FirstNet - NTIA State and Local Implementation Grant Program (SLIGP)

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Summary Of The Status and Future of the Connecticut Interoperable Public Safety Network Initiative

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As the state's Recovery Act funded NTIA State Broadband Initiative Leader, I'm a voting member of the state's Public Safety Wireless Interoperability Council. But, I'm the only member who doesn't leave an ax or a firearm at the door. And "radio" only means the thing on the dashboard of my car that I don't really know how to operate, but from which music occasions comes.

That said, it will take a diversity of stakeholders in each state to the FirstNet federal grant program project to succeed. All the states and territories must work together as a national consortium, while using their resources and budget independently. The goal is not just about building a public safety network, it's also about states working together on interoperability.

The transition to public safety broadband will take years. However, the ultimate success of that transition will link back to the foundational actions taken by states now to ensure the collaboration necessary for successful deployment.

Thus, states need to be prepared to respond to FirstNet by understanding the needs of the state's public safety community, knowing the assets available to support broadband, and ensuring

that the requisite leadership and decision making processes are in place in order to maximize that all stakeholders succeed.

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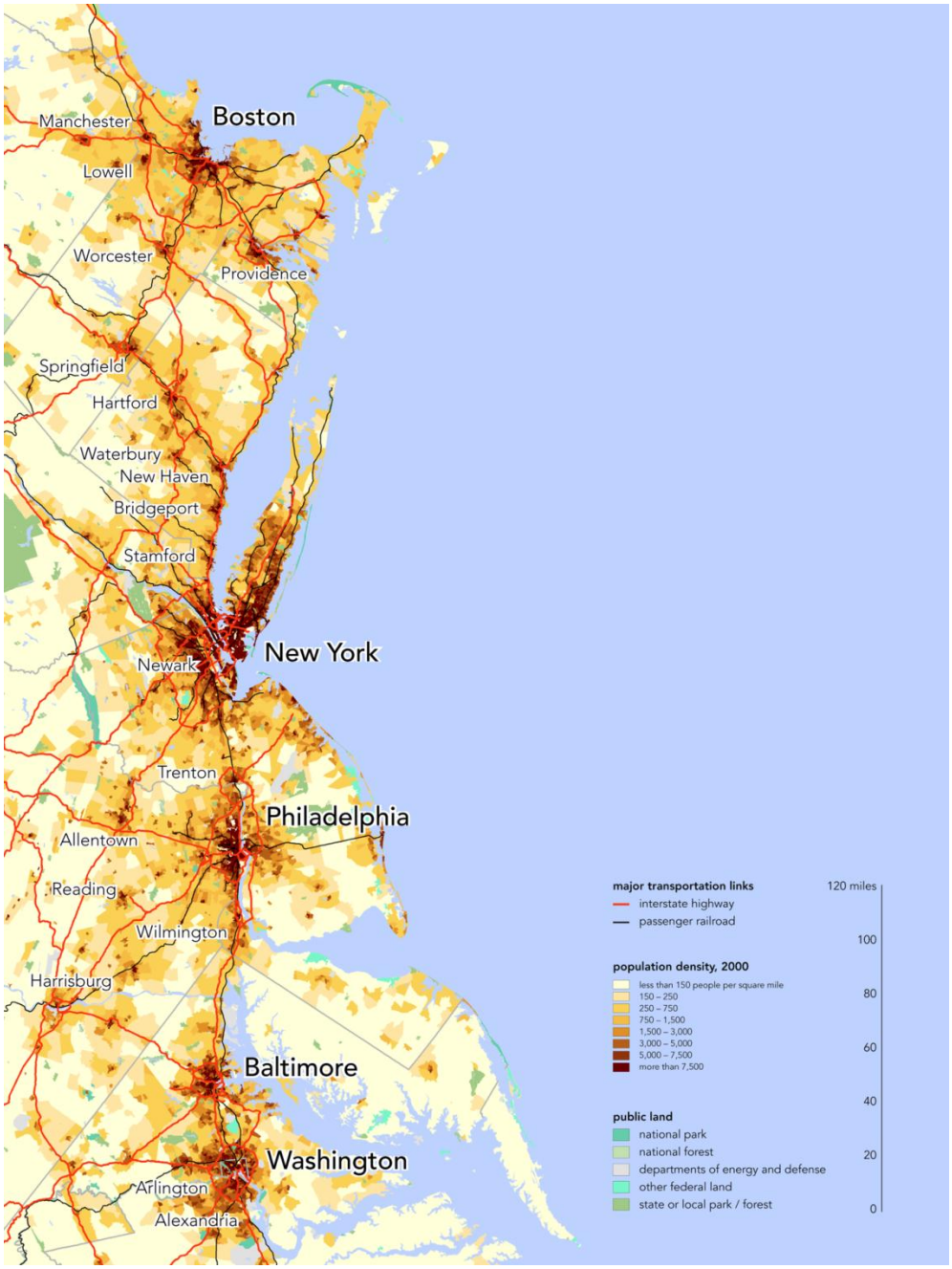
Introduction

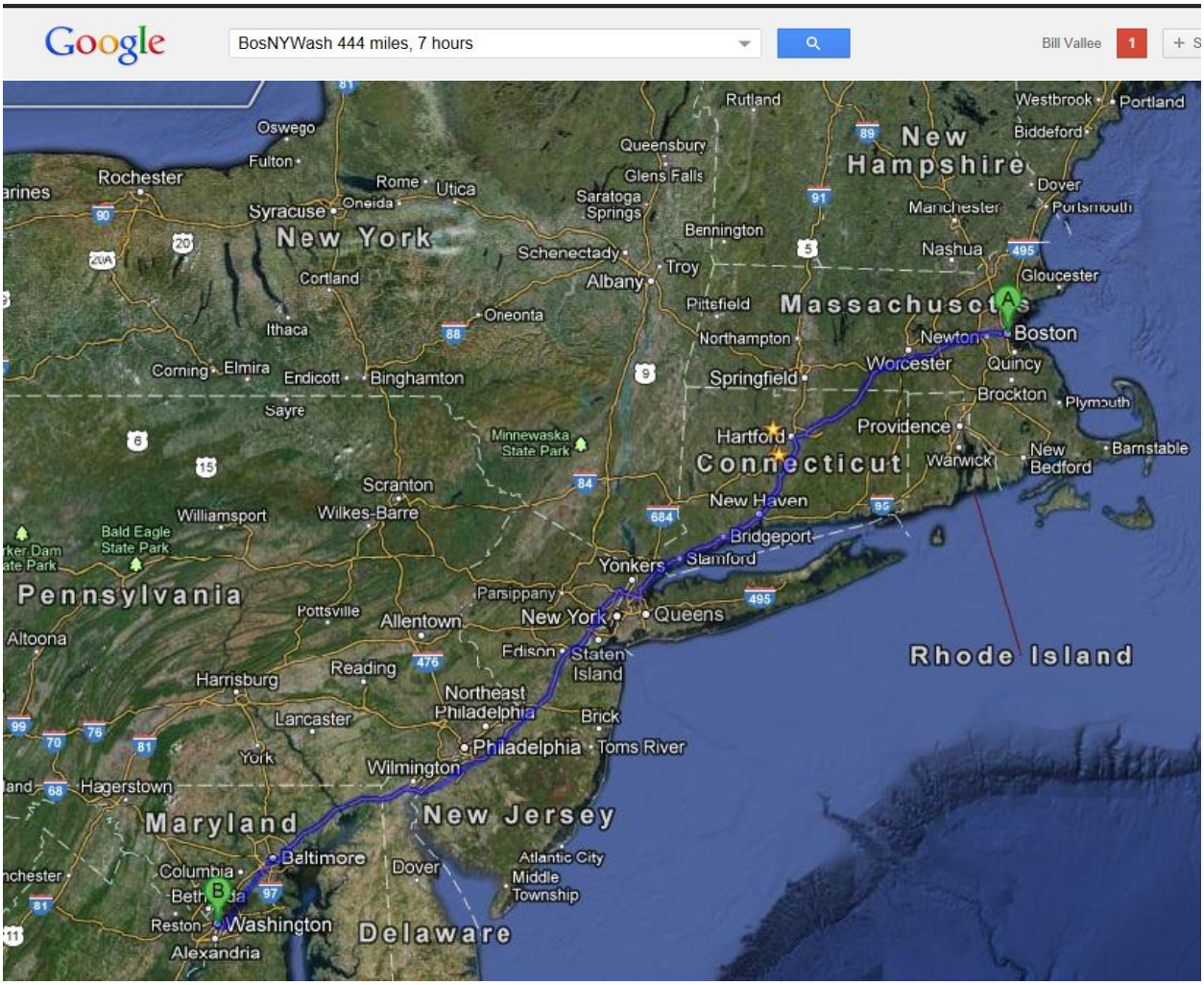
Connecticut has 3 million residents but no huge metropolitan area. The state is entirely in the "BosNYWash" Megalopolis region of the US and is the heart of the northern third of BosNYWash.



The area is geographically a straight line following a border of land and water, with very little topographical interference (no mountains, no huge

bodies of water), and thus is among the most contiguous highly-populated areas in the world.

- The area is an extremely high density population center with over 50 million people, with about 20% of the US population living together on only 2% of the landmass of the US.



- BosNYWash has closely-woven and self-directed transportation and telecommunications:
  - 80% of telephone calls in BosNYWash are contained within the area;
  - 80% of auto traffic stays within its bounds, and there are many routine connections, e.g., "Acela" and the "Chinatown buses."

While the major cities of the BosNYWash megalopolis all are distinct, independent cities, they are closely linked by telecommunications and transportation.

  - This high density of population creates many problems with frequency overlaps for radio transmissions, and recovery from storm-related disasters can be made especially difficult since the entire area can be identically affected by a single storm, affecting many millions of people and homes.

- The density of the BosNYWash area has FirstNet ramifications:
  - Severe signal overlap due to the concentration of population and towns;
  - border problems (wireless E-911 calls are often transmitted to radio towers in adjoining states);
  - storm problems have been multiple of late and they are incredibly severe due to the population density;
  - the entire BosNYWash is bordered by the Atlantic so storms bring much water/snow damage.

- The tragic Newtown shootings (December 2012), like all such natural or human disasters, demonstrates the enhanced fear in the local population effect in a highly densely populated area. The one-day visit by POTUS to Newtown created huge single-day need for mobile security requiring the use of the state's remote public safety telecommunication centers- Mobile Communications Vehicles.

- During Hurricane Irene, summer 2011, CT lost about 50% of the cell towers across the state for nearly a week: restoration required the use of military personnel and equipment to reach remote hilltops and forested areas to provide fuel and restoration of burned out equipment after days of service.

- The October 2011 Nor'easter caused most of Connecticut to be without power for 11 days affecting 800,000 customers since many states in the region were also impacted and crews needed to be brought from other areas of the country.

The SBI Broadband Coordinator worked together with the state's SWIC in the initial structuring of a successful BTOP grant to the Connecticut Department of Information Technology (DOIT), now the Bureau of Enterprise Systems and Technology (BEST) within the Department of Administrative

Services.[1] That grant is proceeding apace and will result in the full establishment of the Connecticut Public Safety Services Data Network (CPSSDN) base fiber optic network topology and inter-connecting the existing 107 PSAPs, the Department of Public Safety building in Middletown, and the state's central IT data center. The project will ultimately implement additional coverage and capacity of the CPSSDN, expanding coverage to an additional 411 public safety-related locations so as to realize cost savings, connectivity requirements, and efficiency improvements. This project will greatly enhance agency interoperability capabilities, data sharing and overall communications while improving constituent services and safety. The completion of the CPSSDN will substantially increase broadband connectivity and provide service access to over 25,000 police officers, firefighters and supporting staff members.

In order to accelerate the migration to an IP-based, NG 9-1-1 program, the BTOP grant funded the **Access Connecticut project**, which basically now deploys 5,500 miles of new fiber infrastructure, including 113 hub sites in predominantly underserved areas.

As part of that project, also on track to be completed by this summer (2013), the **Connecticut Public Safety Services Data Network** will integrate a statewide data network at more than 540 public safety facilities that serve more than 25,000 first responders.

State Broadband Initiative (SBI) – Mapping and Strategic Planning Project

The state designated SBI Broadband Policy Coordinator will participate and assisting in the development of the NTIA State and Local Implementation grant program.

The state's State Broadband Initiative (SBI) leader and project manager for the Mapping and Strategic Planning Project is deeply involved with broadband groups across the state, including state agencies, many of

[1] In 2005, the Connecticut General Assembly passed and Governor Rell signed into law Public Act 05-181 which enabled the Office of Statewide Emergency Telecommunications (OSET) to initiate a planning process for the investigation and requirements determination of an integrated safety data network. Surveys of current systems and needs led to the initiation of a feasibility study in 2006. The study included recommendations for network infrastructure solutions that would establish a new, integrated public safety data network, saving affected agencies substantial sustainable costs.

the 169 towns (CT has town government, not county) and their regional/statewide organizations, as well as with community anchor institutions and the telecom providers. This will be critical during the implementation and education phases of the FirstNet project since there will be working groups needed to be formed and organized to focus on the project.

In 2009, NTIA launched the State Broadband Initiative (SBI) grant program to facilitate the integration of broadband and information technology into state and local economies. The Connecticut SBI Broadband Coordinator position is federally funded to help the state identify and support opportunities for increased collaboration amongst various state agencies and statewide councils as it relates to the creation and promotion of broadband policies.

The SBI Broadband Coordinator works with other state agencies and private entities to help establish a network of agencies, businesses, and organizations that can work cooperatively to create programs intended to accelerate broadband access and adoption. This state program has successfully progressed since the SBI grant award in January 2010. The Coordinator's activities included assisting in organizing and drafting the successful application to the BTOP program for public safety infrastructure financial assistance, a project that is proceeding on schedule at this time.

The state has used the federal NTIA SBI funding to assure that entities such as the state's public safety and homeland security agencies seeking advice or counsel regarding the state's activities in implementing expansion of broadband access will have the benefit of a single-point of contact through a dedicated state manager with expertise in broadband enhancement activities. Thus, the SBI Broadband Coordinator has already become involved in the statewide coordination of resources, to establish or strengthen governance, and address interoperability gaps in association with the state's Statewide Interoperability Coordinator (SWIC).

The SWIC also addresses interstate coordination issues, and discussing initiatives such as the creation of a regional field operations guide and continuing to work with state-to-state coordination of frequency use. The SWIC is the chair of the state's Public Safety Interoperability Communications Committee which will coordinate on the NTIA State and Local Implementation grant program. The SBI Broadband Coordinator is a voting member of that Committee at the invitation of the SWIC and will provide assistance to the SWIC and the Committee throughout the application process and implementation of the NTIA State and Local Implementation grant program.

The SBI Broadband Coordinator's project included extensive survey, data collection, GIS mapping, and public policy planning and thus can immediately provide valuable information to the SWIC to jumpstart the State and Local Implementation grant program in Connecticut. The

broadband coverage studies developed by the SBI program show all areas of Connecticut in terms of providers, existing infrastructure, and capacity of service, including wireless infrastructure and service capacity, thus expediting determinations of suitability and readiness.

These broadband status studies of course also reveal coverage gaps and potential locations of new infrastructure that can be used to enhance the network coverage for specific areas of the state. Once these existing and new infrastructure requirements are identified and built, these assets should be incorporated into the network's infrastructure pool after local agreements for the use of those assets are in place. Thus, these two NTIA funding projects, and other NTIA BTOP projects in Connecticut, such as the NG-911 enhancement project and the Connecticut Education Network buildout, can consolidate the data gathering/mapping projects to the mutual benefit of the state and its agencies. The states will remain the data collection clearinghouse and NTIA has already developed the standards and format of these data files over the last few years of the SBI project, including rules for generating nationally-standardized GIS maps.

The SBI program also required the development by the state over the last few years of a complete contact list of all local jurisdictions and community anchor institutions — including utility and telecommunications providers, police, fire, libraries, health centers, and municipal structures — are clearly an established asset immediately available to the SWIC in order to coordinate communications among the many support groups necessary to assure the success of this program. The SBI program will continue to use and grow these vital relationships with the providers and local authorities as it continues to obtain and modify the critical datasets required by the grant provisions in order to develop the GIS mapping that enhances use of the data.

Examples would be local inventory backhaul (fiber and microwave) resources, final mile, tower space and useable building sites which may be suitable for sharing infrastructure. The SBI Broadband Coordinator is also deeply involved in a PURA regulatory docket with the electric utilities to transfer management of the attachment or transfer of utility equipment in the public rights of way of the state in order to improve productivity and emergency restoration processes.

Thus, there already exists in Connecticut a sharp focus for inter-agency coordinating activities at the state level, supporting intra-governmental activities across the state, including development of streamlined permitting processes, coordination of local government officials leading broadband access and adoption efforts, and support of sector-specific coordination efforts such as will be required in the NTIA State and Local Implementation grant program.

For localities, establishing state and local governance is an important first step. Additionally, states and localities need a comprehensive view of

their communications infrastructure, what services and applications are needed, and fund distribution and public/private partnership opportunities. States should gather technical and business information. Any public safety solutions need to be competitive and focus on adoption. It's important to establish conditions and terms for adoption, address capabilities, level of performance needed, coverage and devices as states and localities plan and implement their public safety networks.

An example of strong cooperation in the BosNYWash region is the Mid-Atlantic Consortium for Interoperable Nationwide Advanced Communications (MACINAC), formed by six states. The group has adopted a lightweight approach for its governance.

http://www.ntia.doc.gov/files/ntia/macinac_comments_on_firstnet_noi_final_11-1-2012.pdf

http://www.ntia.doc.gov/federal-register-notice/2012/comments-nationwide-interoperable-public-safety-broadband-network-noi?page=3#comment-29613

Assess your state's assets. As states prepare for broadband build out, they need an accurate understanding of their existing infrastructure used to provide communications for public safety users and the state, local, and tribal levels. That can also include knowing what assets are available within commercial networks. Among the assets to be inventoried are towers and the capacity to handle communications between towers and the core of the network (fiber and microwave "backhaul"). That type of information will be important for consulting with FirstNet on the design and building of the network.

The SBI leaders may have already performed a baseline assessment to identify what systems are in use, which key partnerships are already established, which systems are in the procurement cycle; and generate a list of best practices for the region.

The SBI leaders and program can help the FirstNet Project to implement an assessment of regional interoperable systems to determine leveraging opportunities and core sustainability requirements; define governance structure recommendations and/or guidance; determine, compile, and provide recommendations/guidance for oversight, executive orders, policy, etc.; and establish a common language for the region.

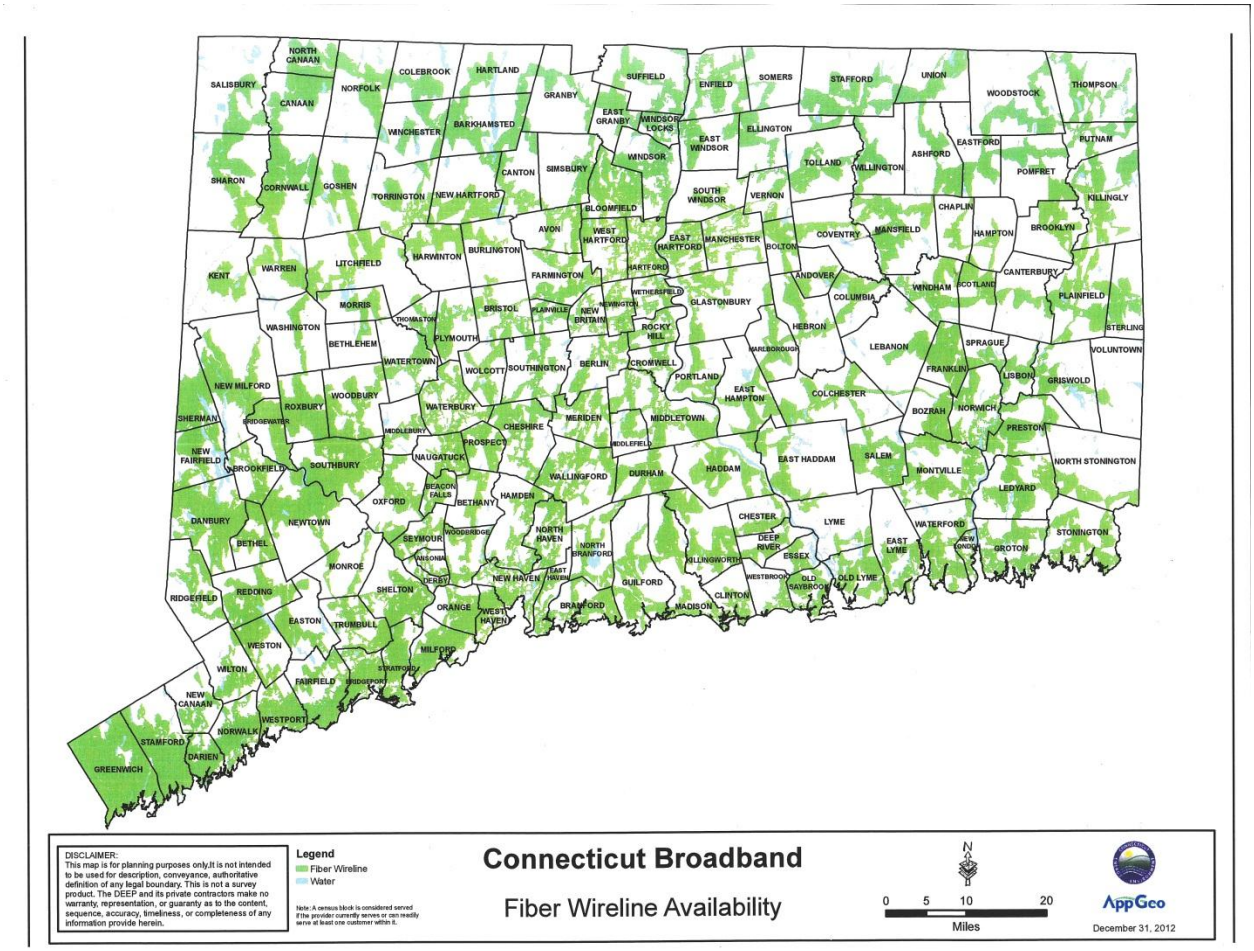
The SBI project has ready contacted municipalities and collected data to develop a map of the known government-owned, publicly accessible, wired and wireless broadband service. We needed to get the providers on board to convince them that divulging their network and service data to us would be held in confidence and would be useful to them. In turn, the data we produced, and the GIS maps that have resulted, bubble up to the NTIA and then to the FCC for use in the National Broadband Map.

- The data that is collected as part of the SBI program is updated on a regular six month basis. In Connecticut, we are just completing the collection that details conditions as of December 31, 2012 and will be beginning the next collection on July 1, 2013.
- Anticipate modifying some of your collection procedures to collect additional information that will be useful to this program.

This data collection does not contain all of the information that will be needed to plan the Public Switched Broadband Network (PSBN), but it is a good starting point that can be leveraged and built upon.

- This dataset is current as of December of 2012, and includes contact lists and phone numbers of people the project can contact to gather further details on the networks.
- Data on Fiber backhaul that exists in the state.

There is a substantial amount of Fiber in Connecticut that is being expanded as part of the BTOP program as well.



Much of the necessary information might already be available at the state and local levels, but states will need to compile it into a usable and accessible format to ensure a comprehensive overview of their capabilities to support the new broadband network. Additionally, states should be aware of ongoing communication projects and may want to reexamine those efforts in light of the nationwide system. Fundamental questions that need to be asked are: Will those projects be interoperable with the nationwide system? Will they support the core mission requirements currently being identified? And, are the resources currently being spent going to be wasted?

Establish security practices and rules governing access to information. When deployed, the network will allow remote access to tremendous amounts of critical and sensitive information and communications from around the nation. Although FirstNet will be responsible for establishing overall security for the network, states still need to ensure from the inception that appropriate safeguards are "baked" into the system at their end. Among the questions states need to consider are: What happens if a public safety cell phone or tablet is lost or stolen? How do system operators ensure that information is shared only with individuals with the appropriate authorization and under the right circumstances? And, how do states ensure accountability within the system?

Broadband Service Providers are contacted and requested to provide an updated data submission. In addition we have built a Secure Provider Portal application that allows providers to either submit new data to us or perform online edits of the data they have previously submitted to us. This application will also be leveraged for collection of data in this program.

Information obtained from prior data collection efforts and work products and information from the Public Utilities Regulator Agency is available for use in this planning.

Inventory of all regulated tower locations in the state that is maintained by the State of Connecticut Siting Council.

- This dataset provides some details on the type of equipment and the providers that have equipment on the towers in the state.
- The information included in this database is based on records of dockets, petitions, tower share requests, and notices of exempt modifications received and processed by the Council.
- This database is not an exhaustive listing of all wireless telecommunications sites in the state in that it does not include all information about sites not under the jurisdiction of the Siting Council.

- We will need to supplement this data with additional details (such as availability, redundant power supply, etc.) as well as details on towers not under the jurisdiction of the Council to gather the information necessary to plan the PSBN, but again it is a good starting point.
- This dataset was last updated on March 3, 2013.

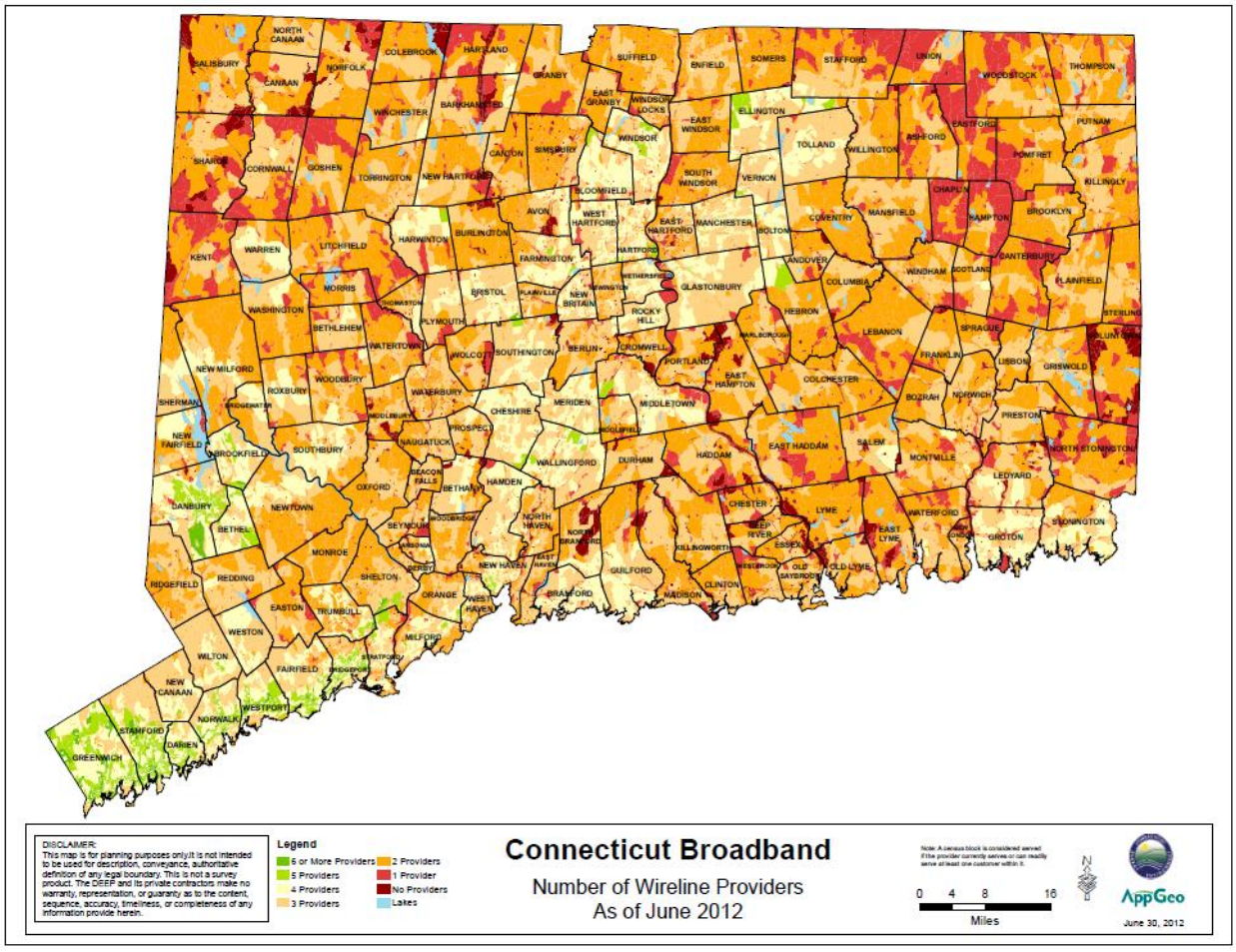
The two significant tribal bodies, the Mohegan Tribe of Connecticut and the Mashantucket Pequot Indians.

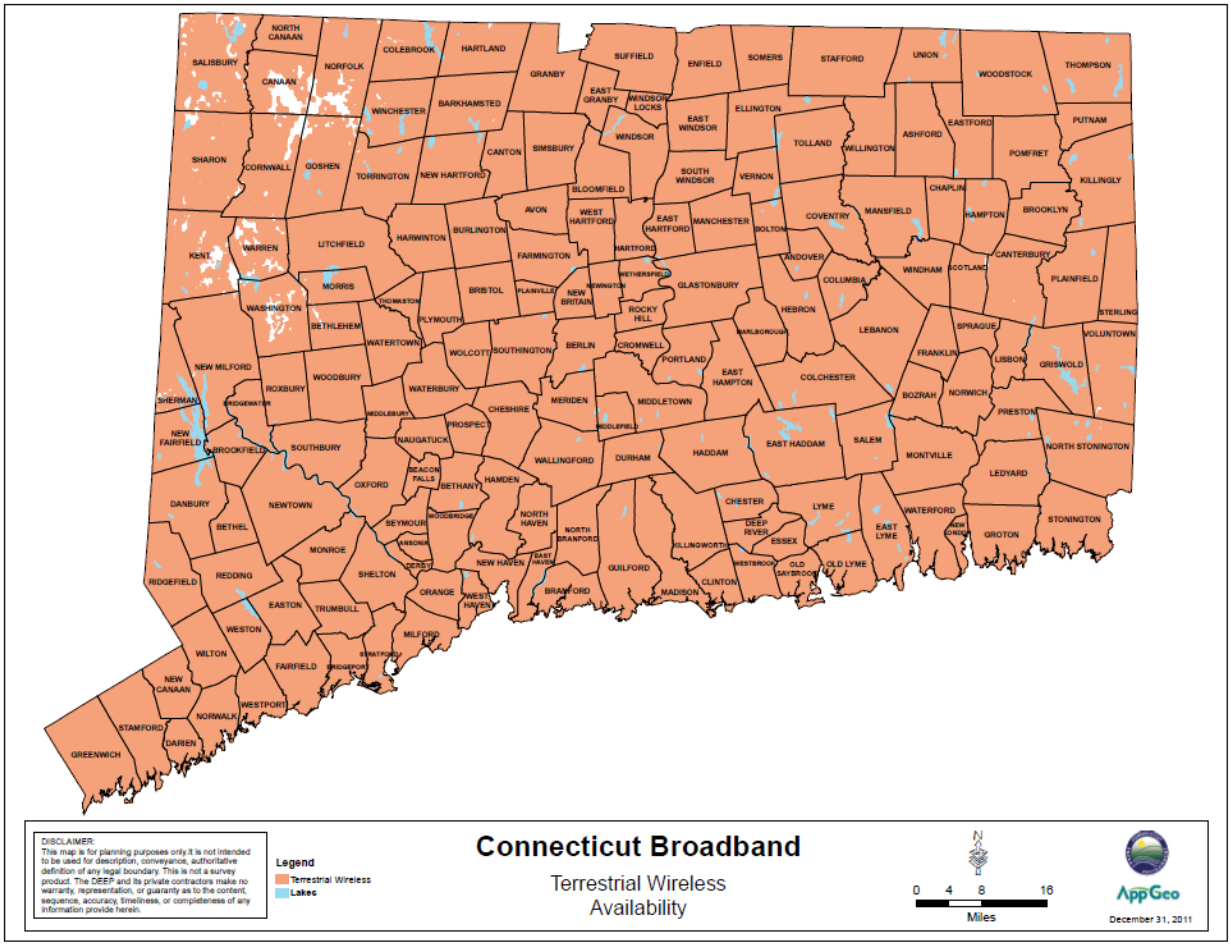
- We have contacts at both of these tribes and know they have fairly good inventories that detail the networks they have in place.
- we have not been able to obtain a copy of this dataset.
- As part of this program we will work with both our technical and public safety contacts at the tribes to gather this information.

Through previous planning and data collection efforts done in the broadband mapping efforts data has been collected for all of the state available broadband service and LTE technology. The maps below show a sample of the available coverage and providers.

Additional information is available at www.ct.gov/broadband/

Rural entities will be involved in the same manner as their non-rural counterparts. Rural communities will be used to host data collection activities and neighboring rural towns will be invited to attend. Their milestones and metrics will be the same as those collected from the remainder of the state.


DISCLAIMER:
This map is for planning purposes only.It is not intended to be used for description, conveyance, authoritative definition of any legal boundary. This is not a survey product. The DEEP and its private contractors make no warranty, representation, or guaranty as to the content, sequence, accuracy, timeliness, or completeness of any information provide herein.
Legend
6 or More Providers
5 Providers
4 Providers
3 Providers
2 Providers
1 Provider
No Providers
Lakes
Connecticut Broadband
Number of Wireline Providers
As of June 2012
Note: A census block is considered served if the provider currently serves or can readily serve at least one customer within it.
0 4 8 16
Miles
N
AppGeo
June 30, 2012



Governance Bodies and Members

In order to comply with the federal law and practically implement the FirstNet Project, it will be necessary for each grantee state or territory to convene a multidisciplinary advisory group on broadband.

Among the first major actions a state or territory must take is determining how decisions regarding public safety broadband will be made within a state.

Existing public safety governance and planning authorities need to be modified to provide support for the implementation of this project.

- Convening a multidisciplinary advisory group on broadband;
- Ensuring public safety's participation in design, operation, and governance;

- Building partnerships with local governments, special districts, and key state associations;
- Engaging tribal nations;
- Communicating with the private sector and utilities.
- Assessing the assets in the state;
- Establishing security practices and rules governing
- Access to information; and
- Ensuring that the state's procurement and contracting rules and regulations allow for the turnaround time set forth in the federal law.

Those decisions relate to managing federal funds, designing business processes within the state, and establishing mission requirements, what is sometimes referred to as the "statement of requirements" (SOR). It may be premature, however, to put in place either an officer or commission because many of the decisions to be made by FirstNet could affect a state's choice about governance structures. A preparatory step states and territories can take is convening an internal advisory group that will comprise senior policy advisors and cabinet officials to track developments and oversee state preparations. Such a group could be made responsible for overseeing many of the other steps that states need to take to be ready to act once FirstNet is in place.

- How will ongoing decisions regarding the network be made within a state?
- What structures and business processes should a state use to engage multiple stakeholder agencies and end users?
- How will a state establish the minimum operational requirements of the network? That is, how will first responders use their system, and who will make those types of operational decisions?
- What process will a state use to decide whether or not to opt out of the network? How will they finance the balance of the building costs? How will they fund ongoing upgrades?
- How will states pay ongoing usage fees?

There are significant differences in terms of states' readiness for public safety broadband. Those differences will make uniformity across states difficult. Much will depend on a range of conditions, including a state's geography, the effectiveness of its existing structures governing public safety communications, and the existing technical assets available in a state.

One area where the public safety community's input will be essential is in ranking or prioritizing users' access during major events. For example, during the events of 9/11, many citizens using commercial wireless services

were unable to place or receive calls because too many people were trying to use the system at the same time. The resulting gridlock paralyzed communications for many individuals. Although the nationwide network will not be a commercially available network, the challenge of gridlock during a major event remains.

Prioritization will avoid network gridlock by ensuring that first responders and other key public safety officials are able to access the system ahead of "lower" priority users during times of high demand, such as in a crisis situation. Unlike the prioritization of public safety over public users on commercial systems, the challenge here will be prioritizing access among public safety officials at varying levels and units of government.

The states and territories need to ensure that the interests of law enforcement, fire, and EMS officials are adequately represented in governance and ongoing decision making. For the network to be successful, states will need to include the public safety and first responder community in governance and decision making processes.

- States and localities will need to work on governance, regional collaboration, procurement and adoption, coverage, reliability, resiliency requirements, and training needs of local users.
- States need to plan to involve local and tribal entities in the grant program
- States need to determine how they will facilitate regional participation through the states and how states could involve in the grant program federal users and entities located within their states.

Key state-level individuals whose role will be essential to advising states and territories include the following:

Chief Information Officers (CIOs). Although the role and responsibilities of CIOs vary to some extent by state, CIOs generally lead their states in developing and operating communications and information systems and thus have the experience and enterprise-wide view that will be essential to broadband deployment.

State CIOs need to be included in this process because of their unique enterprise view and responsibilities in dealing with the state digital fabric on a daily basis. On a daily basis, State Chief Information Officers support public safety activities through the statewide communications infrastructure. The PSBN build-out represents a singular opportunity to expand broadband across the state and nation. If CIOs are included and consulted during the grant process, NTIA will be able to take advantage of existing network infrastructure and the governance processes by which they're managed. In this regard, it is critical that CIOs are part of this process because of their

expertise with statewide network services, IP-based networks and contract management to the table around which the public safety broadband interoperable network will be planned and implemented.

Chief Technology Officers (CTOs) and Chief Information Security Officers (CISOs). CTOs and CISOs lead their state's technical development and operation of networks and have responsibility for and experience in network development, procurement, and implementation of security safeguards.

Homeland Security Advisors (HSAs). HSAs lead their states' homeland security enterprises. Although their role and operational responsibilities vary by state, HSAs will bring a critical perspective to the development of the network.

Emergency Managers (EMs). EMs lead their state's response to disasters. Their standing in the first responder community and their tactical understanding of network mission requirements are critical.

State Police. State police are often responsible for a state's existing public safety networks and, thus, their input is imperative.

Statewide Interoperability Coordinators (SWICs). SWICs work with emergency response leaders at all levels of government to implement the statewide communication interoperability plan (SCIP) for radio communications. Currently 44 of the 55 states, territories and commonwealths and the District of Columbia have a full-time SWIC or equivalent position.

State Fire and EMS Officials. Fire and EMS personnel will be major consumers of network services and also major contributors. Their understanding of mission requirements is critical.

Public Utilities Commissioners. Public utilities commissioners regulate utility services, including energy, telecommunications, and water, and are responsible for assuring those services are reliably provided and available to consumers at reasonable rates. Their role in regulating telecommunications systems suggests that their input will be essential as well.

State Budget Officers. Funding the network will be complicated both initially and over time suggesting that early participation by state budget officers could be useful to implementing successful funding strategies.

State Health Officials. State health officials operate many public health information systems that support states' public safety missions. It is important to ensure that those systems are factored into the business design of the network.

In Connecticut, Public Safety Interoperable Communication Issues are addressed by:

- The Department of Emergency Management and Homeland Security (**DEMHS**) -
    - State-wide **Emergency Management and Homeland Security Advisory Council's Public Safety State Interoperability Executive Committee (PSSIEC)**.
  - This Committee serves as the **(SIGB) Statewide Interoperability Governing Board**.
- **PSSIEC's Primary purpose is to make recommendations** to
  - the Advisory Council and the Deputy Commissioner of Department of Emergency Services and Public Protection (DESPP) and DEMHS
    - with regard to sharing real-time voice, data and video information with authorized first responders and other critical components of the emergency management and public safety community
  - **And, coordination of public telecommunications emergency planning, preparedness, and restoration.**
  - **Examples =**
    - **Provide strategic planning input and review of Statewide Communications Interoperability Plan (SCIP).**
    - **Interoperability policy development;**
    - **Review and approval of proposed local/regional radio interoperability systems;**
    - Review and approval of public safety wireless broadband systems;
    - Grant guidance;
    - Channel system policy development and utilization;
    - Governance of use of statewide Public Safety P25 controller;

Decisions made by this committee are implemented by the SWIC.

The PSSIEC currently is made up of **two classes of members, voting members and non-voting** members.

The **voting members** consist of one representative from each discipline or state agency involved with public safety, or their designee, as follows:

- **Department of Emergency Services and Public Protection**

    - **Division of Emergency Management and Homeland Security**
    - **Division of State Police**
    - **Office of Statewide Emergency Telecommunications**
- Statewide Interoperability Coordinator (**SWIC**)
- **Office of Consumer Counsel (Broadband Policy Coordinator)**
- Department of **Transportation**
- Department of **Correction**
- Department of **Public Health**
- **Military Department**
- Department of Administrative Services, Bureau of Enterprise Systems and Technology (**BEST**)
- Department of Energy and Environmental Protection (**DEEP**)
- **Judicial Branch**
- Connecticut **Police Chiefs Association**
- Connecticut **Fire Chiefs Association**
- One representative from each of the **5 DEMHS regions**
- One representative from a **Tribal Nation**
- **One amateur radio operator**
- **EMS Advisory Board**
- **Member of the Public**
- **Connecticut Emergency Managers Association**.

The PSSIEC also includes active **non-voting membership**, examples=

- **Federal agency partners**:
    - US Coast Guard, DHS Officer of Emergency Communications & FEMA.
- **Not-for-profits**, Red Cross Various and Civil Air Patrol
- **for profit organizations** = A.T.&T., Verizon, Sprint, Motorola , local broadband carriers.

Financial Support:

The State of Connecticut currently provides limited financial support for the activities of the PSSIEC

- (state employees are assigned to the PSSIEC on a part time or fulltime basis).
- The State of **Connecticut plans to leverage SLIGP funds to support the ongoing efforts to achieve the goals set forth in this program**.

- The support provided would be in concert with required SLIGP grant activities due to the integrated approach to both public safety mission critical voice and broadband applications.
- No specific funds will be set aside for SIGP support but the majority of outreach, governance and planning activities will incorporate the same stakeholders and similar topics all to be coordinated through the same office and integrated within the Connecticut Statewide Interoperability Plan (SCIP).

Statewide Communications Interoperability Plan (SCIP)

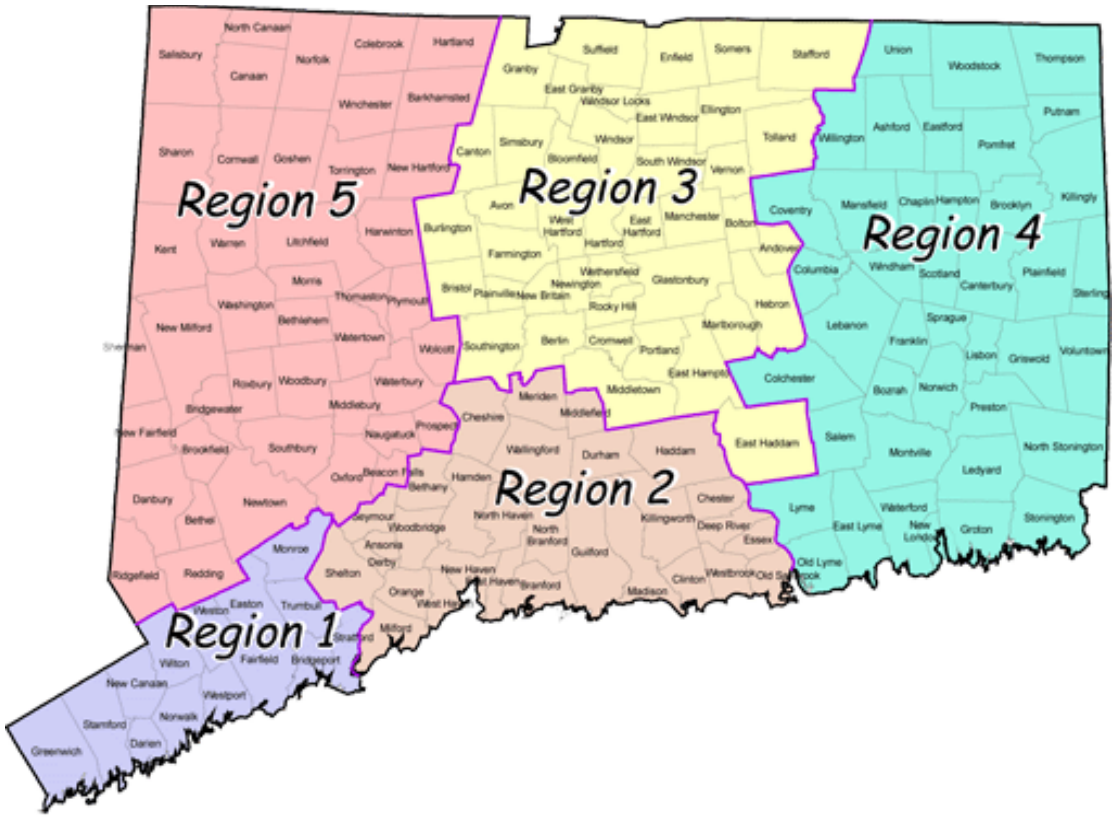
The Connecticut Statewide Communications Interoperability Plan (**SCIP**) the does **not** presently address public safety broadband service.

- This topic has been discussed over the past several years and incorporated into PSSIEC activities and SCIP updates.
- This topic will be addressed formally covered in the revision being released later in 2013.

Connecticut is currently composed of: (PSSIEC members shown above):

- **169 municipalities**;
- **2** federally-recognized **tribal nations**; and
- **no county government or unincorporated areas exist** within the State.
- 5 **planning regions** (emergency management and homeland security) coordinate public safety communications planning and response activities.
    - five Division of Emergency Management and Homeland Security (DEMHS) Regions
        - provide emergency planning purposes
        - each has representation re public safety communications issues through the **Emergency Support Function 2 ESF#2 (Communications) committees**.
        - Each of the five regions has a formalized active ESF#2 Committee responsible for coordinating interoperable communications amongst the member municipalities and tribal nations.

The state's public service utilities utilize a similar set of five regions for emergency and restoration operations.



The state intends to use the funds from the SLIGP grant to support the activities of the PSSIEC of which will be to update the SCIP.

- Specifically broadband goals and initiatives will be added and updated through this process.
- A portion of the funds requested through the budget for contracted services in support of planning and organization activities will be used.
- Specific dedicated funds have not been determined for this purpose other than it will be conducted as part of the overall outreach, education and data collection activities.
- These would include the hiring of technical experts for assistance and also use In-kind match (labor hours) to assist in SCIP workshops, regional stakeholder workshops and broadband working group meetings.

State-level Involvement

The **Statewide Interoperability Coordinator (SWIC)** for the State of Connecticut

- also serves as the Director of Administration of the State of Connecticut Department of Emergency Services and Public Protection.
- The CT SWIC also serves on the **FirstNet Public Safety Advisory Committee** as a representative for the National Council of Statewide Interoperability Coordinators (NCSWIC).
- The CT SWIC is the single point of contact (POC) for each state be identified and funded, providing the leadership and continuity necessary for interstate interoperability to be successful.

The State of Connecticut Chief Information Officer (CIO) serves as the Chairman of the Public Safety Broadband Working Group.

- Once the governance, data collection and other tasks are completed, the CIO will have responsibilities similar to those being completed for the current BTOP supported Public Safety Data Network (PSDN) a statewide fiber optic network connecting all law enforcement, fire service and public safety answering points within Connecticut. (Nutmeg Network)
- In addition **municipalities will be represented on the Broadband Working Group** and any associated sub-committees as they have in the past for all other projects associated with the PSSIEC.
- The other state level agencies which will be involved in the SLIGP are the PSSIEC members and all other agencies are invited to participate if interested.

In addition to the state employees engaged in this project, on an In-kind match basis:

- it is anticipated additional support consisting of contract services will be hired to provide technical writing expertise and assistance from subject matter experts.
- This would include project management support, technical subject matter experts, technical writers and facilitation support staff.
- Several contracts have been put in place by the state to act on immediately upon receipt of grant award.

Engage the private sector and utilities. Private industry is currently involved in a non-voting capacity with the PSSIEC, utilities, both power and communication providers, as well as other related private sector vendors have been involved and active participants as appropriate on working groups and at workshops for several years.

Each state will need to determine the role that private sector companies and utilities should play in network build out and operation. As with the recommendations described above, many of the decisions and

actions that states need to take will be contingent on the guidance issued by FirstNet. Some states could find it advantageous to keep the private sector and utilities involved in ongoing discussions and planning, but for others involvement may not be appropriate at this time. That decision will need to be based on a range of factors, such as a state's infrastructure and the role of the public utility commission.

Their active engagement will continue through this process.

Coordination with Local Government Jurisdictions

A working group comprised of local and state entities was formed to use funding from the

Public Safety Interoperable Communications (PSIC) Grant for various interoperable communications projects.

- One of the many successful projects within PSIC included developing the concept of Mobile Communications Vehicles (MVC) for each of the five DEMHS regions to use for large scale incident/events.
- This concept led to bid specifications and custom construction of the MCVs.
- This project was primarily supported by local municipal stakeholders who developed the goals, objectives, specifications and assisted with the readiness of each of these vehicles.

These MCVs have been deployed numerous times since their arrival in May of 2012.

- The deployments included Long Island New York Deployment for Super Storm Sandy (September 2012),
- the school shooting incident at Sandy Hook (December 2012 Newtown, Connecticut)

The largest challenge in engaging local jurisdictions in any of the statewide initiatives is the time commitment needed for the local subject matter experts to be away from their local government responsibilities.

- By supporting their activities with administrative and technical support, the Project Team will make the best use of the valuable time of all stake holders on this project.
- Meetings will also be held throughout the state at day and evening hours to make attendance at the various workshops as convenient as possible.

Regional Collaboration

Connecticut actively participates in many interstate planning activities and groups by both actively providing members but also leadership to several of the groups listed below.

- All of these groups hold regular meetings at which broadband planning has been a topic for the past several years.
  - Region 1 Regional Interoperable Communications Committee (Six New England State SWICs) of which the CT SWIC is the Chair. In addition these meetings also regularly include Region 2 participants.
  - FEMA Region 1 Regional Emergency Communications Coordinating Working Group
  - Regional Catastrophic Planning Committee (New York, New Jersey & Connecticut)
  - FCC Region 19 700/800 MHz Planning Committee (New England States)
  - FCC Region 8 & 30 700/800MHz Planning Committees (New York, New Jersey, Connecticut)
  - New York Regional Interoperability Committee (New York, Connecticut, New Jersey)

Tribal Nations

The State of Connecticut has **two federally recognized tribal nations**,

- the Mashantucket Pequot Tribal Nation and
- the Mohegan Tribe of Indians.

Both tribal nations are part of the Connecticut Public Safety State Interoperability Executive Committee.

Tribal nations will be able to make many of their own decisions about their participation in the nationwide network and the advice offered to states and territories to begin planning applies to the leaders of tribal nations as well. To improve planning and reduce duplicative efforts, states with recognized tribal nations will need to either factor in or directly reach out to the tribes to enhance their planning efforts.

- The tribal nations will be treated equally and will have representation on the Public Safety Broadband Working Group.
- Both tribal nations have been engaged in DEMHS Region 4 and have participated in a statewide hurricane exercise.

- They are also involved in receiving homeland security equipment and are part of the Region 4 Hazardous Materials Response Team.
- The communications centers for the two tribal nations have been included in the PSDN statewide fiber optic link between communications centers.

Given the limited resources of many tribes, decision making may take longer, and states will need to factor this into their planning processes. The primary challenges the State has with the two tribal nations is the same as with municipal entities, the time demands required for active participation which detracts from their tribal responsibilities.

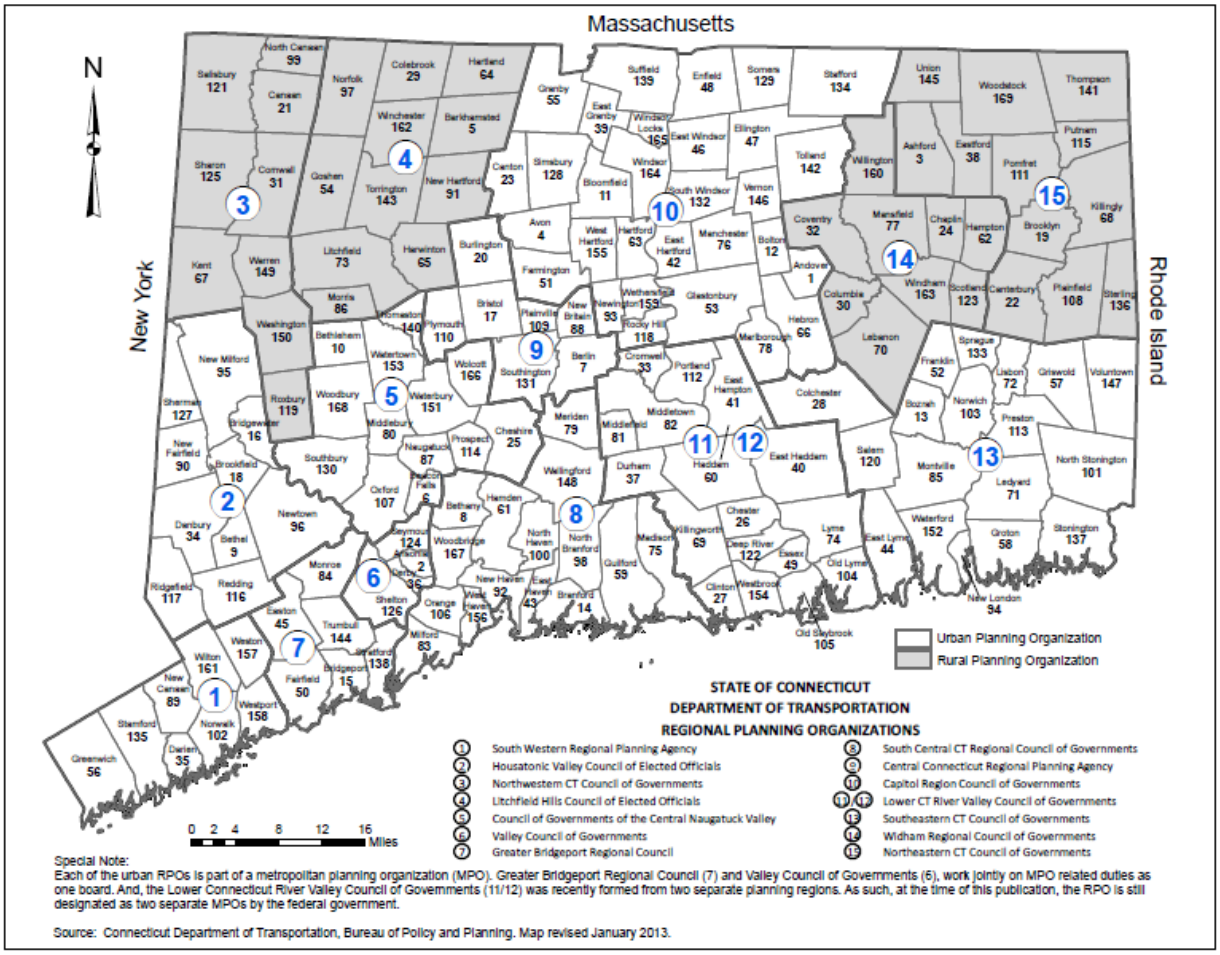
Rural Coverage

Connecticut is a compact state with urban, suburban and rural areas and characteristics.

- **For general planning purposes** the state has developed 15 regional planning areas for use in regional efforts to include transportation and other multi-town planning efforts such as GIS.
- **For Broadband planning purposes** we will use these designations as used by the Department of Transportation and the Office of Policy and Management. (See map below).

The criteria used for these regions are based on transportation infrastructure and population density.

- The Northwest CT Council of Governments, Litchfield Hills Council of Governments, the Windham Regional Council of Governments and the Northeast CT Council of Governments are classified as **rural planning areas** while the remaining area of Connecticut is classified as Urban Planning Areas.
    - This **rural designation covers 41 municipalities**
    - **remaining 128 municipalities and both tribal nations are categorized as urban.**



Existing Government-Owned Networks

Connecticut plans to continue and expand as needed the current process of identifying any hardening, security, reliability or resiliency requirements that currently are required for existing government owned networks or those of partner agencies. This is currently done through a rigorous risk analysis methodology that follows the NIST 800 series guides regarding security controls and configurations on information systems. The determination to base this methodology on existing Federal Government standards recognizes the prime importance of the information sharing partnership in existence between numerous Federal Government and State of Connecticut agencies. Basing State of Connecticut information system risk and control evaluations on Federal standards allows Federal audits by the IRS, SSA and HIPAA authorities to occur in a mutually understood environment utilizing commonly defined concepts and terms.

In adapting existing Federal standards the guiding principle was to provide users with practical techniques which would make any risk analysis a

straightforward and understandable exercise while ensuring compliance with the framework and standards provided by the Federal guidelines. By its very nature this guideline is not considered a finished product. It is anticipated that it will constantly be improved upon by its continuing adaptation to evolving Federal standards and by the addition of improved techniques and methods for the gathering and analysis of data related to threats, vulnerabilities and control capabilities. Components of this analysis include: risk analysis process flow, evaluation of multiple systems, systems security profile, threat and vulnerability identification, control analysis, likelihood determination, impact analysis, risk determination and any remediation workflow and action items.

The identification of any contractual requirements will follow the same methodology as we have done in the past with previously contracted vendors.

Network Users

On Line Surveys and other data collection tools will be used to determine levels of interest of local entities these same tools as described above will be also used for data collection. In addition throughout this process significant outreach to many municipalities throughout the state using a variety of disciplines will be sued to host these sessions.

Education and Outreach

Conferences and regional training sessions will be conducted to increase the level of understanding of the capabilities of the public safety broadband network. These will be hosted throughout the state using a variety of different disciplines and organizations as sponsors to facilitates ease of access and buy in from the varied stakeholder community.

Memorandum of Agreements

It is not anticipated there will be any memorandum of agreement obstacles encountered between the State and the municipalities. The state has been successful in formulating MOAs to support other statewide efforts. These MOAs included specific considerations for the two tribal nations and have been obtained from all 169 municipalities and both tribal nations. These are updated on an annual basis as needed.

Tools

The tools planned to be employed include, broadband mapping (SBI), Online survey tool provide through the ICTAP program from DHS OEC, CASM tool and CT Geographic Emergency Management Systems (GEMS) a GIS based online collaborative tool. The state has built a number of tools that have been used and can be leveraged as part of this program. In addition to the Secure Provider Portal in the SBI program we have built survey tools that allow us to gather information about services that exist at community anchor institutions in the state including public safety facilities. From this tool we have accurate locations of the facilities and a database of services subscribed to at each location which is included within GEMS. We also have another survey tool that allows us to gather information on coverage and document feedback from users on gaps in service. This tool can be modified and used to gather additional information when we meet with the municipalities during out outreach efforts.

The State is unaware of any additional tools as of this time. As the working group becomes aware of additional tools they will be utilized and leveraged to the extent possible.

Phase Two Funding

Connecticut anticipates that phase two will consist of detailed data collection and additional planning as outlined by the FirstNet Board and as such it is planned to use available tools and additional outreach activities to collect and provide additional planning input as requested, similar to those initiated during Phase One activities.