

Before the  
Department of Commerce  
National Telecommunications and Information Administration  
Washington, D.C. 20230

In the Matter of	)	
	)	
Development of the State and Local	)	Docket No: 120509050-1050-01
Implementation Grant Program for	)	
The Nationwide Public Safety	)	
Broadband Network	)	

**COMMENTS OF SPRINT NEXTEL CORPORATION**

**I. INTRODUCTION AND SUMMARY**

Sprint Nextel Corporation (“Sprint”) respectfully submits these comments in response to the May 16, 2012 Request for Information (“RFI”) on the development of the State and Local Implementation Grant Program (“Grant Program”) established pursuant to the Middle Class Tax Relief and Job Creation Act of 2012 (“the Act”). The State and Local Implementation Grant Program seeks to assist State and local governments in identifying, planning and implementing the most efficient and cost-effective ways to use and integrate infrastructure, equipment, and other architecture of the Nationwide Public Safety Broadband Network (“NPSBN”).

Sprint has a unique perspective regarding many of the challenges that will be faced in this process of integrating State and local infrastructure, equipment, and resources with the nationwide public safety network. Having worked with public safety entities and other incumbents to relocate nearly half of the total pool of currently available mobile broadband spectrum, Sprint understands the importance of engaging with stakeholders at multiple levels to implement national projects with large scope, involving public safety agencies and critical infrastructure.

The Grant Program’s success will in large part depend upon empowering State and local officials to work collaboratively, cost-effectively, and transparently to identify, plan, and implement integration of infrastructure, equipment, and other resources with the nationwide public safety broadband network. Properly structured, the activities supported by the Grant Program can provide an important foundation for State engagement with NTIA and FirstNet. In

particular, the Grant Program can assist States in cultivating the information and expertise necessary for effective oversight in developing, constructing, and operating the NPSBN.

While States ultimately will engage with FirstNet directly, cities, counties and municipal agencies will undertake much of the work in identifying local resources, needs, and priorities. Grant funding can help establish clear channels of communication between FirstNet and State and local officials. Implementing the Grant Program in a way that prepares States to better participate in FirstNet's Request for Proposal process – particularly by encouraging State collaboration, effective resource identification, and standardized information sharing – will help facilitate subsequent stages of the NPSBN's development and promote effective communication between States and FirstNet.

## **II. SPRINT'S EXPERIENCE WITH RELOCATION OFFERS A USEFUL TEMPLATE FOR MUCH OF THE WORK THAT MUST BE DONE TO IDENTIFY LOCAL AND STATE RESOURCES, NEEDS, PRIORITIES AND INFRASTRUCTURE.**

The Grant Program administered by NTIA will in large part serve to assist States and local jurisdictions accomplish much of the preliminary work necessary for the nationwide public safety network's construction. The realization of a project of national scope such as the NPSBN requires careful planning, coordination, and execution at the local level. Sprint's experience with both 800 MHz Reconfiguration and the Broadcast Auxiliary Service (BAS) Retuning illustrates many of the key features that the Grant Program should serve to sustain, including helping States and local jurisdictions to develop comprehensive inventories of their assets, resources, capabilities and needs; developing a process for aggregating and organizing this valuable information; and framing the data in the context of a national project involving prospective stakeholders such as manufacturers, vendors, and industry groups.

### **A. 800 MHz Reconfiguration and BAS Retuning Provide an Important Example for NTIA to Consider.**

With its first commercial radio licenses situated in the 800 MHz band, Nextel operated a commercial service that directly adjoined 800 MHz public safety communication systems. To address a growing public safety communications interference problem resulting from the

interleaving of these services, the Federal Communications Commission (“Commission”) modified Nextel’s (and ultimately Sprint Nextel’s) licenses to include a 10 MHz block of 1.9 GHz spectrum in exchange for vacating the lower portion of the 800 MHz band and assuming the cost of 800 MHz band reconfiguration.<sup>1</sup> The process of relocating public safety users to the lower portion of the 800 MHz band involved thousands of parties, billions of dollars, and extensive equipment procurement – all on a nationwide scale.

An outgrowth of this process involved a similar relocation of Broadcast Auxiliary Services (electronic news gathering stations) across the nation. As noted above, the *800 MHz Order* granted Sprint Nextel 1.9 GHz spectrum to replace the 800 MHz spectrum it would surrender to effectuate 800 MHz Reconfiguration. Deployment at 1.9 GHz, however, required Sprint Nextel to relocate all Broadcast Auxiliary Service (BAS) licensees from 1990-2020 MHz to frequencies above 2025 MHz.<sup>2</sup> The transition of BAS operations ultimately involved thousands of hours of negotiations, the retuning of roughly one thousand BAS systems (each with hundreds and sometimes thousands of discrete components that had been assembled link-by-link over more than thirty years), and a broad range of integrated networks of fixed and portable links dispersed across a variety of types of facilities and locations. These facilities varied significantly in location, use, accessibility, and upkeep, with numerous facilities possessing scores of delicately integrated transmitters, receivers, antennas, controllers and related equipment.

In both cases, Sprint learned that the first step in what would be a large-scale, nationwide process involved an inventory of all assets of the affected parties. In fact, Sprint learned, through discussions with numerous public safety officials in the case of 800 MHz, and similar discussions with broadcasters in the case of BAS, that the best place to start was to provide financial assistance and a standardized reporting system for these parties to inventory their equipment. In the 800 MHz Retuning, this involved an inventory of public safety’s existing 800 MHz land mobile communications systems, including base stations, infrastructure, handsets and

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<sup>1</sup> *Improving Public Safety Communications in the 800 MHz Band*, Report and Order, Fifth Report and Order, Fourth Memorandum Opinion and Order, and Order, WT Docket No. 02-55, ET Docket No. 00-258, 19 FCC Rcd 14969 (2004) (“*800 MHz Order*”).

<sup>2</sup> Clearing of the frequencies from 1990-2025 MHz benefitted myriad parties, most notably the Mobile Satellite Service Licensees licensed to deploy commercial services in the bulk of the spectrum (2000-2025 MHz). Consequently, responsibility for clearing BAS incumbents fell on MSS licensees and Sprint Nextel. After MSS licensees failed to negotiate with BAS incumbents on a relocation plan, Sprint Nextel stepped forward as the primary mover in clearing the BAS Band.

mobile units – spread across hundreds of licensee-jurisdictions throughout the nation. In the BAS relocation, this inventory effort involved providing financial assistance to broadcasters to identify all of their electronic newsgathering assets –an inventory which eventually contained more than 16,000 items of BAS equipment, including more than 9,000 transmitters and receivers, more than 4,900 controllers, and nearly 2,000 antennas and antenna upgrades. Accordingly, Sprint proposes that the Grant Program support a comparable effort in developing a comprehensive inventory of public safety and governmental communications resources that can be potentially integrated into or otherwise support creation, deployment and/or management of the public safety broadband network. In other words, the Grant Program can assist State and local public safety and governmental agencies in developing a comprehensive inventory of assets that can be leveraged to help build, operate or manage portions of the public safety broadband network, as described in greater detail below.

Moreover, as the explanations below indicate, Sprint believes, based on its experience, that the entire FirstNet nationwide public safety broadband network program will prove most successful if NTIA and FirstNet work with the States and local jurisdictions to assure that deployment priorities, capacity decisions, coverage needs, and similar determinations reflect the coordinated and comprehensive thoughts of those who will use these broadband services on a day-to-day basis: the nation’s first responders and collateral users in public safety, State and local governments, regional authorities, critical infrastructure providers and of course federal users. Decisions on the layout of the nationwide public safety broadband network should be developed “bottom-up” from local governments to the States, from States to regional multi-state consensus, and from regional consensus ultimately to coordination and compliance with the broadband interoperability and core access requirements established by FirstNet.

This is not to say that strong, decisive federal/FirstNet governance is not necessary or critical to the successful creation and deployment of the NPSBN; it is. Sprint submits, however, that effective FirstNet governance and execution of the significant responsibilities set forth in the Act will be best advanced by providing Grant Program assistance to the States and their constituent local governments to carry out the critical preparatory, planning, inventory and prioritization activities described herein.

### **III. THE GRANT PROGRAM CAN ASSIST STATE AND LOCAL PUBLIC SAFETY OFFICIALS IN PROVIDING CRITICAL INFORMATION TO FIRSTNET.**

The Grant Program should provide assistance to State and local public safety officials to assure that they have sufficient resources to offer FirstNet important information for the nationwide public safety network's Request for Proposals. Eligible activities of the State and Local Implementation Grant Program should at minimum include offering financial support to the State – and through them their constituent cities, counties, tribal governments and municipal agencies – to (1) inventory existing communications assets that can be included or leveraged in the deployment of the nationwide public safety broadband network; (2) inventory unmet public safety broadband needs; and (3) identify regional broadband deployment priorities for the next few years.

#### **A. States Should Have Access to Grant Program Funding to Help Leaders Identify Existing Resources that May Prove Useful to FirstNet and the NPSBN.**

NTIA should make State and local data-gathering eligible for Federal funding. The consultative process between FirstNet, regional, State, tribal and local jurisdictions provides a critical basis for the development of cost-effective and appropriate FirstNet RFPs. Thus, activities that can contribute materially to the consultative process, such as data-gathering and inventorying, merit classification as “eligible costs” under the Grant Program. Providing a meaningful foundation for the constructive engagement of regional, State, tribe, and local stakeholders helps ensure that the nationwide interoperable public safety broadband network is robust, responsive, cost-effective, and successful.

NTIA should not only provide States with ready access to planning grants, but also structure the funded activity to ensure the data States produce is responsive, useful and readily accessible to decision makers. NTIA asks a number of important questions concerning the structure and implementation of the Grant Program. These questions regarding Grant Program design frame an important overarching consideration for NTIA in developing programmatic requirements for the grant program: namely, how to standardize and formalize State and local interactions with FirstNet while sustaining robust and meaningful contributions from cities, counties, and multi-jurisdictional subunits. NTIA should make Grant Program funds available

for producing a comprehensive multi-state inventory and planning program that can form the foundation of FirstNet’s network planning, development, construction and operation activities.

First, NTIA should support the development of a comprehensive inventory of existing public infrastructure. As was amply demonstrated in the 800 MHz Rebanding and BAS Relocation, the creation of a comprehensive inventory can produce overwhelming benefits for the long-term, large-scale project, including in cost avoidance, relationship-building, creating clear channels of communication and accountability, and developing a shared vision. In the case of Sprint’s inventory efforts, the first step involved calling together all interested parties, allowing them to familiarize themselves with each other and the shared vision. Question and answer sessions during these preliminary meetings included conveying a sense of common purpose to participants, identifying relevant boundaries and forming mutual agreement on the appropriate procedures and objectives of the inventory.

NTIA can replicate this process in the Grant Program, most notably through the grant coordinator charged with administering grant funds. Directing the State coordinator to convene similar meetings – drawing all constituent jurisdictions together in a single forum to identify common goals and interests – could constitute an important procedural component of the Grant Program. Though the State coordinator will serve as an important point of contact between NTIA and the States, important activities will occur through local, county and municipal initiatives. Specifically, cities, counties and other municipal organizations should undertake an inventory of existing governmental rights-of-way, base station locations or access, conduits, public safety equipment that can be forward-compatible, power sources, backhaul, towers, relevant governmental authorities and chains of command, existing contracts with commercial broadband providers, and other infrastructure that can be leveraged to support the NPSBN.

In other words, NTIA should direct the Grant Program’s initial focus to providing funding for States and constituent jurisdictions to identify precisely what they can leverage for the nationwide public safety broadband network. This will enable potential commercial partners and prospective bidders to assess those assets along with commercial assets that can be leveraged to reduce the cost, complexity, and time needed to deploy the network. Section 6206(c)(3) of the Act directs FirstNet to enter agreements that “utilize, to the maximum extent economically desirable” both commercial infrastructure and “Federal, State, tribal, or local infrastructure.”<sup>3</sup> A

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<sup>3</sup> *Id.* at § 6206(c)(3).

comprehensive inventory of public infrastructure and resources will implement this legislative directive.

**B. States Should Have Access to Federal Funding to Help Identify Unmet Public Safety Broadband Needs.**

Beyond the development of an inventory of what broadband–supporting assets States and local jurisdictions already possess, the Grant Program can also assist States and local jurisdictions to identify what they will actively *need* in a public safety broadband network. To be sure, having an inventory of State and local resources will help sharpen the focus of States and local jurisdictions on their essential needs, cognizant (thanks to the inventory) of what they already have. Nonetheless, a determination by States of the needs and capabilities that a public safety network must address remains an important task – one that will help direct the attendant network design and procurement actions of FirstNet, and one that should be supported by the Grant Program.

All interested parties recognize the panoply of possible broadband applications that have served as the impetus to providing additional spectrum and federal funding for the NPSBN. Needless to say, however, not every application and capability can be created at once, or be available and deployed on “Day One” of the nationwide public safety network’s launch in every jurisdiction. Rather, as amply observed in the commercial sector, an ecosystem must emerge to support the development of applications. And, fundamentally, this ecosystem depends upon a preexisting platform, responding to the articulated needs and capabilities of users.

Accordingly, the Grant Program should also be used to fund State-directed activities that serve to identify the particular broadband capabilities that should be the focus of deployment in their areas. That is, States and local jurisdictions should be able to apply for funding to determine, coordinate, and aggregate their particular public safety broadband communications needs. Some public safety users might consider real-time incident monitoring video an essential capability in their day-to-day activities. Still others might emphasize ultra-fast downloads of building plans and schematics. Rapid fingerprint or photo analysis might garner the attention of others. Robotic video feeds, remote database access, real-time temperature and air-quality sensing -- all might populate the lists of differing jurisdictions as preeminent functional capabilities necessitating support by the nationwide public safety *broadband* network.

Consultation and coordination among public safety and governmental entities throughout a State – and perhaps throughout a region – will help identify the most urgent unmet broadband communications capabilities, thereby having a profound effect on subsequent FirstNet work in network design and vendor engagement. Such activities, consequently, merit eligibility for Grant Program funding.

### **C. The Preceding Two Grant Priorities Potentially Call for Multi-State, Regional Collaboration.**

The manner in which States and local jurisdictions plan to use and determine the suitability of their existing infrastructure and equipment for integration into the public safety broadband network, and the ways in which they identify critical unmet public safety needs, will be important input for NTIA and FirstNet. While no particular method stands out as superior to another, any means selected must be as transparent as possible. States and local jurisdictions should conduct planning activities as inclusively as possible in light of potential security concerns related to the discussion of critical infrastructure. For instance, meetings should receive ample notice and remain open to the public or, alternatively, to individuals with a predefined set of security credentials.

Perhaps more importantly, such activities potentially warrant broader, interstate collaboration. Regional consultations not only offer administrative efficiencies for States and FirstNet; they also bring together jurisdictions that share much in common despite looking across State borders. For instance, adjoining local jurisdictions divided by a State border (and consequently participating in their respective State inventory-processes) might have considerably more in common in public safety needs and common infrastructure than with other, non-adjoining jurisdictions in their own States. Similarly, two rural jurisdictions in two States within the same region may share common priorities and will often draw upon similar bases of resources and infrastructure. Creating fora in which these jurisdictions can collaborate should produce tremendous benefits for FirstNet as it designs network parameters and considers competing funding requests. Decisions to leverage State and local infrastructure require a canvassing of local opinions, resources and priorities, but these inquiries can often be aggregated for greatest effect.



As a consequence, NTIA should define “regional” on an interstate basis and should generally include multiple States within a region. The Act recognized the importance of regional collaboration, including the term “regional” when describing opportunities to partner and consult with State, local and tribal jurisdictions.<sup>4</sup> To best encourage regional participation through the States, and ensure that the network is fully interoperable and integrated, NTIA should define “regional” in a way that avoids duplication of effort, aligns needs, ensures interoperability and helps move State and local jurisdictions in the direction of closer collaboration to achieve the benefits of scale that have typically escaped public safety communications infrastructure and user devices.<sup>5</sup> Just as States will harmonize the disparate needs, priorities and resources of their cities and counties, regional organizations can harmonize the needs of States in cost-effective and productive ways. Many successful Federal grant programs have relied on standard federal regions that are defined on an interstate basis and include multiple States within a region.<sup>6</sup> To be sure, some particularly large or populous States, such as California, Alaska, and Texas, might warrant their own region designations to reflect the unique economic, demographic, or technical characteristics that define the jurisdictions as a cohesive unit – or such large States might be better divided and joined with neighboring States.<sup>7</sup> In all cases, however, NTIA should emphasize collaboration, maximize available resources, and avoid duplicative efforts by individual states. A regional approach to planning will help FirstNet promote interoperability and allow economies of scale and scope not possible if the planning exercise were predominantly confined to a single State or intra-state subregion.

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<sup>4</sup> See, e.g., *Id.* at § 6206(a)(3)(describing FirstNet’s powers to make contracts with “Federal, State, regional, and local agencies”); *id.* § 6206(c)(2)(A)(requiring FirstNet to consult with “regional, State, tribal, and local jurisdictions” regarding the distribution of funds).

<sup>5</sup> See *Emergency Communications: Various Challenges Likely to Slow Implementation of a Public Safety Broadband Network*, Government Accountability Office, at 30 (February 2012), available at <http://www.gao.gov/assets/590/588795.pdf> (describing the segmentation of jurisdictions, prohibiting them from enjoying interoperability and economies of scale).

<sup>6</sup> See, e.g., Economic Development Administration (facilitating regional collaboration through six EDA regional offices); *Fiscal Year 2012 SAFECOM Guidance on Emergency Communications Grants*, Department of Homeland Security Office of Emergency Communications, at 17 (2012), available at [http://www.safecomprogram.gov/library/Lists/Library/Attachments/334/2012\\_SAFECOM%20Guidance\\_FINAL.pdf](http://www.safecomprogram.gov/library/Lists/Library/Attachments/334/2012_SAFECOM%20Guidance_FINAL.pdf) (encouraging grant applicants to “coordinate proposals with State and regional partners” and “Consider Regional, Multi-Jurisdictional, Multi-Disciplinary Projects”)

<sup>7</sup> This definition of region tracks the regulatory definition adopted by the Economic Development Administration, defining ‘regional’ as geographic areas that “constitute a cohesive area capable of undertaking self-sustained economic development.” 13 C.F.R. § 300.3.

#### **D. Standardized Reporting of Inventory Information May Warrant Consideration.**

The inventories developed by States will contain a wealth of important information for FirstNet to use in the RFP process. A clearinghouse or one-stop shop from which entities bidding to build and operate portions of the national public safety broadband network can obtain access to resources such as towers and backhaul networks would significantly reduce transaction costs related to information gathering. The most cost-effective method to assemble and secure such information, however, would be through a single *national* repository. Productive State action will consist of consolidating and harmonizing information from cities, counties and other municipal agencies within its borders – itself a substantial and time-consuming task. State-level reporting risks variability and delay and creates new hazards in preserving data with potential national security implications from disclosure or cyber-attack. For these reasons, the clearinghouse model would appear best served by the development of a national clearinghouse incorporating State inventory data. Notably, in the American Recovery and Reinvestment Act, Congress directed the Secretary of Energy to establish a similar clearinghouse regarding information related to the Smart Grid project.<sup>8</sup> The resulting clearinghouse aggregates information on smart grid grants, construction, and smart grid activities at the State level.<sup>9</sup>

Whether FirstNet elects to have States (or regional agglomerations of States) serve as repositories of infrastructure information, or creates a single national repository to which States contribute information, simplifying and standardizing the reporting mechanism *per se* is less important than having a common set of standards. In populating their inventories, the States or regions should follow a) uniform standards, procedures and security protocols; b) a common database and data set form; c) non-discriminatory access to the information repository; and d) a standard-form contract from NTIA or FirstNet to govern access. Procedures that vary by State or region risk delay and regulatory uncertainty. Moreover, incorporation of State infrastructure and resources within RFP bids involves many of the same coordination complexities as public siting of wireless facilities currently. Recognizing many of these complexities – and particularly the delay and costs associated with them – Congress sought to streamline this process in the context of the deployment of commercial networks, providing for standardization of applications and

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<sup>8</sup> American Recovery and Reinvestment Act of 2009, Pub. L. No. 110-140 (2009).

<sup>9</sup> Smart Grid Information Clearinghouse, available at <http://www.sgiclearinghouse.org/InDepth>

forms and master contracts.<sup>10</sup> These same principles counsel in favor of streamlined, standardized and non-discriminatory formatting of any State or Federal infrastructure information repository – and similarly streamlined, standardized and non-discriminatory access to (and bid-incorporation of) information within the repository.

#### **E. Grant Activities Should Help States and Local Jurisdictions Articulate Deployment Priorities.**

Just as an applications ecosystem cannot develop overnight, nor can the earliest stages of the nationwide public safety network provide extensive broadband capacity in all locations, given the limited amount of federal funding. Information regarding the critical areas within States and localities requiring early-stage coverage will prove vital to FirstNet in the design and construction stages of the network. While knowledge of existing public infrastructure will greatly aid FirstNet in making decisions regarding where cost-effective construction can be done, States and local jurisdictions ideally must provide FirstNet with additional data on where deployment priorities lie.

A high-value use of Grant Program funding would thus involve State, local (and regional) identification of nationwide public safety network funding priorities over the first few years of the network's construction. This information could effectively help guide the formation of RFPs that encourage and incentivize prospective bidders to deploy public safety broadband in areas where it will be used most intensively and for the greatest public safety benefit. The articulation of these initial deployment priorities, combined with information regarding the extent of existing public infrastructure and the types of public safety needs in particular locations, would greatly enhance FirstNet's ability to productively and cost-effectively guide the network's earliest stages – with the opportunity to expand and enhance the initial deployments over time.

### **IV. CONCLUSION**

NTIA has effectively framed a number of the key considerations that it faces in not only designing and administering the State and Local Implementation Grant Program, but also that FirstNet will ultimately face throughout the course of constructing the nationwide public safety

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<sup>10</sup> *Id.* at § 6409.

broadband network. The ways in which regional, State, tribal, and local jurisdictions approach leveraging public infrastructure, collaboration, data-gathering, and transparency at these early stages will have a profound effect on how these essential features of the nationwide public safety broadband network are implemented going forward. As Sprint has learned through large-scale, nationwide, multi-stakeholder efforts in the past, encouraging the development of a robust and comprehensive inventory constitutes an important first step in any project of the NPSBN's scope. The inventory not only helps focus the related process of identifying needs and capabilities, but also serves as a stanchion for multi-stakeholder collaboration, cross-jurisdictional communication, and cost avoidance. Supporting States and local jurisdictions in articulating deployment priorities – in combination with support for inventory activities and State and local identification of unique needs and capabilities – merit serious consideration by NTIA as eligible Grant Program activities.

Respectfully submitted,

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