, portions of the 470-512 MHz band are identified for sharing. The current rules limit the location of base stations to within a maximum of 80 kilometers (50 miles) from the center of each metro area and mobiles may operate over a maximum radius of 48 kilometers (30 miles) around their associated base stations. Spacing criteria in the rules relative to co-channel or adjacent channel television stations also proscribe the areas within which public safety or other land mobile licensees may operate. These spacing criteria are based on a 50 dB desired-to-undesired (D/U) ratio for co-channel situations, except in the New York area, where a somewhat less conservative D/U ratio of 40 dB has been used successfully for over 35 years for channel 15. For adjacent channels, a 0 dB D/U ratio is used to set the spacing.

The Commission recently placed on public notice a petition submitted by NPSTC requesting that changes be made to the current 470-512 MHz rules.⁶ In that petition, NPSTC noted that the transition from analog to digital television (DTV) provides the opportunity to amend the rules to provide greater flexibility in the eleven markets where land mobile sharing is allowed. Because DTV receivers are less susceptible to interference than analog receivers, NPSTC's

⁶ See Petition for Rulemaking submitted by NPSTC Feb. 18, 2009, RM-11527.

petition recommended rule changes that can be made without negatively impacting television viewing, under the assumption that DTV operations would continue to occupy the band. The result of such modifications would provide significant benefits to public safety, public service and enterprise users of the band and the general public they serve. These changes would also allow more efficient use of the scarce spectrum resource.

There was broad support for NPSTC's petition which spanned the mobile and broadcast communities.⁷ NPSTC urges the Commission to move forward with the next steps to propose and adopt specific rule changes consistent with those NPSTC recommended if DTV operations remain in the band.

III. If TV Spectrum is Repurposed, Public Safety, Public Service and Enterprise Use of the 470-512 MHz Band Should Be Further Expanded

Should the Commission decide to take further steps to repurpose the broadcast spectrum, NPSTC urges the Commission to consider further expansion of public safety, public service and enterprise use of the 470-512 MHz spectrum beyond those modifications recommended in the NPSTC petition for rulemaking. The public can benefit as much or more from improved public safety communications as they will from additional commercial spectrum to add to the 500 MHz or so of commercial licensed spectrum already allocated. Therefore, should the Commission decide to repurpose the broadcast spectrum, NPSTC recommends any proposal fully protect operations at 470-512 MHz that can be deployed under the current rules, and include provisions to expand public safety, public service and enterprise use throughout the country beyond the current 11 metropolitan markets. The same advancements in technology that increase the demand for

⁷ See comments on NPSTC Petition for Rulemaking, RM-11527.

spectrum to serve the general public will also place pressure on the need for greater allocations to support the operational requirements of public safety, public service and enterprise operations.

NPSTC recently initiated a comprehensive Assessment of Future Spectrum and Technology (AFST) requirements that will assess public safety spectrum needs through the year 2020.⁸ The Public Safety Wireless Advisory Committee (PSWAC) report, finalized in September 1996, provided a comprehensive review and projection of spectrum needs through the year 2010. That report led to allocations at 700 MHz and 4.9 GHz, but not all the spectrum requirements projected in that report have been fulfilled. Given the expected increase in broadband communications, in addition to continued need for mission critical voice, NPSTC has initiated this new comprehensive study with results targeted for the fourth quarter 2010. NPSTC believes this study will also be an important element for consideration should the Commission move forward with a proceeding to repurpose the broadcast spectrum.

IV. Conclusion

In taking any action concerning repurposing of the current broadcast spectrum, NPSTC recommends that public safety, public service and enterprise use of the 470-512 MHz band allowed by the current rules and waivers granted by the Commission be fully protected. If the Commission decides to maintain DTV operations in the band, NPSTC urges the Commission to move forward and provide for additional flexibility for public safety operations in the 470-512 MHz band as recommended in the previously filed NPSTC Petition for Rulemaking. Should the Commission instead decide to repurpose the broadcast spectrum, NPSTC recommends expanding public safety, public service and enterprise use of the 470-512 MHz band throughout the country.

⁸ See <http://www.npstc.org/pswac.jsp>.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Ralph A. Haller", with a long horizontal flourish extending to the right.

Ralph A. Haller, Chair
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