



A conversation with . . . *David Aldrighetti* Bethel Volunteer Fire Department Chief

The Bethel Volunteer Fire Department has a team of 25 firefighters. They assist in mutual aid calls to Barnard and South Royalton. They also are part of a three department Swiftwater Rescue Team. David Aldrighetti has been a part of the department since 1993 and became the Chief 10 years ago. His department responded to 85 calls in 2017, a number that is steadily growing. When tropical storm Irene hit the area in 2011, the Bethel area received around 6 inches of rain. We talked with him about how communications held up during the emergency and what difference it would have made to have a reliable FirstNet system to communicate.

The concentrated rainfall and wind from the storm knocked out power and destroyed infrastructure throughout the state. Bethel had the highest costs for public infrastructure damage in the state--\$5.1 million. Did your communications structure withstand the storm?

Fortunately, we maintained communication through the storm and never lost power. We have three repeaters and two run-on generators. However, as soon as we were out of range of our towers, we lost communication. We share a communication network with Barnard. We are on the same radio system with the same radio frequencies. That helped us communicate with the surrounding area.

How did you overcome the gaps in your communication?

A couple of days into the emergency, the feds took over. The highest ranking feds in our area were based at the U.S. Forest Service Ranger Station in Rochester. They literally would fly over the mountaintops and drop mobile repeaters down. They had radios that worked off those repeaters. Once we hooked up with them, we could communicate in most of the gaps.

(Story continued pg. 3)

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VT Public Safety Broadband Commission
Department of Public Safety
45 State Drive
Waterbury, VT 05671-1300

FirstNet's mission is to deliver a nationwide broadband network dedicated to public safety to help strengthen their emergency communications abilities, making them safer and more effective on the job. A new, innovative public-private partnership will be established to deploy the Nationwide Public Safety Broadband Network.

VERMONT SUPPORT TEAM

For questions, or to arrange a presentation for your team:

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VERMONT UPDATE

FirstNet for First Responders

Department of Public Safety

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Vermont Opts-In to Federal FirstNet Plan

Vermont, and all other states, have opted-in to the federal FirstNet plan to deliver a wireless broadband network coast-to-coast for first responders. Governor Phil Scott announced November 29 that he had decided to opt-in to the federal plan rather than have Vermont work to build its own network. The Nationwide Public Safety Broadband Network is expected to provide Vermont's first responders with access to a reliable, secure and technologically robust cellular network that is now under development.

"It is important that Vermont's first responders have the best service and access to an interoperable network that is expected to advance and adapt with new technology through the next 25 years," said Gov. Scott. "Vermont faced the choice of building its own network or using the federal solution. After thoroughly considering the technological, financial and operational aspects of both options, I believe the federal plan will more quickly and sustainably provide our public safety community with the network it needs to continue its valuable service to Vermont."

Commission Recommendation

Gov. Scott's decision followed the recommendation he received in late November from Vermont's Public Safety Broadband Network Commission (PSBC), which recommended Vermont opt-in to the federal plan. The advisory commission's members represent police, fire and EMS personnel and state agency representatives. The commission considered the federal plan and a proposal from an alternative vendor submitted through an RFP process. In its recommendation, the PSBC focused on service, coverage and risks of both options. Below are key reasons cited by the PSBC for an opt-in recommendation.

- **Immediate service** – Due to the all-bands approach by AT&T, first responders will have immediate access to all bandwidth owned and operated by AT&T in Vermont and immediate access to priority calling. In an opt-out scenario, Vermont first responders would have to wait for the Band Class 14 network to be built before having access to FirstNet service.
- **Pricing** – No first responder is required to use the FirstNet/AT&T network, but must be persuaded to subscribe to the service. The commission anticipates that an opt-in decision will spur competition among cell phone providers and drive down costs for first responders, while enhancing services.
- **Commitment to expanded coverage** – In addition to its existing cellular network, AT&T will leverage funds allocated to FirstNet to increase the number of cell sites in Vermont within the next five years, many in areas where first responders currently lack good coverage.
- **No financial cost to Vermont for the network** – The financial cost of building, maintaining and operating the network will be born by FirstNet and AT&T. AT&T would be liable for paying any federal financial penalties for failure to attract public safety subscribers in prescribed numbers.

In 2012, Congress passed legislation creating FirstNet as an independent
(Story continued pg. 2)



In This Issue

- Opt-In Decision
- Next Steps in Vermont
- Trending News

There's more information at
www.PSBC.Vermont.gov



(Vermont Opts-In continued pg. 1)

authority within the U.S. Department of Commerce's National Telecommunications and Information Administration (NTIA). FirstNet was to build the nationwide network and eventually become financially self-sufficient by selecting a commercial partner. Following a 15-month national RFP process to secure a partner, AT&T was announced as the winning bidder. Once FirstNet and AT&T delivered final build-out plans to the states, governors had 90 days to announce their decision on whether to accept the federal plan or have the state take on the responsibility of building the network. The nationwide decision deadline was December 28. No state or territory decided to opt-out.

"The opt-in recommendation from the PSBC came after a lot of careful work on the part of the commission," said PSBC Chair Terry LaValley. "The commission critically reviewed the draft and final proposals submitted by FirstNet/AT&T and worked with their representatives for specific coverage improvements. The commission also secured the services of an independent consultant, Televate, to conduct a technical review of the plan and considered opt-out proposals submitted through a competitive RFP process. Our ongoing contact with the first responder community helped shape the commission's coverage objectives outlined in Vermont's formal data submissions to FirstNet."

In addition to the opt-in recommendation from Televate, the commission also reviewed the opt-in recommendation from an independent review by the Coeur Business Group, which was contracted by the Agency of Digital Services to analyze the opt-in/opt-out options. Commission members also received a financial risks opinion from the State Treasurer's Office that concluded that opt-in was in the best interest of the State of Vermont and an endorsement for opt-in by the International Association of Fire Chiefs, who represent 12,000 fire and emergency services leaders across the country.

FirstNet and AT&T designed Vermont's network solution with direct input from the state's public safety community. FirstNet has been meeting with Vermont's officials and public safety personnel for several years to address their unique communication needs. These include:

- Expanding rural coverage to include the Northeast Kingdom;
- Making available a Bring Your Own Device (BYOD) solution to support Vermont's large contingent of volunteer responders; and
- Incorporating a deployment plan that leverages state and municipal infrastructure.



TRENDING

Check out these stories on FirstNet, interoperability and public safety technologies.

Homeland Prepared News

Pilot project fixes cybersecurity vulnerabilities in first responder mobile apps

<https://homelandprepnews.com/stories/25867-pilot-project-fixes-cybersecurity-vulnerabilities-first-responder-mobile-apps/>

American Security Today

US/Canada Comm Interoperability Demo'd Among First Responders

<https://americansecuritytoday.com/us-canada-comm-interoperability-demo-d-among-first-responders/>

NIST News

NIST Awards \$38.5 Million to Accelerate Public Safety Communications Technologies

<https://www.nist.gov/news-events/news/2017/06/nist-awards-385-million-accelerate-public-safety-communications>

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FirstNet Implementation Begins in Vermont



Terry LaValley
FirstNet SPOC & PSBC Chair

The Nationwide Public Safety Broadband Network moved from the planning phase to the implementation phase on December 28, when all 50 states officially opted-in to the federal FirstNet plan. FirstNet, through their partnership with AT&T, now begins

work to build a high-speed wireless network that serves public safety in both rural and urban areas, provides a high level of security, and a special set of help desk and other options for users. Key to providing this adequately is coverage.

In Vermont, AT&T currently has a tower network of hundreds of sites. Vermont negotiated with FirstNet and AT&T on coverage plans. From AT&T's build plans, Vermont will benefit from coverage from more than 40 new sites that will provide service throughout the state. In addition to these sites is AT&T's ongoing business-as-usual site installations. These are sites the company has already planned to build to serve its customers. Finally, Vermont will receive two deployables to be situated for state-wide use and a third AT&T owned deployable that will be located within a secure facility in the state.

This sizeable commitment within a rural state like Vermont is possible because the federal legislation creating FirstNet requires build-out in rural areas—areas not always commercially viable to cellular carriers. Congress created FirstNet to build the nationwide network and eventually become financially self-sufficient by selecting a commercial partner. Following a 15-month RFP process to secure a commercial partner, AT&T was selected as the winning bidder. Verizon did not submit a bid for the national award. As the winner of the award, AT&T received access to \$6.5 billion for network construction and dedicated Band 14 spectrum. AT&T may profit from leasing unused or underutilized portions of the spectrum to nonpublic safety subscribers. In highly populated areas like Chicago, where AT&T needs more spectrum to serve all of its customers, AT&T can make a profit. Looking at the network as a national enterprise, profits from these large

population areas support the build-out in less populated rural areas like Vermont.

Such profits do not come at the expense of public safety. The 25-year contract requires AT&T to provide priority and pre-emption rights on the network to public safety subscribers and attract such subscribers at prescribed numbers or face hefty penalties. No first responder is required to use the FirstNet/AT&T network, but must be persuaded to subscribe to the service. A statewide contract for FirstNet services is now being negotiated. Prices will have to be competitive and coverage enhanced to attract first responders.

For 2018, FirstNet has released the following planned advancements for network subscribers in the coming year.

- Increased coverage & capacity from AT&T's FirstNet build.
- Access to mobile dedicated network assets for deployment when coverage is needed.
- Launch of the AT&T built dedicated core network with end-to-end encryption.
- Access to a dedicated Security Operations Center to offer 24/7/365 support.
- Roll out of next-generation public safety tools, such as new applications.

The Department of Public Safety and the Public Safety Broadband Network Commission want to work closely with the first responder community to receive input on coverage and services. In the next few months we will be hosting regional meetings that will allow you to ask FirstNet and AT&T representatives specific questions about service in your area. Notice about these meetings will be communicated through the commission web site at www.PSBC.Vermont.gov, through email notices and direct mailings. If you are not currently receiving notices directly from us, send us your information via email at DPS.PSBC@vermont.gov or call (802) 241-5535.

I look forward to working with you in 2018.

In addition to serving as the SPOC and PSBC Chair, Terry LaValley is also the Director of Radio Technology Services for the Department of Public Safety. RTS designs, installs and maintains a statewide voice LMR radio system, the Vermont Microwave Network, and the Vermont Law Enforcement Telecommunications System (VLETS).

(David Aldrighetti continued pg. 4)

FirstNet and AT&T will be building out a cellular broadband network in Vermont. While not meant to replace the LMR system, how might reliable cell coverage have made a difference?

During Irene, our cell coverage was not very good. There was a new tower in Bethel. If you went up to the top of that mountain, you had coverage. That became our backup. We are now in the process of converting our pager system to cell phones. Everybody has cell phones. Our cell provider is AT&T and our coverage is pretty good. I am looking forward to FirstNet going forward. Communication is a top concern for us in responding to an emergency.

Communications in an Emergency



Michael Chamberlain, Windsor County Sheriff

We talked with several other members of the public safety community about tropical storm Irene and the potential future impact of FirstNet in Vermont. Here is what they had to say.

"Communication can be challenging in Windsor County because of the terrain. We always use our radio first and the cell phones as a back-up. During tropical storm Irene we had very limited communication. Deputies were not able to access radio or cell signals in some areas. We had no portable towers or anything that could be put up in an emergency. If we

had good cell communication in 2011, we would have been able to communicate from Plymouth to our main office and have some means to communicate directly with deputies. It would be great if FirstNet would enable us to go to one channel and communicate with all other emergency personnel. We need this."

Todd Menees

River Management Engineer, State of Vermont, southern region

Regarding technology advances since 2011

"Now our team is equipped with smartphones. Now we have fiber optic service to our homes. We have a new AT&T tower in Andover and that has helped coverage, but coverage in our area is still like 50 percent. I know where there is coverage and I stop in those locations to collect cell messages and emails. It is encouraging to see build-outs in the area for cell coverage. I look forward to any improved coverage we may gain through FirstNet."



Debris had to be cleared in many rivers and streams throughout Vermont as a result of flooding from tropical storm Irene. FEMA News Photo.

Coming in 2018

The Department of Public Safety will host informational meetings for first responders to speak with FirstNet and AT&T representatives about network build-out in specific areas of the state. We're currently working to plan meetings in these areas:



- Northwest - Milton
- Northeast - Newport City
- West - South Burlington
- Central - Berlin
- East - White River Junction
- Southwest - Pittsford
- South - Wilmington

For more information, email us at DPS.PSBC@vermont.gov.