

# National Regional Planning Council

An Advocate for 700 and 800 MHz Regional  
Planning Committees

[www.nrpc.us](http://www.nrpc.us)

January 5, 2011

## **Reply Comments of the National Regional Planning Council regarding flexible use of 700 MHz Narrowband Channels covering 769 through 775 MHz and 799 through 805 MHz in Docket 06-229**

### Summary

The National Regional Planning Council (NRPC), in the short term, does not support any alteration to the current 700 MHz narrowband band plan resulting from any flexible implementation of 700 MHz narrowband spectrum to support broadband applications. In addition, we do not support the implementation of 700 MHz narrowband channels in any other configuration than currently allocated without extensive coordination and dialogue between potential applicants, the 700 MHz Regional Planning Committee(s) involved, the State 700 MHz Licensee's (SL) involved in the geographic area of the proposal, the Commission and/or the Public Safety Spectrum Trust and the National Regional Planning Council to ensure interference free 700 MHz narrowband operation for those that expect it. While we do not rule out long term flexible use of the 700 MHz narrowband allocation when it has been determined and proven in the field that such flexible use will be beneficial to public safety AND will not interfere with 700 MHz narrowband licensees and any level of 700 MHz interoperability existing in the affected area, we feel existing interoperability in the 700 MHz narrowband allocation would be undermined by incorporating any flexible use of 700 MHz narrowband channels in the absence of an effective coordination process is in place with representation of all parties involved. At

some point in the future, to explore flexible use including public safety broadband applications in the 700 MHz narrowband allocation, it will be required to have a structured coordination process in place to ensure the new opportunities created from such flexible use does not negatively impact the interoperability that has been achieved in the narrowband block.

Many agencies utilizing 700 MHz, due to a lack of funding and a failed auction of the public safety D block spectrum resulting in no D Block Licensee, have yet to adapt to the current 700 MHz band reorganization the Commission facilitated in 2007 to accommodate 700 MHz broadband spectrum from 763-768 MHz and remain in operating in environments where interoperable communications between first responders utilizing the 700 MHz band is hampered due to inconsistent regional 700 MHz implementations. In some of these same areas, 800 MHz rebanding has created environments where inter-regional and inter-state communications are hampered by the inconsistent usage of 800 MHz NPSPAC interoperability spectrum during the re-banding process. In many areas there are regional and state borders where 700 MHz interoperability spectrum is being utilized in two (2) different 700 MHz band plans and in the same area 800 MHz dedicated interoperability spectrum is also not using the same spectrum due to multiple regions being in various states of 800 MHz rebanding.

Subsequently, the NRPC feels that any change to the current 700 MHz band plan will cause further confusion and uncertainty to potential 700 MHz narrowband public safety applicants and users in all regions. That said, while we support the ability for regional planning to take place in all regions, we also recognize the fact that 700 MHz narrowband spectrum is utilized sparingly or not at all in some FCC established regional planning areas and that not utilizing that spectrum at all within a specific region does not meet the Commission's long term goals of spectrum efficiency and effectiveness. In those regions interoperable communications may be accomplished by utilizing dedicated interoperability spectrum in other public safety allocations. Regardless, use of 700 MHz narrowband spectrum for anything other than the usage currently documented for it could impair already achieved interoperable communications if not properly coordinated. While several regions do not anticipate utilizing 700 MHz interoperable spectrum

for system build-out, the use of 700 MHz interoperability channels in the subscriber units of users in Part 90 agencies, licensed by rule by the Commission to ensure availability and ease of use by first responder agencies and the use of which is not documented on the Commission's Universal License Service (ULS) database, could be negatively impacted by uncoordinated flexible use of narrowband 700 MHz and the lack of a FCC authorization by those using 700 MHz interoperable spectrum in some regions. We support the comments from public safety agencies and organization that speak to the negative impact of altering the current 700 MHz band plan. We urge the Commission to continue the dialogue with public safety to ensure that the needs and solutions public safety require can be met by the current allocation.

To ensure that regional planning continues as necessary while taking into consideration the spectrum efficiency responsibilities that we all as users of the spectrum have ownership in, the NRPC seeks to participate in an ongoing dialogue with the Commission and the public safety community to ensure the inherent interoperability associated with the 700 MHz narrowband spectrum is retained while allowing the Commission to explore in the long term usage and efficiencies that have to accompany this critical public safety spectrum. We hope our comments contribute to that end.

## 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 and our adjacent regions as well as the Commission on a regular basis to ensure our planning responsibilities and the goals of those we serve are met. These Regional Planning Committees are made up of public safety volunteer members that dedicate their time to coordinate spectrum efficiently and effectively for the purpose of making it available to public safety applicants in their region. The work these people do reflects

their dedication to public safety communications and to ensuring local public safety agencies and user needs are heard and met in 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, we encourage each region planning committee to voice their opinions and speak to the Commission's inquiries as best they can with the intimate knowledge they have as to initiatives that are in place within their own regions. Subsequently, the NRPC does not in this proceeding speak for each individual regional planning committee but we are hopeful that each regional planning committee will respond in this proceeding to the Commission's inquiries on their own terms and with their own viewpoints. We encourage each region to do so.

## Comments

In the Public Notice, The Commission seeks input in many areas, including information specific to individual regions such as are their agencies in your region planning on implementing 700 MHz narrowband systems, are those systems funded, are there agencies that are attempting to implement 700 MHz narrowband and 700 MHz Broadband concurrently, etc. The NRPC feels that these questions are best answered by each regional planning committee as they are more familiar with the topics and issues the questions pose *in their regions*. The questions are as follows:

- *How widely are the state license, the general use narrowband RPC-controlled frequencies and the interoperability frequencies being used?*
- *What are the plans for future deployments in the narrowband spectrum? What are the timeframes? Has funding been allocated?*
- *Are agencies planning both narrowband and broadband deployments in the same area?*
- *Will the systems share infrastructure or other resources? What are the cost differentials?*

- *Would the flexibility to deploy broadband in the narrowband and/or guard band be a more efficient use of the 700 MHz spectrum? Could this flexibility help to meet the demand for broadband spectrum? Could it help to meet the demand for narrowband capacity over time?*

Again, we encourage each regional planning committee to respond to these questions as they deem appropriate with pertinent information from their region.

In addition, the Commission seeks comment on broader issues addressing the potential impact to flexible use of 700 MHz narrowband spectrum on a wider scale. We feel it is perhaps more appropriate for the NRPC to provide the Commission a national perspective on the questions they pose, in addition to any regions comment on the issues, given the long term impact on some of the issues at hand and that comments on these long term considerations, rather than on regional specific issues, are more consistent with the role the NRPC plays in its relationship with its members. The following are some of the questions posed by the Commission with our response:

*If the Commission were to permit flexible use of the narrowband spectrum, would this cause interference to incumbent or future narrowband deployments?*

Yes, we feel that flexible use of narrowband spectrum, implemented without consideration of existing licensees between regions, could cause interference to existing and planned 700 MHz narrowband deployments. We feel that stability should be a major priority in today's 700 MHz narrowband policies as the last band modification still is impacting interoperability across the country between regions that have adjusted to the new 700 MHz band and those that have received a waiver to operate in the previous band plan prior to funding being available to move to the new band plan. Another adjustment of the 700 MHz band plan prior to finalizing nationally the previous band plan issue would heighten uncertainty as to proper use of the

band by those desiring to implement it and negatively impact plans for future 700 MHz narrowband allocations.

Another issue arising from the Public Notice is whether agencies are seeking to develop 700 MHz narrowband systems over the same geographic area as they were implementing 700 MHz broadband spectrum in 763/793 MHz – 768/798 MHz (Waiver Recipients) is whether effective management of the Guard Band from 768/798 MHz – 769/799 MHz will prove sufficient to protect incumbent 700 MHz narrowband operations. Since the 1 MHz 700 MHz guard band's effectiveness has yet to be proven to protect 700 MHz narrowband operation with concurrent operations in the 700 MHz broadband spectrum, we feel it is premature to consider flexible use of the 700 MHz narrowband spectrum for broadband operations. We look forward to areas where 700 MHz narrowband spectrum is in place and where waiver recipients utilizing public safety broadband spectrum are operating to further identify the effectiveness of the 1 MHz paired Guard Band between 768-769/798-799 MHz in its protection of narrowband operations.

At some point in the future, when the degree of interoperability resulting from broadband implementation is identified and as efficiencies and benefits identified in public safety broadband implementation begin to outweigh the interoperable characteristics inherent in 700 MHz narrowband operations, a discussion of the aggregation of the 700 MHz narrowband allocation may be in order to facilitate additional spectrum for 700 MHz broadband. If at that time it is determined that the 700 MHz narrowband allocation is inefficient compared to broadband alternatives AND 700 MHz broadband solutions have proven to be able to provide public safety agencies and users a more efficient and higher interoperable "quotient" than narrowband operations are capable, taking into account channel efficiencies and capacities as they pertain to public safety's needs in the nation's urban and rural environments, the NRPC and the regional planning committees look forward to participating in dialogue to address those issues. We are confident that day will necessitate those actions, but when that day will occur is unknown.

Would guard bands be necessary?

We absolutely feel that any flexible use of the 700 MHz narrowband allocation would require the use of additional guard bands between public safety 700 MHz narrowband spectrum and that used for non-narrowband use. Exactly how much additional guard band is unknown. Even today, there are questions as to the effectiveness and viability of the 1 MHz paired Guard Band spectrum in the current band plan between 768-769 MHz and 798-799 MHz and whether it alone can provide sufficient protection for the implementation of public safety broadband and narrowband spectrum in the same geographic area. High site 700 MHz narrowband operations may be impacted by nearby low site 700 MHz broadband use between 763-768/793-798 MHz in the adjacent spectrum. We anticipate more information on the effectiveness of current guard bands to result from initial broadband waiver implementations that have existing 700 MHz narrowband systems already in place.

The initial creation of the 1 MHz Guard Band between public safety broadband and narrowband operations in the 700 MHz band led to discussions that possible nationwide low power vehicular repeater operations could be dedicated for use in this band with the regional planning committees and the Public Safety Spectrum Trust being involved in the coordination of such use. Whether or not the current Guard Band is sufficient in protecting narrowband operations from broadband usage, or vice a versa, remains to be seen and any potential for coordinated, dedicated use of Guard Band spectrum will be a dialogue that will be necessary in the near future.

What coordination or interference protection criteria would allow both narrowband and broadband systems to operate in adjacent spectrum in the same area; or co-channel in adjacent areas?

The NRPC feels strongly that should 700 MHz narrowband spectrum be utilized in a flexible manner, it should be coordinated on a case by case basis by the State 700 MHz Geographic Licensees, impacted Regional Planning Committees, the licensee or sub-licensee, and those entities wanting to implement 700 MHz narrowband spectrum in a flexible manner to facilitate broadband public safety communications, as appropriate. We feel strongly that any coordinated, flexible use of 700 MHz narrowband spectrum for broadband applications need to consider the positions of 700 MHz stakeholders, existing and planned 700 MHz spectrum usage in the area where flexible use is being considered as well as the viability and effectiveness of 700 MHz Nationwide Interoperability Spectrum. Regions adjacent to those proposing flexible use need to be assured that their use of 700 MHz narrowband spectrum, and the interoperability resulting from that use, will not be impacted by flexible use of narrowband channels in a region that has not chosen to implement 700 MHz narrowband spectrum. In addition, should such flexibility be permitted by the Commission, until it can be utilized in any other manner and still protect existing 700 MHz narrowband allocations, flexible use of between 769-775/799-805 MHz should be *secondary* to any primary 700 MHz narrowband use in the band.

*How would "narrowband flexibility" impact nationwide narrowband interoperability?*

As mentioned above, implementing 700 MHz narrowband spectrum for flexible use would seriously impact those users exercising the Commission's "licensed by rule" eligibility for seamless nationwide 700 MHz interoperability channel usage. Mobile and portable usage of the 700 MHz interoperability channels, which by the Commission's rules do not need to be individually licensed and are eligible to any Part 90 licensee, needs to be preserved to ensure responder continuity and the ability to access nationwide interoperable communications, as necessary. If this seamless ability to roam throughout the nation on these designated interoperability channels becomes a tool that can facilitate interoperability in some areas but not others, the impact to on-scene, unit to unit interoperability, in particular for personnel responding from their home

state to where an incident has occurred with nationwide 700 MHz interoperability channels as an expected resource, would negatively impact the effectiveness of those responding.

*Would the 700 MHz band plan have to be reconfigured to move the interoperability frequencies to another portion of the band or would the narrowband interoperability frequencies as currently designated be sufficient to maintain interoperability?*

Again, another band plan change would be problematic for all agencies prior to all agencies adopting the current band plan. Without a solution and funding necessary to move the existing forty two (42) agencies that are not utilizing the current 700 MHz narrowband channel plan, a change in the current band plan could seriously impact interoperable communications being achieved today within the 700 MHz narrowband allocation. Again, if in the long term it is determined that flexible use of 700 MHz narrowband spectrum to realize broadband communications is determined by all parties impacted and involved to be a more effective and efficient use for public safety than 700 MHz narrowband spectrum used solely for narrowband voice and low speed data communication applications, the National Regional Planning Council and 700 MHz regional planning committees look forward to entering into a dialogue with all parties to promote the seamless transition of 700 MHz narrowband spectrum to more efficient and flexible usage. Since the aggregation and flexible use of narrowband spectrum has not been determined to be in public safety's best interest in anything more than narrowband use of the band as yet, narrowband voice and low speed data operations for the 700 MHz narrowband spectrum is the correct, primary use of the allocation and altering the current band plan is not recommended by the National Regional Planning Committee.

*If an area does not deploy narrowband 700 MHz systems, could interoperability frequencies in other bands be used for narrowband interoperability?*

We look forward to further dialogue with the Commission on this issue. The use of 700 MHz narrowband spectrum in states and regions vary considerably as does the use of 800 MHz spectrum. The fact that some states use such spectrum for narrowband voice applications is driven by the need for such spectrum to meet capacity needs and cost. Sparsely populated, rural areas often meet their interoperable needs by utilizing public safety spectrum in bands with propagation characteristics more suitable to their coverage needs and available funding sources, often in the bands below 512 MHz.

For example, those states that do not meet their 700 MHz State Geographic License build-out by the January 1, 2012 deadline may be an indication of a state that has not identified 700 MHz narrowband spectrum as a resource that is a contributable element towards interoperable communications as defined in their state. Such states may have achieved interoperable communications between state and local agencies by developing interoperable systems in other public safety bands. Perhaps an indication of which states will not utilize 700 MHz narrowband spectrum in their statewide interoperable solutions will be more apparent after January 1, 2012 given the notification to the Commission required by the states on or before that date. Even today, there are adjacent statewide interoperable radio systems in which 700 MHz narrowband spectrum is utilized in one state and VHF High Band (150 MHz) is identified as a statewide interoperable solution in an adjacent state. This solution has created today the necessity for an interoperable dialogue between adjacent states addressing disparate band operation to ensure consistency in the development of interoperable cross border communications. The recent introduction of multi-band radios that can operate in 700/800, UHF or VHF High Band to the public safety community has led to states identifying new solutions and alternatives for addressing band disparities and a lack of interoperability between systems at state borders. With the introduction of multi-band radios and the coordination of usage between systems, radios can today access systems operating in different frequency bands in different states, as necessary and as coordinated. This is yet another excellent example highlighting that

interoperable communications is mostly a person to person coordinating issue, with technology more often than not providing viable interoperable solutions needing to be implemented.

*If "narrowband flexibility" is permitted, should a certain portion of the narrowband and/or guard band allocation be retained exclusively for narrowband operations?*

Again, the Commission's first priority should be bringing all agencies onto the current 700 MHz narrowband channel plan. If flexible use is to be established in the narrowband portion and will include segmenting a portion of the overall "flexible" spectrum for exclusive narrowband usage, arriving at a solution that doesn't lose the necessary interoperability inherent in the band is dependent on ALL agencies to be operating within the same band plan. Any proposal for such an altered channel plan must first establish consistency in existing 700 MHz narrowband usage. Absent a consistent, nationwide band implementation, interoperable progress identified in the 700 MHz narrowband allocation may be impeded within and between users of different agencies, regions and states.

*What role would the 700 MHz RPCs and states play in the deployment of "narrowband flexibility"?*

As the NRPC today mitigates and resolves disputes both within and between regional planning committees, we feel that the task of managing and coordinating usage, narrowband or otherwise, of 700 MHz spectrum between 769-774/799-804 MHz between the FCC's designated regions, should fall to the NRPC. In turn, the NRPC will work with other involved parties (applicants, PSST, States, etc.) to ensure that existing 700 MHz narrowband spectrum remains functional and available for use to those that have identified its use as contributable to their interoperability needs. The regional planning committees have detailed information of 700 MHz narrowband operation in their region and can contribute to solving issues that may arise from disparate use within and between regions in the 769-774/799-804 MHz narrowband spectrum, should

the Commission permit such flexible use. We feel strongly, however, that such flexible use should only be permitted when it has been *proven in the field* that such use can co-exist. Absent the necessary coordination between all involved, we feel that such use will be detrimental to interoperable public safety communications achieved in the 700 MHz band.

*What's the proper jurisdictional level to decide whether or not to implement flexibility?*

The flexible use of 700 MHz narrowband spectrum should only be implemented in areas where all parties have proven that current and long term voice based interoperable communications in the 700 MHz band will not be negatively impacted by use. The jurisdictional level where such use should be permitted should begin at the regional level and with the regional planning committees. Since in their creation the Commission acknowledged the regions have diverse demographics, topology and communications needs, the regional planning committees are a logical starting point for coordination *intra-region* and they can also depend on their history of *inter-regional* coordination in areas where flexible use can impact use in multiple regions.

We feel each 700 MHz regional planning committee can be where discussions as to whether or not flexible use of 700 MHz narrowband is feasible or not. The National Regional Planning Council would issue guidelines and Best Practices to each regional planning committee to aid their evaluation in addition to counsel from the NRPC national level and its Executive Board when flexible use was proposed in a region.

*How would flexibility impact existing 700 MHz Regional Plans?*

We feel that should the Commission permit flexible use of 700 MHz narrowband spectrum already under the authority of each region's approved 700 MHz plan, those plans should be modified, under recommendations from the Commission, the PSST and others, to document guidelines and a process in which the flexible use of 700 MHz narrowband spectrum can be applied for. We anticipate such applications for flexible

use would require that applicants become aware of existing narrowband operations between 769-775/799-805 MHz and meet stringent requirements as established by the regional planning committees to ensure protection of *intra or inter* regional 700 MHz narrowband use within and/or between regions. Each approved 700 MHz plan would have to be modified to document a process in which regions would utilize for applicants to apply to obtain regional approval for flexible use in the narrowband spectrum. The process should be finalized and approved in the region and should then be approved by the Commission and other parties before flexible use is implemented in any 700 MHz regional plan.

*Should RPCs/states be required to coordinate flexible deployments?*

Yes, regional planning committees and states, both responsible for coordinating portions of the 700 MHz narrowband block between 769-799/774-804 MHz, should cooperatively review and coordinate any flexible deployments in the narrowband block, should this be permitted. Jointly reviewing any such deployments will ensure that existing narrowband use will not be negatively impacted. A process to ensure existing narrowband operations are protected flexible use should include RPC's, States and other impacted entities.

*If flexible use of the narrowband spectrum is permitted, should the FCC re-address the existing narrowband 6.25 kHz efficiency deadlines?*

We feel the Commission should re-evaluate the 700 MHz 6.25 KHz per voice path January 1, 2017 requirement. In recent years technological advances have moved quickly towards recognizing that the *aggregation of spectrum* can reap greater rewards than reducing the bandwidth of existing spectrum. In addition, several petitioners have requested the Commission extend the January 1, 2017 date to June 19, 2019, ten (10) years after the Digital Television transition (DTV) took place since many 700 MHz applicants were hampered in their effort to implement 700 MHz narrowband systems due to incumbent TV operations in band 63-68 and 64-69. Others feel that since

equipment is only recently available that can operate on both today's FDMA (12.5 KHz) systems and can also be upgraded to a 6.25 KHz per voice path equivalent, and that the Project 25 Phase 2 standard has yet to be finalized, the lifecycle of equipment purchased in the last 5 years will be shortened considerably introducing additional subscriber replacement costs for 700 MHz interoperable systems across the country. The NRPC feels strongly that the Commission's extension of this deadline, to at least a date consistent with the actual DTV transition date, is in the best interest of the public and those agencies that serve them.

As stated earlier, new technologies always enable new opportunities but ensuring those new opportunities do not negatively impact any interoperable solutions developed over the last 10 years using 700 MHz narrowband channels is a priority for the NRPC. The 700 MHz band plan has changed dramatically in the last 10 years and we understand that it will continue to change. We anticipate this important band will continue to be a providing ground for new public safety applications and technologies in the years to come.

Thank you for the opportunity to provide our comments in this important proceeding.

Stephen T. Devine, Chair

National Regional Planning Council

