



Public Safety Wireless Network

Saving Lives and Property Through Improved Interoperability

August 7, 2002

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 Twelfth Street, SW
12th St. Lobby, TW-A325
Washington, DC 20554

Re: Reply Comments to Notice of Proposed Rulemaking, *Improving Public Safety Communications in the 800 MHz Band [and] Consolidating the 900 MHz Industrial/Land Transportation and Business Pools, WT Docket No. 02-55*

Dear Ms. Dortch:

On behalf of the Public Safety Wireless Network (PSWN) Program and pursuant to Section 1.419 of the Commission's Rules, 47 C.F.R. § 1.419 (2000), enclosed herewith for filing are an original and four (4) copies of the PSWN Program's Reply Comments in the above-referenced proceeding.

Kindly date-stamp and return the additional, marked copy of this cover letter and filing to the person delivering it.

Should you require any additional information, please contact the undersigned.

Respectfully submitted,

Brigadier General Paul H. Wieck II
Iowa Army National Guard
Chair, PSWN Executive Committee
Spectrum Working Group

Steven Proctor
Executive Director,
Utah Communications Agency Network
Executive Vice-Chair,
PSWN Executive Committee

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Before the
Federal Communications Commission
Washington, DC 20554

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In the Matter of)
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Improving Public Safety Communications in the)
800 MHz Band)
)
Consolidating the 900 MHz Industrial/Land)
Transportation and Business Pool Channels)

WT Docket No. 02-55

To: The Commission

REPLY COMMENTS TO NOTICE OF PROPOSED RULEMAKING

Filed by: The Public Safety Wireless Network Program

Date: August 7, 2002

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EXECUTIVE SUMMARY

The Public Safety Wireless Network (PSWN) Program is pleased to provide the following reply comments to the Federal Communications Commission (Commission), with respect to the Notice of Proposed Rulemaking, WT Docket No. 02-55. The issues addressed in this proceeding relate to a reorganization of the 800 megahertz (MHz) band to prevent further interference to public safety communications. The Commission must consider a number of factors that will complicate the effective implementation of a reorganization plan. The decisions made here will affect not only the public safety community, but a considerable number of other users, including Commercial Mobile Radio Service (CMRS), specialized mobile radio (SMR), and Business and Industrial Land Transportation (B/ILT) services, encompassing various key utilities such as gas, electricity, water, and other indispensable functions.

The PSWN Program is in agreement with many agencies contributing comments to this docket that the interference to public safety communications must be resolved, once and for all. The Commission has before it an opportunity to eradicate interference to public safety communications in the 800 MHz band. The PSWN Program requests that the Commission perform a technical study to thoroughly examine all sources of interference and review all the options available before adopting a final plan with such potentially profound and enduring consequences to all 800 MHz band licensees. Through this research and evaluation process, the best solution will be selected to ensure the success of this initiative.

The PSWN Program also urges the Commission to continue allocating spectrum for public safety communications purposes. The Public Safety Wireless Advisory Committee (PSWAC)

recommendations for additional spectrum to meet the needs of the public safety community through 2010 remain unfulfilled. A large portion of the spectrum allocated since the PSWAC Report of 1996 cannot currently be employed for public safety operations unless the Commission institutes hard deadlines. Otherwise, this spectrum may still be occupied by incumbent analog television stations when the transition is to occur. The public safety community needs more accessible spectrum now to meet ever-growing priorities for communications coverage. An allocation of interoperable and general use channels would be both valuable and immediately useful in meeting those requirements.

The proposed reorganization cannot be funded using already scarce public safety appropriations. Instead, the Commission should continue to require that the parties responsible for causing interference to public safety licensees must pay necessary costs for retuning or replacing equipment, necessary construction, licensing fees, and administrative costs incurred in the process of reorganizing the 800 MHz band. To support this undertaking, the Commission should also investigate additional methods to absorb these costs from taxes, proceeds of spectrum auctions, and other sources.

Finally, the implementation of this plan must be seamless and make certain that public safety communications do not experience any interruption or reduction in coverage. Public safety wireless users depend on reliable, robust communications to be available 24 hours a day, 7 days a week to protect our citizens. The Commission should demand and accept no less in accomplishing the ambitious goals of this rulemaking proceeding.

Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of)
)
Improving Public Safety Communications in the)
800 MHz Band) WT Docket No. 02-55
)
Consolidating the 900 MHz Industrial/Land)
Transportation and Business Pool Channels)

To: The Commission

REPLY COMMENTS TO NOTICE OF PROPOSED RULEMAKING

1. The Public Safety Wireless Network (PSWN) Program¹ Executive Committee respectfully submits these reply comments in response to comments addressing the Notice of Proposed Rulemaking (NPRM) published April 5, 2002, by the Federal Communications Commission (Commission).²

I. INTRODUCTION

2. The Commission has identified interference to public safety communications as a critical issue that must be addressed immediately.³ The central purpose of this NPRM is to eliminate the harmful interference being experienced by the public safety wireless user community from Commercial Mobile Radio Services (CMRS). Other significant issues, such as allocating

¹ The PSWN Program is a federally funded initiative operating on behalf of all local, state, federal, and tribal public safety agencies. The Department of Justice and the Department of the Treasury are jointly leading the PSWN Program's efforts to plan and foster interoperability among public safety wireless networks. The PSWN Program is a 10-year initiative that is an effort to ensure that no man, woman, or child loses his or her life because public safety officials cannot talk to one another.

² NPRM, *In the Matter of Improving Public Safety Communications in the 800 MHz Band, [and] Consolidating the 900 MHz Industrial/Land Transportation Business Pools (800 MHz NPRM)*, WT Docket No. 02-55, rel. March 15, 2002.

³ *Id.*, at para. 16.

additional public safety spectrum to enable mission-critical communications, reimbursing implementation costs of the 800 megahertz (MHz) band realignment plan so these expenses are not borne by public safety agencies, and implementing the 800 MHz band reorganization in a process that guarantees no interruption of public safety communications operations, are also of paramount importance and will be further examined in this reply comment. Other responding public safety entities agree that these are four major factors that the Commission must consider in adopting any band reorganization plan.⁴

II. THE COMMISSION'S 800 MHZ BAND REORGANIZATION MUST RESOLVE THE ISSUE OF INTERFERENCE TO PUBLIC SAFETY COMMUNICATIONS

A. A Solution That Creates a Contiguous Block of Public Safety Spectrum Will Help to Alleviate Interference

3. Many of the comments received on this docket from diverse sources including public safety agencies, local government entities, Business and Industrial/Land Transportation (B/ILT) users, equipment manufacturers, and CMRS providers, have underscored the concern that this rulemaking must succeed in meeting the primary objective of eliminating interference to public safety communications. The PSWN Program agrees with these parties that resolving interference with ad hoc solutions developed after public safety personnel and the citizens they protect have been endangered is unacceptable.⁵ The PSWN Program recommends that the Commission continue to

⁴ See, e.g.; Comments of the International Association of Chiefs of Police *et al.* (*IACP Comments*), 800 MHz NPRM, May 6, 2002, at p. 3; Comments of the International Association of Fire Chiefs, Inc. and International Municipal Signal Association (*IAFC/IMSA Comments*), 800 MHz NPRM, at pp. 3-4.

⁵ IACP Comments at p. 3; Comments of the Bergen City Police Department (*Bergen P.D. Comments*), 800 MHz NPRM, at p. 6 ("One of the substantial burdens encountered by public safety agencies, and symbolized by the 800 MHz context, is that in encountering interference from CMRS providers, the personnel and technical resources devoted to determining the degree of interference, the source of the interference, presenting the circumstances to the source and the Commission and seeking a remedy from the Commission to halt the interference are enormous." *Id.*)

emphasize and encourage best engineering practices as cellular network expansion occurs. The Commission can plan for the future by adopting rules and procedures that clarify and make certain that any interference to public safety communications will be investigated promptly, and the source of the interference will eliminate the problem as soon as it is detected. This policy must be respected and upheld by all spectrum users. Any breach of these regulations creating interference jeopardizes lives and must be resolved immediately.

4. While the PSWN Program understands the concerns of other 800 MHz band incumbents that have argued against a band reorganization plan because of potential costs,⁶ it has become apparent that interference problems cannot be satisfactorily addressed after the damage has been done. The source of the interference problem has been consistently identified as CMRS entities that, although in compliance with the Commission's Rules, are constantly adding sites and changing service configurations to address new subscriber use.⁷ These licensees' channels are interleaved with many public safety channels in the 800 MHz band. By creating a contiguous block of spectrum dedicated to public safety communications, the Commission can address much of the interference, particularly from intermodulation, currently experienced in this band.⁸

⁶ See, e.g.; Comments of the City of Baltimore (*City of Baltimore Comments*), 800 MHz NPRM, May 6, 2002, at para. 9; The Lubrizol Corporation, Letter to the Federal Communications Commission, 800 MHz NPRM, May 2, 2002, p. 1; Island SMR Response to FCC NPRM Docket No. 02-55 (*Island SMR Ex Parte Comments*), 800 MHz NPRM, May 10, 2002, at p. 3; Letter to William F. Caton, Acting Secretary, Federal Communications Commission, from the South Dakota Rural Electric Association, Inc., 800 MHz NPRM, May 3, 2002, at p. 1.

⁷ Motorola Comments at p. 13; Comments From the Department of Information Technology, Fairfax County, Virginia, 800 MHz NPRM, April 30, 2002, at para. 10; City of Baltimore Comments at para. 10.

⁸ See, e.g.; City of New York Comments, at p. 7; Comments of the City of Austin, Texas to the Noticed of Proposed Rulemaking, 800 MHz NPRM, at para. 4; Comments of the City of Fort Lauderdale (*City of Ft. Lauderdale Comments*), 800 MHz NPRM at p. 2; Comments of Statewide Wireless Network, State of New York Office of Technology (*Statewide Wireless Network, SONY Comments*), 800 MHz NPRM, at p. 12.

B. The Reorganization Plans Presented in This Rulemaking Are Not Clearly Adequate to Address the Interference Problem

5. Although several solutions have been offered, it remains unclear whether any of them will meet the demanding threshold of certainty necessary and remedy the interference problem absolutely. The Commission acknowledges this on the record in this NPRM.⁹ The cost of adopting the Nextel and National Association of Manufacturers (NAM) 800 MHz reorganization plans has been estimated at “well in excess of \$1 billion” by more than one commenter in this proceeding.¹⁰ This same study indicated that even if retuning of equipment is performed for 800 MHz band licensees where possible, 30–40 percent of all mobile and portable communications equipment will still require replacement.¹¹ The impact of the adoption of band reorganization plan will affect incumbent licensees whether they contributed to the interference problem or not.¹²

6. The true costs of implementation and other effects of band reorganization cannot be accurately quantified until the Commission has chosen a band reorganization plan that achieves the stated objective of eliminating interference with the least possible disruption to incumbent licensees.¹³ Such a plan would include ensuring that any channels provided for incumbent licensees moving from current locations on the 800 MHz band would be subject to the same protection, have equal coverage, and would otherwise be equivalent to the spectrum being exchanged under the

⁹ 800 MHz NPRM, at para. 27.

¹⁰ See IAFC/IMSA Comments, at p. 4. See also Motorola Comments, 800 MHz NPRM, May 6, 2002, at p. 24, estimating that adoption of the Nextel Proposal on public safety and B/ILT incumbent licensees in the 800 MHz band would cost between \$2.8 and \$3.9 billion, and \$1.6 to \$2.2 billion under the NAM Proposal for those entities; Comments of the County of Maui (*County of Maui Comments*), 800 MHz NPRM, at p. 6, estimating the cost of implementing a “nationwide solution” at approximately \$5 billion.

¹¹ Motorola Comments at p. 25.

¹² See, e.g.; Comments of Fisher Wireless Services, 800 MHz NPRM, at para. 7; Island SMR Ex Parte Comments at p. 3.

¹³ 800 MHz NPRM at para. 5. See also IACP Comments at p. 9; Dallas Area Rapid Transit Authority, Letter to William Caton, Office of the Secretary, Federal Communications Commission (*DART Comments*), May 6, 2002, at p. 3.

Commission's reorganization plan.¹⁴ For this reason, the PSWN Program reiterates that any plan proposing secondary status for public safety communications users, including some vital utilities key to the provision of public safety services (i.e., critical infrastructure industries) is not a valid option.¹⁵

C. The Commission Should Undertake a Technical Study to Ensure the Reorganization Plan Chosen Eliminates Interference to Public Safety Users

7. First and foremost, the Commission must absolutely eliminate interference to public safety users. For that reason, the PSWN Program recommends that the Commission undertake an additional analysis of the problem and potential solutions to this interference to better understand the causes and remedies while leveraging the experience of communications stakeholders in the affected 800 MHz channels.¹⁶ By including representatives from the public safety community, CMRS, B/ILT, and specialized mobile radio (SMR) services, the plan chosen by the Commission will arrive at a solution that considers factors and issues raised by a broad range of 800 MHz band users.

8. The PSWN Program agrees with observers that one blanket solution does not exist that will resolve all occurrences and types of interference.¹⁷ Citing the *Best Practices Guide*, one commenter noted "the potential for interference to public safety operations in the 800 MHz band is not uniform across the nation. It is axiomatic that interference potential is highest in urban areas where customer demand for PMRS/CMRS services is large, the number of public safety users is high, and, as a result, public safety users are forced to operate in close proximity to PMRS/CMRS antennas."¹⁸ One

¹⁴ The City of Gainesville, Florida, *Letter to the Federal Communications Commission*, 800 MHz NPRM (*City of Gainesville Comments*), April 29, 2002, at p. 2.

¹⁵ Comments of the Utah Communications Agency Network, 800 MHz NPRM, May 3, 2002, at para. 15.

¹⁶ IAFC/IMSA Comments at p. 4.

¹⁷ Motorola Comments, 800 MHz NPRM, May 6, 2002, at p.10.

¹⁸ Comments of Access Spectrum, LLC, 800 MHz NPRM, May 6, 2002, at p. 5, citing the 800 MHz NPRM at para. 12.

suggestion to alleviate the current conditions was that a band reorganization plan should provide “spectral separation” for interference limited and noise limited systems.¹⁹ Another contributor to this docket stated that the proposed remedies for interference would not resolve the interference experienced by their public safety personnel.²⁰ The Commission must examine all sources of interference, including intermodulation, side-band noise, receiver overload, and other identified interference issues, such as radio frequency (RF) selectivity and receiver selectivity, to verify that the solution provided is complete, and improved performance will endure in the long term.²¹ The Commission should incorporate the recommendations provided in the *Best Practices Guide*²² and the *APCO Project 39 Report*²³ in crafting the regulations that will address all of these variables and correct the problems affecting public safety licensees on the 800 MHz band.

9. In addition, it is crucial that CMRS operators voluntarily conduct additional studies and research to determine how filters, reductions in the noise floor, and other modifications can protect public safety communications from interference. The interference problem is not likely to be resolved simply by a reorganization of the 800 MHz band.²⁴ These parties should also cooperate

¹⁹ Comments of the Telecommunications Industries Association, 800 MHz NPRM, May 6, 2002, at p. 3.

²⁰ City of Portland Comments, at p. 9. Specifically, the author notes that the proposed changes will not preclude the interference experienced to the data transmission applications currently used by that jurisdiction’s 800 MHz system.

²¹ “Any transition must be a complete solution to the elimination of current and future interference to public safety systems. The FCC must carefully consider all known potential sources along with the implications of developing technologies, and insure that the harmful interference to public safety channels is eliminated both now and in the future.” Comments of the Michigan State Police, Communications Division, 800 MHz NPRM, May 6, 2002, at p. 2 (electronic mail comment).

²² See *Avoiding Interference Between Public Safety Wireless Communications Systems and Commercial Wireless Communications Systems at 800 MHz—A Best Practices Guide (Best Practices Guide)*, December, 2000, prepared by a working group from the Association of Public-Safety Officials–International, Inc. (APCO), the Cellular Telecommunications and Internet Association (CTIA), Motorola, Inc., Nextel Communications, Inc., and the PSWN Program.

²³ See APCO Project 39, *Interference to Public Safety 800 MHz Radio Systems, Interim Report to the FCC*, December 24, 2001.

²⁴ See, e.g.; City of New York Comments, at p. 7; Comments of APCO, et. al. (*APCO Comments*), 800 MHz NPRM, at p. 10.

fully with the Commission, public safety frequency coordinators, and other bodies of experts that are familiar with these issues, and undertake the additional ameliorative “complementary” solutions that will serve to prevent and eliminate interference to public safety communications. For example, if the Commission determines that reorganization is not sufficient to address all sources of interference adequately, CMRS operators should supply additional spectrum to create guard bands.²⁵

10. Whatever decision the Commission ultimately makes, it is clear that licensees will not make changes to upgrade or invest in their networks until the Commission has decided how the 800 MHz band will be reorganized. “Regardless of the final relocation band, there is no evidence that viable equipment is available in the chosen band. In the event that radio equipment does not yet exist, the time necessary to develop such equipment, and associated features, will further delay the 800 MHz interference resolution schedule.”²⁶ Likewise, equipment standards cannot be accurately selected until a technical study is performed and a final plan is adopted. The Commission cannot establish appropriate signal strength, RF selectivity, front end overload limits, or other standards for equipment until it is clear what frequencies will be used and what other services and architectures will be positioned on adjacent bands. By taking time for this assessment now before committing resources to realign the 800 MHz band, the Commission will address long-term concerns for service reliability, subscriber growth, and the facilitation of emerging technologies that will provide valuable assets to the public safety community, as well as new solutions to market for commercial applications.

²⁵ 800 MHz NPRM at para. 23, citing Promoting Public Safety Communications—Realigning the 800 MHz Land Mobile Radio Band to Rectify Commercial Mobile Radio—Public Safety Interference and Allocate Additional Spectrum to Meet Critical Public Safety Needs (*Nextel White Paper*), November 21, 2001, at p. 33.

²⁶ Comments of the Chief Technology Officer, Government of the District of Columbia, 800 MHz NPRM, May 6, 2002, at p. 5.

III. PUBLIC SAFETY AGENCIES URGENTLY NEED ADDITIONAL SPECTRUM TO MEET MISSION-CRITICAL COMMUNICATIONS REQUIREMENTS

11. The PSWN Program reiterates its opinion that the public safety community's spectral resources are seriously overburdened, and additional spectrum is needed particularly in the channels below 512 MHz to meet the interoperability and day-to-day communication needs of many local, state, and tribal agencies. As an established baseline, the PSWN Program concurs with the estimated spectrum requirements set forth in the Public Safety Wireless Advisory Committee (PSWAC) Final Report of 1996 (*PSWAC Report*).²⁷ The *PSWAC Report* recommended the allocation of an additional 97.5 MHz of spectrum to support public safety communications needs through 2010.²⁸ Since then, the Commission has noted that additional spectrum requirements, such as support for the Homeland Security program, may be needed to address the challenges that confront public safety personnel in the new millennium.²⁹

12. While recent allocations made by the Commission have yielded an additional 24 MHz of spectrum in the 700 MHz band³⁰ and 50 MHz of spectrum in the 4.9 gigahertz (GHz) band,³¹ the current dedicated spectrum falls short by 23.5 MHz of the *PSWAC Report* estimates for public safety communications needs through the end of this decade. In many large jurisdictions, the 700 MHz public safety channels cannot be accessed until the digital television transition from analog channels,

²⁷ *PSWAC Report*, September 11, 1996, at p. 3.

²⁸ Statewide Wireless Network, SONY Comments at p. 3.

²⁹ See 800 MHz NPRM at para. 29.

³⁰ See The Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Agency Communications Requirements Through the Year 2010, WT Docket No. 96-86, First Report and Order and Third Notice of Proposed Rulemaking (*First R&O and Third NPRM*), 14 FCC Rcd. 152, September 29, 1998.

³¹ See In the Matter of the 4.9 GHz Band Transferred from Federal Government Use, *Second R&O and FNPRM*, WT Docket No. 00-32, rel. February 27, 2002.

still occupied by incumbent licensees, has been completed.³² “[F]ive years after its allocation, the 24 MHz of public safety spectrum in the 700 MHz band remains inaccessible in most major metropolitan areas because of television incumbency which brings the real shortfall [from the recommendations of the *PSWAC Report*] to almost 50 MHz. Our departments in and around New York City, Los Angeles, San Francisco, Miami, Boston, Baltimore, Dallas, and many other major cities have no access to the 700 MHz band under the current situation.”³³ It is further observed that the necessary communications equipment and infrastructure still need to be developed to communicate within this frequency band.³⁴ The PSWN Program therefore endorses the Digital Television Task Force initiative announced by the Commission to assess the transition and recommend policies to “promote the rapid recovery of broadcast spectrum for other purposes,”³⁵ and the establishment of an absolute deadline for access to the spectrum allocated for public safety use by Congress.³⁶

13. The recent allocation of the 4.9 GHz spectrum to public safety is only a beginning. It will be months or years before this spectrum can be used by many public safety agencies. The value and utility of spectrum in different bands varies dramatically. For example, the propagation characteristics of the 4.9 GHz band, contemplated for the use of high-speed data and video technologies, differ greatly from those of the 800 MHz band, which has been traditionally used for transmitting voice messages. Ultra high frequency (UHF) and very high frequency (VHF) systems,

³² *City of Ft. Lauderdale Comments* at p. 3; *DART Comments*, at p.3; *Comments of the State of Florida to the NPRM*, 800 MHz NPRM, para. 14; *City of Gainesville Comments* at p. 2.

³³ *IACP Comments* at p. 7.

³⁴ *DART Comments* at p. 3; *City of Gainesville Comments* at p. 2.

³⁵ See Public Notice, *FCC Chairman Michael Powell Announces Creation of FCC Digital Television Task Force*, October 11, 2001.

³⁶ See the Balanced Budget Act of 1997 (*BBA 97*) H.R. 2015, PL 105-33, Title III, Section 337, January 7, 1997; see also Second MO&O, WT Docket No. 96-86, at para. 24, and FN 78.

familiar alternatives to the 800 MHz band still widely used in many jurisdictions, are also used for voice transmissions, and the necessary infrastructure and equipment are already in place, making additional allocations in these bands immediately useful. This technology can help to address not only the public safety communications needs of the future, but of the present. The PSWN Program urges the Commission to provide additional spectrum allocations in all bands that will incorporate both common and emerging applications for public safety operations.

IV. THE COSTS INCURRED BY PUBLIC SAFETY AGENCIES IN THE REORGANIZATION OF THE 800 MHz BAND MUST BE REIMBURSED

14. No matter which solution the Commission chooses to eliminate interference, it will require the expenditure of millions of dollars for additional replacement equipment and retuning (where possible) of deployed equipment, as well as other associated costs that may include construction of additional base stations and antennas, license and frequency coordination fees, and more. The realignment of 800 MHz incumbents may create an onerous burden for many of the public safety agencies that will be affected by this transition, especially in rural and impoverished areas where public funds are modest and tax resources already subject to demands from competing programs.

15. Numerous parties submitting comments on this docket have stated that the expense associated with realignment of the 800 MHz band to remedy interference to public safety communications should not be paid by the public safety community.³⁷ Even if some public safety agencies could afford to replace their communications systems, the majority cannot. Many jurisdictions have made huge investments of capital to upgrade their public safety communications systems, spending

³⁷ See, e.g.; Comments of the National Rural Telecommunications Cooperative, 800 MHz NPRM, May 6, 2002, at p.4; City of Fort Lauderdale Comments at pp. 6-7; City of Baltimore Comments at para. 9.

millions of dollars to transition to the 800 MHz band, and must be compensated if a band reorganization plan requires retuning, replacement, and other expenditures before the systems need replacement.³⁸ “Public safety systems are not the root cause of the interference and have existed relatively interference free for two decades. It is only in recent years that the interference problems have arisen.”³⁹ Another public safety agency observed “[t]raditionally, the new user causing interference has been given a limited amount of time to resolve the interference problem, at their own expense.”⁴⁰ A number of parties encouraged the Commission to adhere to this policy, and to place the obligation for remedying interference on the parties that are responsible for causing it, and not on the public safety community.⁴¹ The PSWN Program reiterates that the public safety community is ill-equipped to fund a band reorganization initiative, and ask that the Commission ensure any costs incurred by public safety entities in implementing such a plan are paid by other sources.

16. The PSWN Program looks to the CMRS industry for leadership, innovation, and acceptance of the duty owed to law enforcement, fire, emergency medical, and other critical public safety personnel to take all measures necessary to resolve interference to these communications completely and permanently. The onus of responsibility is largely on commercial operations to respond quickly and decisively to eliminate interference. The consistent and conscientious use of engineering best practices, and the recommendations of rules, procedures, and guidelines will help ensure that daily

³⁸ See City of Baltimore Comments, para. 3–4; see also Comments of the National Ready Mixed Concrete Association, Re: 800 MHz Band NPRM, May 6, 2002, at p.1: “What about those communities who may have recently spent thousands of dollars in tax payer money to upgrade to a new system and purchase new equipment? Will they be required to change again?....Would those many public safety agencies operating on the VHF level even consider moving to a higher level?” *Id.*)

³⁹ IACP Comments at p. 4.

⁴⁰ Comments by the State of Arizona to the Notice of Proposed Rulemaking, 800 MHz NPRM, May 3, 2002, at p. 3.

⁴¹ See, e.g.; Comments of the United States Cellular Corporation, 800 MHz NPRM, May 6, 2002, pp. 6–7; City of Baltimore Comments, at para. 12; Comments of Amaren Corporation, 800 MHz NPRM, at p. 5.

business operations do not threaten critical safety-of-life communications and put the lives of citizens at any risk. CMRS licensees on the 800 MHz band must pledge their cooperation and resources to warrant that reliable public safety communications are a priority for everyone. The PSWN Program agrees with those contributors to this docket that assert that the Commission should encourage further analysis, studies, and efforts improve quality of service by the CMRS industry.⁴²

17. The expenses incurred from the reorganization of the 800 MHz band that are subject to payment by other funding sources must include retuning and replacement of equipment, any necessary construction costs for communications facilities, all necessary licensing fees and frequency coordination fees assessed, as well as legal and administrative costs. The PSWN Program agrees with those commenters that have proposed that the Commission should not impose the reorganization plan until external funding has been identified and guaranteed to compensate all public safety entities for any relocation costs from this initiative.⁴³ Where possible, innovative methods should be explored to supplement the expenses incurred from the contemplated reorganization. In one instance, E-911 taxes have been used by a jurisdiction to underwrite the costs of upgrading its public safety communications system.⁴⁴ Another contributor has suggested that the Commission earmark revenue from frequency auctions to help underwrite the costs of implementing an 800 MHz band

⁴² Comments of the Cellular Telecommunications and Internet Association, 800 MHz NPRM, May 6, 2002, at p. 8.

⁴³ City of New York Comments at p. 8. *See also* Comments of the American Mobile Telecommunications Association, Inc., 800 MHz NPRM, May 6, 2002, at para. 16: “[T]he Commission and the industry must develop a specific, viable plan for funding whatever changes are needed to alleviate the interference problem. Even the least expensive system retuning proposal is estimated to cost many hundreds of millions, perhaps billions, of dollars. The solutions that involve moving either public safety or other incumbents out of the 800 MHz band could cause those costs to double. To the extent that it is in the overall public interest to correct this problem, which it surely is, it may be appropriate to secure Congressional support for a funding mechanism that looks to the general public to support this vital effort.” *Id.*)

⁴⁴ Comments to WT Docket No. 02-55, of the San Diego County–Imperial County Regional Communications System, 800 MHz NPRM, at p. 4.

reorganization plan for public safety entities.⁴⁵ Still other comments recommend paying public safety expenses caused by the 800 MHz band reorganization with funds from the “Federal Government’s homeland security initiatives.”⁴⁶ In addition, as the Commission had previously noted, a reliable mechanism for collection and distribution of those reimbursed fees must be installed to ensure the public safety community is compensated to defray those costs.⁴⁷

V. THE 800 MHZ BAND REORGANIZATION MUST IMPLEMENTED CAREFULLY AND WITHOUT INTERRUPTION OF PUBLIC SAFETY COMMUNICATION SERVICES

18. Any reorganization of the 800 MHz band that takes place pursuant to the Commission’s orders must be performed seamlessly so that no gaps in communication capabilities, even temporary ones, are created. The PSWN Program emphatically agrees with many of the submitted comments addressing these concerns that “the 800 MHz band is home to a host of public safety and critical infrastructure industry users that cannot afford *any* system down-time for equipment modifications.”⁴⁸ The implementation of an 800 MHz band reorganization plan cannot allow any lapse in imperative public safety and other crucial communications at any time. Solutions that suggest otherwise are unthinkable, and cannot be contemplated.

19. Furthermore, “[w]e must be able to continue expanding and upgrading our systems during the multiyear process likely to be required to obtain and implement a Commission decision.”⁴⁹ Even if it could be accomplished in a single step, replacement of deployed equipment can logistically occur only through a gradual “phasing out” that presents a more affordable solution than complete

⁴⁵ Bergen P.D. Comments at p. 6.

⁴⁶ Comments of Blooston, Mordkofsky, Dickens, Duffy, and Prendergast, 800 MHz NPRM, May 6, 2002, at p. 8.

⁴⁷ See 800 MHz NPRM, at para. 45.

⁴⁸ Motorola Comments at p. 25.

⁴⁹ IAFC/IMSA Comments at p. 6.

substitution of all 800 MHz public safety radios and equipment simultaneously.⁵⁰ Another public safety participant in this docket asserted that “[t]he cutover to relocate to the 806 band will not be an ‘out of box’ experience and needs to be keenly considered by the FCC. If it is the decision of the commission to relocate public safety, regardless of band, it will require seamless transition on the many mission critical systems throughout the County. Many of the sites affected do not allow for side-by-side duplication of equipment due to lack of physical space.”⁵¹

20. Complete duplicate communications systems may have to be constructed in many cases to support continuous and uninterrupted public safety operations.⁵² A “hot cut,” transitioning public safety agencies and the many users that are served by public safety systems to “replacement” spectrum, will be necessitated as the retuning and replacement process is implemented, so that no interruption of vital services occurs. Critical infrastructure industries also will need to have alternative communications to prevent service outages.⁵³ As noted above, as a practical matter, there may simply not be room for these systems to co-exist simultaneously⁵⁴ within critical emergency vehicles such as ambulances, fire engines, and police vehicles. Schools, hospitals, and other essential functions will need to be included in the planning so that coverage is not suspended where it is most needed. Even if there is room for duplicate systems to be used, the costs may well prove to be prohibitive for many public safety agencies.

⁵⁰ City of Fort Lauderdale Comments pp. 7–9.

⁵¹ County of Maui Comments at p. 7.

⁵² *See, e.g.*; City of Gainesville Comments at p. 3; City Of New York Comments at p. 10.

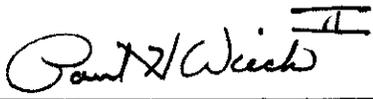
⁵³ Comments of the Duke Energy Corporation, 800 MHz NPRM, May 3, 2002 at para.10.

⁵⁴ City of New York Comments at p. 10, FN 26.

VI. CONCLUSION

21. The PSWN Program is grateful for the opportunity to provide reply comments addressing the reorganization of the 800 MHz band spectrum and welcomes the valuable contributions by the many parties that participated in this rulemaking. The PSWN Program will continue to advocate measures that will improve the reliability, efficiency, capacity, and interoperability of public safety communications, and present alternatives to the Commission that recommend policy and procedures that provide greater opportunity to address this priority. The PSWN Program is certain that the renewed emphasis by the Commission to enhance and improve public safety communications capabilities will serve our nation while achieving real and tangible benefits in the future.

Respectfully submitted,



Brigadier General Paul H. Wieck II
Iowa Army National Guard
Chair, PSWN Executive Committee
Spectrum Working Group



Steven Proctor
Executive Director,
Utah Communications Agency Network
Executive Vice-Chair,
PSWN Executive Committee

Before the
Federal Communications Commission
Washington, DC 20554

Certificate of Service

In the Matter of)
)
Improving Public Safety Communications in the)
800 MHz Band) WT Docket No. 02-55
)
Consolidating the 900 MHz Industrial/Land)
Transportation and Business Pool Channels)

I, Richard N. Allen, Senior Associate, Booz Allen Hamilton, 8283 Greensboro Drive, McLean, Virginia, 22102-3838, hereby certify that on this date I caused to be served, by first-class mail, postage prepaid (or by hand where noted) copies of the Public Safety Wireless Network Program's Reply Comments in response to the Notice of Proposed Rulemaking, *Improving Public Safety Communications in the 800 MHz Band [and] Consolidating the 900 MHz Industrial/Land Transportation Business Pools*, WT Docket No. 02-55, the original of which is filed herewith and upon the parties identified on the attached service list.

DATED at Fair Oaks, Virginia, this 7th day of August 2002.



Richard N. Allen

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