

The National Regional Planning Council

The National Regional planning Council (NRPC) is an advocacy body formed in 2007 that supports public safety communications spectrum management by Regional Planning Committees (RPC) in the 700 MHz and 800 MHz NPSPAC public safety spectrum as required by the Federal Communications Commission. We liaison with FCC certified frequency coordinators, licensees, applicants, vendors, adjacent regions as well as the Commission on a regular basis to ensure our planning responsibilities and the goals of those first responder agencies we serve are met. These Regional Planning Committees are made up of public safety volunteer members that dedicate their own time, independent of their regular public safety duties, to coordinate 700 and 800 MHz spectrum efficiently and effectively for the purpose of making it available to public safety agency applicants in their region. The work these people do every day reflects their dedication to public safety communications and to ensuring local public safety agencies and user needs are heard and met within their regions and beyond.

As a body that advocates the *voice* of regional planning committees and one that does not attempt to consolidate and centralize that voice into a single message, the NRPC encourages each region planning committee to voice their opinions and positions on pertinent topics and speak to the Commission in filings and comments as best they can with the intimate, specific knowledge they have as to regional public safety communication initiatives in place and how they are impacted within each region. Subsequently, the NRPC does not in this Further Notice of Proposed Rulemaking speak on behalf of each individual FCC recognized regional

planning committee but promotes each region's ability to speak on behalf of the needs of their users.

While many RPC members were involved in the development of the current rules and policies associated with the use of 4940-4990 MHz under Docket 00-32 and supported the position that the initial implementation of 4940-4990 MHz should be *regionally* managed similar to the Regional Planning Committee spectrum management process inherent today in which the 700 and 800 MHz public safety band in each region is managed under a Commission approved regional plan, the NRPC supports the development of a national plan for 4940-4990 MHz with each region having an opportunity to provide *regionally specific* information and content associated with users in their region. In conclusion, the NRPC is hopeful that each regional planning committee will respond to the Commission with their perspective on this important issue and bring their own viewpoints into consideration. We encourage each region to do so.

Fourth Report and Order

The NRPC supports the Commission restoring certified frequency coordination of the 4940-4990 MHz band within its rules. However, the NRPC supports additional measures be taken by the Commission, consistent with the Further Notice of Proposed Rulemaking, to ensure successful implementation of the 4940-4990 MHz band by public safety and improve the functionality available today to users in the current uncoordinated, public safety shared environment of 4940-4990 MHz.

Background

In its Fifth Further Notice of Proposed Rulemaking in this proceeding, the Commission seeks comment on a number of issues associated with the 4940-4990 MHz band, including its current usage, existing band plan and user eligibility and other issues. The NRPC provides herein comments on the following proposed changes and questions proposed by the Commission in the Further Notice of Proposed Rulemaking.

Current usage of the 4940-4990 MHz band:

NRPC regional planning committee members across the nation are aware of the detailed use of the 4940-4990 MHz band in their respective regions. Nationally, current use of the 4940-4990 MHz supports narrowband operations, fixed access point base/mobile operations and fixed backhaul operations identified by the public safety licensee. Some agencies operate fixed sites under a jurisdictional authorization assigned to their agency (City, County, and State) by the Commission and others utilize permanent fixed operations under separate, site based authorizations issued by the Commission. Jurisdictional authorizations are issued for base/mobile operations and temporary fixed operations utilizing 4940-4990 MHz. The NRPC feels that should new developments in the coordination of 4940-4990 MHz merit the continued issuance of jurisdictional licenses for certain applications utilizing the band that the license be issued to the jurisdiction and not a single agency within each jurisdiction. The individual, geographic licensing of multiple departments within a single agency has led to inefficient usage of the band and, should some element of jurisdictional licensing be included as a part of the new 4940-4990 MHz coordination process, the NRPC recommends a single license be issued to each jurisdiction to ensure jurisdictional cooperation and efficient inter-

agency usage of this valuable spectrum resource. Much confusion has resulted from different departments and licensees within a single agency not knowing that each other were implementing 4940-4990 MHz for their applications.

The NRPC feels that any national 4940-4990 MHz National Plan has to take into account all current use of the band, mobile and fixed, licensed or otherwise, and would benefit from the details associated with each application of the band, information not readily available on the user's current FCC authorization.

NRPC members feel that a coordination method for 4940-4990 MHz that utilizes some of the elements included in current Part 101 microwave coordination, including the Prior Coordination Notification (PCN) process that heightens the awareness pending application to existing licensees, in the band. The awareness of current users in the band promotes a more coordinated environment and improved spectrum usage within a city, county or state.

NRPC requests the Commission promote a process that leads to a more effective, improved coordination and use of 4940-4990 MHz for public safety.

The NRPC also feels a nationwide plan for 4940-4990 MHz would be difficult to achieve without the usage of a national coordination database utilized cooperatively by all parties.

We envision a FCC database being developed that allows for input from those entities charged with coordinating the 4940-4990 MHz band for public safety. The information contained in the database will be critical to ensuring that coordination of the band leads to successful applications of the band by the user. We envision this database acting as a repository for data compiled by current users, applicants, frequency coordinators and regional planning committee's to ensure that as much data as possible is collected from existing and new users to contribute to the coordination process of the band. The NRPC

looks forward to working with the Commission, the certified Frequency Coordinators and the entire public safety community to help determine the elements that need to be included in a successful public safety coordination process for 4940-4990 MHz.

Frequency Coordination of 4940-4990 MHz

The NRPC supports the Commission requiring the formal coordination of the 4940-4990 MHz band. We support the following elements be included in any new coordination process:

Additional data needs to be collected from existing licensees and new applicants as compared to what is collected today in the band as implementation goes forward to ensure efficient usage of the band.

An approach that requires existing licensees, within a specific amount of time to promote the bands effective coordination by current and future users, to provide additional information to the Commission than what is on their current authorization to promote effective coordination of the band is required.

All new authorizations in the 4940-4990 MHz band including sufficient site based information of antennae at transmit and receive sites, elevation, azimuth, beam width and power levels as well as the application being implemented and the proposed benefit to user agencies.

New applicants and existing licensees in 4940-4990 MHz need to provide details of their operation to a nationwide common database on the details and their application of the 4940-4990 MHz band.

Should Regional Planning Committees perform coordination necessary for the 4940-4990 MHz band?

The NRPC feels that regional planning committees should be given the opportunity to contribute to any national plan for the use of 4940-4990 MHz. We support the concept of a national plan for 4940-4990 MHz that will serve as the baseline coordination requirement and will be the method of coordinating 4940-4990 MHz in areas where no additional requirements for coordination beyond that in the national plan are necessary, per the region.

In areas where the RPC in a region feels that additional criteria should be a part of 4940-4990 MHz coordination in their region, each region should be provided an opportunity for those additional heuristics to be added to the national plan and required for successful coordination by applicants in that specific region. The NRPC knows that regional needs differ across the nation so regional planning committees that do not feel additional criteria are required for successful coordination may not need to provide any input above what is developed as Best Practice with in the national plan. Input from the RPC's to the national 4940-4990 MHz plan, which could be in the form of a plan approved by the Commission after being submitted by the region or an appendix of additional criteria or practices that applicants in that region need to meet for successful coordination, could supplement the 4940-4990 MHz national plan specifically on behalf of that region.

Should RPC's coordinate 4.9 without a database?

No, public safety has seen the results of uncoordinated implementation of 4940-4990 MHz and it has not been effective. A national database is necessary to ensure effective coordination of the band.

Should the channel plan reflect broadband and narrowband usage with 1 MHz channels?

Given much of the current use of 4940-4990 MHz is utilized in support of public safety narrowband operations, the NRPC feels that portions of the current 4940-4990 MHz band plan could be designated for *primary* narrowband operations with the remainder of the band dedicated to supporting public safety broadband. With 10 MHz of the band today dedicated to 1 MHz channels that can be aggregated to greater bandwidths, perhaps a phased approach that initially utilizes two (2) sets of 5 1 MHz channels at the top and bottom of the band (4940-4945 and 4985-4990 MHz) should be designated to supporting public safety narrowband operations and reduces the 2 sets of 5 1 MHz channels (10 MHz) to 1 set of 5 MHz channels (5 MHz) over a period of 3-5 years. Such a policy would provide sufficient bandwidth to support existing narrowband public safety operations in the band while allowing the Commission to provide users awareness of the Commission's desire over time for the band to support less narrowband operations and more broadband public safety applications in the 4940-4990 MHz band. The NRPC looks forward to working with the Commission on identifying and recognizing narrowband use of the band today while promoting greater broadband application of the band in the coming years.

Consideration of additional technical parameters associated with use of the band, primarily in power levels and antenna parameters associated with implementation of 4940-4990 MHz.

The NRPC feels that any consideration of altered or additional technical parameters that could impact public safety operations in the 4940-4990 MHz band should be part of the nationwide discussion and dialogue associated with the development of a national 4940-4990

MHz band plan. Any changes to the current rules associated with power levels or antenna configurations (polarization, antenna gain, etc.)

Should standards be adopted for the 4.9 GHz band beyond the requirements already in the Commission's rules? Should existing emission mask criteria for the 4940-4990 MHz band, enabling public safety's use of Dedicated Short Range Communications Mask A and consistent with 80211.a emission mask requirements, be altered thereby reducing public safety's access to Commercial Off the Shelf Hardware and potential additional 5 GHz spectrum for its mission critical applications?

Public safety supports the current rules regarding emission masks utilized in the 4940-4990 MHz. In the initial rules development public safety fought hard to ensure that 4940-4990 MHz band was able to leverage Commercial Off The Shelf (COTS) hardware for use in the 4940-4990 MHz band. Indeed, the development of 4940-4990 MHz rules by the Commission from 2002 to 2005 under Docket 00-32 were the first to establish COTS requirements for public safety applications and were intended to allow public safety to leverage worldwide hardware standards for its implementation of 4940-4990 MHz. Today, in seeking to develop a nationwide public safety broadband network that utilizes Long Term Evolution (LTE) we again the Commission and public safety seeking to utilize COTS hardware for current and future public safety broadband. In the initial rule development process for 4940-4990 MHz, which many NRPC members participated in, the incorporation and development of global standards led to public safety's desire to utilize established Dedicated Short Range Communications (DSRC) emission Mask A for its use of 4940-4990 MHz, consistent and within constraints of worldwide 5 GHz band 802.11a hardware. While able to operate in the 4940-4990 MHz band, 802.11a hardware equipped devices allow for use of several hundred MHz of spectrum between 4940-4990 MHz through the 75 MHz located in the DSRC band at 5850-5925 as well as unlicensed and UNII spectrum at 5.2 GHz, 5.4 GHz, 5.7 GHz and 5.8 GHz. While the use of unlicensed spectrum for primary applications is not generally desired by public safety due to concerns regarding spectrum availability, the development of opportunistic technologies that can dynamically utilize and

aggregate bandwidth from multiple frequency bands or ranges for applications has arrived and may also permit some public safety applications (access point base/mobile operation, for example) to dynamically utilize other portions of the 5 GHz band as “reserve” should users find their applications experiencing constraints in bandwidth within the 4940-4990 MHz band. Additional spectrum from nearby, unlicensed 5 GHz frequency bands could be utilized dynamically to enhance public safety operations in 4940-4990 MHz on a case by case basis, as needed when experiencing congestion. This can leverage internationally developed COTS 5 GHz hardware only if the hardware utilized by 4940-4990 MHz public safety users utilize 802.11a emission mask A, currently permitted in the rules. The development of hardware criteria outside the 802.11a feature set will exclude public safety from the global 802.11a 5 GHz hardware market and may also potentially remove the ability for their applications to opportunistically utilize and aggregate additional While public safety faced some opposition in its desire to be able to utilize COTS hardware in the 4940-4990 MHz band in the initial 4940-4990 MHz initial rule development process, the desire to implement a nationwide public safety broadband network utilizing a global standard such as LTE demonstrates public safety’s knowledge that commercially developed hardware and equipment, implemented properly and with public safety needs in mind, can be utilized successfully by the public safety community to meet their mission critical application needs.

Should periodic deployments be required of licensees in the 4940-4990 MHz band by the Commission to ensure the implementations are current and continuing to contribute to effective use of the band?

Yes, the NRPC feels that periodic reporting of licensee use of the 4940-4990 MHz band is beneficial to long term effective implementation of the band. This periodic reporting of use of 4940-4990 MHz to the Commission should be done in concert with 4940-4990 MHz Prior Coordination Notification (PCN) practices that will allow users to know as much as possible about the implementation of the 4940-4990 MHz band within their communities.

Use of the 4940-4990 MHz band to complement the 700 MHz Nationwide Public Safety Broadband Network.

The NRPC is convinced a coordinated approach to the public safety implementation of 4940-4990 MHz can enhance public safety broadband capabilities and benefit users of the National Public Safety Broadband Network (NPSBN). Applications of 4940-4990 MHz that can benefit public safety are point-point backhaul between NPSBN sites, point to multi-point applications, access point base/mobile usage, Personal Area Networks (PAN), and Vehicular Area Networks (VAN). The NRPC feels that if properly coordinated the 4940-4990 MHz band can support these applications in support of public safety broadband. We look forward to working with our colleagues in the public safety community to ensure 4940-4990 MHz contributes to the Nationwide Public Safety Broadband Network where it can.

Conclusion

The National Regional Planning Council thanks the Commission for its initiative intended to improve operations in the 4940-4990 MHz band for public safety. We look forward to working with the public safety community and the Commission on developing guidelines and policies that lead to the most effective implementation of the 4940-4990 MHz band.

Respectfully,

William Carter, Chairperson

National Regional Planning Council

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