MINNESOTA DEPARTMENT OF PUBLIC SAFETY

Alcohol and Gambling Enforcement

Bureau of Criminal Apprehension

Driver and Vehicle Services

Emergency Communication Networks

Homeland Security and Emergency Management

Minnesota State Patrol

Office of Communications

Office of Justice Programs

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JUNE 15, 2012

To: **National Telecommunications and Information Administration**
US Department of Commerce

Re: Request for Information on
Development of the State and Local Implementation Grant Program for the Nationwide Public Safety Broadband Network

Please find enclosed Minnesota's response to the NTIA's May 11, 2012 RFI on *Development of the State and Local Implementation Grant Program for the Nationwide Public Safety Broadband Network*.

Minnesota has been a national leader in public safety broadband planning, being the first state to our knowledge to complete a public safety broadband study including a comprehensive user needs assessment and statewide network design.

Minnesota is pleased to have the opportunity to provide input on this very important issue.

Respectfully,

Jackie Mines

Jackie Mines, Director
Emergency Communication Networks

1. ***Section 6206(c)(2) of the Act directs FirstNet to consult with regional, State, tribal, and local jurisdictions about the distribution and expenditure of any amounts required to carry out the network policies that it is charged with establishing. This section enumerates several areas for consultation, including: (i) Construction of a core network and any radio access network build-out; (ii) placement of towers; (iii) coverage areas of the network, whether at the regional, State, tribal, or local level; (iv) adequacy of hardening, security, reliability, and resiliency requirements; (v) assignment of priority to local users; (vi) assignment of priority and selection of entities seeking access to or use of the nationwide public safety interoperable broadband network; and (vii) training needs of local users. What steps should States take to prepare to consult with FirstNet regarding these issues?***

Detailed answers to this question are provided in this comment through direct responses to each of the NTIA's RFI questions below.

1a. What data should States compile for the consultation with Firstnet?

As a reference model for individual state studies, Minnesota offers its Public Safety Broadband Study, which, with some revision, may be a suitable foundation for National Public Safety Broadband Network (NPSBN) planning nationwide. The specific data sets included in the Minnesota study include:

- User Needs Assessment

  Each state must document its user needs through a comprehensive assessment to include face-to-face interviews, online surveys, table-top exercises, inventories of existing cellular devices used by public safety, and more. This sort of assessment is a critical first step in NPSBN planning that each state should replicate.

- Statement of Network Requirements

  Each state must clearly state its network requirements relative to the needs of its users gathered through its assessments. This statement of features and performance outcomes required of the NPSBN should be gathered in consultation with end-users, technical staff, and managerial staff/elected officials. Per ongoing efforts through NPSTC, there may be a national set of requirements and each state may not need to provide the same level of detail as provided in Minnesota's initial statement.

- Commercial Carrier Assessment

  Each commercial carrier should be assessed in its ability to meet public safety needs through service or partnership models. Minnesota's report includes face-to-face interviews with cellular carrier representatives. Minnesota's assessment is limited to those advertising commercial LTE service in Minnesota at the time of data collection—2010-2011—and assessments for other states should include a broader area study than done for Minnesota.

- Implementation Model and Overall/Budgetary System Design

  Each state should first develop a high-level design for the NPSBN statewide, including budgetary costs, for the purposes of evaluating the scale of the

network and general funding needs. Minnesota's overall system design included placement of core elements, sites, and a rudimentary backhaul design, some specifics of which will be different under Firstnet as compared to the time the Minnesota study was conducted. Whichever business model each state chooses for its RAN (i.e. "opt-in" or "opt-out"), the network architecture, and the costs for network buildout in each state, should be relatively consistent.

- Funding and Grant Plan

  Each state must document all sources of potential capital and operational funding, through increased state revenue, offset costs in other programs, partnership contributions, user fees, or others, and perform an assessment of the viability of these assessments.

Outstanding issues that Minnesota did not include in its study, which are recommended for including in its own further research, or as part of initial studies in other states, include:

- Public Safety Broadband Plan

  Minnesota and other states generally do not have a dedicated public safety broadband plan in their SCIPs. During its May 2012 SCIP workshop, the state and its stakeholders identified key priorities for broadband planning for inclusion in the SCIP, some of which the state has already acted upon. However, there exists no narrative detailing the full plan for the state outside of its initial research. The expectation of stakeholders in Minnesota is that action taken in response to current SCIP initiatives should form the basis of the state's public safety broadband plan. Studies and assessments identify problems but they do not identify solutions or strategies to correct problems.

- Valuation of existing network assets for integration into NPSBN

  It is unclear what the specific value of incumbent infrastructure is to the NPSBN; if Firstnet builds a national network and charges a user fee, but uses state and local infrastructure to build the network, it is not clear what value exists that the state may contribute in-kind to the network. Whether under "opt-in" or "opt-out" models, there nonetheless be some partnership between Federal and state government entities to build the network. The scope of each member's contribution to that partnership will vary based on the value of existing assets within each stakeholder's domain, and this scope must be documented.

- Valuation of human capital to Firstnet

  While it will be Firstnet's responsibility to build the national network, there exists throughout Minnesota and other states a large population of engineers, technicians, Network Operations Center (NOC) staff, administrative support and others who may be available in some capacity to support Firstnet's overall network implementation. The total value of this human capital as it relates to the NPSBN is not well-documented at this time. This human capital represents a significant potential asset both to the state and Firstnet to accelerate network deployment at a reduced overall cost and reduced duplication of effort.

- Potential to offset existing cellular service costs (e.g., cell phones, USB data modems)

  The full extent of cellular service costs to public safety in most states is not fully-documented, and it is not understood to which degree these costs may be offset through migration to the NPSBN, or if those overall costs would increase. Service on the NPSBN may indeed be more expensive, based on the higher performance expected of the network and higher coverage targets compared to commercial service. Additionally, each public safety organization may be forced to maintain two separate service contracts; one for Firstnet and one for a commercial roaming agreement.

- Inventory of coverage enhancements relevant to the NPSBN (e.g., existing commercially-operated BDAs that may support Band Class 14 [BC14])

  Each state should collect data on coverage enhancements such as BDA/DAS systems that may contribute to the NPSBN and/or which existing systems may be upgraded to support the NPSBN (such as neutral host systems), and if so, at what cost.

- Private Partner Assessments

  In many states there exist no detailed assessments of private partner assets nor are there many formal public/private partnerships for public safety broadband executed at this time.

- Rural Design Study

  It is not well-documented what the full impacts of rural buildout are, nor what degree of financial support is available at the local level. Meeting rural coverage benchmarks for the NPSBN could be prohibitively expensive for many states.

- Priority Coverage Areas

  Each state should identify which coverage areas included in their implementation model area are extraneous, or areas of low response activity that would not be a priority investment target—as well as the inverse (required or high response activity areas).

- Detailed Network Design

  Minnesota's existing network design is budgetary, and includes numerous assumptions and extrapolations. A detailed design would address detailed engineering issues such as feasibility of microwave backhaul paths, feasibility of site placement/land acquisition, in-building coverage for key structures, and many others. Additionally, the design does not include a strategy for interconnecting with the national network, as there is no national network framework to design to at this time. Each state should address these issues in their assessments to be fully prepared for NPSBN buildout.

- Network Security Requirements

  Minnesota's study does not include a detailed assessment of network and application security requirements, or of a credential/identity management process that suits its stakeholders.

- Future User Services/Applications Requirements

In Minnesota's initial study, most user services and applications requirements were based on existing applications and devices that users are familiar with through their commercial service contracts. There is value in clearly identifying future capabilities of the network, and in investigating the network impacts of those capabilities accordingly.

- NG9-1-1 Integration Requirements

  Minnesota's study does not include a detailed assessment of the requirements to integrate future NG9-1-1 services with the NPSBN. Each state should plan, in the course of its NPSBN efforts, to fully integrate NG9-1-1 services with its NPSBN services.

- SCIP Compliance Requirements

  Minnesota's study does not contain a detailed assessment of those changes to the SCIP that may be required for NPSBN planning, if any, nor do many other states include substantive NPSBN topics in their SCIPs.

Minnesota has specifically not identified Interoperability Governing Body (IGB) formation or maintenance as a priority investment target, as the Statewide Radio Board and its committees fully meet governance needs for NPSBN planning. For those states without a robust IGB, however, IGB formation is recommended as a high-priority and prerequisite investment target to any other NPSBN planning activity.

For its grant program, the NTIA may consider using Minnesota's foundational work as a national model for state-by-state or region-by-region assessments that will be essential in NPSBN planning.

1b. Should this activity be covered by the State and Local grant implementation program?

Collection of this data should be considered an essential and primary output of the NTIA's grant program.

2. The Act requires that each State certify in its application for grant funds that the State has designated a single officer or governmental body to serve as the coordinator of implementation of the grant funds.

2a. Who might serve in the role as a single officer within the State and will it or should it vary for each State?

The appropriate "single officer" will vary from state-to-state or region-to-region, as each government is organized differently. More importantly, the individual champion for the NPSBN in each state or region could come from anywhere within it, and may or may not work for a state, local government, public safety agency, or may be the state CIO. There is tangible value in identifying that person and leveraging that person's incumbency, regardless of his or her organizational affiliation, and whoever that person is in each state.

Accordingly, Minnesota recommends that the single officer for NPSBN planning be nominated by the appropriate public safety IGB. IGBs may be a Statewide Interoperability Governing Body (SIGB), Statewide Interoperability Executive Committee (SIEC), or a Regional Interoperability Governing Body (RIGB) (for an IGB

that is larger or smaller than one state). In being nominated by an IGB, the single officer carries the legitimacy of endorsement by his or her full constituency and peers.

For its grant program, the NTIA may consider requiring a showing that the single officer has been nominated by his or her IGB for each state requesting funding.

2b. Who might serve on the governmental body (e.g., public partners, private partners, technical experts, Chief Information Officers, SWIC, finance officials, or legal experts)?

All of the parties listed by the NTIA should be represented on the IGB.

As a reference model, Minnesota's SIGB, the Statewide Radio Board, has been extremely successful in coordinating interoperability activities in the State. It includes the following members *or their designees*:

- The commissioner of public safety;
- The commissioner of transportation;
- The state chief information officer;
- The commissioner of natural resources;
- The chief of the Minnesota State Patrol;
- The commissioner of management and budget;
- The chair of the Metropolitan Council;
- Two elected city officials, one from the nine-county metropolitan area and one from Greater Minnesota, appointed by the governing body of the League of Minnesota Cities;
- Two elected county officials, one from the nine-county metropolitan area and one from Greater Minnesota, appointed by the governing body of the Association of Minnesota Counties;
- Two sheriffs, one from the nine-county metropolitan area and one from Greater Minnesota, appointed by the governing body of the Minnesota Sheriffs' Association;
- Two chiefs of police, one from the nine-county metropolitan area and one from Greater Minnesota, appointed by the governor after considering recommendations made by the Minnesota Chiefs' of Police Association;
- Two fire chiefs, one from the nine-county metropolitan area and one from Greater Minnesota, appointed by the governor after considering recommendations made by the Minnesota Fire Chiefs' Association;
- Two representatives of emergency medical service providers, one from the nine-county metropolitan area and one from Greater Minnesota, appointed by the governor after considering recommendations made by the Minnesota Ambulance Association;
- The chair of the regional radio board for the metropolitan area; and
- A representative of Greater Minnesota elected by those units of government in phase three and any subsequent phase of development as defined in the statewide, shared radio and communication plan, who have submitted a plan to the Statewide Radio Board and where development has been initiated.

Additionally, each of 7 regions in Minnesota has a Regional Radio Board (or Emergency Services Board, in two regions), whose representation is generally based on county. The state and each regional board each include numerous subject matter committees. These committees assign membership to meet their own requirements.

This model is extremely successful for Minnesota and is recommended as a model nationwide for all IGBs—not just those established to coordinate NPSBN implementation.

2c, d, e, f, h. How should the States plan to involve the local entities in the State and Local Implementation grant program? How should the States plan to involve the tribal entities in the grant program? What requirements should be included in the grant program to ensure that local and tribal public safety entities are able to participate in the planning process? How should the State and Local Implementation grant program ensure that all public safety disciplines (e.g., police, sheriffs, fire, and EMS) have input into the State consultation process? How should States plan to involve the Federal users and entities located within their States in the grant program?

States should involve local, tribal, and Federal entities, and all public safety disciplines, by coordinating all NPSBN planning activities through their IGB, which in turn should represent those constituencies as they are all legitimate stakeholders in a state's interoperability planning. If the grant program is coordinated through an IGB that has adequate representation of all public safety disciplines and stakeholders, then the consultation process will naturally provide an opportunity for these entities to provide their input.

For its grant program, the NTIA may consider requiring a showing, or considering such a showing in its scoring criteria, that the IGB (a) has legitimate authority over public safety broadband planning (such as an executive order, and/or record of successful projects in NPSBN or interoperability planning) and (b) that there is sufficient local, Federal, and tribal participation in the IGB.

In those cases that there is not a functioning or adequately representative IGB, the NTIA may consider funding those planning activities required to establish an IGB or increase its representation, whether through subsidizing travel costs, hiring administrative staff, producing marketing and informational materials, developing and hosting websites, and others. In this case, for its grant program the NTIA may consider scoring proposals based on the feasibility and cost-effectiveness of each applicant's plan to increase participation by those entities.

However, each IGB will require a long-term permanent funding mechanism and cannot depend on Federal aid in perpetuity. The NTIA may consider funding IGB activities on the basis that the IGB has a strategy for securing long-term funding beyond the scope of the NTIA's grant program.

2g. How should the State and Local Implementation grant program define regional (e.g., interstate or intrastate) and how might the grant program be structured to facilitate regional participation through the States?

The logical unit of organization is the IGB, whether statewide or regionwide. IGBs may consider hosting regional workshops and developing regional communications plans, as is necessary, or in assigning liaisons to neighboring units of government.

There are existing inter-regional cooperative efforts throughout the nation, such as the FEMA RECWGs, in which there is already established a precedent in broadband planning across states and throughout the region. For example, Minnesota through its SIGB has engaged in interoperable communications projects with the states of Iowa, Wisconsin, North Dakota, South Dakota, and the provinces of Ontario and Manitoba. Within Minnesota, there is no special benefit to establishing new mechanisms, other than those through its SIGB which have been successful to this point, to encourage regional participation in the NTIA grant program.

For its grant program, the NTIA may consider a record of intrastate or interstate/international cooperation as a criterion in scoring proposals, such as by FEMA region.

3. The Act contemplates that FirstNet will consult with States regarding existing infrastructure within their boundaries, tower placements, and network coverage, which FirstNet can use to develop the requests for proposals called for by the Act. The States, however, will need time and funding to collect the necessary information before they are ready to consult with FirstNet.

3a. Given these interrelated activities, how should the State and Local Implementation grant program be used by States to assist in gathering the information to consult with FirstNet?

State and local government should conduct comprehensive, purpose-driven studies to collected information required to consult with FirstNet, such as is detailed in the answer to 1a.

3b. Should consistent standards and processed be used by all States to gather the information? If so, how should those policies and standards be established? What should those policies and standards be?

It is unlikely that there could exist an effective single national policy or standard for determining placement of network assets, including sites and various distributed Evolved Packet Core (EPC) elements, that fits the needs of the stakeholders within every state or region. This is particularly true when dealing with existing network infrastructure that may be repurposed or expanded to support the NPSBN. Policies and standards of this nature should be set by each IGB. Each IGB should have policies that encourage coordination and rules to resolve major disputes.

There should not be nationwide, static benchmarks dictating network performance criteria (such as minimum coverage or throughput requirements) unless an IGB agrees that such criteria are its requirement. Expectations for the NPSBN may vary greatly depending on a number of factors, and user requirements may scale based on geography, population density, or other factors. While collecting stakeholder feedback and setting priorities on a county-by-county basis for every state may be a daunting and impossible task for a single national entity, it is a manageable goal for an IGB to manage with its own constituency.

That said, each IGB would benefit from a national framework that establishes which variables exist, so that the priorities from one state or region may be compared to another. These variables should be based on measurable performance indicators of the network, and could include minimum acceptable busy hour throughput, required

minimum average throughput, required minimum coverage area, minimum acceptable downtime (availability), minimum round-trip latency, and other common metrics in network design.

There exist very detailed statements of requirements either published today or in draft from public safety organizations including NPSTC and APCO. The NTIA should consider these publications as a reference for specific technical data to be included in the standard set of variables set forth by NTIA.

3c. What time period should NTIA consider for States to perform activities allowed under the grant program as it relates to gathering the information to consult with FirstNet?

Minnesota required approximately one full year to complete the bulk of its work for the Minnesota Public Safety Broadband Study, which provides sufficient information for Minnesota's IGB to set standards and priorities for placement of network assets. States should be given up to one full year to complete their information gathering in turn.

4. Over the years, States have invested resources to conduct planning and to create governance structures around interoperable communications focused primarily on Land Mobile Radio (LMR) voice communications, including the Statewide Interoperability Coordinators (SWIC) and Statewide Interoperability Governing Bodies (SIGB), often called Statewide Interoperability Executive Committees (SIEC).

4a. What is the current role of these existing governance structures in the planning and development of wireless public safety broadband networks?

Existing IGBs generally have, as their stated purpose, the basic goal of enabling first responders to communicate with one another. Even though the underlying technology is fundamentally different for the NPSBN compared to the technologies IGBs have historically dealt with (principally Land Mobile Radio [LMR]), the mission is not fundamentally different; the media changes, and the transport changes, but there exists the same challenge to enable communications between many parties. Accordingly, existing IGBs should continue to have principle responsibility for interoperability within the NPSBN just as they have historically for land mobile radio.

It is important to note that the NPSBN's core infrastructure does not, in itself, represent a substantial interoperability problem. The perennial technological problem with interoperability—that of establishing a basic connection between two networks or devices—is generally solved when there is a single nationwide network that everyone uses (the NPSBN) and a common set of formats and signaling. There is no direct analog in the NPSBN to the problem of connecting one vendor's proprietary land-mobile radio system with another's, outside of perhaps connecting proprietary software solutions with one another. Even then, the nation can take this opportunity to establish standardized media formats and interfaces *ahead of time* and ensure that these basic technological interoperability problems don't occur in the future.

The outstanding NPSBN interoperability problem left to each IGB is that of interfacing different applications and interconnecting outside Public Safety Enterprise Networks (PSENs), as well as their applications, with the NPSBN; also, there will be a challenge in connecting end-points (such as user devices) that use the NPSBN for transport. Finally, one very large high-profile interoperability problem will be that of NG9-1-1 systems (which do not have

the same level of national conformity and Federal support as the NPSBN initiative) integration with the NPSBN. Furthermore, each IGB should establish policies for management of topics like traffic priority and security management *over* the NPSBN as a basic issue related to underlying *operability.*

For its grant program, the NTIA may consider each IGB's record in NPSBN and other interoperability planning efforts as a factor in scoring proposals.

4b. What actions have the State's governance structures (e.g. SWIC, SIGB or SIEC) taken to begin planning for the implementation of the nationwide public safety broadband network?

Minnesota has found it prudent to establish a new committee of subject matter experts for the express purpose of broadband planning, but its new Interoperable Data Committee nonetheless still reports to the Statewide Radio Board who retains its overall responsibility to oversee interoperable communications in Minnesota.

Minnesota has:

- Established a new Interoperable Data Committee under its Statewide Radio Board (recognized by Executive Order of the Governor as the Statewide Interoperability Executive Committee [SIEC]) that is chartered to be the primary entity for public safety broadband planning in Minnesota.
- Completed a comprehensive broadband planning study through 2011-2012.
- Evaluated at various phases, over the past several years, different approaches for realizing public safety broadband within Minnesota, including an extensive wireless data feasibility report in 2009 and a Wireless Data Development RFI in 2009-2010.
- Aggressively participated in the NPSBN regulatory and legal activities, such as participating in FCC rulemaking activity and filing comments, as needed, with the Commission.
- Participated in larger national planning efforts through professional and governmental cooperative organizations such as NPTSC, NENA, and NGA.
- Held dozens of sessions on public safety broadband at various meetings and conferences throughout the state, either specifically for its broadband study or for general education's sake.
- Updated Statewide Communications interoperability Plan (SCIP) to include public safety broadband planning initiatives.

4c. Can these existing governance structures be used for PSBN, and if so how might they need to change or evolve to handle issues associated with broadband access through the Long Term Evolution LTE technology platform?

Minnesota's Statewide Radio Board can, should, and is fully prepared to address NPSBN planning issues. IGBs throughout the nation should be utilized to do the same. For those areas without a robust IGB, the NPSBN project is an opportunity to organize an IGB around a specific and meaningful project, as Minnesota has done with its statewide land mobile radio system (ARMER) and VHF narrowbanding.

4d. What is or should be the role of the Statewide Communications Interoperability Plans (SCIPs) in a state's planning efforts for the nationwide public safety broadband network?

The SCIP is a comprehensive outline of the strategic direction for public safety communication efforts, the basic mission of which does not change when the technology does. Gaps in each state's SCIP as they apply to NPSBN planning should emerge over the course of executing a statewide broadband assessment. As such, a detailed user needs assessment is an important input to updating each SCIP in a meaningful way.

4e. What actions do the states need to take to update the SCIPs to include broadband?

As an initial step, states should identify critical planning needs for the NPSBN, and include strategies to meet those needs in their SCIPs. These needs and strategies should be held through the IGB, such as through a facilitated public workshop, in order to gather as much information as possible. Once those gaps are addressed, or are close to becoming addressed, IGBs should be better-informed to establish specific day-to-day interoperability priorities that may in turn be included in the updated SCIP.

For example, in May 2012, Minnesota held a workshop with assistance from US Department of Homeland Security to identify strategic gaps that existed in its SCIP in regards to its current broadband strategy. Participants identified the following strategic goals:

1. *Establish a statewide body under the Statewide Radio Board to officially sanction public safety interoperable data planning activities and to represent the State before regional and national entities such as the Firstnet, FCC, NTIA, and standards bodies including 3GPP.*
2. *Develop a full assessment of state and local assets that may contribute to the Minnesota buildout of the national wireless broadband network.*
3. *Develop a Minnesota Public Safety Wireless Interoperable Data Plan based upon its existing planning activities and current research, including continued requirements research and planning efforts such as expansion of its existing financial models, network design, network requirements, and user needs.*
4. *Develop applications and data interoperability standards, both on a statewide basis and in cooperation with larger national and global efforts, such as standardized SDKs, APIs, network interfaces media codecs, signaling formats, and container formats.*
5. *Investigate potential formal partnerships for the public safety wireless broadband network to clearly identify all feasible avenues for alternative financial models for both construction and maintenance of the network.*
6. *Continue to foster public safety interoperability planning on a regional basis to ensure data interoperability with adjacent states and the provinces of Manitoba and Ontario.*

7. *Monitor, and participate when appropriate, in larger planning and standards-setting with organizations such as Firstnet, PSCR, NPSTC, and 3GPP to support development of national standards and a national network model that fully support the needs of the state of Minnesota.*

These strategic goals are in the current draft SCIP and will be presented to its SIGB and committees for approval throughout summer 2012. It should be noted that Minnesota's SIGB and stakeholders have already carried out Goal 1, and will execute a contract to contribute to fulfilling Goal 2, by end of June 2012.

For its grant program, the NTIA may consider each state's record of performing an NPSBN user needs assessment, or its need to perform a user needs assessment; and in updating, or its need to update, its SCIP to address gaps identified in its user needs assessment.

4f. Should the costs to change or evolve existing governance and Statewide Plans be eligible in the new program?

The costs of updates to or maintenance of existing governing bodies and SCIPs should be eligible under this grant program. The function of each IGB is critical to the success of the nationwide network in order to facilitate orderly interactions between each state's responder community and Firstnet. The SCIP, as a single comprehensive outline of each state's communications planning, is a key instrument in articulating each state's plans to integrate into the NPSBN.

For its grant program, the NTIA may consider the cost-effectiveness of proposed funding to be dedicated to establishing or maintaining SCIPS and IGBs.

4g. Should the maintenance of those existing governance bodies and plans be eligible in State and Local Implementation grant program?

Maintenance of governance bodies and plans should absolutely be an eligible cost of the NTIA's grant program. See answer for 4f.

5. How should States and local jurisdictions best leverage their existing infrastructure assets and resources for use and integration with the nationwide public safety broadband network?

This question is impossible to answer on a unilateral basis. Each state should conduct a detailed assessment to determine the tangible value of their existing assets as they pertain to integration into the NPSBN; in turn, this assessment should reveal the best answer to this question for each state.

5a. How should States and local jurisdictions plan to use and/or determine the suitability of their existing infrastructure and equipment for integration into the public safety broadband network?

A key input to any decisions regarding placement of network assets will be each state or region's user needs assessment and infrastructure assessment; network assets, and in particular RF sites, should be placed specifically to meet users' needs as they appear in the user needs assessment and where their respective

infrastructure assessments show gaps. These assessments should reveal the best strategies in each state to leverage existing resources into the NPSBN.

5b. What technical resources do states have available to assist with deployment of the nationwide public safety broadband network?

Minnesota state and local governments collectively employ several hundred full-time technical staff devoted wholly or as part in part to public safety communications, including engineers, technicians, coordinators (such as the SWIC), and technical management staff, including over 100 state government technical staff specifically dedicated to the ARMER network. Much of this personnel has already invested significant training and effort into NPSBN planning and integration.

Many state and local governments will have similar resources available. However, the full scope of available resources will vary greatly across different organizations throughout the nation. And so, it is critical that each state performs a full assessment of their available human capital.

5c. How will states include utilities or other interested third parties in their planning activities?

Minnesota is currently investigating formal MOUs with interested private partners and holding meetings. Minnesota has invited potential private partners to sit in non-voting seats in its Interoperable Data Committee and has received several responses from those potential partners, including public utilities, commercial carriers, equipment vendors and manufacturers and telecommunications carriers.

There also currently exist functioning communications project partnerships between public safety and utility organizations, although none of them are in Minnesota. These partnerships may serve as a model for other states and governments to follow.

5d. Should NTIA encourage planning for the formation and use of public/private partnerships in the deployment of the nationwide public safety broadband network? If so, how?

The NTIA should encourage the planning and formation of public/private partnerships. Through its grant program, the NTIA could consider funding, as a priority, those projects that demonstrate a strategy to evaluate the feasibility of such partnerships.

Additionally, the NTIA and FirstNet could work to establish such partnerships on a national level, if possible.

6. Section 6206(b)(1)(B) of the Act directs FirstNet to issue open, transparent, and competitive requests for proposals (RFPs) to private sector entities for the purposes of building, operating, and maintaining the network. How can Federal, State, tribal, and local infrastructures get incorporated into this model?

FirstNet should defer to IGBs to manage or negotiate RFP processes for their constituencies as much as is practical, as each IGB should represent state, Federal, tribal, and local government entities and all public safety

disciplines. These IGBs will have specific perspectives specific to their states and regions that FirstNet cannot have by its very nature of it not being a local government entity.

6a. How would states plan for this integration?

Minnesota's IGB has much experience establishing workgroups and designating officers to participate in procurement activities on its behalf. Accordingly, it would use the same strategies it always uses to negotiate RFPs through its workgroups and subject-matter experts.

6b. Should States serve as clearinghouses or one-stop shops where entities bidding to build and operate portions of the FirstNet network can obtain access to resources such as towers and backhaul networks? If so, what would be involved in setting up such clearinghouses?

There should be a single clearinghouse for such activities, and this clearinghouse should operate under FirstNet—*in cooperation with the appropriate resource owner(s)*. For example, for access to ARMER resources, the clearinghouse would coordinate with the Minnesota Department of Transportation for state-owned backbone sites and with various local governments for locally-owned sites.

6c. Should setting up a clearinghouse be an eligible cost of the grant program?

No, because states should not set up clearinghouses for these activities.

7. What are some of the best practices, if any, from existing telecommunications or public safety grant programs that NTIA should consider adopting for the State and Local Implementation Grant Program?

Minnesota recommends that allocations under the State and Local Implementation grant program defer, as much as possible, to the authority of IGBs throughout the nation to make detailed allocation and funding priority decisions. Minnesota historically has had significant success in coordinating its grant activities through the Statewide Radio Board.

8. What type of activities should be allowable under the state and local implementation grant program?

Any activities directly or primarily related to planning, development, delivery, or local coordination of the NPSBN. Activities may include, for example:

- Broadband Studies which should target the following study areas:
  - User Needs
  - Network Requirements
  - Carrier Capabilities
  - Implementation Model/Overall Design
  - Priority Service Areas
  - Sustainable Funding Strategies
  - Private Partnerships

  - Value of Existing Assets and Human Capital to the NPSBN
  - Network Security
  - User Services/Applications Requirements
  - NG9-1-1 Integration
  - SCIP Compliance
- Authoring of a Public Safety Broadband Plan
- Hiring full-time technical and administrative personnel
- Attending/organizing meetings, workshops, tabletop exercises, and conferences
- Developing or maintaining SCIPs insofar as they must be updated for the NPSBN
- Forming and administering IGBs

9. What types of costs should be eligible for funding under the State and Local Implementation grant program (e.g., personnel, planning meetings, development/upgrades of plans, or assessments)?

See answer to 8.

Through this grant program, the bulk of Firstnet's planning work, including overall network design, could be performed at the state and local government level—where personnel are closer to the issues and closer to the responder. Such an approach would greatly accelerate deployment of the NPSBN nationally, and would better target NPSBN features to meet end-user needs at greatest value to taxpayers.

It should be noted that there is great interest in many states in developing demonstration and/or test networks or early build-out zones to be supported by the NTIA's grant program. Such networks would provide an outlet for early adopters to explore unique implementation models, to provide model Standard Operating Procedures (SOPs) for other agencies to follow, and would provide an outlet for manufacturers and application developers to develop products. The costs incurred in potentially modifying these demonstration networks for incorporation into the national network could be offset by the efficiencies *all other parties* may gain from lessons learned or in procuring mature technology products for the NPSBN.

9a. Should data gathering on current broadband and mobile data infrastructure be considered an allowable cost?

Data gathering should be one of the principal costs of this grant program, as it is an extremely labor-intensive effort that requires specific expertise over a short term. These types of services are often acquired through contract services and not included in a regular budget; therefore, they are an excellent target for grant funding.

9b. Should the State and Local Implementation grant program fund any new positions at the State, local, or tribal level that may be needed to support the work to plan for the nationwide public safety broadband network? If so, what, if any, restrictions should NTIA consider placing on the scope of hiring and the type of positions that may be funded under the grant program?

The program should support training and education for existing staff to properly equip such staff to participate in NPSBN activity. Much of the incumbent interoperability staff has experience in public safety, interoperability,

and land mobile radio—however, staff may not have extensive experience in IP networks, applications deployment, or cellular networks. States will have to either invest in retraining existing interoperability staff to support the NPSBN, or hiring *new staff* that specializes in cellular technology and retraining these new hires in interoperability. In either case, interoperability with the NPSBN is a relatively new study area and states will need funding to support the training of new or existing staff to handle it.

In those cases that there would appear to be an extended or permanent need for any positions to be initially funded by the NTIA's grant, the NTIA should consider requiring a showing that the position will be funded beyond the performance period of the grant, or a showing that the position is indeed temporary in nature.

10. What factors should NTIA consider in prioritizing grants for activities that ensure coverage in rural as well as urban areas?

There should be no specific factors to prioritize projects that focus on rural, suburban, or urban coverage unless each IGB has identified a particular gap area as a priority. The user needs assessment should demonstrate the scope of rural coverage requirements within each state and county, and the infrastructure assessment should demonstrate any gaps that exist.

11. Are there best practices used in other telecommunications or public safety grant programs to ensure investments in rural areas that could be used in the State and Local Implementation grant program?

A number of ARRA projects specifically targeted rural broadband needs, as project proposals demonstrated a real and tangible gap in meeting the needs of rural broadband internet consumers. The NTIA could consider those projects as a model.

Additionally, each state's IGB should represent all stakeholders—including those in rural areas. As such, activities coordinated through an IGB should account for needs in rural areas by nature of those represented in an IGB.

12a. Do States envision SBI state designated entities participating or assisting this new State and Local Implementation grant program?

Yes.

12b. How can the SBI state designated entities work with States in planning for the nationwide public safety broadband network?

SBI entities could work with States by participating in IGB activities. For example, Minnesota's Department of Public Safety has cooperated in broadband assessments conducted by Connect Minnesota, which is Minnesota's SBI-designated entity. The Department of Public Safety supported Connect Minnesota's efforts by coordinating communications through the state and regional radio boards, which in turn represent all agencies and disciplines in Minnesota.

13. What outcomes should be achieved by the State and Local Implementation grant program?

After concluding projects funded by the NTIA's grant program, each state should:

- Fully understand their user needs and expected traffic volumes/patterns over the NPSBN
- Fully understand the scope and value of existing physical assets and human capital insofar as they may be included into the NPSBN
- Fully understand the scope of additional investments that will be required to meet their needs with the NPSBN
- Fully understand the scope and dollar amount for operational funding of the NPSBN within their state
- Have a preliminary network design for their state
- Have a fully-functioning governance structure capable of coordinating all NPSBN activities while representing all stakeholders and disciplines within the state
- Be "shovel-ready" for NPSBN implementation in the state

For its grant program, the NTIA could consider how proposals contribute to meeting each of the needs as described above. It is noted that a robust governance structure is a prerequisite in meeting any of those outcomes described above, as the IGB, and each governor, are those that would "understand" as enumerated in each bullet point above.

13a. Are there data that the States and local jurisdictions should deliver to document the outcomes of the grant program?

Yes. See response to 1a, which details each assessment that is recommended. In documenting outcomes related to each stated objective, the NTIA could consider a model similar to that which states use today in updating and reviewing their SCIPs each year, as well as the reports states have prepared to report NECP goal progress to US DHS.

13b. If so, how should they be measured?

Each year in Minnesota, the SCIP is reviewed in a public workshop to determine whether planning goals have or have not been met. This determination is made by the SWIC with input from the public safety community. For its grant program, the NTIA may consider regular reviews requiring a public showing that objective statements have been met, and if so, how; this showing should be endorsed by the IGB.

Also, see response to 13a.

13c. Who should collect this information and in what format?

The IGB and its designated officers should collect the information.

13d. What data should already exist and what new data could be gathered as part of the program?

Specific to broadband—unless a state has already performed required assessments—there probably exist no real data that would exist specifically to support this effort. However, data entered into CASM and TICPs throughout the nation may be a good place to start in organizing data specifically relevant to NPSBN planning.

14. ***The U.S. Department of Homeland Security's Office of Emergency Communications (OEC) has developed the following tools through its Technical Assistance Program available at http://www.publicsafetytools.info, including: (1) Mobile Data Usage andSurvey Tool—Survey process to document the current-state mobile data environment, in preparation for a migration to LTE; (2) Statewide Broadband Planning Tool—Template and support on Statewide strategic broadband planning issues designed to serve as an addendum to the SCIP; (3) Frequency Mapping Tool—Graphical tool to display FCC license information and locations including cellular sites within a jurisdiction; and (4) Communications Assets Survey and Mapping Tool (CASM)—Data collection and analysis tool for existing land mobile radio assets. Should States be encouraged to utilize tools and support available from Federal programs such as those developed by OEC? Are there other programs or tools that should be considered?***

Yes, states should be encouraged to use the tools provided by DHS.

15. ***Do the states have a preferred methodology for NTIA to use to distribute the grant funds available under the State and local implementation grant program?***

Funds distribution should be coordinated according to IGB priorities within each state, and/or awarded to the IGBs directly.

15a. Should NTIA consider allocating the grant funds based on population?

Funds distribution should be based on the relative value of proposals. One component of a proposal's value is the population that may ultimately benefit from any NPSBN planning activities. However, population specifically—and as a metric by itself—is not useful or particularly relevant to the value of any NPSBN proposals. Proposals should be evaluated based on their demonstrated ability to benefit a large number of people.

15b. What other targeted allocation methods might be considered appropriate to use?

The NTIA may consider the following:

- A proposal's accounting for risk factors such as:
  - Strategic targets, such as power plants, UASI areas, chemical storage, military, schools and other community anchor institutions
  - Natural disasters
  - Transportation
  - Utility Transport
  - Aging or obsolete systems
- The number of organizations that would use the network and/or number of responders specifically

- Any unusual or precedent-setting areas of investigation, such as innovative partnerships or "opt-out" business models
- The scope of work (e.g., if there is a large incumbent communications system a high degree of reusability for the NPSBN)
- The demonstrated record of the applicable IGB in delivering successful projects

15c. Should NTIA consider phasing the distribution of grant funds in the new program?

The NTIA should consider phasing of grant funds to ensure that funding remains after the states provide their information to FirstNet, so that each state will have continued assistance to support their governance bodies and serve as a resource to FirstNet.

Additionally, states are in many different phases through their planning process. Phases may allow some states to "catch up" and present compelling proposals for a second phase, where they would not be prepared today to present a compelling proposal for a first phase.

16. What role, if any, should the States' Chief Information Officer (CIO) or Chief Technology Officer (CTO) play in the State and Local Implementation grant program and the required consultations with FirstNet? How will these different positions interact and work with public safety officials under the State and Local Implementation grant program?

NTIA grants should require involvement of the CIO, CFO, or both, as well as any other applicable chief officers, alongside any other respective leaders that the governor has identified as the appropriate leads for each state. What specific role the state's CIO has in NPSBN activities should be according to that person's role within his or her own state. The involvement of any single person—whether CIO or not—should be based on the function of each state's government and local governments as well as who is represented in its IGB.

In Minnesota, for example, the CIO has a seat on the state's IGB whose office is a valued partner in interoperable communications planning.

17. The Act requires that the Federal share of the cost of activities carried out under the State and Local Implementation grant program not exceed 80 percent and it gives the Assistant Secretary the authority to waive the matching requirement, in whole or in part, if good cause is shown and upon determining the waiver is in the public interest. As NTIA develops the State and Local grant program, what are some of the factors it should consider regarding States' abilities to secure matching funds?

The NTIA may consider those states that have recently invested significant dollars into NPSBN planning as having contributed *in kind*. For example, Minnesota has invested a quarter of a million dollars to complete its broadband study, which is the type of planning activity the NTIA should encourage under its grant program.

Additionally, the NTIA may consider those states with significant financial hardships as eligible for waivers to the funding match; due to financial shortfalls or political difficulties, some states may simply find it impossible to produce matching dollars. It would be unfortunate that a state with an innovative revenue-neutral business

model for the NPSBN in its state would be stripped of the chance to pursue that business model due to not being able to contribute a match, and so, being excluded from the NTIA's grant program.

18. What public interest factors should NTIA consider when weighing whether to grant a waiver of the matching requirement of State and Local Implementation grant program?

See answer to 17.

19. Please provide comment on any other issues that NTIA should consider in creating the State and Local Implementation grant program, consistent with the Act's requirements.

We have no additional comments.

Respectfully Submitted,

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Minnesota Department of Public Safety
Emergency Communication Networks