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

In the Matter of	)	
	)	
Service Rules for the 698-746, 747-762 and 777-792 MHz Bands	)	WT Docket No. 06-150
	)	
	)	
Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band	)	PS Docket No. 06-229

COMMENTS OF THE NATIONAL PUBLIC SAFETY TELECOMMUNICATIONS COUNCIL

The National Public Safety Telecommunications Council (NPSTC) submits these comments in response to the Commission's *Third Further Notice of Proposed Rulemaking (Third Further Notice*) regarding the 700 MHz D Block, the Public/Private Partnership and the Public Safety Broadband Licensee.[1] NPSTC supports strongly the Commission's pursuit of a nationwide broadband network that improves emergency response while serving commercial customers.

NPSTC's work in this proceeding has been directed towards promoting a nationwide broadband network able to serve the range of the nation's local and state public safety agencies and provide the means for agencies to communicate with one another. A network beyond the reach of most agencies will serve neither public nor private interests. NPSTC's views emanate from the experience of its participating organizations whose members deploy and operate local,

[1] In the Matter of the Service Rules for the 698-746, 747-762 and 777-792 MHz Bands and Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band, *Third Further Notice of Proposed Rulemaking*, WT Docket 06-150 and PS Docket No. 06-229, FCC 08-230 (released September 25, 2008).

county, tribal, statewide and regional public safety networks. Our positions seek to portray how the myriad of circumstances emergency service agencies confront affect the communications networks that dispatch response to the citizen facing an emergency.

What has emerged in this proceeding, and reflected in the direction of the Commission's decisions and proposals, is the challenge presented by the gap between public safety standards and those of commercial networks. The advocacy by private interests regarding the extent of their commitments, the failed D Block auction and the national financial circumstances contribute to the context by which the proposals in this *Third Notice of Proposed Rulemaking* are examined. NPSTC understands the Commission's direction that the shared public private network will be commercial in character to attract capable bidders to the auction and to deploy the network. Our objective has been, and still is, the development of a network more closely reflecting public safety requirements and built out to serve the geographic areas where public safety agencies respond. Yet the lack of any identified funding leads to a broadband network less than that originally envisioned. The reality the *Third Further Notice of Proposed Rulemaking* presents is a vision of the difficult balances the Commission must strike- the investment needed to purchase the spectrum and deploy a network must be consistent with a viable business plan.

NPSTC's comments seek to contribute positively to the Commission's effort to balance the interests and move the proceeding forward to deployment. We recommend that the Commission establish a specific means by which unserved areas are addressed. We present areas where commercial standards and other rules present risk that should be comprehended and where risk can be mitigated without threatening the investment and expertise needed. NPSTC commends the Commission for continuing to pursue what is the only realistic means to bring broadband communications to local and state emergency/public safety service agencies.

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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 has promoted implementation of the Public Safety Wireless

Advisory Committee (PSWAC) and the 700 MHz Public Safety National Coordination Committee (NCC) recommendations. NPSTC explores technologies and public policy involving public safety telecommunications, analyzes the ramifications of particular issues and submits comments to governmental bodies with the objective of furthering public safety telecommunications worldwide. NPSTC serves as a standing forum for the exchange of ideas and information for effective public safety telecommunications.

The following 15 organizations participate in NPSTC:

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

Several federal agencies are liaison members of NPSTC. These include the Department of Homeland Security (the Federal Emergency Management Agency, the Office of Emergency Communications, the Office 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.

Establishing an Auction Structure and Deploying a Shared Broadband Network

NPSTC supports strongly the Commission's proposal that the D Block licensee of 10 MHz of spectrum in the 700 MHz enter into a public/private partnership with the Public Safety Broadband Licensee (PSBL), holding the adjoining 10 MHz in the 700 MHz band. The partnership will construct a wireless broadband network that will operate over both D Block spectrum and public safety broadband spectrum and provide broadband services to both commercial users and public safety agencies. The Commission also established technical specifications and performance requirements for the network.

The Commission proposes to auction the D Block as a single, nationwide license; the licensee shall select the network's technology. It also presents an option to auction regional licenses. Whether the network is one licensee or a number of licensees will be determined by coverage and if coverage is identical, by the highest bid. The regional geographic areas would be comprised of 58 700 MHz Public Safety Regions (PSR) or zones and will employ one of two technology standards, LTE or WiMAX®. The PSR zones closely replicate the 700 MHz regional planning committee (RPC) regions that administer the 700 MHz public safety narrowband channels. There are 55 RPCs. The Commission provides for three additional PSRs/zones. If there is no successful national bid, the Commission will license the sold PSRs so long as PSRs encompassing 50% of the US population have bids. The reserve price for all PSRs is $750 million; the Commission may lower bid prices for regions not sold.

The Commission revises its build out and service requirements for the nationwide licensee or regional licensees. It sets criteria by which the hardening and robustness of the network can be evaluated. The proposed rules generally embrace the characteristics associated

with commercial networks as the standard to which the network will be constructed and maintained.

NPSTC urges the Commission to reexamine and reduce its proposed reserve price. As the Treasury's revenue objectives in the 700 MHz band have been met, the goal should be to attract financially capable participants to the auction process with the expertise and capital to deploy a network. While a high reserve price is one method,[2] the Commission should rely on other mechanisms to ensure a licensee's financial and technical integrity and commitment.

With regard to the technology choice by either a national or regional licensee, the Commission's rules should ensure the link between the network standards set forth in the rules and the actual performance of the licensee's technology.

NPSTC also thinks that the revisions present a greater likelihood that significant areas will be left without broadband service. We think that the auction and build out structure should be revised. The Commission should also establish a path to address unserved areas and that the PSBL be authorized to monitor build out progress and adherence to standards. The PSBL should be responsible to pursue with local agencies, any D Block Licensee and other interests solutions consistent with the objective of a nationwide broadband network.

National versus Regional Licenses

NPSTC, as most public safety organizations, believes that the single, nationwide license approach is the better path as it presents the most cost effective means to design and deploy a broadband network that achieves the dual goals of interoperability and connectivity across geographic regions on a nationwide basis. We have noted concern regarding the logistic and coordination challenges to integrate regional networks into a national interoperable structure.

[2] *Third Further Notice* at paragraph 290.

There is also the risk that regions will be unsold and unserved. Balanced against these concerns are wireless carriers who urge a regional format and indicate their commitment to participate in the auction and deploy networks is not possible on other than a regional basis.

In any regional approach, there is need for Commission rules to recognize and accommodate the significantly broader responsibilities of the PSBL if it must partner not with one D Block Licensee but several. Additional resources must be made available to the PSBL. Any credible execution of the PSBL's duties in negotiating a network sharing agreement and other operational parameters with the D block licensee(s) will require representing public safety's interests, which in turn requires that the PSBL have the resources to fund its own technical advisors and legal counsel.

There should also be a structure that, once a winning bidder for a region emerges from the auction and commences discussions with the PSBL, promotes negotiations in an efficient manner. Otherwise, the regional winners will leverage the circumstances to their advantage and the public safety's detriment. While the anti collusion rules should be upheld until the auction closes, a means must be found for the regional winners and PSBL to negotiate efficiently. NPSTC urges the Commission to require regional licensees to form a national governance structure with which the PSBL can negotiate, just as if a national licensee had been successful in the auction. This approach will require only one NSA and promotes the greatest possibility for nationwide interoperability.[3]

In this regard, one of the key issues in a regional format is how each regional licensee will connect its portion of the network with that of other regional licensees to preserve the

[3] See Comments of United States Cellular Corporation in response to the *Second Notice of Proposed Rulemaking* proposing that licensees be obligated to form a national committee as a single point of contact with the PSBL, at 21 (June 30, 2008).

nationwide character of the network. It should be the responsibility of the D Block winners to present a unified proposal and resolve such matters among themselves for the PSBL's consideration. To do otherwise will weaken and dilute the PSBL's ability to represent public safety.

Unsold Regions and Unserved Areas

The Commission recognizes the possibility that the regional approach may leave PSRs unserved as it proposes to award licenses once a threshold of 50% of the total US population is reached under the regional auction approach. There is also the likelihood that because of the reduction in the build-out obligations and that the overall population of a PSR is the metric, large areas in a licensed PSR will be unserved. Further, if the Commission moves forward with its proposal to significantly reduce the minimum bid for unsold regions once 50% of the population is covered by other bids, NPSTC believes there is an increased risk that entities without the necessary capital needed to pursue network build out and operation could win the licenses. NPSTC believes that the Commission should address these circumstances in its rules by enabling and encouraging local build out and other alternatives for areas in which coverage is not planned or is planned but is not being executed.

The 50% population limit has an inherent risk that there will be regions that will not be initially licensed. Examining the PSR population data contained in Appendixes B and F[4] shows that the number of regions containing significant population, perhaps as few as 11, will likely be sold and total more than 50% of the US population, indicating that the auction threshold for licensing will be readily obtained. With regard to licensed regions, the build out obligations are measured against PSR population and virtually assure unserved areas in both densely populated

[4] Appendixes B and F of the *Third Further Notice.*

and rural regions. The only means by which the 50% benchmark can be viewed as reasonable is if the Commission's rules present a path where unsold PSRs or unserved areas within a PSR can be built out.

With regard to build out and service mileposts, the Commission proposes to modify both the final and interim D Block performance requirements. It intends to reduce the final performance benchmark from 99.3 percent to three varying standards or tiers. It proposes to extend the license term and period for achieving the final benchmark from 10 to 15 years. The Commission determines that the 99.3 percent benchmark is not commercially feasible. The changes it proposes seek to encourage participation by a larger pool of bidders.[5]

In the Commission's proposal to revise the interim fourth and tenth year mileposts, a licensee will be obligated to provide signal coverage and offer service to at least 40 percent and 75 percent of the population in each PSR, respectively. The tiered approach after 15 years will be one of three benchmarks depending on the population density of the PSR: (1) for PSRs with a population density less than 100 people per square mile, the licensee will be required to provide signal coverage and offer service to at least 90 percent of the population; (2) for PSRs with a population density equal to or greater than 100 people per square mile and less than 500 people per square mile, the licensee will be required to provide signal coverage and offer service to at least 94 percent of the population; and (3) for PSRs with a population density equal to or greater than 500 people per square mile, the licensee will be required to provide signal coverage and offer service to at least 98 percent of the population.

While not entirely clear, the tier based format does not appear to be based on counties or other recognized jurisdictional boundaries but on the varying PSRs, which, as noted, parallel the

[5] *Third Further Notice p*aragraphs 149-150.

700 MHz regional planning committee structure. As a result, it is a substantial challenge to determine what towns and cities have a realistic opportunity to obtain broadband service. Approximately one half of the regional planning committee areas are states, most of which contain vast rural expanses. It also appears that only 7 PSRs will qualify for the ultimate 98% Tier 3 coverage.[6] This format does not correspond to how mobile phone use is measured. Historically, mobile phone use has been measured at the County level and more recently the Commission has moved to a Census Block approach which provides more insight with regard to the extent of service.[7] Also, the proposed metrics and mileposts do not parallel public safety service area responsibility, which reflects the continued tension between commercial and public safety standards.

NPSTC recommends that these metrics be clarified, even if the PSR population remains the source of the build out standard. It is important to comprehend that in most areas the D Block licensee obligation will be 90% service at the end of the license term. Because most PSRs are states, build out and service will likely be confined to the urban and suburban population centers, as they will provide the most economic approach for a commercial operator to meet its population build out requirements. Even PSRs containing substantial metropolitan and suburban population centers will face significant unserved areas.

For example, PSR 5, California-South, covers the land mass and population from the US Mexican border to the northernmost borders of San Luis Obispo, Kern, and San Bernardino

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[6] New York Metro, Puerto Rico, US Virgin Islands, American Samoa, Chicago Metro, Maryland, District of Columbia and Northern Virginia Metro, and Guam and the Northern Mariana Islands.

[7] The Commission has noted the benefit of the greater insight obtained with regard to deployment information than county wide formats and moved this year, in measuring mobile phone service availability, to analyze data based on the more granular Census Blocks format. Census Blocks encompasses not only individual cities and towns but rural area boundaries. Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, *Twelfth Report,* WT Docket 07-71, FCC 08-28 (February 4, 2008) (*Twelfth Report)* at paragraph 35.

counties in California. It encompasses San Luis Obispo, Kern, Santa Barbara, Ventura, Los Angeles, San Bernardino, Orange, Riverside, San Diego and Imperial counties. The population of PSR 5 is 20,637,512,[8] with a land area of approximately 56,512 square miles. Therefore, the overall average population density for PSR 5 is 365.2 people per square mile, ranging from 3,607 per square mile in Orange County to 34 per square mile in Imperial County. As reflected on Attachment A, PSR 5 presents the enormous population centers of Southern California but still includes areas encompassing some of the lowest population areas in the country.

Under the Commission's proposed rules, a D block licensee can meet the fourth year 40% benchmark in PSR 5 by servicing only a portion of Los Angeles County. The tenth year 75% benchmark can be reached by serving Los Angeles, Orange, Riverside, and San Bernardino counties, with the latter two counties having substantial geographic areas not served. Further, this benchmark can be met even if the broadband network has no presence at all in the remaining 6 counties. At the fifteenth year 94% benchmark, sizable geographic areas can be left unserved, with population totals nearly equating the population of San Luis Obispo, Santa Barbara, and Ventura counties.

PSR 41, Utah, has a population of 2,233,169. It has land area of 82,143 square miles for an average population density of 27.2 persons per square miles within 29 counties. Persons per square mile, by county, range from 1,219 for Salt Lake County to 0.9 per square mile for Garfield County. The fourth year 40% benchmark can be reached by serving only a portion of Salt Lake

[8] The source of the population information is the US Census Bureau, year 2000 Census. http://quickfacts.census.gov/qfd/states/06000.html

County. The tenth year mark can be reached by serving Salt Lake, Utah, Davis and Weber counties. The fifteen year 90% benchmark can be reached by serving only 10 of the 29 counties.[9]

Examining PSR 5 and PSR 41 in the context of the Commission's proposed auction and build out rules point to the need for the Commission to raise its requirements and establish a means for both the D Block licensee(s) and PSBL to address unserved areas. The 40% build out at the 4 year milepost is a nominal benchmark for either large metropolitan areas where a significant commercial user base can be reached, or for the rural regions. Other indicia support expanding the mileposts and providing incentives for additional build out. Approximately 99.8% of the total US population already has one or more operators (cellular, PCS or SMR) offering mobile telephone service in Census Blocks where they serve, reiterating what is commercially possible.[10]

NPSTC recommends the Commission reexamine its mileposts and benchmarks consistent with the proposal of the Public Safety Spectrum Trust (PSST), the PSBL. The PSST recommends an additional interim 7th year benchmark and a more responsive schedule to reach 90% population build out except in areas with extremely low population. Many areas would have an obligation to meet 75% population build out after seven years and 90% after 10 years. The Commission should also provide financial incentives to auction participants in exchange for more aggressive build out commitments. Such an approach would require the Commission to adopt rules that ensure promises of future build out commitments in exchange for auction discounts now are actually executed.

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[9] The source of the population information is the US Census Bureau, year 2000 Census. http://quickfacts.census.gov/qfd/states/49000.html

[10] *Twelfth Report* at paragraph 2, page 5.

As NPSTC's underlying concern remains the unserved areas that are likely to emerge from the proposed structure, we further recommend that the Commission's rules recognize this challenge and establish a direction to bring the network to unserved areas. We believe that the local build out alternative of the Commission's rules should be expanded and encouraged in regions that are not sold or regions where the D Block Licensee makes no commitment to provide service by a certain milepost, such as year number 4. It is also relevant in regions where, while the service milepost is met, significant areas remain without service. The Commission's rules should recognize that if commercial operators demonstrate no interest in a particular region, the PSBL should have flexibility to discuss with local agencies, other D Block licensees, and interested parties alternatives to obtain build out. NPSTC believes the PSBL with its broad representation across multiple public safety disciplines has the expertise to determine whether such alternatives would serve public safety. However, if necessary, such alternatives could be presented to the Commission for approval. The goal of a nationwide network is more likely served by a flexible approach with one entity, the PSBL, responsible for pursuing a resolution.

In addressing unsold regions, NPSTC cautions against the RFP process proposed. It is unwieldy and vague and unlikely to produce an entity with the expertise and capital needed to deploy a system. In essence, it will be the Commission in search of a licensee. Instead, the focus should be on market factors contributing to a region's failure to be sold. The regional license approach has the benefit of attracting interests with expertise and capital that would not participate in a solely national auction. The premise of their participation or non-participation depends upon whether the investment required is too large, the information too limited or the risks of the particular area, including the competitive environment, too high, all factors that enter

into investment decisions. These factors will not suddenly be ameliorated during an RFP process.

NPSTC recommends that the Commission examine these factors in greater detail, even if a review continues post auction. The objective is simply not to license an area, but to deploy a network that is operated and maintained in a manner that meets public safety's broadband needs. The Commission should commence with the premise that if the commercial market demonstrates no interest in a particular region, the PSBL should have the responsibility and authority to explore how the network can be deployed to unserved areas to best meet public safety needs.

The Commission references Alcatel-Lucent proposed changes to the local build-out rules that would create an additional option allowing a public safety entity to enter a spectrum lease agreement with the PSBL and, at its own expense, build out a 700 MHz broadband network in any area where the public-private broadband system has not yet been built. If the D Block licensee seeks to build out and operate the public-private network in the area, it would compensate the public safety entity based upon "commercially reasonable" terms, for the value of the network to be integrated into the public-private network.[11]

NPSTC agrees with the Commission's reluctance to alter its rules in areas where there is a build out commitment and demonstration by the D Block licensee(s) that such commitments are actually being pursued. In areas where the D Block licensee has made a near term build out commitment, to allow a separate deployment on the premise that all will converge in the end presents real potential for diluting the nationwide network. The shared wireless network will not be realized through deployment of a multitude of discrete systems.[12] The range of unanticipated

[11] *Third Further Notice* at paragraph 296.

[12] Comments of the State of California at 7 in response to the *Second Notice of Proposed Rulemaking*.

variables is wide and integrating discrete systems will not be without expense or challenge. The Commission should make clear the standards to be adhered to and the limits of any compensation. It should direct its focus to areas that will be unserved for a considerable amount of time, absent pursuit of alternative build out provisions.

Commercial Standards- Reliability, Robustness and Hardening

The Commission notes the tension between the essential requirements of public safety communications systems while providing a level of commercial viability sufficient to encourage investor participation and to permit long-term commercial success in a competitive environment.[13] It pursues something more than a commercial network,[14] yet makes substantial changes to the current technical specification and performance requirements to ease the burden on the D Block licensee and make the endeavor more commercially viable.[15]

The bias toward commercial standards is reflected in several areas. The reduction in build out responsibilities emanates from decreasing the milepost percentage that must be obtained, altering the metrics by which build out is evaluated and extending the time periods to complete the build out. Adjustments are also made with regard to the technical specifications and performance requirements of the network- its reliability, hardening and robustness.

Many of the elements contained in the proposed rules in Appendix C of the *Third Further Notice* flow from NPSTC's Statement of Requirements.[16] Significantly, however, throughout the *Third Further Notice* and its proposed rules, are numerous areas where the D Block licensee can rely upon the assertion that what it intends to provide, or has provided, is consistent with commercial standards. There will be circumstances where the requirements of these standards and/or whether the D Block licensee has actually met such requirements will not be clear. As the standards are the foundation upon which public safety will base its reliance on the network, NPSTC recommends that the Commission establish a formal process for resolution of such

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[13] *Third Further Notice* at paragraph 55.

[14] *Third Further Notice* at paragraph 54

[15] *Third Further Notice* at paragraph 65.

[16] NPSTC Comments to the *Second Further Notice of Proposed Rulemaking* commencing at page 25.

disputes. The D Block Licensee(s) should have the responsibility to demonstrate that its actions reflect commercial standards in such circumstances.

An example of where disputes may arise is public safety's requirement to communicate one-to-many. This capability must remain and cannot be hindered by the broadband network.[17] Broadcast communications allow public safety to notify all personnel for potential threats at the same time. Current deployed cellular technologies such as EVDO and HSPA support broadcast communication within their standards; however the feature is not available because of its limited commercial application. As the Commission is mandating either LTE or WiMAX as potential air interfaces, it is important that these technologies support public safety broadcast communications capability.

The Commission states that the D Block licensee(s) shall use "commercially reasonable" efforts to provide network availability with the target of 99.9 percent network availability. The proposed rules provide that the D block licensee has to equip only a portion of the sites with backup power. Sites designated as "critical" will be required to have battery backup power of 8 hours and generators with a fuel supply sufficient to operate the generators for at least 48 hours. The D Block licensee(s) must make reasonable efforts to provide and maintain a fuel supply at "critical" sites above this requirement sufficient for a minimum of 5 days.

The Commission's rules should recognize that the ability to provide backup power and fuel supply may well be constrained by the location of the site and its owner, and the ongoing circumstances of a major event (earthquake, fire, etc). In many circumstances, the site owner will be neither the D Block licensee nor a public safety agency. Additionally, from a logistical support standpoint, the initial cost difference between providing 48 hours fuel supply and a 5 day

[17] NPSTC Comments to the *Second Further Notice of Proposed Rulemaking* at pages 42 – 43.

supply is incremental; yet having a 5 day fuel supply provides public safety a substantial advantage in an emergency, especially an emergency such as an earthquake or a hurricane where access to multiple communications sites is adversely impacted by the events. In these circumstances and where the local agency seeks to expand geographic or in-building coverage, it is vital to expand the options of local agencies to enhance the reliability, robustness and hardening requirements for the network. The Commission should allow local agencies to provide more than commercial standards and place responsibility with the PSBL to pursue such upgrades with the D Block Licensee(s).

The Public Safety Broadband Licensee

Officers and Executive Committee

The Commission concludes that the PSBL's positions of Chairman of the Board and Chief Executive Officer (CEO) must be separate individuals. A CEO cannot have served on the PSBL executive committee during the period three years prior to appointment. The Commission also requires the PSST board to elect a new executive committee. No current executive committee member may be re-elected to the same position. Executive Committee members are limited to a term of 2 years and may not serve consecutive terms in the same position. The PSST must elect a new Chairman, Vice-Chairman, and Secretary/Treasurer and separate the Chairman/CEO positions within 30 days of the Commission's Order. A new CEO may not be appointed until the D Block licensee(s) have made funding available.

NPSTC members were unable to reach consensus on the Commission's proposals regarding elections. Many are concerned with the potential negative impact these changes may have at this time while others view this as a positive step forward.

Funding

The Commission proposes that funding for the PSBL's operational and administrative costs come through the annual payment to the PSBL of one percent of the amount of the D Block licensee's gross winning bid, but not to exceed the sum of $5 million per year.[18] NPSTC urges the Commission to reexamine this $5 million cap and rely on the PSST estimation of its costs and expenses. There is a particular challenge with regard to ensuring that the PSBL is adequately funded prior to the D Block auction. An underfunded PSBL will accrue significant detriment to public safety interests and disrupt considerably its ability to promote access by all public safety users.

PSBL Role

The Commission concludes that the D Block Licensee(s) will have exclusive responsibility for all traditional network service provider responsibilities. It states that the PSBL will be responsible for priority access, service levels and related requirements established through the network sharing agreement between the D Block Licensee(s). The Commission believes that the PSBL can perform its "function" through review of monthly usage reports ignoring the active management requirements of 47 C.F.R. § 1.9010(b)(1). It believes that the PSBL can effectively carry out its monitoring role without requiring the D Block licensee to support real-time monitoring by the PSBL or to provide the PSBL with access rights to the D Block licensee's network operating centers and/or data centers.[19]

The Commission's proposal reduces the PSBL to a passive role of reviewing reports of events and operations that have passed. The PSBL cannot meet its responsibility as representative of public safety interests and advocate the needs of public safety without real time

[18] *Third Further Notice* at paragraph 374.

[19] *Third Further Notice* at paragraph 200.

participation. The Commission is wrong in diluting the PSBL to such a status. It ignores a critical PSBL responsibility to coordinate agency activities so that the D Block can look to one source. This responsibility cannot be performed without real time access to the network and its activities. NPSTC urges the Commission to reconsider its proposal and provide the PSBL access and authority to coordinate the public safety and private interests on a real time basis.

Public Safety Emergency Priority Access to D Block Capacity

The Commission proposes to change its rules regarding access by public safety agencies to D Block spectrum capacity in an emergency. It reduces the access from preemption to priority status. It defines emergency to encompass eight particular circumstances and establishes two different tiers of priority access dependent on the defined emergency.[20] The Commission premises these changes on ensuring that the D Block licensee is able to offer viable services competitive with other commercial mobile services. The Commission determined that commercial viability could be adversely impacted if users of a D Block licensee's commercial services perceive that their service may be preempted or unavailable at the times when they most need to use it, while competing providers offer uninterrupted services.[21]

NPSTC understands the premise behind promoting the success of the commercial D Block licensee(s). We do suggest, and believe that most commercial customers and the public will agree (if not endorse), another premise - emergency service communications responding to a catastrophic incident should be first in line to access a resource owned by the government - the radio spectrum. NPSTC recommends that the Commission clarify the inclusion of local

[20] One tier provides public safety priority to only 20% of the commercial capacity; the other to 40%. For both tiers, the process set forth in the proposal envisions that the applicable D block licensee(s) and the PSBL would agree that a given incident qualifies as an emergency and that this qualification must be renewed every 24 hours. If agreement cannot be reached, the PSBL must enlist the Commission's Defense Commissioner to determine whether the incident qualifies as an emergency for purposes of triggering public safety priority access.

[21] *Third Further Notice* at paragraphs 86-90, Proposed Rules at 90.1407(e).

emergencies and the ability of the PSBL to establish procedures to trigger access in such circumstances. Three provisions of proposed section 90.1407(e) of the Commission's rules can be construed to address local circumstances. These are a natural disaster, a manmade disaster or terrorist act of substantial nature and the occurrence of a power outage of significant duration and scope. It is unclear whether priority access is available to local agencies and how it would be engaged.

It is important that emergencies such as large wild fires in the West, the I-35W bridge collapse in Minneapolis, two Los Angeles area train collisions and those incidents that draw far less national attention yet involve the dispatch of personnel and resources from adjacent, regional and state agencies are covered. In these types of incidents it is crucial to shelter the affected population immediately. Video from the air, which consumes significant network capacity, will help determine the scope of the area endangered, how swiftly the incident is spreading, where evacuation can be directed and where resources should be dispatched.

In these circumstances both communications capacity and time are at a premium. Waiting for an official declaration that such incidents constitute an emergency that warrants priority access simply introduces too much unnecessary delay in taking action, such that a major incident may be nearly resolved before the added network capacity becomes available to public safety. It should be clear that the PSBL may rely on the judgment of local officials in charge of the incident. These individuals are responsible for determining priorities of substantial magnitude, including those impacting commercial demands and expectations. Their discretion should be recognized with regard to access to the D Block.

Emergency incidents such as wildfires, earthquakes and tornados start suddenly with a need for a network with sufficient capacity that is available immediately. This need is at odds

with the proposed rules for requesting priority access to D Block spectrum by local public safety agencies. One real example illustrating the challenge is the 2003 *Old Fire* in San Bernardino County, California.

The *Old Fire* was a wildfire that started on October 25, 2003 at the base of the San Bernardino Mountains in the national forest. It was but one of at least a dozen wildfires burning in Southern California at this time (including the Cedar Fire, the largest fire in California history). Fanned by Santa Ana winds, the fire burned 91,281 acres (369.4 km²), destroyed 993 homes and caused 6 deaths. The fire threatened the cities of San Bernardino and Highland and the mountain resort communities of Cedar Glen, Crestline, Running Springs and Lake Arrowhead. The evacuation of upwards of 80,000 from their homes was necessary.

The fire started at 9:16 am on a Saturday. It quickly burned south and also spread east and west pushed by the strong winds. The fire quickly began burning houses in San Bernardino City requiring evacuations as fire fighters struggled to keep up with the advancing fire. Evacuations were conducted by the San Bernardino Police department with support from the San Bernardino Sheriff's department. Also involved were local public works agencies, the California Department of Transportation and the California Highway Patrol. These agencies were critical to routing traffic, blocking ingress and ensuring evacuation routes remained open and safe. By 3:00 PM the fire had burned 7,000 acres; and by 10:00 PM it had burned 10,000 acres. At this point the mountain resort communities had lost commercial power and were facing evacuation of approximately 70,000 residents. At 7:00 AM on Sunday morning, the Governor declared San Bernardino County a disaster area.

Under the Commission's proposed rules, the local agencies would not have been allowed priority access until the Governor declared a State of Emergency nearly 22 hours into the

incident, long after the initial heavy load of data needed to better respond to this incident had passed. Broadband service will bring many critical services that will help ensure the safety of the emergency responders and citizens affected. Rapid video from helicopters or other airborne platforms direct to the Incident Commander provide critical information to enable decisions on where and how to distribute resources to protect lives and property. The ability to send maps directly to Sheriff Deputies or to firefighting personnel unfamiliar with the streets will expedite response. These and other applications can require transport of large amounts of data with short response times beyond the bandwidth available solely in the public safety portion of the network.

Additionally, over this past year several weather related incidents have struck the Midwest. Severe snow and ice storms leave traditional first responder agencies paralyzed without the assistance provided by critical infrastructure agencies. During recent events various Departments of Transportation have provided heavy equipment with high ground clearance providing emergency response personnel access to incidents. Fire engines, while being large and heavy do not handle ice and snow well and depend on critical infrastructure to proceed in front of them opening access to burning buildings. Rural departments comprised mainly of volunteers require critical infrastructure to open roads before they are able to reach their stations.

During the heavy flooding it was the heavy equipment of critical infrastructure which brought in sand and other supplies to reinforce levees and build sandbag dikes to protect life and property. As flood waters receded, it was critical infrastructure engineers that inspected roads, bridges and overpasses to ensure search and rescue personnel were not in imminent danger from failed roadways or structures. Access to adequate broadband capacity will enable effective decisions and response on a real time basis.

A fast simple process for local agencies is needed to obtain priority access in the D Block. The inflexible and complicated approach proposed to request priority access will not work for these types of incidents. NPSTC proposes instead that the PSBL be allowed to negotiate a simple method for local agencies to obtain priority access for incidents that affect large numbers of citizens and arise suddenly. Importantly, the Commission should permit the use of real-time automated network management tools that monitor overall loading and determine the need for prioritization based upon real-time network activity.

In this context, NPSTC also recommends that the issue of network priority not be addressed as one of spectrum partitioning. The most efficient use of broadband spectrum is to have the widest pipe available to all users, and regulate availability to commercial users when priority is implemented by "throttling" back availability to specified levels.

NPSTC also urges the Commission to examine and clarify how priority access will work in the blended network.[22] Combining the D Block and PSBL spectrum into a single resource is both cost and spectrum efficient. When both public safety and commercial users saturate and overload the "access channel" what remains is a significant challenge in how overload mechanisms will engage to allow public safety access to the network. Past emergency event situations involving masses of people in the same geographic area demonstrate a real barrier when public safety tries to initially access the network. The priority access structure proposed only accounts for circumstances once the user is connected to the network. Left unanswered is the difficult technical challenge of providing initial access in a blended network.

[22] *Third Further Notice of Proposed Rulemaking* at paragraphs 79 and 80

Service Rates for Public Safety Users

In two areas the Commission proposes to establish specific rates for public safety users. The first proposes a fee of $7.50 per month "per user (meaning per public safety officer/individual)" for gateway IP based access to the shared broadband network. The Commission reasons it is important to ensure that the shared wireless broadband network have the technical capability to support interconnection with public safety operations via bridges and/or gateways to public safety frequency bands other than the 700 MHz public safety spectrum broadband allocation.[23]

The second proposal is the Commission's intention to establish a fixed nationwide service fee that the D Block licensee may charge to public safety users. The Commission surveyed broadband service rates charged by carriers for government customers. Based on its survey, the Commission determined that the rate should be $48.50 per user per month. It proposes that $48.50 serve as a per user, per month rate for all public safety users for a four year period.

The Commission states it is important to provide potential bidders and public safety users with a fee structure that is stable and predictable, notwithstanding the difficulty of determining such fees given the limited information available. It relates that commercial participants need sufficient pre-auction information regarding fees to help them evaluate the financial prospects of providing both a commercial and public safety-oriented service. It states that public safety agencies need specificity regarding prospective fees to ensure their timely commitment to use the public safety spectrum and to enable them to plan and budget for the use of the new network.[24]

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[23] *Third Further Notice* at paragraph 114.

[24] *Third Further Notice* at paragraph 124.

NPSTC urges the Commission to reconsider its proposed rules for gateway and general access fees to the network. The foundation of a reasoned rate determination process is a relationship between the costs and the services provided. We do not believe either proposal can withstand scrutiny in this regard. Any rate structure must relate to the incremental costs of the network attributed to public safety use and be designed to help promote access by all public safety agencies. Without these objectives at the forefront the proposed rates will not provide commercial interests with certainty or public safety agencies with stability. The proposals impose an inflexible structure on the D Block licensee with regard to what services it can offer. Such an inflexible structure also will likely place services out of reach of most agencies. With only one rate option, the D block licensee has no ability to provide alternatives for those small public safety departments that may not always need the same level of capacity required by a large department in a core metro center.

D Block licensee ability to provide gateway access to public safety users in other spectrum bands will contribute to the objective of connecting public safety agencies. It is also important that the D Block licensee be able to recoup its costs of designing and deploying gateway access. Yet the proposal ignores that many agencies have advanced and multiple trunking systems and numerous channels to be integrated, all of which contribute to additional costs. Additionally, the monthly charge is applicable per user, whereas many emergency vehicles and officers have more than one device. Devices have varying capacities, all of which are relevant to the D Block licensee's costs.

The proposal ignores the range of uses a gateway serves. These involve the agency monitoring a channel in the event its mutual aid responsibilities are called upon, or an agency which integrates its entire communications system with the D Block network. Both have widely

varying requirements and capacity requirements. Additionally, the Commission should recognize the difference in cost to the network between an agency simply seeking a connection to the gateway and one that uses the network. NPSTC questions the relevance of the Commission's survey of carrier add-on services, such as push to talk, in determining the $7.50 per month fee. The relation to gateway costs seems tenuous.

The proposed charge ignores the underlying premise of gateway access. Gateways are deployed today in most respects as an incentive to interoperability relationships. Agencies called upon to assist in an incident outside their jurisdiction monitor circumstances to have as much information as possible. An agency will have its own costs in connecting and operating its access to the gateway. To impose an additional fee goes in the wrong direction. NPSTC believes that the costs of the gateway should be spread across the costs of provisioning the D Block public safety network.

With regard to the $48.50 general network access rate, the Commission has determined that the rate will serve the private interest need to predict revenue. The Commission's survey of current rates offered by carriers to government agencies is useful only if these rates have some parallel to the services to be provided to local and state public safety agencies. There appears little if any relationship between the rates compiled and the level of services envisioned by the Commission's proposed rules in section 90.1405. What results is an inflexible standard that will neither recoup the costs and rate of return for the D Block licensee nor attract public safety users.

In establishing the $48.50 rate, the Commission acknowledges that some of the plans contain restrictions on customers and apply per device and not per user. Verizon Wireless' plan precludes streaming video. Sprint Nextel precludes servers that provide what is described but

not defined as "continuous heavy traffic or data sessions."[25] These restrictions contradict proposed rule section 90.1405 which details the services the shared network is to provide. The proposed rate does not address satellite usage fees as the contracts used to determine an average fee are drawn from terrestrial based services.

Reference to the General Service Administration's (GSA) telecommunications carrier agreements as support for the rate, and which the Commission intends to be the ultimate fee schedule of commercial spectrum for government users, ignores that the GSA's requirements are not based on the needs of local and state emergency service agencies. Additionally, there are local and state agencies that use commercial networks today. Their support of the Commission's objective is not based on another competitor with similar services and prices, but one that can provide the services current commercial options lack.

The underlying premise that the D Block Licensee(s) and the PSBL formulate and implement a strategy capable of serving both remains vital and sound. This includes setting rates. It is the means for the services in proposed rule section 90.1405 to be deployed with the D Block licensee recouping its costs while attracting public safety agencies. An inflexible rate, detached from the requirements, and will serve neither the D Block licensee(s) nor public safety. A flexible structure encompassing the concept of maximum rates that promote access by all users should be pursued. The Commission should retain its authority to review and if necessary establish both the parameters and a reasonable rate as such relates to a defined service.

Critical Infrastructure Industry Access and Related Issues

In the *Third Report Notice of Proposed Rulemaking*, the Commission determines, based

[25] *Third Further Notice* at paragraphs 255-257 at footnote 771.

upon its legal analysis of sections 337(a)(1) and (f) of the Communications Act of 1934, as amended, that critical infrastructure industries (CII) may not obtain access through the PSBL to the public safety broadband network. The Commission reasons that CII entities do not have their principal purpose, as required by the Communications Act, of protecting the safety of life, health or property.[26]

The breadth of the Commission's decision creates significant barriers to emergency response with regard to government agencies, private entities that assist these agencies and public utilities that are vital to resolving an incident expeditiously. It departs from the historic eligibility criteria contained in section 90.20 of the Commission's rules that has served to promote connectivity among responding agencies. It appears to contradict the Commission's previous policy addressing non-governmental organization access to the 700 MHz band.[27] NPSTC urges the Commission to reexamine its determination in the context of this proceeding's objective to improve emergency response.

The Commission's decision appears to challenge agencies that have core safety of life, health or property responsibilities but have either additional responsibilities outside of this sphere or engage private entities to assist in core responsibilities. Several organizations representing these agencies are members of the PSBL's Board of Directors. Health departments have core safety attributes yet are assisted by private entities in administrating vital statistics and other data bases crucial to determining response. Transportation and public works agencies have core responsibilities to construct and maintain safe infrastructure and are a vital part to effective

[26] Paragraph 324 of the *Third Further Notice*.

[27] In the Matter of the Development of Operational. Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Agency Communication Requirements through the Year 2010, Establishing Rules and Requirements for Priority Access Service, *First Report and Order and Third Notice of Proposed Rulemaking*, WT Docket No. 96-86, FCC 98-191 at paragraphs 50-58.

emergency response at an incident. Reliance upon private sector entities to meet responsibilities is pervasive. Hospitals and incident commanders rely on private ambulance services to care and transport the injured. While these entities, public and private, can qualify under section 90.20 of the Commission's current rules, the *Third Further Notice* creates significant question whether they can continue in the 700 MHz spectrum.

More specifically, in many areas the only agency authorized to close roads or intersections, or establish evacuation routes, are departments of transportation or public works agencies. This responsibility was critical in the 2003 San Bernardino County *Old Fire* discussed at pages 20-22.

Many transit companies called upon by incident commanders and emergency operations centers to evacuate people from danger areas are owned and operated by governmental agencies while still others are private operations under contract to state and local government. Many utility systems comprising gas, water, and electricity are similarly divided between public and private ownership which need to respond as an emergency responder when required. Government forestry agencies must be able to send or receive instructions to aerial crews or fire personnel. Virtually all of these agencies rely on private companies whose primary purpose is not the protection of life, health, or property.

Private fire fighters and those who provide their transport are crucial to wild fires. Heavy equipment contractors must be able to create fire lanes, bring in material to reinforce levees and flood walls, clear highway accident scenes, or remove snow, ice and other obstructions. Government transit agencies must be able to communicate with their private carriers. As to public utilities, while there can be a determination that a private utility's principal purpose is not protecting the safety of life, health or property, the ability to save a life, care for the injured or

extinguish a fire cannot commence until the utility acts to turn off or divert power or water. From public safety's view, the principal purpose of the CII entity at an incident is the safety of life, health or property. All these entities are integral to effective emergency response.

There must be a means to instill in the public private partnership the crucial ability for public safety agencies to communicate among themselves and with those in the private sector integral to emergency response who seek to become part of the network. To do otherwise means a network distant from the realities of emergency response that requires coordination and communication among many public and private entities. The objective must remain to improve emergency response among all who are integral to the response, a perspective captured by section 90.20 of the Commission's rules. It was the National Commission on Terrorist Acts, in embracing Arlington County's after action report of the Pentagon September 11, 2001 attack, that stated the great challenge and the risk of bifurcated communications:

> ...there were significant problems with both self dispatching and communications. "Organizations, response units, and individuals proceeding on their own initiative directly to an incident site, without the knowledge and permission of the host jurisdiction and the Incident Commander, complicate the exercise of command, increase the risk faced by the bonafide responders, and exacerbate the challenge of accountability." Almost all aspects of communications continue to be problematic, from the initial notification to tactical operations. Cellular telephones were of little value… Radio channels were initially saturated… It is a fair inference, given the differing situations in New York City and Northern Virginia, that the problems in command, control and communications that occurred at both sites will likely recur in any emergency of similar scale. The task looking forward is to enable to first responders to respond in a coordinated manner with the greater awareness of the situation. [28]

Satellite Communications

NPSTC agrees with the Commission's determination that the D Block licensee cannot satisfy its performance benchmarks through the provision of non-terrestrial services such as mobile satellite service (MSS). MSS and other non-terrestrial technologies cannot currently provide broadband capabilities comparable to those of a broadband terrestrial network.[29]

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[28] The 9/11 Commission Report, National Commission on Terrorist Acts, Section 9 at page 315 (2004).

[29] *Third Further Notice* at paragraph 153.

Satellite service does present opportunity to provide service that would otherwise be unavailable and has the potential to make a significant contribution to public safety. The details of its use, however, should be fully comprehended before substantial investment is made by the D Block Licensee, the PSBL and users of the network.

Several areas should be examined. These include its lack of in-building coverage. Another area is cost. There should be clarification of how it will be used and its cost. Additional work should examine when and how, handoff or network connection between the D Block licensee and the satellite providers will emerge. A subsidiary question is how satellite service is integrated among several D Block licensees to ensure interoperability as the Commission has not proposed to specify any particular satellite service.

As the degree of satellite service becomes better understood, NPSTC believes that access to satellite communications should be included in the basic network monthly access fee. The goal is nationwide interoperability. Agencies in rural areas should not be penalized. The public private partnership should be responsible for entering into agreements with satellite service vendors for nationwide service and that cost should be divided among all agencies using the broadband network. For example, wildfire control is vitally important to public safety, but is most prevalent in rural areas. These responders should have access to the broadband network at the same rate as responders in urban and rural environments. Further, the public private partnership should have a deployable cache of 700 MHz broadband terrestrial base stations that can also communicate via broadband satellite and can be deployed to rural areas when needed. This will enable broadband portable or mobile units without direct access to satellite networks to connect to such service through a deployable terrestrial 700 MHz broadband base station. All of these factors motivate the need to examine and detail satellite use further.

Narrowband Relocation

In the *Second Report and Order*,[30] the Commission addressed the responsibility to relocate agencies already operating on the 700 MHz band narrowband channels. It established parameters for the PSBL to implement the process. Narrowband operations in channels 63 and 68 and the upper 1 megahertz of channels 64 and 69 were to be cleared no later than the DTV transition completion in February 2009. It also provided that the D Block licensee would pay for the relocations, but capped the cost reimbursements at $10 million.

In the *Third Notice of Proposed Rulemaking*, the Commission proposes to cap the narrowband relocation reimbursement costs at $27 million. It states that the amount should be more than sufficient to ensure that all public safety entities are fully reimbursed for their costs for relocating their narrowband systems to the consolidated narrowband channels. It does state that the amount represents its estimate of the aggregate hard costs directly associated with modifications necessary to implement the relocation of base stations, mobiles and portables, and not for any unrelated improvements.[31] The Commission intends to extend the narrowband relocation deadline to twelve months from the date upon which narrowband relocation funding is

[30] In the Matter of the Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, WT Docket No. 06-150, Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones, WT Docket No. 01-309, Biennial Regulatory Review – Amendment of Parts 1, 22, 24, 27, and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services, WT Docket 03-264, Former Nextel Communications, Inc. Upper 700 MHz Guard Band Licenses and Revisions to Part 27 of the Commission's Rules, WT Docket No. 06-169, Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band, PS Docket No. 06-229, Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010, WT Docket No. 96-86, Declaratory Ruling on Reporting Requirement under Commission's Part 1 Anti-Collusion Rule, WT Docket No. 07-166, *Second Report and Order*, 22 FCC Rcd 15289 (2007) (*Second Report and Order*).

[31] *Third Further Notice* at paragraph 445 and footnote 936.

made available by the D Block licensee(s).[32]

NPSTC urges the Commission to examine the information the PSST is submitting addressing narrowband relocation costs. In pursuing its responsibility to administer the narrowband relocation, the PSST has compiled projected costs that approach $75 million. Particular review should be directed to vehicle repeaters where units were built to agency specifications and are not readily adjusted. As the universe of agencies subject to relocation is known, NPSTC recommends that the Commission solicit each agency's understanding of what it will cost to relocate. Any ultimate amount should encompass all costs related to the relocation - equipment, transactional and administrative.

Conclusion

NPSTC supports strongly the Commission's objective to provide a nationwide 700 MHz broadband network to all public safety agencies through a public private partnership. NPSTC recommends that the Commission's proposal be amended to address explicitly unserved areas. The Commission policies and rules should have as their core purpose promoting access by all agencies enhancing emergency response communications.

Respectfully submitted,

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[32] *Third Notice of Proposed Rulemaking* at paragraph 437.

Attachment A

Set forth below is the approximate geographic area of Public Safety Region (PSR) 5. PSR 5 encompasses the California counties of San Luis Obispo, Kern, Santa Barbara, Ventura, Los Angeles, San Bernardino, Orange, Riverside, San Diego and Imperial counties. The shaded areas indicate population centers. (Source - US Census Bureau)

Attachment B

Set forth below is the geographic area and 29 county demarcations of PSR 41, Utah. (Source - US Census Bureau). The shaded areas indicate population centers.