Responses from Greg Holcomb, Florida Statewide Interoperability Coordinator and Bill Price, Director Broadband Programs State of Florida to the NTIA Request for Information (RIN: 0660-XC001) Respecting the Development of the State and Local Implementation Grant Program for the Nationwide Public Safety Broadband Network

NTIA Docket No: 120509050-1050-01

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?***

- Generally we believe each state should undertake at a minimum to establish a baseline of the state's requirements, network design, budget, cost models and number of subscribers required to provide sustainable funding for operations. An example is the study which State of Minnesota recently completed and published and can be found at:
- https://dps.mn.gov/divisions/ecn/programs/armer/Pages/studies-reports.aspx
- These projects should be required to go further to fully assess the potential state and local government assets and the value of that may be leveraged by FirstNet to lower subscriber fees and provide greater coverage and capacity down to the county level. Such assets would be towers, potential tower sites, government owned fiber facilities and data centers. Each state and FirstNet can then compare the benchmark study results with FirstNet's RFP results to make fact based decisions on Opt In or Out.
- User Needs Assessment

    > *Each state must document the number of potential subscribers to FirstNet and those user needs through a comprehensive assessment to include face-to-face interviews, online surveys, table-top exercises, inventories of existing cellular contracts and services as well as the types of devices and applications used by public safety. This sort of assessment is a <u>critical first step</u> in NPSBN planning that each state should replicate. This data should be collected and summarized at a county and statewide level.*

- 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 Florida's initial statement. Each state should undertake to identify and document both outdoor and indoor coverage requirements down to a county level and statewide.

- Commercial Carrier Assessment

  Each commercial carrier should be assessed in its ability to meet public safety needs through service or partnership models. Report should include face-to-face interviews with cellular carrier representatives advertising commercial LTE service and assessments for other states should include all interested and/or or capable providers today and in the future. Each state today through the NTIA SBI program is providing wireless coverage maps by provider which can be leveraged.

- Implementation Model and Overall/Budgetary System Design

  Each state should first develop requirements to determine 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. Overall system design should include placement of ,RAN sites, and a rudimentary backhaul design, some specifics of which will be different under Firstnet as compared to the time the 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.

  If NTIA can provide each state with a set of outcome templates the more consistent the outcomes will be for joint evaluation by FirstNet and the states.

- 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. These efforts should also include the state's utility industry and other providers of critical infrastructure as potential subscribers.

- Authoring a Public Safety Broadband Plan

  Florida and other states generally do not have a dedicated public safety broadband plan in their SCIPs. There exists no narrative detailing the full plan for the state outside of its initial research. The expectation and requirements/needs of stakeholders in Florida should form the basis of the state's public safety broadband plan. Studies and assessments may 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 value of incumbent infrastructure is to 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, it is anticipated that there nonetheless be some partnership between Federal, state and local government and commercial entities to build the network. The scope of each side's contribution to that partnership will vary based on the value of existing assets within each stakeholder territory.

- Valuation of human capital to Firstnet

  While it will be Firstnet's responsibility to build the national network, there exists throughout Florida 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 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

  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

  Florida's does not have 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 Florida, 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

    Florida does not have 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

    Florida does not have 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.

This process requires formal use of an Interoperability Governing Body (IGB) to meet governance needs for NPSBN planning. For those states without a robust IGB, formation is recommended as a high-priority and prerequisite investment target to any other NPSBN planning activity.

For its grant program, the NTIA needs a consistent 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?

Yes, as described above the collection of this data should be considered an essential and primary output of the NTIA's grant program. The effort will require two key components in each state; funding to administer and hire qualified consulting resources and funding to conduct awareness, training and meetings to ensure a high degree of local and state participation.

> ### 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" or entity will vary from state-to-state or region-to-region, as each government is organized differently. More importantly, the individual champion for the National Public Safety Broadband Network (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 entity or person and leveraging their role, regardless of organizational affiliation in each state.

Accordingly, we recommend that entity or the single officer for NPSBN planning be nominated by the Governor and guided by the recommendations of the appropriate public safety Interoperability Governing Body (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). This approach carries the legitimacy of endorsement and participation in the project by the public safety stakeholder community. For its grant program, the NTIA may consider requiring a showing that the governmental entity or single officer has been recommended by the 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, Florida's SIGB, the FEITC, by design coordinates interoperability activities in the State. It needs to be stood up and expanded to meet the requirements of the NPSBN.

Additionally, each of 7 regions in Florida has a RDSTF Communications Committee Co-Chair. The Communications Committee has a Co-Chair and includes numerous subject matter representatives from different counties. These committees should assign membership to meet their own requirements.

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

> **2c, d, 3, 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.

With all government jurisdictions under considerable budget and resource constraints NTIA should fund those outreach, training and planning activities required to carry out the grant program and expected outcomes. In some states this may be 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 based on the states geographic size, number of public safety jurisdictions and number of public safety users.

> *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 units of organization are the IGBs within a state where they exist, 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 RECCWGs, and the NCSWIC, in which there is already established a precedent in broadband planning across states and throughout the region. For example, Florida through its SIGB has engaged in interoperable communications projects with the states of in FEMA Region IV. Within Florida, 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 and funding proposals, such as by FEMA region.

> *2h.   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. 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?*

Florida is completing a statewide IO Assessment in 2012 which provides sufficient information for Florida'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 and grant funded activities in turn. Once the state's baseline is established FirstNet and the states can leverage this information pre and post RFP to determine best approaches to maximize coverage, capacity and cost to ensure maximum service adoption and sustainment.

> *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 data collection and studies of collected information required to consult with FirstNet, such as the IO Assessment underway in Florida. All data should have a central depository database such as CASM in concert with the currently funded data collection and GIS systems mapping being provided by NTIA in the SBI program.

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?

To the extent possible within budget and time constraints for NTIA to develop required data collection templates and database design such as being used in the NTIA managed SBI program. In an ideal environment NTIA would also establish common cost modeling methodology and templates.

It is unlikely that there could be 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 <u>not </u>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. There must be a <u>minimum</u> requirement published nationally, but not to the degree of an exact specification for all factors and geographic requirements.

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?

One year at a minimum to complete the baseline assessment. Then ongoing funding for resources to continue consultation and negotiations with FirstNet and potential statewide partners.

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).

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.

It should be noted that within local and state governments existing mobile broadband services for public safety are procured as a service from commercial providers through existing IT and Telecomm departments with dedicated staff and budgets to address broadband requirements within them. These departments will have important information about the numbers of users, the current services provides, the monthly and annual costs upon which FirstNet will be compared and judged. These institutions are also an important source of human capital expertise required to understand the many issues that FirstNet and public safety together are undertaking. FirstNet should leverage the decades of expertise within these organizations should they be available to participate.

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?

We are evaluating the options in Florida and believe it is prudent to establish a new committee of subject matter experts for the express purpose of public safety broadband planning, but such a new Committee nonetheless

would still report through the FEITC who retains its overall responsibility to oversee interoperable communications in Florida. We also believe that NTIA should encourage the strongest possible linkage between a state's IGB, the NTIA SBI funded programs and the existing IT/Telecom departments.

> ### 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 LTE technology platform?

Yes, Florida's FEITC can and should be 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. To maximize existing resources, assets and budgets strong linkages to existing SBI programs and IT/telecom departments will need to be developed.

> ### 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. The SCIP essentially acts as the voice of the stakeholders, their requirements and plans to address them which is similar to a "product manager" in a private sector company. Each state and NTIA should ensure this role is fully staffed to meet the scope and scale requirements based on the size of the state. One FTE may not be adequate.

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

The NTiA planning grant program results will provide each SCIP with a detailed set of public safety broadband requirements. 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 and collaborating organizations such as those mentioned above through facilitated public workshops in order to gather and update the requirements, gaps and resources to address them through planning ongoing. As the needs and gaps are addressed, or are close to becoming addressed, SCIPS, IGBs and partners would be better-informed to establish specific day-to-day interoperability priorities that may in turn be included in the updated SCIP.

Identify 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 ongoing assessment of state and local assets that may contribute to the state buildout of the national wireless broadband network.*

3. *Develop a Florida 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*

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

For its grant program, the NTIA may consider each state's proposal and record of performing an NPSBN type 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?*

Yes, 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 and partner organizations are 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?*

Yes, the incremental resources and ongoing costs to add this critical function should be an eligible cost of the NTIA's grant program.

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?*

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.

Statewide Telecommunications

Each state will have one to several organizations responsible to provide telecommunications services to anchor institutions both state wide and locally to the public sector. Many states have a centralized telecommunications

division which may or may not be combined with enterprise IT resources. Those organizations are typically responsible to develop and procure enterprise telecommunications services at the lowest possible cost. They are represented by the National Association of State Technology Directors or NASTD.org. Many of these organizations have statewide IP/MPLS networks which could be leveraged in lowering the backhaul cost of FirstNet within each state. These networks are typically competitively procured from the telecommunications industry as a service and are managed by the state with a cost recovery model.

State Departments of Transportation

Each State's DOT will have telecommunications resources and fiber optic facilities that today are dedicated to the Intelligent Transportation System (ITS). These networks are funded by the ITS program managed by the Federal Highway Administration. There is a current prohibition within this program that those assets can only be used for ITS purposes and would have to be addressed to make them available to the FirstNet program. In many states the DOT when constructing the fiber networks has deployed many conduits, sub-ducts and fiber optic cables which represent another opportunity to lower the backhaul costs of FirstNet.

State University Research and Education Networks (R&E)

48 states have implemented R&E networks which typically are comprised of owned and leased dark fiber within the state and crossing state boundaries to comprise both the national Internet2 and LambdaRail networks. These networks are typically limited to reach state universities and some colleges. They are operated by the universities and provide large bandwidth capacities within their limited footprints. They also represent a potential source of lowering the cost of Radio Access Network (RAN) backhaul.

Local Government Networks

Many cities, counties and in some cases due to BTOP grants there are regional broadband networks many of which are fiber optic based which may be leveraged to lower the cost of FirstNet backhaul.

Recommendation

We encourage NTIA to through the program rules and funding requirements to use the opportunity to encourage the cooperation, coordination and collaboration across these entities in achieving the desired outcomes for FirstNet. This would also require similar cooperation across Federal agencies such as NTIA and DHS.

> ***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?***

This will require detailed technical specifications and requirements from FirstNet and the public safety community within each state through the NTIA planning project. 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?***

As detailed above there are state and local govnerment technical resources with expertise in all aspects of planning, technologies involved, procurements, contracting and backoffice systems required to ensure the needs of public safety are met at the best possible cost, performance and coverage. Florida 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 local and state government technical staff specifically dedicated to the LMR networks. 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?***

In Florida we are conducting limited meetings with public utilities for participation. Once funded Florida would increase those activities to determine the options and outcomes of partnerships. Ultimately FirstNet will determine the eligibility of allowing utilities and other critical infrastructure users for FirstNet. Based on a positive outcome states could use existing agreements and models to establish public private partnerships, MOUs, or contract vehicles necessary. If they do become FirstNet users we would recommend including them as non-voting seats in its IGB.

We would propose to review any currently existing/ functioning communications project partnerships between public safety and utility organizations. 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?***

Yes, NTIA should encourage the planning and formation of public/private partnerships. Through the grant program, 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?*

As described earlier many state and local government entities own a variety of possibly valuable assests to FirstNet. To leverage them and obtain agreement on their value, the cost of integrating them will have costs associated. To the degree possible the state's designated entity by the Governor should coordinate this effort If FirstNet desires to obtain access to the Federal Highway Administration funded ITS conduits and available fiber resources action should be taken nationwide to allow this purpose.   Incorporation and use of other state or local government fiber, towers or tower sites will have unique requirements should be assessed during the grant funded planning project as an outcome.

The legal and statutory requirements to accomplish this may vary significantly based upon the state's decision to Opt In or Out.

6a. *How would states plan for this integration?*

Through the planning project led by the state's designated entity Florida will leverage its IGB local and state technology departments which have experience establishing workgroups and designating officers to participate in procurement activities on its behalf. Accordingly, it would use the same strategies to provide FirstNet and the state with the expertise to develop agreements, RFPs and contracts through its 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?*

No. *FirstNet should maintain the clearinghouse functions with the states through the NTIA planning grant continuing to provide periodic updates (6 month on annual) to FirstNet much like the current NTIA SBI program funds states to collect data and upload to create the national broadband map. 6c.   Should setting up a clearinghouse be an eligible cost of the grant program?*

The ongoing cost of resources to provide continuous updates to the FirstNet clearinghouse should be.

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?*

We recommend that NTIA leverage to the fullest extent possible the lessons learned and best practices from the NTIA SBI grant program.   We recommend that each state's IGB must play an integral role to determine the funding needs and priorities to accomplish the program goals and outcomes. The most robust Florida approach to developing funding requirements, priorities and achieving consensus regards DHS funding and is managed by the Department of Emergency Management.

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

Resources and activities directly or primarily related to planning, design, costing, development, delivery, local coordination, awareness, training and ongoing updates to ensure the success 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
- Incremental costs to forming and administering IGB resources to NPSBN

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 the state's FirstNet preparation and planning work, including overall network design will require specialized consultant expertise as well as state and local government level expertise. 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 supported with 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?**

To the exent that the requirements of data and information required goes beyond existing funded efforts such as the NTIA SBI program, DHS and CASM related efforts. The program should require integration and use of the currently funded NTIA SBI program which is already funded through 2014 to gather wireline and wireless data

about commercial broadband availability as well as anchor institutional broadband connectivity. Depending on the unique incremental data gathering requirements this could represent 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, it is 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?**

Based upon the final program requirements each state through its designated entity will need to determine the resources and funding required. As with the NTIA SBI program positions and contracted resources had to be described and justified to NTIA for final funding decision. 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 as a topic, and land mobile radio— however; staff may not have extensive experience in IP networks, applications deployment, or cellular networks. State and local IT/Telecomm/Public Safety technology departments may or may not have adequate staffing capacity to address the needs of the project. States will have to either invest in retraining existing interoperability staff to support the NPSBN, hiring or contracting for *new staffing resources* 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 or acquisition of new or existing staff resources depending upon the requirements of the grant program and ultimately FirstNet based upon the Opt In or Out decision.

Based upon our current understanding of the scope and scale of this effort we believe there will exist the need for incremental resources to be initially funded by the NTIA's grant. Longer term state and local government resource cost and funding requirements will depend upon decisions to Opt In or Out and FirstNet requirements thereof. Those required resources and cost should be factored into the sustainability model of FirstNet.

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. There needs to be a bare minimum coverage requirement nationally and expanded on individual needs and coverage requirements for each state.

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?

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. Use of the Florida RDSTF Communications Co-Chairs would accommodate such in Florida.

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

Yes, this should be a requirement as described in previous comment detail.

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

SBI entities and activities such as data collection and mapping should be integral to this process. SBI funded staff and contractors through funded initiatives are already conducting surveys and significant outreach for broadband related planning, outreach and training which should be integrated. Each state's designated entity should include and leverage to the fullest extent these activities.

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:

- Achieve a complete statewide baseline report down to a county level of public safety requirements, statewide RAN design, cost models, asset evaluations, potential user populations as well as potential funding and partner resources.
- 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
- Identify or establish a fully-functioning governance structure capable of coordinating all NPSBN activities while representing all stakeholders and disciplines within 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 designated entity, 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 earlier responses, which detail each state's baseline assessment. NTIA should require the SCIP model with ongoing updates to include FirstNet related requirements.

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

This would depend on several factors such as any templates and data gathering requirements of the program for initial and ongoing updates. The more consistent the minimum required quantitative and qualitative outcome deliverables defined by the program the easier it will be for each state to track, measure and achieve those outcomes and NTIA and FirstNet to analyze and utilize them. For SCIP plans, every other year in Florida, 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 designated entity

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

This effort should be led by the state's designated entity with participating stakeholders and partners. The final formats would depend upon program deliverable requirements to be developed by NTIA. For the NTIA program NTIA developed the required database and reporting forms in consultation with the FCC. We recommend if possible NTIA incorporate review and input from the states in this process for this program.

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

As stated before each state is participating in the NTIA SBI program. Each state will also have varying degrees of data gathered for the CASM system hosted by DHS. Each state will have varying degrees of data maturity and quality of from other program such as the ITS program administered by each state DOT of their conduit and fiber assets. Each city and county with fiber networks and towers will have some degree of inventory in various formats. The research and education networks within each state will have some inventory of their networks and assets.

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 and Survey 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 incented to use existing tools and systems already funded and provided by federal and state program such as SBI and 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?

NTIA should refer to the SBI program which allows for a single designated entity to act as the grantee as well as allowance for sub-grantees depending on the states approach.

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

Populations as well as geographic size within a state are determining factors that affect the number of public safety personnel within a state. State and local budgets are also a determining factor of the number of qualified FirstNet subscribers. Some states such as Florida which is the 4th largest state in the nation also have significant population influx due to tourism. Florida for example accommodates 88 million visitors per year which must also be protected by public safety. Ultimately the number of potential subscribers, geography, coverage, capacity and costs driven by them will be the primary determining funding factors. The planning grant outcome of a baseline assessment of statewide RAN with user populations and cost models will determine one time capital costs as well as ongoing maintenance and support costs within a state. User fees as a source of sustainable funding for ongoing operations and network improvements will be determined by service adoption.

Funds distribution should also be based on the relative value of proposals to meet the program's required outcomes. Population alone should not be the only determining factor..

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?

This depends on the outcome expectations of the program. An initial baseline assessment could be done in 1 year and cost will vary significantly based upon the size of each state. Ongoing funding will depend upon ongoing data gathering and requirements updates to support 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 incentivize the involvement of any key agency that impacts the objectives of the grant program outcomes. 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. 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 are represented in its designated entity and or IGB.

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 match requirements should be allowed to met with either cash or in kind contributions. NTIA should provide clear definition and guidance on what types of in kind resources and assets are qualified. All states will be sensitive to any post grant funding ongoing funding requirements for participation in and with FirstNet.

The NTIA may consider those states that have recently invested significant dollars into NPSBN planning as having contributed *in kind*. For example, Florida has invested to complete its IO Assessment, 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 see this grant program having multiple purposes:

1. Essential component to provide resources and capacity that will facilitate the collaboration between local, state, tribal, federal resources with FirstNet resources to determine capabilities, capacities and resources that may be leveraged in the FirstNet effort to achieve the maximum service coverage and performance at the lowest possible cost.

2. Essential element of the process by which local, tribal and state stakeholders will determine the recommendation to the Governor regarding the Opt In or Opt Out decision.

3. Opportunity to ensure awareness and education to public and private stakeholder organizations within a given state.

Respectfully Submitted,

Bill Price, Director Broadband Programs, State of Florida, bill.price@dms.myflorida.com

Greg Holcomb, Statewide Interoperability Coordinator and Public Safety for Lake County Florida, GHolcomb@lakecountyfl.gov