



WISCONSIN PUBLIC SAFETY BROADBAND PROJECT

WISCONSIN STATE PLAN DECISION PROCESS

June 15, 2017



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1 Introduction

1.1 Purpose of this Document

Under the U.S. Middle Class Tax Relief and Job Creation Act of 2012 (“The Act”), the First Responder Network Authority (“FirstNet”) is required to provide a plan (“State Plan”) for implementation of the Nationwide Public Safety Broadband Network (NPSBN) in each U.S. state and territory.¹ This document outlines the state of Wisconsin’s method for evaluating the State Plan.

In turn, the governor of each state has 90 days from receipt of the State Plan to determine whether to opt-in to the service or opt-out and provide an alternative plan for implementation of the network. This document provides a framework for that opt-in/opt-out evaluation process. This document also details the state of Wisconsin’s plan for reviewing the draft version of the State Plan, collecting and managing stakeholder and Interoperability Council feedback and submitting comments to FirstNet.

1.2 Background

The Act created FirstNet as an independent authority within the National Telecommunications and Information Administration (NTIA), charged with building, operating, and maintaining a nationwide, interoperable public safety broadband network designed to meet public safety’s communications requirements. Under the Act, FirstNet is required to provide a plan to guide the implementation of the network within each state and territory.

After completing a successful Request for Proposals (RFP) process, FirstNet entered into a contract with AT&T on March 30, 2017 as the national commercial partner for the nationwide service. FirstNet’s service will be delivered over a combination of AT&T’s existing commercial network, enhanced for public safety, with additional features and wireless coverage built into the network specifically to meet its commitments under its partnership with FirstNet.

The Wisconsin Public Safety Broadband (WiPSB) project represents the state’s efforts to prepare for the implementation of FirstNet in the state, and aims to ensure the success of that implementation based on a comprehensive statement of stakeholder requirements. The scope of this project includes collecting user requirements, performing user population modeling and analysis, reviewing the state’s public safety communications governance structure, performing stakeholder outreach, and evaluating the State Plan. This project is housed under the Wisconsin Department of Justice, Crime Information Bureau, Interoperability Unit and is funded by the NTIA State and Local Implementation Grant Program (SLIGP).

2 Evaluation Process

2.1 The Decision

Under the Act, the governor of each state has a legal right to opt-out of the FirstNet State Plan. If a state opts out, it will be responsible for submitting an alternative plan to build a Radio Access Network (RAN) to the NTIA and FCC and must enter into a spectrum lease agreement with FirstNet.² The RAN, for

¹ See 2012 US Middle Class Tax Relief and Job Creation Act, P.L. 112-96.
<https://www.congress.gov/112/plaws/publ96/PLAW-112publ96.pdf>, retrieved 4/11/2017.

² See Id., Sec. 6302(e).



practical purposes, includes only cellular sites and the backhaul that connects cellular sites to the core network. The core network is operated by FirstNet nationwide, whether a state has opted out or not; opt-out states have the responsibility to connect their RAN to the nationwide core.

The goal of the Project Team's evaluation of FirstNet's State Plan is **to recommend whether the governor (1) should opt-in to FirstNet's proposed service, or whether the governor (2) should exercise the right to opt-out and prepare an alternative plan.** This evaluation will include a full assessment of not only whether the service proposed in the State Plan meets first responder needs, but also whether there is sufficient risk inherent in FirstNet's proposal that it is in Wisconsin's best interest to pursue an alternative plan. The objective of the entire process set forth in this document is to provide a plan to ensure the State is adequately prepared for the Governor to confidently make this monumental decision.

The Act does not explicitly include a mechanism to opt-in to FirstNet's State Plan, and each governor is not required under the Act to send any approval or notice of any kind to FirstNet at all. The standing legal interpretation of the Act is that, should a governor not respond to FirstNet's State Plan at all, FirstNet has authorization to proceed with implementation of the network starting 90 days after delivery of the final State Plan; in this case, the state opts-in by default.³

However, FirstNet has, at its executive discretion, provided states with the opportunity to provide affirmation that the governor of the state has chosen to opt-in. FirstNet has stated that it will offer priority service over AT&T's nationwide network on day-one following a state's choice to opt-in to the service rather than waiting a full 90 days after delivering the State Plan to each governor.⁴

2.2 Means for Evaluation

The execution of FirstNet's contract with AT&T on March 30th triggers a timeline of events set forth by the Act and the schedule FirstNet has developed at its executive discretion. The schedule provides 6 months from the date of contract execution to deliver the State Plan to each state and territory,⁵ 90 days from plan delivery for each governor to choose whether to opt-out and implement the state's own RAN connected to the nationwide core network,⁶ and 180 days from plan delivery for each opt-out state to complete its Request for Proposals (RFP) to implement its own RAN⁷ and provide an Alternative Plan

³ See Final Interpretations of Parts of the Middle Class Tax Relief and Job Creation Act of 2012; specifically: "[. . .] the Act does not require the Governor of a State to provide notice of the State's decision to participate in FirstNet's proposed State plan pursuant to section 1442(e)(2)(A) to FirstNet, or any other parties. Rather, notice is only required should the Governor of a State decide that the State will assume responsibility for the buildout and operation of the RAN in the State." <https://www.federalregister.gov/documents/2015/10/20/2015-26622/final-interpretations-of-parts-of-the-middle-class-tax-relief-and-job-creation-act-of-2012>, retrieved 4/11/2017.

⁴ See *FirstNet's Nationwide Network: Becoming a Reality for America's First Responders*. <https://www.firstnet.gov/newsroom/blog/firstnets-nationwide-network-becoming-reality-americas-first-responders>, retrieved 6/8/2017.

⁵ Though not a requirement of FirstNet in the Act, FirstNet has stated in its RFP that vendors must deliver State Plans 6 months from contract award, i.e., 6 months after March 30, 2017. See *FirstNet Nationwide Public Safety Broadband Network (NPSBN)* ("the RFP"), Federal Solicitation Number: D15PS00295E. Available online at <https://www.fbo.gov/index?id=33106ecc75222458a6e4405b0f66bd2e>, retrieved 4/11/2017.

⁶ See the Act, Sec. 6302(e)(2).

⁷ See *Id.* At Sec. 6302(3)(B).



to the FCC. Based on this schedule, FirstNet will begin offering service in opt-in states by the end of 2017, and opt-out state partners should begin offering service sometime in 2018.

AT&T has announced that it plans to invest a total of \$46.5 billion dollars across the nation into its existing and enhanced commercial network to meet the needs of the first responder community.⁸ Wisconsin's review of FirstNet's offering will require the Project Team to evaluate whether the FirstNet-branded service via AT&T provides:

1. **Sufficient service in terms of coverage and capacity** to the state, including permanent terrestrial service and deployable, on-demand service
2. **A service environment that is sufficiently secure** to support public safety operations; in particular, sensitive law enforcement and medical information
3. **A service that, in all, meets the minimum expectations** of the Wisconsin first responder community
4. **A service that mitigates specific deployment and business operations risks** sufficiently so that it is not in Wisconsin's best interests to pursue an alternative plan

2.3 Review Timeline

Given the March 30, 2017 contractual agreement between FirstNet and AT&T, the WiPSB Project Team has identified several milestones for the State Plan review process. These milestones are based on a combination of statutory requirements (the Act), contractual requirements (commitments AT&T must make as a condition of being selected as FirstNet's vendor) and "soft" (determined at FirstNet's executive discretion) factors. Following are the milestones assumed for the Wisconsin State Plan review process:

- FirstNet executed its vendor agreement on March 30, 2017. This marks the beginning of the six-month timeline set by FirstNet for delivery of State Plans.
- FirstNet delivers a draft State Plan by June 19, 2017 that is reasonably sufficient to perform a full review of the plan.
 - The Project Team begins its review of the state plan and records its findings on the WiPSB State Plan Review Scoring Template (See Appendix 1: WiPSB State Plan Review Scoring Template).
 - The Review Team also reviews the state plan, filing comments using the State Plan comment tool (see Section 3.5.2.1).
- The Review Team submits its comments to the Project Team by June 26th, 2017 via the State Plan comment tool.
- The Project Team completes its initial review of the State Plan by June 27th, 2017 and prepares materials to facilitate the first Working Meeting.
- The Review Team meets June 29th to review initial findings and concerns with the State Plan at its first Working Meeting.

⁸ See AT&T press release dated March 30, 2017, "AT&T Selected by FirstNet to Build and Manage America's First Nationwide Public Safety Broadband Network Dedicated to First Responders".

http://about.att.com/story/firstnet_selects_att_to_build_network_supporting_first_responders.html , retrieved 4/11/2017.



- The Review Team submits its final comments to the Project Team by July 6, 2017 via the State Plan comment tool.
- The Project Team compiles and reviews its findings and final comments from the Review Team. The Project Team puts together final comments for FirstNet for review and discussion by the Review Team by July 11, 2017.
- The Review Team meets a second time on July 11th, 2017 to approve its final comments to FirstNet during its second Working Meeting.
- The Project Team's target date is to submit the state's final comments to FirstNet by July 19th, 2017 using the WiPSB State Plan Comments form. If additional time is required, FirstNet will accept comments as late as August 3, 2017—45 days after delivery of the draft State Plan.
- FirstNet delivers a final State Plan on or before September 30, 2017.
- Assuming the final State Plan is not substantially larger in scope or substantially different than the Draft State Plan, the Project Team completes a final review of the final State Plan within two weeks of receipt, including responsiveness to the state's comments originally submitted to FirstNet. This review includes a written recommendation to opt-in or opt-out of FirstNet's proposal.
 - If the final State Plan is substantially larger in scope than the Draft State Plan, within one day of receipt the Project Team shall send notification to the Review Team, the NPSBN Subcommittee and the Interoperability Council describing the estimated amount of time required to complete the final review.
- The Project Team presents its final recommendation to opt-in or opt-out to the Review Team, the NPSBN Subcommittee and the Interoperability Council within one month of completing its final review of the State Plan.

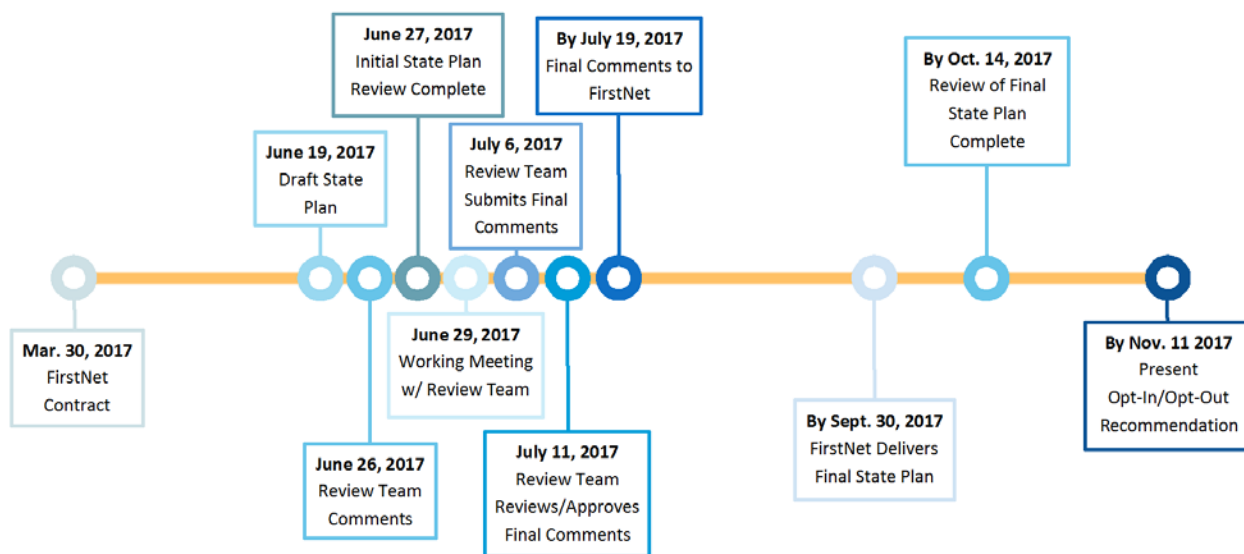


Figure 1: State Plan Review and Acceptance Timeline

2.4 Composition of the State Plan

2.4.1 State Plan Portal

FirstNet will deliver the State Plan via the State Plan portal. This is a secure website with the same content one would expect in a written document, but with multimedia content including interactive



maps and informational videos. Each member of the Project Team and Review Team will be provided with access credentials to the State Plan on June 19th, when the State Plan is delivered.

It is important to note that each *individual* will be required to agree to the terms of use to access the State Plan portal which includes, among other things, an agreement to not disclose sensitive or proprietary information.

The State Plan includes the following sections:

- What is FirstNet
 - About FirstNet
 - State Plan Overview
 - Acquisition Overview
 - Value of FirstNet
- State Plan Consultation
 - State Consultation
 - Data Collection
 - State Reference Library
 - Spectrum Relocation
 - Nationwide Engagement
- Governor's Decision
 - State Executive Summary
 - Acceptance Guide
 - Opt-in Process
 - Opt-out Guide
 - Process and Requirements
 - FCC Technical Review
 - NTIA Technical Review
 - Spectrum Manager Lease Agreement
 - Governor's Decision Library
 - Opt-out Financials
- Coverage
 - Nationwide Coverage⁹
 - LTE w/ Priority and Preemption
 - Band 14
 - LTE without Priority and Preemption
 - 3G/4G
 - 2G
 - Primary State Objectives
 - Secondary State Objectives
 - Rural Providers
- Network Architecture

⁹ Each bullet below "Nationwide Coverage" is provided on an indoor and outdoor basis in 6 phases over 5 years on an interactive map.



- Radio Access Network
 - Network Design and Key Assumptions
 - Radio Access Network Backhaul
 - Network Upgrade and Expansion
 - Roaming Strategy
 - Advanced RAN Features
 - State-Deployed RAN Integration
- Core Network
 - Network Support Systems
 - Service Availability
 - Logical Architecture
 - Coverage and Hardening
 - Public Safety Grade
- Network Implementation
 - Migration to FirstNet Network
 - Compliance to 3GPP Standards
 - Numbering Plan
- Security
 - Security Architecture Plan
 - Transport Security
 - Security Operations Center
 - Identity Credential Access Management
 - Applications Security
 - PSEN-PSAP Integration
- Products and Services
 - Features
 - Basic Services
 - Quality of Service, Priority and Preemption
 - Transport Service Prioritization
 - Local Control
 - Deployable Assets
 - Mission Critical Services
 - Land Mobile Network Integration
 - Products and Services Roadmap
 - Devices
 - Public Safety Device Portfolio
 - Device Support of Network Services
 - Support Commercial Band Access
 - SIM/UICC Distribution and Process Management
 - Device Support and Lifecycle Management
 - Bring Your own Device policy
 - Wireless Rate Plans
 - Applications
 - Application Ecosystem
 - Public Safety Homepage



- App Store
- Applications for Public Safety
- Developer Program
- Marketing Portal
- Business Operations
 - Marketing
 - Distribution
 - Customer Care
 - Status Reporting

2.4.2 Comment Tool

The State Plan will include a comment tool, which will work much like a comment or reply function on a website or social media service (e.g., when readers enter comments on an online news article). Each section of the State Plan will have a comment box which will allow credentialed users to enter comments. These comments are viewable *only* by the commenter and the state Single Point of Contact (SPOC).¹⁰ The SPOC can then export these comments in a standard form (See Appendix 2: WiPSB State Plan Comments Form). The final comments submitted by the state to FirstNet will be in this same format.

Members of the WiPSB State Planning Working Group will use this comment tool when reviewing the State Plan to submit comments to the Project Team. The Project Team will then export all comments from the comment tool at specific dates per the schedule provided earlier in this document. The Project Team will reference these comments in addition to the Project Team's own State Plan review when preparing discussion materials for the Working Meetings.

It is important to note that comments entered into the State Plan comment tool are not directed to FirstNet personnel and do not represent any official correspondence between the state and federal government. The comment tool is provided by FirstNet in the State Plan as an optional tool for SPOCs to use in reviewing the FirstNet state plan and coordinating feedback from stakeholders.

2.5 Roles and Responsibilities

The table below outlines the specific roles and responsibilities for parties involved in the State Plan decision process. A detailed description of each of these roles and responsibilities is included later in this section.

¹⁰ As of this writing, the Wisconsin SPOC is the deputy director of the WI DOJ, Crime Information Bureau. The SPOC is designated by the governor.



Table 1: Responsibilities Matrix

	Project Team	Review Team	NPSBN Subcommittee	Interoperability Council	Governor
Review of State Plan	Yes	Yes	No	No	No
Working Meetings	Yes	Yes	No	No	No
Comments to FirstNet	Yes	No	No	No	No
State Plan Consistency Review	Yes	No	No	No	No
Review and Endorsements	No	Yes	Yes	Yes	No
Formal Advisory to Governor	No	No	No	Yes	No
Identify Alternatives	Yes	No	No	No	No
State Decision	No	No	No	No	Yes

2.5.1 Description of Roles

2.5.1.1 Project Team

The Project Team consists of full-time and contract staff at DOJ. Specific key roles on the Project Team include the governor's designated Single Point of Contact (SPOC), the Statewide Interoperability Coordinator (SWIC), the designated FirstNet project manager, and expert technical staff dedicated to the WiPSB project. The role of the Project Team throughout the entire WiPSB program has been to spread awareness about FirstNet and to collect the information necessary to perform due diligence during the FirstNet consultation process. The primary role of the Project Team in the State Plan Decision process is to perform the review of the State Plan and to facilitate planning and review meetings with stakeholders throughout the review process, including the WiPSB State Planning group, the NPSBN Subcommittee and the Interoperability Council.

2.5.1.2 WiPSB State Planning Workgroup

In January and February 2017, the WiPSB Project Team conducted workgroup meetings to define Wisconsin's requirements for reviewing the State Plan. Representatives from many counties and state agencies across a variety of disciplines are included in this workgroup. The output of these development sessions was used in part to develop the WiPSB State Plan Review Scoring Template.¹¹

The workgroup included Operations and Technical task groups, which met weekly for two hours through January and February to review requirements from the FirstNet RFP Section J-19 template,¹² the National Public Safety Telecommunications Council (NPSTC) Statement of Requirements (SoR),¹³ and the FCC minimum technical requirements for FirstNet.¹⁴

¹¹ See Appendix 1: WiPSB State Plan Review Scoring Template.

¹² See the RFP.

¹³ See NPSTC Public Safety Broadband High Level Launch Requirements Statement of Requirements for FirstNet Consideration ("SOR"). Available at:



The Operations Group comprised line-level personnel, executives, and managers who reviewed operational needs, including determining what features FirstNet should provide. The Technical Group, consisting of radio and IT domain experts, addressed technology requirements, including how these features should be provided. Over the course of the meetings, the groups identified the required and desired elements of the FirstNet network and service, ultimately finalizing the language of the requirements to form the basis of the evaluation matrix used to score FirstNet's State Plan and determine whether it meets the minimum expectations of the community.

2.5.1.3 Review Team

On May 23, 2017, DOJ sent correspondence to the NPSBN Subcommittee, the Interoperability Council, and other stakeholders previously involved in the WiPSB program to request participation in the State Plan review process. These individuals have provided their commitment of time and effort to the review process. This group of stakeholders, subcommittee, and council member volunteers are referred to as a combined "Review Team" in all task descriptions in this document. These volunteers will be expected to review the State Plan, provide comments via the State Plan comment tool, and participate in meetings.

2.5.1.4 Interoperability Council and NPSBN Subcommittee

The Wisconsin Interoperability Council (IC) is codified in Wis. Stats. §15.107 (18) and §16.9645.¹⁵ The IC is assigned the responsibility to provide recommendations that would enhance public safety communications interoperability in the state. The NPSBN, as a "statewide public safety interoperable communications system,"¹⁶ is a topic the IC is called to advise upon under the umbrella of public safety communications interoperability. The IC's role in the State Plan Decision Process is to evaluate the Project Team's recommendation, and accordingly, provide a recommendation to the Governor.

The NPSBN Subcommittee, in turn, is the subject-matter specific committee of the IC designated to manage issues pertaining to implementation of the NPSBN. The subcommittee has participated in the WiPSB program in a variety of ways, including receiving routine reports on project progress, approving deliverables and advising on coverage requirements.

For the purposes of this document, the functional roles "Interoperability Council" and "NPSBN Subcommittee" refer to these bodies *only* in their official capacity; meaning, when either entity holds a public meeting, establishes quorum and makes decisions upon an affirmative vote of its membership. "Interoperability Council" and "NPSBN Subcommittee", for the purposes of this document, do *not* refer to members of either body outside of public meetings; e.g., when a member of the Interoperability Council provides comments to the State Plan during the State Plan Review task.

http://www.npstc.org/download.jsp?tableId=37&column=217&id=2609&file=BBWG_SoR_Launch_12112012.pdf. Retrieved 6/1/2017.

¹⁴ See Recommended Minimum Technical Requirements to Ensure Nationwide Interoperability for the Nationwide Public Safety Broadband Network. Available at: <https://ecfsapi.fcc.gov/file/7021919873.pdf>. Retrieved 6/1/2017.

¹⁵ Available at: <https://docs.legis.wisconsin.gov/statutes/statutes/15/II/107/18> and <http://docs.legis.wisconsin.gov/2007/statutes/statutes/16/VI/9645/1>. Retrieved 4/11/2017.

¹⁶ Wis. Stats. §16.9645 (2) (a)

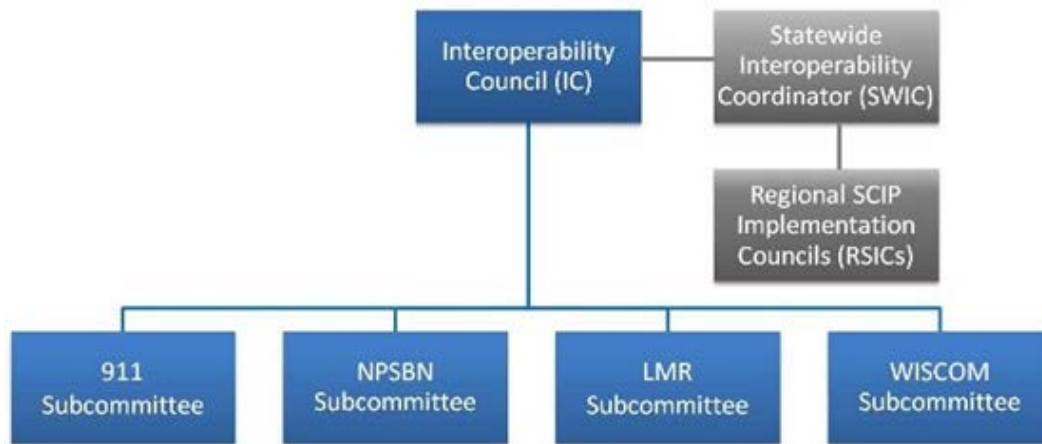


Figure 2: Wisconsin Communications Governance Structure

2.5.1.5 Governor

FirstNet will deliver its final State Plan by September 30, 2017. Under the Act, the governor's role in the State Plan Decision Process is to decide whether or not to exercise the state's right to opt-out. Under the expanded executive discretion extended by FirstNet, the governor also has the right to opt-in and accelerate deployment of FirstNet services in the state. One of the ultimate objectives of the entire WIPSB program is to prepare the necessary data for the governor to make that decision.

2.5.2 Description of Responsibilities

2.5.2.1 Review of State Plan

The State Plan review is conducted by two groups: The Project Team and the Review Team. The Project Team will perform a comprehensive review of FirstNet's State Plan. In doing so, the Project Team will collect feedback from the Review Team and will facilitate an interactive working session with the Review Team. After performing the review and collaborative working session, the Project Team will deliver a recommendation to the NPSBN Subcommittee and the Interoperability Council. Finally, this recommendation will be transmitted to the governor to aid in making the opt-in/opt-out decision. The Project Team's review will consist of an evaluation of the elements in the sections below.

2.5.2.2 Working Meetings

The Project Team will host two working meetings with the Review Team. These meetings will be held in-person on June 29, 2017 and July 11, 2017. As described above, the purpose of these working meetings will be to review stakeholder feedback provided via the comment tool, findings of the Project Team during the State Plan review, and to prepare comments for FirstNet.

The first working meeting will be held 8 business days after receipt of the Draft State Plan. At this meeting, the Project Team will deliver their initial impressions of the State Plan and will discuss any major issues with the Review Team. The Project Team will also facilitate discussion around any of the comments that have been submitted up to that point via the comment tool. After the meeting, the Project Team will complete its State Plan review and incorporate any feedback provided by the Review Team. The Review Team will have an additional week to submit its final comments to the Project Team.

At the second Working Meeting (scheduled for July 11, 2017) the Project Team will present recommended final comments to FirstNet. These comments will include all findings from the Project



Team's full review of the state plan as well as comments provided by Review Team members. The purpose of the second meeting will be to arrive at a consensus for a final set of comments to submit to FirstNet for any changes required in the final State Plan.

Representatives with AT&T and/or FirstNet will be invited to attend portions of the Working Meetings. They will be available to answer questions and clarify topics in the State Plan. They will not, however, be expected to attempt to change requirements introduced by the Project Team and the Review Team.

2.5.2.3 Comments to FirstNet

The Project Team will submit comments to FirstNet on July 19, 2017—30 days after receipt of the draft state plan. These comments will collectively reflect the combined efforts of the Project Team and the Review Team. FirstNet will provide a final State Plan sometime after receipt of these comments; at the latest, six months after delivery of the Draft State Plan, or September 19, 2017.

2.5.2.4 State Plan Consistency Review

The Project Team will review the final State Plan and will evaluate whether the final State Plan meets the changes called for in the state's comments. The Project Team will perform a final review of the State Plan, identifying any remaining gaps and any requested changes not addressed. Finally, the Project Team will evaluate whether the final State Plan represents the best offer to the state and whether it is in the state's best interests to opt-in or to opt-out.

2.5.2.5 Review and Endorsement

The Project Team will seek endorsement of its recommendation from the WiPSB State Planning Working Group, the NPSBN Subcommittee, and the IC upon concluding all previous tasks and prior to submitting a formal advisory to the governor. This report will include the following deliverables:

- All Comments submitted to FirstNet
- The State Plan Review
- A full report of the process and methodology for reviewing the State Plan
- A review of the consistency of FirstNet's State Plan with the state's comments to FirstNet
- A recommendation to opt-in or opt-out

The Project Team will seek endorsement of the report from each body (the Review Team, subcommittee and IC). Additionally, the Project Team will record any dissenting advisory from each party (e.g., if the endorsement is made through a non-unanimous vote, or strong dissenting statements made from individual members of each body).

2.5.2.6 Formal Advisory to Governor

The IC, or its designee, will provide a formal advisory to the governor's office as to whether the State, based on a comprehensive review process, should exercise the right to opt-out of FirstNet's proposed plan for implementation. This advisory will include a copy of the complete technical review performed by the Project Team, an executive brief, and (if applicable) concurring or dissenting advisory from the Review Team and/or the NPSBN Subcommittee. The executive brief will include, at a minimum, the following sections:

- Recommendation to exercise right to opt-out (yes/no)
- Compliance with Minimum Coverage Requirements (yes/no, and any major exceptions to the prevailing recommendation)



- Sufficiency of Technical Data (yes/no, and any major exceptions to the prevailing conclusion)
- Compliance with Minimum Expectations from Draft RFP (yes/no, and any major exceptions to the prevailing recommendation)
- Risk assessment (FirstNet's plan presents sufficiently low risk: yes/no, and any major exceptions to the prevailing recommendation)
- Responsiveness to the state's request for changes

2.5.2.7 *Identify Alternatives*

If necessary, the state will identify alternatives to FirstNet's service offering—which may range from a basic Request for Information (RFI) from potentially interested vendors to a complete Request for Proposals (RFP) and comprehensive implementation plan and budget from a prospective opt-out vendor. The specific process for identifying an alternative solution is outside of the scope of this plan.

2.5.2.8 *State Decision*

The ultimate decision on whether to opt-in or opt-out rests with the Governor. Should the Governor opt-in, or should the Governor not respond at all, FirstNet's proposed State Plan shall serve as the basis for FirstNet to implement and market the service in the state and **FirstNet is responsible for delivering service in Wisconsin.**

Should the Governor exercise the right to opt-out, successfully secure a relationship with a vendor partner and successfully secure all approvals required under the Act to implement an opt-out RAN, **FirstNet is responsible for delivering core services and the state is responsible for delivering wireless service via the opt-out RAN in Wisconsin.**

2.5.3 **Description of Review Contents**

The sections below provide a summary of the contents of the Project Team's review of the state plan. The Project Team's review will be recorded in two documents: the WiPSB State Plan Scoring Template (see Appendix 1: WiPSB State Plan Review Scoring Template) and the Comment Form (see Appendix 2: WiPSB State Plan Comments Form).

2.5.3.1.1 *Background on Minimum Coverage Requirements*

Coverage is essential to FirstNet's offering. Anticipating stakeholder expectations, the WiPSB program collected detailed coverage requirements from the public safety community throughout the state. This section provides background on the development of those requirements and how they will be incorporated into the State Plan review. For a complete report, see WiPSB Coverage Phases for FirstNet Implementation, dated April 6, 2017.¹⁷

One of the most substantial elements of the Project Team's review will be an assessment of whether FirstNet's proposed plan meets the minimum coverage requirements provided by the state. Wisconsin filed minimum coverage requirements for inclusion in FirstNet's State Plan on December 16, 2016 with the stated intent of articulating priority service areas and areas with service issues, and to divide these areas into a recommended 5-Phase implementation.

¹⁷ See WiPSB Interactive Coverage Review Map ("WiPSB Map"). Available online at: <https://wipsb.wisconsin.gov/publications>.

The WiPSB Project Team conducted Coverage Review meetings with public safety stakeholders throughout the state to identify Wisconsin’s coverage needs for the NPSBN. During these interactive sessions, participants identified geographic areas where they most needed coverage, including “Critical Service Areas” (areas with intensive public safety need) and “Extended Service Areas” (areas of need, with nonexistent or inadequate coverage).

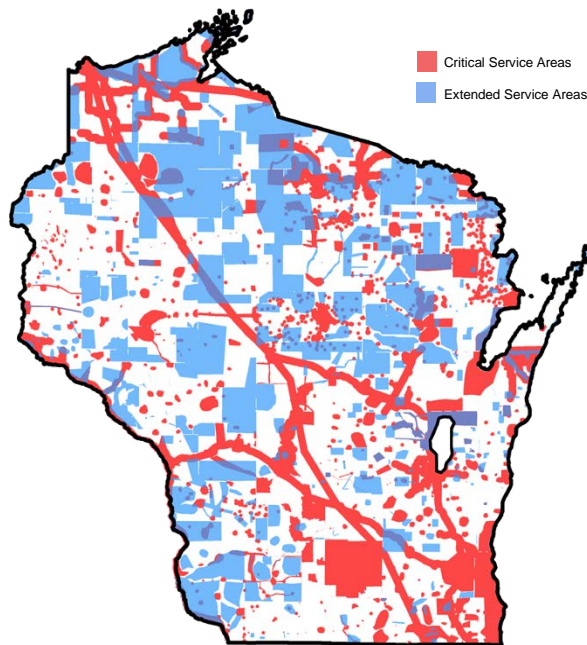


Figure 3: Coverage Review Output

To provide an objective justification for the areas prioritized during the Coverage Reviews, the Project Team requested that each Public Safety Answering Point (PSAP) provide three years of computer-aided dispatch (CAD) incident data.

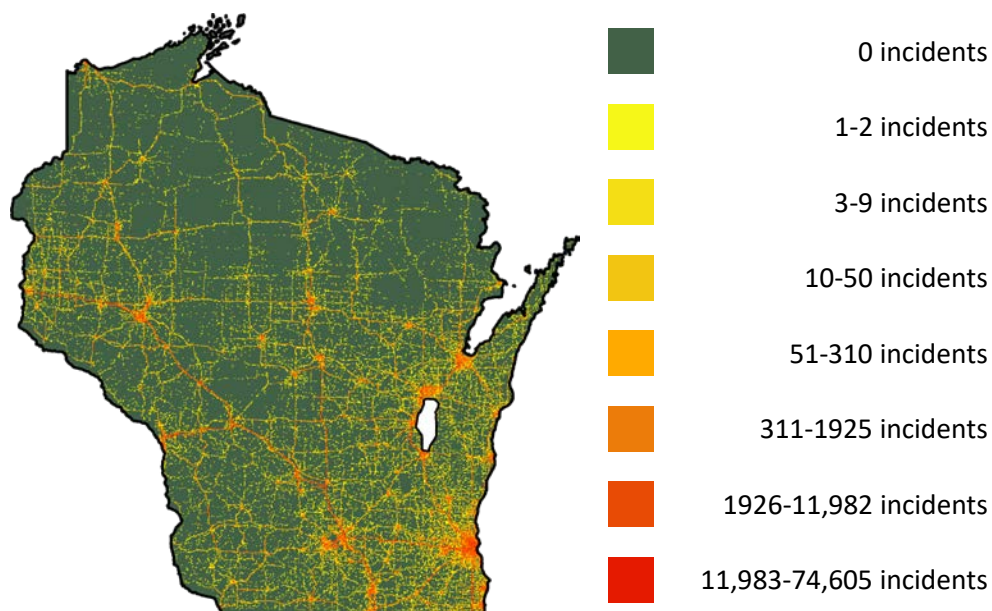


Figure 4: CAD Incident Data per ½ Square Mile

This data will be used by the project team to analyze not only whether FirstNet’s proposed network covers the population and area of the state of Wisconsin, but also whether the network covers public safety calls for service that have occurred throughout the state which often, but not always, occur in populated areas. In the figure below, these incidents are mapped in ½ square mile bins.

The results of this analysis—a map of coverage requirements—reflect input from all 72 counties, three major cities, and one Native American tribe that all individually provided information to develop the WiPSB program’s coverage needs. These coverage requirements were prioritized into 5 implementation phases to correspond with FirstNet’s 5-year plan in its RFP. These coverage reviews, CAD data, and 5-phase implementation requirement form the basis of much of the technical review of FirstNet’s coverage described below.

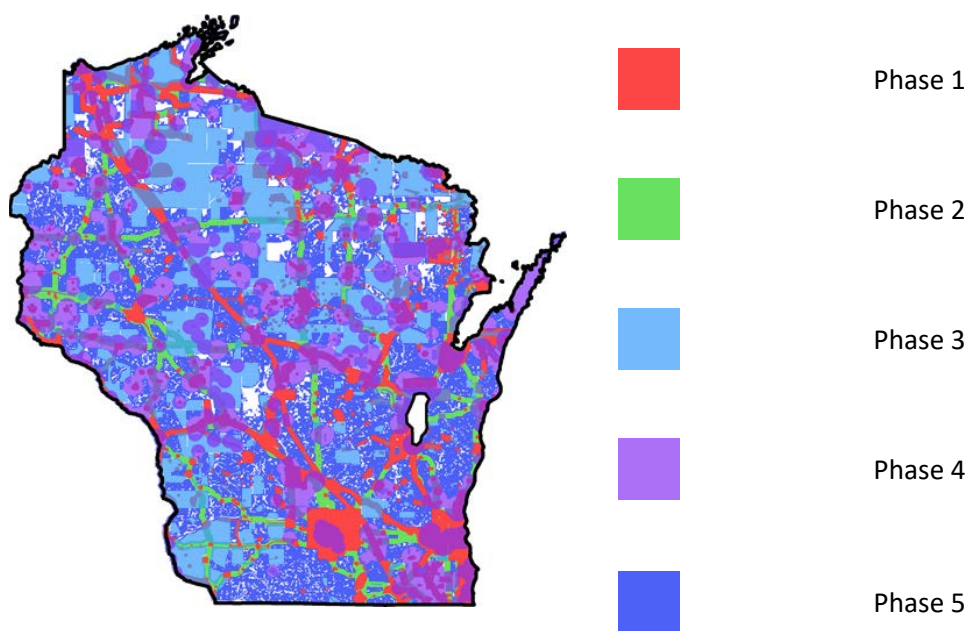


Figure 5: 5-Phase Implementation Requirement for FirstNet

2.5.3.1.2 Assessment for Minimum Coverage Requirements

The technical assessment of FirstNet’s proposed coverage will compare wireless technologies based on a combination of fields referenced from FirstNet’s RFP, section J-19, the output from the WiPSB program’s coverage reviews, and FirstNet’s State Plan Portal Sitemap.¹⁸ The project team will evaluate FirstNet’s proposed area covered with LTE with priority and pre-emption according to the following metrics:

¹⁸ See FirstNet State Portal Sitemap, issued via email to each State Point of Contact for FirstNet Friday, May 5, 2017.



- Population covered, per Initial Operating Capability (IOC)¹⁹
- Incidents covered, per IOC
- Geographic area covered, per IOC
- Critical Service Areas covered, per IOC
- Extended Service Areas covered, per IOC

Note that the RFP Coverage and Capacity Template included in FirstNet’s RFP calls for detailed technical information from the vendor in addition to coverage provided, which would provide sufficient information to estimate the throughput to be provided by the network. This technical information includes, but is not limited to, the bulleted list below. The project team will evaluate these items, if provided by FirstNet; if not, the project team will evaluate specific gaps:

- Link Budget (uplink/downlink)
- Throughput Assumptions
- Tower Site Data
- In-Building Coverage attenuation factors

The RFP²⁰ defines “covered” at the cell edge per the following parameters:

- 768 kbps downlink
- 256 kbps uplink
- Measured from stationary outdoor User Equipment (UE) at 3 feet from the ground
- 95% confidence margin
- Uniform cell load of 50%

While the draft State Plan (RFP Section J-19) does not specify what the minimum service level at the “covered” cell edge will be, nor has FirstNet as of this writing made a specific public commitment, it is likely that FirstNet’s draft State Plan will depict coverage per the parameters listed above. If these parameters are modified, the Project Team will document accordingly when comparing service areas between the state’s requirements and FirstNet’s proposal.

2.5.3.1.3 Review of Radio and Core Network Services

The Project Team has not identified minimum requirements for FirstNet’s link budget or other specific technical information; these are all factors that contribute to the depiction of the coverage footprint, reliability, and throughput provided by the network, which are the key outputs that stakeholders will have primary interest in assessing. The Project Team will evaluate the technical data provided by FirstNet to determine (1) whether it is complete and/or (2) whether the network’s design parameters will reasonably support the level of service FirstNet claims to offer in its plan.

The Project Team will produce a score sheet for reporting to the Review Team, the NPSBN Subcommittee and the Interoperability Council. Each review line item will include the following:

- A summary of what FirstNet proposes in each topical area

¹⁹ IOC1-IOC 6, or implementation phases of month 6, and years 1, 2, 3, 4 and 5, respectively. See the RFP.

²⁰ See the RFP, section J-1, pg. 3.



- Whether the design parameter follows best practices (on an exceeds, meets, or does not meet basis)
- A statement of specific strengths in FirstNet's proposal
- A statement of weaknesses or gaps in FirstNet's proposal (for example, if the plan lacks adequate information in a specific topical area)
- A statement of any risks inherent in the proposal
- A description of any formal comments for FirstNet, if any

This score sheet will include, at a minimum, the sections from 3.4.1, *State Plan Portal*. For an example of how the Project Team will track its findings, see *Appendix 1*.

For a template and example of how findings will be recorded as comments for FirstNet, see *Appendix 2*. Please note that this score sheet may change based on the format of FirstNet's State Plan.

2.5.3.1.4 Risk Assessment

The Project Team will perform a risk assessment of the State Plan aimed primarily at (1) attempting to quantify the amount of risk associated with public safety agencies adopting FirstNet's service compared to their incumbent service, and (2) any substantial deviance from the requirements and expectations included in this document.

2.5.3.1.4.1 Incumbent Service Comparison

While AT&T will be offering a separate, FirstNet-branded service, that service will be developed through an expansion of AT&T's incumbent network. Accordingly, a portion of our risk assessment will evaluate how AT&T's incumbent and proposed *expanded* coverage compares to the coverage public safety users throughout the state have today.

Based on the WiPSB program's prior data gathering activities,²¹ the Project Team identified that AT&T controls approximately 5% of the existing public safety market in the state. Most public safety subscribers in Wisconsin are customers of either Verizon (49%) or US Cellular (32%). See figure 6 below.

²¹ See Coverage Needs and User Population Analysis for FirstNet, September 30, 2016. Available online at <https://wipsb.wisconsin.gov/sites/default/files/2016-10/WiPSB%20Data%20Collection%20Report%20v11.pdf>, retrieved 4/11/2017.

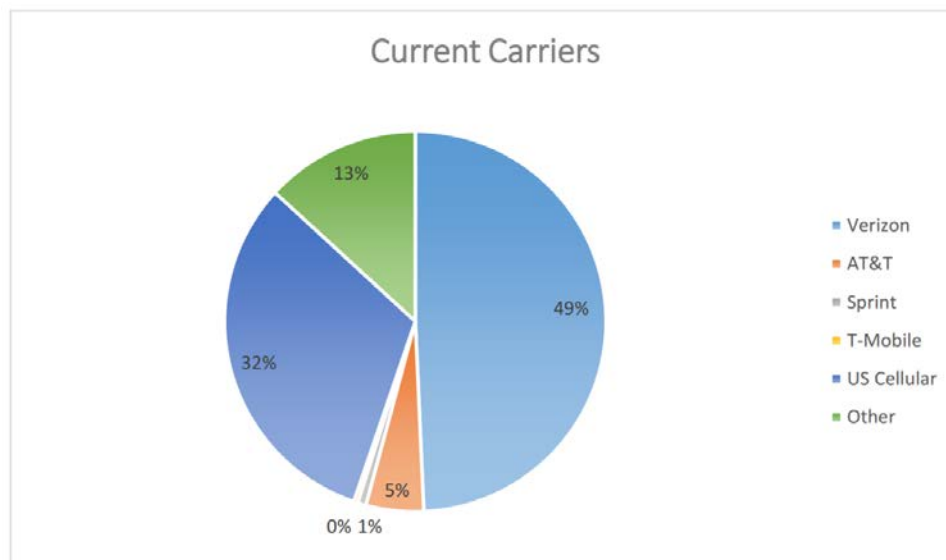


Figure 6: Current Carriers

Migrating from one cellular carrier to another is a substantial change for a public safety organization. Not only will the organization need to replace its fleet of handheld devices, it will also need to replace vehicular modems and may need to install new antennas on their vehicles. Additionally, a new carrier will offer a different service coverage footprint than the carrier that the agency is switching from. Because AT&T has such a small share of public safety's business in the state, this means that almost every agency adopting FirstNet's service will have to switch to a new carrier. A customer already on AT&T's network, for example, could likely adopt FirstNet's priority's service (without Band 14 support) with their existing fleet with little to no immediate change in their device fleet. Migrating from Verizon or U.S. Cellular, however, will require major updates and technical changes throughout the entire organization.

The risk assessment will evaluate the financial and organizational disruption FirstNet's offering provides to public safety agencies in the state based on a comparison to the incumbent, including, at a minimum, a review of:

- Change in coverage footprint
- Change in device fleet
- Change in peripherals and accessories
- Change in pricing
- Cost of adoption

2.5.3.1.4.2 Substantial Deviance from Requirements and Expectations

In the event that the FirstNet proposal deviates substantially from identified coverage requirements, minimum expectations, and/or does not provide sufficient or adequate technical information, the Project Team will provide a statement on each deviance and a summary of the risk introduced by such deviance. This statement will be cross-referenced with each of the rows on the provided score sheets (see appendices to this document).



3 Conclusion

This document records the state of Wisconsin's plan to review FirstNet's State Plan. The inputs to this review process represent thousands of hours of effort from hundreds of stakeholders and, in various parts, nearly every major public safety jurisdiction in the state. These efforts will culminate in providing the Governor with the proper due diligence and information needed to make an informed decision on whether to opt-in or opt-out of FirstNet's proposed service. Should the Governor exercise that right, the state must then take up the ambitious project of proposing an alternative plan to implement the RAN.

In either outcome, the state's objective remains the same: to ensure that first responders in the state of Wisconsin have access to a dedicated, nationwide, interoperable public safety broadband wireless network that will support them in their life-saving missions.



4 Appendices

4.1 Appendix 1: WiPSB State Plan Review Scoring Template

4.2 Appendix 2: WiPSB State Plan Comments Form