THREE YEARS LATER: ARE WE ANY CLOSER TO A NATIONWIDE PUBLIC SAFETY WIRELESS BROADBAND NETWORK?

HEARING

BEFORE THE

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION UNITED STATES SENATE

ONE HUNDRED FOURTEENTH CONGRESS

FIRST SESSION

MARCH 11, 2015

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SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED FOURTEENTH CONGRESS

FIRST SESSION

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THREE YEARS LATER: ARE WE ANY CLOSER TO A NATIONWIDE PUBLIC SAFETY WIRELESS BROADBAND NETWORK?

WEDNESDAY, MARCH 11, 2015

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The Subcommittee met, pursuant to notice, at 10:03 a.m. in room SR–253, Russell Senate Office Building, Hon. John Thune, Chairman of the Committee, presiding.

Present: Senators Thune [presiding], Nelson, Ayotte, Booker, Manchin, Peters, Fischer, Blumenthal, Cantwell, Wicker, Daines, Klobuchar, Udall, Gardner, and Markey.

OPENING STATEMENT OF HON. JOHN THUNE, U.S. SENATOR FROM SOUTH DAKOTA

The CHAIRMAN. This hearing will come to order.

We convene this morning to conduct oversight of the First Responder Network Authority, also known as FirstNet. In 2012, Congress established FirstNet with a mandate to deploy an interoperable nationwide wireless broadband network for America's first responders. Three years later, our committee is revisiting this issue for the first time since we passed the Spectrum Act. Today's hearing will examine the progress and challenges FirstNet is encountering as it moves forward with the important mission of building a twenty-first century communications platform for our country's emergency personnel.

The title of this hearing asks whether we are any closer today to having this twenty-first century public safety network. Of course, in a literal sense, we are. The Spectrum Act was enacted; FirstNet has been stood up; consultations with the states have begun; and FirstNet is on the verge of releasing its highly anticipated Draft Request for Proposals.

But in other ways, we are still a very long way away from having an interoperable public safety network. There are a great many things that can go terribly wrong unless good decisions are made right now. For example, FirstNet's forthcoming RFP will give us a sense of whether a network can be built to meet the needs and expectation of a diverse audience of emergency responders in a cost-effective way that secures FirstNet for future generations. FirstNet must work diligently to make itself a self-funding entity because, frankly, we are not in a budget environment that can easily tolerate spending more than the $7 billion taxpayer dollars that has

(1)

already been committed to the network. We are also confronted with many pressing and unanswered questions due to the complexity of establishing a new communications system.

Stakeholders, including many in my home state of South Dakota, have questions about what FirstNet will mean for them. There are legitimate concerns about how much network access will cost local police and fire departments who are already dealing with constrained budgets. And, if the network is competitive from a cost perspective, many wonder whether it will be appreciably better than what first responders currently use. I know FirstNet is aware of these issues and I encourage the organization to be sensitive to the unique challenges of local communities.

Last year, I asked GAO to examine FirstNet and its progress in building the network. In just a few minutes, we will hear from Mr. Goldstein about GAO's findings and the concerns that they raise.

Ms. Swenson, I hope and ask that FirstNet will take this constructive criticism seriously and will improve its approach to building the network. Specifically, I urge FirstNet to more fully assess the risk it may face in pursuing its laudable objectives. I also ask FirstNet to implement a detailed data analysis plan that builds upon the valuable lessons learned from the early builder projects.

I share GAO's view that, without such a plan, FirstNet might not take full advantage of the sizable Federal investment that has already been made in these Early Builder projects.

The Commerce Department's Inspector General also recently released a report on FirstNet that raised several issues concerning FirstNet's ethics and procurement practices. I look forward to hearing what lessons FirstNet has learned from this report and whether the IG's findings have been fully addressed.

The Department of Commerce also finds itself at a crucial stage of this process. The Department should ask itself whether it is being the best partner it can be to FirstNet in facilitating development of a public safety network that makes us all more secure. FirstNet's unique position as an independent authority within the Department comes with some risk. So much so, that one commentator recently asked whether FirstNet is on the path to becoming the next *Healthcare.gov*, the Obamacare website best known for its disastrous rollout thanks to the mismanagement, only the challenge of setting up this network is arguably many times greater. I strongly encourage the Department to do everything it can to learn from the many mistakes of *Healthcare.gov*.

FirstNet itself also has questions it will need to answer for this endeavor to be successful. For instance, to what degree will emergency responders wish to join a network affiliated with the Federal Government? What is the value to wireless carriers of secondary network access when public safety has priority access? Who exactly will be permitted to use the public safety network?

As this committee proceeds with oversight of FirstNet, I will focus particularly on whether a high quality and useful network can be offered to first responders in rural America. FirstNet will be a failure if it leaves large pockets of rural America uncovered or served by second-rate solutions.

We have an experienced and knowledgeable panel with us today, and I expect their testimony will provide the Committee with im-

portant insight into the issues that I raised. And I want to yield now to my distinguished Ranking Member of this Committee, the Senator from Florida, Senator Nelson, for his opening remarks.

STATEMENT OF HON. BILL NELSON,
U.S. SENATOR FROM FLORIDA

Senator NELSON. Mr. Chairman, I know the Committee members would like to hear my dulcet tones but I would prefer to hear the witnesses. And so, I will enter my remarks for the record.

[The prepared statement of Senator Nelson follows:]

PREPARED STATEMENT OF HON. BILL NELSON, U.S. SENATOR FROM FLORIDA

Thank you Chairman Thune for holding this hearing today on the ongoing work of FirstNet.

Just over three years ago, we took the monumental step of passing legislation to create a first of its kind nationwide wireless broadband network for first responders. The need for that network had been evident for over a decade. And a strong bipartisan coalition came together in the Senate—in fact, in this very committee, led by former Senators Rockefeller and Hutchison—to respond to that need.

We sought to give our Nation's first responders—who put their lives on the line each and every day—the tools they need to communicate effectively during emergencies.

I am proud to have been an early supporter of the legislation that eventually created FirstNet. It represented a sea change in our Nation's approach to public safety communications. It looked to the future. I well remember testimony in this committee from the New York City Police Commissioner that the average 16-year-old had more communications capability in a smartphone than a police officer had in a police radio.

That is unacceptable. FirstNet will address that disparity.

We knew the mission we gave FirstNet would not be easy—but the stakes of inaction were too high. We tasked FirstNet with creating—effectively from scratch—a nationwide interoperable network devoted to the needs of the public safety community. FirstNet is a unique hybrid: Congress asked the FirstNet board to think like an entrepreneur, with a limited budget, and to launch a startup enterprise within the confines of the Federal Government—a monumental task.

The fact that the FirstNet board was not named until August 2012 and had no employees makes what FirstNet has accomplished to date that much more impressive.

Of course, in launching FirstNet with the urgency the legislation gave it, there have been a few bumps along the way. Both the Commerce Inspector General and the Government Accountability Office (GAO) have reviewed FirstNet's work and found concerns that should be addressed. It's my understanding that FirstNet and the Department of Commerce have taken steps to remedy those concerns.

I am confident that FirstNet's board and executive leadership team will redouble their efforts to carefully abide by all applicable rules and regulations going forward and refine their operations, where it makes sense, to incorporate GAO's suggestions. This is even more important given the limited Federal funds for this critical effort. We must always guard against waste, fraud, and abuse in all programs.

In the end, we cannot lose sight of what brought Congress to create FirstNet three years ago—our nation's first responders deserve an advanced nationwide interoperable wireless broadband network to help them do their jobs to protect us all.

I want to thank the witnesses for appearing before the Committee today and for their thoughtful comments on FirstNet and its work. I look forward to hearing your testimony.

The CHAIRMAN. Very good.

Well, we will get underway. And I want to start by introducing our distinguishing panel today. First, we have with us Mr. Bruce Andrews. He serves as Deputy Secretary with the Department of Commerce.

He will be followed by Mr. Keith Bryant. Mr. Bryant serves as the Fire Chief for the Oklahoma City Fire Department and as the President and Chairman of the Board at the International Association of Fire Chiefs.

Mr. Mark Goldstein. Mr. Goldstein serves as the Director of Physical Infrastructure issues at the Government Accountability Office, referenced earlier.

Mr. Susan Swenson. Ms. Swenson serves as the Chairwoman of the First Responder Network Authority, also known as FirstNet.

And finally, Mr. Todd Zinser. Mr. Zinser serves as Inspector General to the Department of Commerce.

So we will start on my left and your right with Mr. Andrews and proceed. And, if you can, keep your comments confined as closely to 5 minutes as possible and then we'll proceed with questions.

Mr. Andrews, welcome.

STATEMENT OF HON. BRUCE H. ANDREWS, DEPUTY SECRETARY, U.S. DEPARTMENT OF COMMERCE

Mr. ANDREWS. Good morning, Chairman Thune, Ranking Member Nelson and member of the Committee. Thank you for inviting me here today to testify.

I feel a special affinity for FirstNet because I actually worked on the staff of this Committee when Senator Rockefeller and Senator Hutchison originally conceived of FirstNet. And, as we all know, this mission arose as a result in the wake of the 9/11 attacks, when the work of our brave first responders was seriously impaired by the problems with communications. We at the Department are proud of our active role in helping to stand up and support this important program. This is a difficult mission, but we are confident that FirstNet is making strong progress towards meeting its goals.

A nationwide first responder network, a key recommendation of the 9/11 Commission, will enhance public safety communications across agencies and jurisdictions. Congress established FirstNet as an independent authority within the Department's National Telecommunications and Information Administration, NTIA, to develop and maintain this network.

FirstNet is a unique Federal entity and one of the most significant initiatives in the Department's portfolio. It is a startup with the challenges of standing up a self-sustaining world-class network within the applicable rules and regulations of the Federal Government. Suffice it to say, that has it challenges.

The Department actively supports and oversees FirstNet. Senior leadership from the Department, NTIA, and FirstNet meet on a regular basis to discuss the status of FirstNet's project, milestones, and potential risks. Now that FirstNet is maturing, it depends less on our staff and its day-to-day activities. However, we continue to offer support and guidance to FirstNet and its strategic development.

Secretary Pritzker and I are personally engaged on FirstNet, and she has leveraged her experience in creating and running companies to help FirstNet. For example, we led a collaborative process through which FirstNet developed a Strategic Roadmap and cost model validated by outside independent experts.

The Department provides certain legal, procurement, human resources, and administrative support to FirstNet, where it does not otherwise have its own resources or direct authority. In doing so, we seek to streamline and expedite Federal processes.

NTIA works with FirstNet on statutory compliance, internal controls, financial management systems, and annual independent audit. NTIA also administers the state and local Implementation Grant program, which supports consultations with state, regional, tribal, and local jurisdictions.

In December, the Department's Inspector General issued an audit report regarding the management of certain FirstNet disclosure reports and the monitoring of certain FirstNet contracts. The Department appreciated the Inspector General's efforts and takes these matters seriously. We concurred with the Inspector General's recommendations and have taken a number of steps to address them. It is important to emphasize that the report focused on FirstNet's early operations and to highlight the Department's full efforts on these matters.

As Congress recognized, FirstNet needs public and private sector board members with deep technical expertise and experience in wireless broadband communications. However, to get such private sector board members, it was likely that they would retain interest and affiliations with the industry thus creating a need to consider carefully potential conflicts of interest. The Department anticipated and addressed this issue through a robust ethics program that worked closely with FirstNet board members to counsel them regarding their employment and financial interest even before they entered government service.

Although, some administrative requirements may not have been fulfilled, board members made the necessary material disclosures. Notably the Inspector General's report did not identify any violations of conflict of interest laws or circumstances that affected FirstNet decisionmaking. It is also important to note that the early FirstNet contracts resulted in valuable work product that has been critical to the rapid establishment of this organization; and to your point, Senator, earlier about getting this stood up as quickly as we can.

To be clear, administrative errors were made and the Department takes those mistakes seriously. For example, we are implementing increased review of financial disclosure reports, increasing the level of review of potential conflicts of interests arising from acquisitions, and working to ensure that employees receive appropriate ethics training.

FirstNet has grown significantly and is now in a stronger position to exercise its own governance and oversight to provide clear direction and structure for the organization. I also think it is important that we emphasize our appreciation to the private sector board members. These private citizens are making significant sacrifices for an important goal in trying to do it the right way.

FirstNet has made strong progress. It is achieving its milestones according to this strategic roadmap related to state consultations, draft requests for network proposals and public notice and comment. In addition, FirstNet is now fully funded due to the proceeds from the FCC's recent auction. This coming year will be critical as

FirstNet transitions to a new phase focused on developing and deploying its network. To be clear, we understand the mission will not be fulfilled quickly. We want FirstNet to set ambitious but realistic timeframes and deadlines. And we understand that some internal deadlines have not and will not be met. None of that undermines the hard work being performed by this terrific team in place at FirstNet.

Creating a multibillion dollar, public safety wireless network is a major undertaking. We take our responsibility for this project very seriously and we will continue to help ensure that FirstNet succeeds in its important mission.

Thank you again for the opportunity to discuss FirstNet's progress and challenges. And, as you can see, FirstNet is making strong progress toward its goals. I appreciate the Committee's time and welcome your questions.

[The prepared statement of Mr. Andrews follows:]

PREPARED STATEMENT OF HON. BRUCE H. ANDREWS, DEPUTY SECRETARY, U.S. DEPARTMENT OF COMMERCE

Good morning Chairman Thune, Ranking Member Nelson and Members of the Committee. Thank you for inviting me to testify on the First Responder Network Authority (FirstNet) and its progress and challenges in establishing a public safety broadband network. I feel a special affinity for FirstNet because I worked on the staff of this Committee when Senator Rockefeller and Senator Hutchison originally conceived of FirstNet and drafted the original authorizing legislation.

As we all know, the mission of FirstNet arose in the wake of the 9/11 attacks, when the work of our brave first responders was seriously impaired by problems with communications. We at the Department of Commerce (Department) are proud of our role in helping to stand up this important program, and the Department plays an active role in overseeing and supporting FirstNet. This is a difficult mission, but we are confident that FirstNet is making strong progress towards meeting its goals.

FirstNet's Mission and Structure

In 2012, Congress passed legislation as part of the Middle Class Tax Relief and Job Creation Act (Act) calling for the construction of a nationwide, interoperable wireless broadband network for public safety first responders. This network, a key recommendation of the 9/11 Commission, will allow police officers, fire fighters, emergency medical service professionals, and other public safety officials to communicate with each other across agencies and jurisdictions. The Act established FirstNet as an independent authority within the National Telecommunications and Information Administration (NTIA), which is part of the Department, to develop, operate, and maintain the much-needed public safety wireless broadband network.

FirstNet is headed by a 15-member Board responsible for making strategic decisions about FirstNet's operations. The U.S. Attorney General, the Director of the Office of Management and Budget, and the Secretary of the Department of Homeland Security serve as ex-officio members of the FirstNet Board. In addition, the Secretary of Commerce appoints 12 non-permanent members of the FirstNet Board, with a statutory requirement to include representatives of state and local governments and the public safety community. We have been tremendously fortunate to have had a strong and dedicated Board to help steer FirstNet through its initial formation and now into its deployment phase.

FirstNet is a unique entity in the Federal Government, and a unique and one of the most significant initiatives in the Department's portfolio. It has a novel structure, with a mix of Board members from both the public and private sectors and placement as an independent entity within NTIA. Under the Act, FirstNet also has a statutory exemption from some Federal requirements but not others; and the ability to leverage auction proceeds, spectrum leases, and user fees to succeed. Since FirstNet's inception, the Department has made the success of FirstNet's important mission a top priority. It is important to remember that FirstNet is a start-up with the challenge of standing up a self-sustaining, nationwide, interoperable, world class telecommunications network, within the applicable rules and regulations of the Federal Government. Suffice it to say, that has its challenges.

Departmental Support of FirstNet

The Department has been actively involved in supporting FirstNet and overseeing its activities. During its earliest days, FirstNet depended heavily on Department and NTIA staff for administrative and program support. Now that FirstNet is maturing as an organization, there is less of a need for such involvement in FirstNet's day-to-day activities.

The Department and NTIA, however, continue to offer support and guidance to FirstNet on its strategic development. Secretary Pritzker and I have engaged personally on FirstNet, and she has leveraged her experience creating and running private-sector companies to help FirstNet. For example, we led a collaborative process with FirstNet through which FirstNet developed a Strategic Roadmap and cost model validated by outside, independent experts.

The Department also provides certain legal, procurement, human resources, and administrative support to FirstNet, where it does not otherwise have the resources or direct authority to provide such services itself. In doing so, we seek to streamline and expedite Federal processes whenever possible and collaborate with FirstNet on creative solutions. For example, the Department worked with FirstNet to expedite its hiring by leveraging the Commerce Alternative Personnel System. The Department also assisted FirstNet with its procurements, facilitated efforts to identify appropriate larger-scale acquisition assistance for the future, helped FirstNet find office space, and worked closely with FirstNet to establish its administrative processes and functions.

NTIA and the National Institute of Standards and Technology (NIST), through their joint Public Safety Communications Research program, collaborate with FirstNet on standards, interoperability research and testing, and technical information sharing. NTIA also works with FirstNet on its compliance with the Act's provisions, working with FirstNet on its administrative functions as it gains its own capacities, and managing the annual independent audit of FirstNet. Additionally, NTIA has assisted FirstNet with putting in place appropriate internal controls, appropriate processes, and strong financial management systems. NTIA will continue to pay close attention to the implementation of the FirstNet operations.

NTIA also administers the State and Local Implementation Grant Program, which supports state, regional, tribal, and local jurisdictions' consultations with FirstNet on the deployment of the nationwide public safety broadband network. NTIA also collaborates with FirstNet on NTIA's other statutory requirements contained in the Act. For example, NTIA is responsible for reviewing and approving FirstNet's fee structure annually, developing a state opt-out construction grant program, and developing a Next Generation 9–1–1 grant program.

Office of Inspector General's Report

In December 2014, the Department's Office of Inspector General (OIG) issued an Audit Report regarding the management of certain financial disclosure reports and the monitoring of FirstNet contracts. The Department appreciates the effort reflected in this report and takes these matters seriously. The Department concurred with the OIG's recommendations and has taken a number of steps to address them, which I discuss below. With respect to both ethics and contracting, however, it is important to emphasize that the report focused on issues arising from FirstNet's early operations and to highlight the Department's full efforts in anticipating and addressing these issues.

As Congress recognized when it established FirstNet, this ambitious project would require both public-sector and private-sector expertise, and would require that Board members have deep technical expertise in wireless broadband communications and experience in building, deploying, and operating commercial telecommunications networks. Accordingly, FirstNet was created with a unique governance structure that includes both public-sector and private-sector Board members. Many of these Board members sacrificed in a number of ways, including financially, to serve FirstNet's public safety goals. The private-sector Board positions provide the Board, and FirstNet as a whole, with significant and deep private-sector experience in the telecommunications industry. To stand up a network, it is critical that we have Board members with substantial industry experience. However, to get people with extensive private-sector experience, it was likely that such Board members would retain interests and affiliations within the telecommunications industry, thus creating a need to consider carefully potential conflicts of interest.

The Department addressed this issue through a robust ethics program that worked closely with FirstNet Board members to counsel them regarding their employment and financial interests, even before they entered government service. Although some administrative requirements may not have been fulfilled with respect to filing certain financial disclosure reports timely, Board members made the mate-

rial disclosures necessary to identify and address potential conflicts. Notably, the OIG report did not identify violations of conflict of interest laws or circumstances that actually affected FirstNet decision-making.

Regarding contracts issues, it is important to note that the early FirstNet contracts resulted in valuable work product that has been critical to the rapid establishment of the organization. During FirstNet's early days, like most start-ups, it sought and received first-rate feasibility research, technical analysis, strategic planning, and outreach services from highly specialized consultants, whose work product has laid the groundwork for executing FirstNet's mission.

To be clear, administrative errors were made along the way, and the Department takes those mistakes seriously. The Department has taken significant steps to address these errors. For example, we are implementing increased review of financial disclosure reports filed by FirstNet Board members and staff, increasing the level of review of potential conflicts arising from FirstNet acquisitions and other matters, and working to ensure that FirstNet and Department employees receive appropriate ethics training. In addition, we have provided additional training to and oversight of the Department Contracting Office handling certain FirstNet contracts.

Since FirstNet's inception, the Department, NTIA, and FirstNet have strived to stand up and operate this start-up organization in a compliant and first-rate manner. Over the past year, FirstNet has grown significantly in its organizational structure, and this growth has provided greater resources, rigor, and oversight in the management of its operations. FirstNet is now in a stronger position to supplement the Department's efforts to implement policies and procedures, and exercise its own governance and oversight that provide clear direction and structure for the organization. I also think it is important that we specially emphasize our appreciation to the private-sector Board members. These private citizens are making significant sacrifices for a noble goal, and trying to do it the right way. They deserve our appreciation.

Continued Progress

With support from the Department and NTIA, FirstNet has made strong progress. FirstNet's ability to make progress on deploying the network is further enhanced now that FirstNet is fully funded under the Act's provisions. Proceeds from the Federal Communications Commission's recent AWS–3 auction will provide the full $7 billion provided for FirstNet under the Act. FirstNet is achieving its milestones according to the Strategic Program Roadmap related to state consultations, requests for network proposals, and public notice and comment. This coming year will be critical, as FirstNet pivots to a new phase focused on developing and deploying its network. To be clear, we know and understand that the FirstNet mission will not be fulfilled quickly. We want FirstNet to set ambitious, but realistic time frames and deadlines. And we understand that some internal deadlines have not and will not be met. None of that undermines the hard work being performed by the terrific team in place at FirstNet.

Conclusion

Creating a multibillion dollar, interoperable, nationwide, public safety wireless broadband network is a major undertaking. We take our responsibility for this project very seriously. Senior leadership from the Department, NTIA, and FirstNet meet on a regular basis to discuss current status of FirstNet's project milestones, potential risks, and upcoming actions. The Department and NTIA will continue to play a key support and oversight role to help ensure that FirstNet succeeds in its important mission.

Thank you again for the opportunity to discuss FirstNet's progress and challenges in establishing a public safety wireless broadband network. As you can see, FirstNet is making strong progress towards its goals. I appreciate the Committee's time and welcome questions.

The CHAIRMAN. Thank you, Mr. Andrews.
Chief Bryant.

STATEMENT OF CHIEF G. KEITH BRYANT, PRESIDENT AND CHAIRMAN OF THE BOARD, INTERNATIONAL ASSOCIATION OF FIRE CHIEFS

Mr. BRYANT. Good morning, Chairman Thune, Ranking Member Nelson, and members of the Committee.

The International Association of Fire Chiefs represents more than 11,000 leaders of the Nation's fire, rescue, and emergency medical services. I would like to thank the Committee for this opportunity to provide a public safety perspective on the need for a nationwide public safety broadband network and to examine the progress made by the First Responder Network Authority, or FirstNet.

FirstNet's goal of building the nationwide public safety broadband network to meet the needs of first responders is a matter of critical importance for public safety. While the task will not be easy, the IAFC believes that FirstNet is developing the leadership, staff, and support from states, public safety, and other key stakeholders required to make this network a reality.

As a fire chief and as a firefighter who has responded to numerous large-scale events including natural disasters and a major act of terrorism, I know firsthand the benefits that the FirstNet network stands to offer in terms of improving communications, coordination, and situational awareness during emergency response operations. Just as smartphones have changed our personal lives, FirstNet devices and applications ultimately will change the way local fire and Emergency Medical Service departments operate.

In terms of daily operations, America's firefighters deal with an increasingly complex environment that requires ever-increasing amounts of information and data to keep citizens and themselves safe. The FirstNet network will make it possible to gain quick access to new tools and applications that provide location data and other vital information for firefighting. It will enable the exchange of real-time data and audio/video feeds on the fireground to assist incident commanders with operational decisionmaking and maximize search and rescue and fire suppression effectiveness.

The FirstNet network will make a profound change in how Emergency Medical Service is practiced. In the field of EMS, it is important to arrive at a patient's location and transport him or her to emergency care at the hospital within minutes. The FirstNet network will facilitate critical decisionmaking in real-time in the field, which, in turn, will help save lives.

Lessons learned from many events throughout the nation tell us that under emergency conditions, the nation's cellular carrier networks quickly become overwhelmed and unusable for the transmission of emergency data. We experienced this firsthand in Oklahoma City twenty years ago when the Alfred P. Murrah Federal Building was bombed. The full deployment of FirstNet's nationwide public safety broadband network will ensure that America's first responders can access vital information under all emergency conditions.

Candidly, I think there was skepticism from some in public safety after FirstNet was formed that our concerns were not being hear initially and that the network would not end up being a mission-critical network. Public safety organizations have consistently said that the network must be mission critical at the outset. Under the leadership of new Chairwoman Sue Swenson, FirstNet has sought greater input from the Public Safety Advisory Committee and engaged with public safety far more than previously. The Public Safety Advisory Committee is a 40-member committee established in

statute to provide significant recommendations and advice to FirstNet on mission-critical issues. Public Safety Advisory Committee meets several times a year including once this past year near my hometown in Norman, Oklahoma.

We believe public safety's ongoing input through the Public Safety Advisory Committee is vital at all stages of the network's development so that it will be tailored to meet the needs of the end users, America's first responders and other public safety entities.

The IAFC and public safety in general also are very pleased with the naming of Chief Jeffrey Johnson, former President and Chairman of the Board of the IAFC, as Vice-Chair of FirstNet. Chief Johnson is a well-recognized in fire and emergency service community as a leader on public safety communications issues.

We believe FirstNet has worked to create opportunities for the public safety community to help shape the design of the network in several states and territories. For instance, the FirstNet Board members, including Chairwoman Swenson and executive-level staff, have traveled throughout the country over the past year, reaching out and connecting with local and state public safety officials. This outreach has dramatically improved over the past year and we look forward to it continuing as the network is deployed.

FirstNet's state consultation process is a key element to its success and is a venue where IAFC members and other public safety personnel are able to ensure that the FirstNet is meeting our needs. FirstNet has made tremendous strides with state consultations in the past year conducting more than 100 engagements involving 20,000 stakeholders in Fiscal Year 2014. Many of our members have attended and reported favorably on the FirstNet's team engagement in their respective states and territories. I understand that FirstNet intends to hold consultation with the remaining states and territories by the end of this year.

While there are still gaps in understanding and agreement during these in-person meetings on what the final network will look like, how much it will cost for public safety to use, and the network's exact coverage areas, these are exactly the types of questions that should be, and are being asked and debated at state consultations throughout the country. Public safety must be included in these conversations and we appreciate FirstNet's engagement with the public safety community over the past year.

We realize there is still a lot of work to be done and FirstNet must continue to move quickly on several key activities in 2015. Collectively, these and other developments from the last year have helped foster a more inclusive, transparent and productive dialogue between FirstNet and the public safety community. The FirstNet network is urgently needed to increase the safety and capabilities of all public safety personnel and protect the American people. However, it is not only FirstNet, which bears the responsibility of success. It also falls on all public safety officials to ensure success in the creation and administration of the broadband network.

I feel confident that FirstNet is on the right path toward building a broadband network that will serve the nation's firefighters, Emergency Medical Service providers, and other emergency responders.

I truly appreciate the opportunity to be before you today and offer this testimony. Thank you, sir.

[The prepared statement of Mr. Bryant follows:]

PREPARED STATEMENT OF CHIEF G. KEITH BRYANT, PRESIDENT AND CHAIRMAN OF THE BOARD, INTERNATIONAL ASSOCIATION OF FIRE CHIEFS (IAFC)

Good morning Chairman Thune, Ranking Member Nelson, and members of the Committee. I am Keith Bryant, fire chief of the Oklahoma City Fire Department, and President and Chairman of the Board of the International Association of Fire Chiefs (IAFC). The IAFC represents more than 11,000 leaders of the Nation's fire, rescue and emergency medical services. I would like to thank the Committee for this opportunity to provide a public safety perspective on the need for a nationwide public safety network and to examine the real progress that the First Responder Network Authority (FirstNet) has made.

The Middle Class Tax Relief and Job Creation Act of 2012 (P.L. 112–96) established FirstNet as an independent authority within the U.S. Department of Commerce's National Telecommunications and Information Administration. Under the act, FirstNet is tasked with building, deploying, and operating a self-funding, sustainable, interoperable broadband network for public safety entities across the country and within U.S. territories.

FirstNet's goal of building the nationwide public safety broadband network to meet the needs of first responders is a matter of critical importance for public safety. While the task will not be easy, the IAFC believes that FirstNet is developing the leadership, staff, and support from states, public safety, and other key stakeholders required to make this network a reality for first responders and the public who call on them for help in their time of need.

As a veteran fire chief, and as a firefighter who has responded to numerous large-scale events including natural disasters and acts of terrorism, I know firsthand the benefits that the FirstNet network stands to offer in terms of improving communications, coordination, and situational awareness during public safety operations. Just as smartphones have changed our personal lives, FirstNet devices and applications ultimately will change the way public safety operates. The ability for a single communications network to be used to dispatch Emergency Medical Services (EMS) personnel, a medical helicopter, fire personnel, and other emergency responders from different jurisdictions all at the same time, while enabling video, text, and data communications at broadband speeds will save critical minutes when it matters most.

As circumstances and technology continue to make our world smaller, situational awareness, real-time information, and data are critical to the safety of America's fire and emergency service and the public we are sworn to protect. In terms of daily operations, America's firefighters deal with an increasingly complex environment that requires ever-increasing amounts of information and data to keep citizens and themselves safe. The FirstNet network will make it possible to gain quick access to new tools and applications that provide location data and other vital information for firefighting. It will enable the exchange of real-time data and audio/video feeds on the fireground to assist incident commanders with operational decision-making and maximize search and rescue and fire suppression effectiveness.

The FirstNet network will make a profound change in how EMS is practiced. In the field of EMS, it is important to arrive at the critical-condition patient's location and transport him or her to emergency care at the hospital within minutes. The FirstNet network will facilitate critical decision-making in real time in the field which in turn will help save lives.

Lessons learned from many events throughout the Nation tell us that under emergency conditions, the Nation's cellular carrier networks quickly become overwhelmed and unusable for transmission of emergency data. We experienced this first hand in Oklahoma City twenty years ago when the Alfred P. Murrah Federal Building was bombed. The full development of FirstNet's nationwide public safety broadband network will ensure that America's first responders can access vital information under all emergency conditions.

Candidly, I think there was skepticism from some in public safety after FirstNet was formed that our concerns were not being heard initially and that the network would not end up being a mission-critical network. Public safety organizations have consistently said that the network must be mission critical at the outset. Under the leadership of new Chair Sue Swenson, FirstNet has sought greater input from the Public Safety Advisory Committee (PSAC) and engaged with public safety far more than previously. The PSAC is a 40-member committee established by the law creating FirstNet to provide significant recommendations and advice to FirstNet on

mission-critical issues. The PSAC meets several times a year, including once this past year near my home town in Norman, Oklahoma.

The PSAC developed and delivered the following documents to FirstNet this past year:

- A Human Factors Report that analyzes the long-range impacts of the network on the way law enforcement, fire, and EMS operate;
- A Potential Users Report that identifies and categorizes lists of potential network users;
- A report containing Use Cases for Interfaces, Applications, and Capabilities that envisions practical examples for how the network will be used.

Recently, the PSAC has been tasked with researching how local incident commanders might use priority and preemption on the network as well as envisioning what types of devices are necessary for public safety personnel in each respective field. We believe public safety's ongoing input through the PSAC is vital at all stages of the network's development so that it will be tailored to the needs of the end users—America's first responders and other public safety entities.

The IAFC and public safety in general are also very pleased with the naming of Chief Jeffrey D. Johnson, former President and Chairman of Board of the IAFC, as Vice-Chair of FirstNet. Chief Johnson is well-recognized in the fire and emergency service community as a leader on public safety communications issues.

We believe FirstNet has worked to create opportunities for the public safety community to help shape the design of the network in several states and territories. For instance, FirstNet Board members, including Chair Swenson and executive-level staff, have traveled throughout the country over the past year, reaching out and connecting with local and state public safety officials. This outreach has dramatically improved over the past year and we look forward to it continuing as the network is deployed.

FirstNet's state consultation process is a key element to its success and is a venue where IAFC members and other public safety personnel are able to ensure that FirstNet is meeting our needs. FirstNet has made tremendous strides with state consultations in the past year conducting more than 100 engagements involving 20,000 stakeholders in Fiscal Year 2014. Many of our members have attended and reported favorably on the FirstNet team's engagement in their respective states and territories. FirstNet has met with 16 states and territories; they have over 20 additional scheduled by the end of this summer. The IAFC believes that is it critical that FirstNet continue its nationwide outreach and consultation to ensure coordination with the public safety community in urban, rural, and remote locations, including island states and tribal nations. I understand that FirstNet intends to hold consultations with the remaining states and territories by the end of this year.

While there are still gaps in understanding and agreement during these in-person meetings on what the final network will look like, how much it will cost for public safety to use, and the network's exact coverage areas, these are exactly the types of questions that should be—and are being—asked and debated at state consultations throughout the country. Public safety must be included in these conversations and we appreciate FirstNet's engagement with the public safety community over the past year.

Public safety fought hard to establish FirstNet because we knew that we were being left behind compared to the technologies available for personal-use communications. The IAFC, and public safety, are united behind the desire to see FirstNet succeed and we will continue to fight for public safety's access to the best available technology to keep the public safe.

We realize there is still a lot of work to be done and FirstNet must continue to move quickly on several key activities in 2015, but collectively, these and other developments from the past year have helped foster a more inclusive, transparent, and productive dialogue between FirstNet and the public safety community. The FirstNet network is urgently needed to increase the safety and capabilities of all public safety personnel and protect the American people. It is not only FirstNet which bears the responsibility of success, but it also falls on all public safety to ensure success in the creation and administration of the broadband network. I feel confident that FirstNet is on the right path toward building a broadband network that will serve the Nation's firefighters, EMS providers, and other emergency responders.

Thank you for the opportunity to testify at today's hearing. I look forward to answering any questions that you may have.

The CHAIRMAN. Thank you, Chief.

Mr. Goldstein.

**STATEMENT OF MARK L. GOLDSTEIN, DIRECTOR,
PHYSICAL INFRASTRUCTURE ISSUES,
U.S. GOVERNMENT ACCOUNTABILITY OFFICE**

Mr. GOLDSTEIN. Good morning, Chairman Thune, Ranking Member Nelson, and members of the Committee.

I am pleased to be here today to discuss our ongoing work on FirstNet. FirstNet is talked with establishing a nationwide, interoperable, wireless broadband network specifically for public safety. We are currently finalizing a report on FirstNet's efforts. As such, the findings I am reporting this morning are preliminary in nature.

The 2012 Act established numerous responsibilities for FirstNet, provided $7 billion from spectrum auction proceeds for the network's construction, and required FirstNet to be self-funding beyond this initial allocation. As part of that effort, FirstNet is working with five Early Builder projects that are permissioned to build local and regional interoperable public safety broadband networks.

My statement addresses, one, FirstNet's progress carrying out its responsibilities and establishing internal controls, two, how much the network is estimated to cost and how FirstNet plans to become self-funding, and three, what lessons can be learned from our early builder projects.

Our preliminary findings are as follows: First, GAO found that FirstNet has made progress carrying out the responsibilities established in the act, but lack certain elements that affect internal controls. FirstNet has made progress establishing an organizational structure, planning the nationwide public safety broadband network, and consulting with stakeholders. Nevertheless, stakeholders GAO contacted sited upcoming issues such as deciding the level of network of coverage, which will be difficult for FirstNet to address as it continues to carry out its responsibilities.

With respect to internal controls, FirstNet has begun establishing policies and practices consistent with Federal standards, but it has not fully assessed its risks or established standards of conduct. Given that FirstNet faces a multitude of risks to achieve its complex objectives, fully assessing risks would help FirstNet respond to risks in a proactive way. Developing standards of contact would help FirstNet address conduct and performance issues in a timely manner.

Second, GAO found that a nationwide public safety broadband network is estimated to cost billions of dollars and FirstNet faces difficult decisions determining how to fund the network's construction and ongoing operations. Various entities have estimated the cost to construct and operate such a network from $12 billion to $47 billion of the first 10 years. The actual cost of FirstNet's network will be influenced by FirstNet's business model especially the extent of personal partnerships, use of existing infrastructure, efforts to ensure network reliability, and network coverage.

For example, the cost of the network will likely increase if FirstNet does not utilize commercial partnerships and at least some existing infrastructure. The 2012 Act provides FirstNet $7 billion to establish the network. To become self-funding, FirstNet is authorized to generate revenue through user fees and commer-

cial partnerships, the latter of which can involve secondary use of the network for non-public safety services. However, GAO's ongoing work suggests that FirstNet faces difficult decisions in determining how to best utilize these revenue sources. For instances, widespread network coverage can attract more users and thus user fee revenues, but is expensive to construct and maintain especially in rural areas, as the Chairman has noted.

Finally, we found that FirstNet has taken steps to collect and evaluate information and lessons from the five Early Builder projects that are developing local and regional public safety networks, but it could do more to ensure that it properly evaluates and incorporates these lessons. For example, FirstNet has asked the projects to report on the experiences of their networks' users and has assigned contractors to collect and log lessons.

However, preliminary results indicate that FirstNet does not have a plan that clearly articulates how it will evaluate those experiences and lessons. GAO has previously found that a well-developed evaluation plan for projects like these can help ensure that agencies obtain the information necessary to make effective program and policy decisions. Given that the Early Builder projects are doing on a local and regional level what FirstNet must eventually do nationally, an evaluation plan can play a key role in FirstNet's strategic planning and program management, providing feedback on both program design and execution and ensuring FirstNet has not missed opportunities to incorporate lessons the projects have identified.

Chairman Thune, Ranking Member Nelson, members of the Committee, this concludes my remarks. I would be happy to answer questions at the appropriate time. Thank you.

[The prepared statement of Mr. Goldstein follows:]

GAO HIGHLIGHTS—March 11, 2015

Public Safety Communications

Preliminary Information on FirstNet's Efforts to Establish a Nationwide Broadband Network

Why GAO Did This Study

Public safety officials rely on thousands of separate radio systems to communicate during emergencies, which often lack interoperability, or the ability to communicate across agencies and jurisdictions. The 2012 act created FirstNet to establish a nationwide, interoperable, wireless broadband network for public safety use. In doing so, the act established numerous responsibilities for FirstNet, provided $7 billion from spectrum auctions proceeds for the network's construction, and required FirstNet to be self-funding beyond this initial allocation. As part of the effort, FirstNet is working with five "early builder projects" that have permission to build local and regional interoperable public-safety broadband networks.

This statement is based on preliminary information from GAO's ongoing review of FirstNet. This statement addresses (1) FirstNet's progress carrying out its responsibilities and establishing internal controls, (2) how much the network is estimated to cost and how FirstNet plans to become self-funding, and (3) what lessons can be learned from the early builder projects. GAO reviewed relevant FirstNet documentation and public-safety network cost estimates recommended by agency officials and experts; surveyed the state-designated FirstNet contact in 50 states, 5 territories, and the District of Columbia; and interviewed FirstNet officials and public safety and wireless industry stakeholders selected for their telecommunications and public safety experience, among other things.

What GAO Found

GAO's ongoing work has found that the First Responder Network Authority (FirstNet) has made progress carrying out the responsibilities established in the 2012 Middle Class Tax Relief and Job Creation Act (the 2012 act) but lacks certain elements of effective internal controls. FirstNet has made progress establishing an organizational structure, planning the nationwide public-safety broadband network, and consulting with stakeholders. Nevertheless, stakeholders GAO contacted cited upcoming issues, such as deciding the level of network coverage, which will be difficult for FirstNet to address as it continues to carry out its responsibilities. With respect to internal controls, FirstNet has begun establishing policies and practices consistent with Federal standards, but it has not fully assessed its risks or established Standards of Conduct. Given that FirstNet faces a multitude of risks to achieve its complex objectives, fully assessing risks would help FirstNet respond to risks in a proactive way. Developing standards of conduct would help FirstNet address conduct and performance issues in a timely manner.

A nationwide public-safety broadband network is estimated to cost billions of dollars, and FirstNet faces difficult decisions determining how to fund the network's construction and ongoing operations. Various entities have estimated the cost to construct and operate such a network from $12 to $47 billion over the first 10 years. The actual cost of FirstNet's network will be influenced by FirstNet's (1) business model, especially the extent of commercial partnerships; (2) use of existing infrastructure; (3) efforts to ensure network reliability; and (4) network coverage. For example, the cost of the network will likely increase if FirstNet does not utilize commercial partnerships and at least some existing infrastructure. The 2012 act provides FirstNet $7 billion to establish the network. To become self-funding, FirstNet is authorized to generate revenue through user fees and commercial partnerships, the latter of which can involve secondary use of the network for non-public safety services. However, GAO's ongoing work suggests that FirstNet faces difficult decisions in determining how to best utilize these revenue sources. For instance, widespread network coverage can attract more users, and thus user fee revenue, but is expensive to construct and maintain, especially in rural areas.

FirstNet has taken steps to collect and evaluate information and lessons from the five "early builder projects" that are developing local and regional public-safety networks, but could do more to ensure that it properly evaluates and incorporates these lessons. For example, FirstNet has asked the projects to report on the experiences of their networks' users and has assigned contractors to collect and log lessons. However, preliminary results indicate that FirstNet does not have a plan that clearly articulates how it will evaluate those experiences and lessons. GAO has previously found that a well-developed evaluation plan for projects like these can help ensure that agencies obtain the information necessary to make effective program and policy decisions. Given that the early builder projects are doing on a local and regional level what FirstNet must eventually do nationally, an evaluation plan can play a key role in FirstNet's strategic planning and program management, providing feedback on both program design and execution and ensuring FirstNet has not missed opportunities to incorporate lessons the projects have identified.

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PREPARED STATEMENT OF MARK L. GOLDSTEIN, DIRECTOR, PHYSICAL INFRASTRUCTURE ISSUES, U.S. GOVERNMENT ACCOUNTABILITY OFFICE

PUBLIC SAFETY COMMUNICATIONS—PRELIMINARY INFORMATION ON FIRSTNET'S EFFORTS TO ESTABLISH A NATIONWIDE BROADBAND NETWORK

Chairman Thune, Ranking Member Nelson, and Members of the Committee:

I am pleased to be here today to discuss our ongoing work on the First Responder Network Authority (FirstNet). The 2012 Middle Class Tax Relief and Job Creation Act (the 2012 Act) created FirstNet as an independent authority within the Department of Commerce's National Telecommunications and Information Administration (NTIA).[1] FirstNet is tasked with establishing a nationwide, interoperable, wireless broadband network specifically for public safety (hereafter, the public safety network). We are currently finalizing a report on FirstNet's efforts; as such, the findings that I am reporting to the Committee today are preliminary in nature.

Communication systems are essential for public safety officials—especially first responders such as police, firefighters, and paramedics—to gather and share information during emergencies. Today, first responders rely on thousands of separate,

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[1] Pub. L. No. 112–96, § 6204(a), 126 Stat. 156, 208 (2012).

incompatible, and often proprietary land mobile radio (LMR) systems for their mission-critical voice communications. Oftentimes these LMR systems lack "interoperability"—the capabilities that allow first responders to communicate with their counterparts in other agencies and jurisdictions—which has been a long-standing concern. For example, during the terrorist attacks of September 11, 2001, and also during Hurricane Katrina in 2005, the lack of interoperable public safety communications hampered rescue efforts. To supplement these LMR systems, many first responders also use commercial wireless networks for data transmissions. While FirstNet's public safety network will not initially improve the interoperability of voice communications among first responders, the network is expected to support important data transmission (such as security-camera video feeds). For mission-critical voice communications, public safety entities will likely continue to rely on their LMR systems for many years.

The 2012 act established numerous responsibilities for FirstNet, allocated billions of dollars for the network's construction, and set aside radio frequency spectrum on which it will operate.[2] Public safety users of the network, and potentially other "secondary" users,[3] may be charged fees to use the network, much as they currently pay to use commercial wireless networks. To inform its work, FirstNet has been consulting with numerous federal, state, local, and tribal jurisdictions, and is working with five "early builder projects" that received Federal funding to deploy local and regional public-safety broadband networks similar to what FirstNet is required to establish on a national scale. FirstNet also has to develop a business plan that supports the upfront and ongoing costs of the network.

My statement today presents preliminary information from our ongoing review—requested by this Committee—of FirstNet. My statement will address: (1) the extent to which FirstNet is carrying out its responsibilities and establishing internal controls for developing the public safety network, (2) how much the network is estimated to cost to construct and operate and how FirstNet plans to become a self-funding entity, and (3) what lessons can be learned from local and regional public-safety-network early builder projects.

For our ongoing work, we reviewed FirstNet documentation—such as its Requests for Information (RFI) and FirstNet board meeting materials—and compared FirstNet's efforts with requirements established in the 2012 act.[4] We also compared FirstNet's efforts to establish internal controls with criteria established in the Federal Standards for Internal Control.[5] We reviewed cost estimates for a nationwide public-safety broadband network from the Congressional Budget Office, the Federal Communications Commission (FCC), and academics.[6] We reviewed documentation related to how FirstNet plans to collect and evaluate lessons learned from the early builder projects—such as Spectrum Manager Lease Agreements and Key Learning Conditions Plans—and assessed these plans against key features of a well-developed evaluation plan for pilot projects identified by our previous reports.[7] To obtain

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[2] Radio signals travel through space in the form of waves. These waves vary in length, and each wavelength is associated with a particular radio frequency. The radio frequency spectrum is the part of the natural spectrum of electromagnetic radiation lying between the frequency limits of 3 kilohertz (kHz) and 300 gigahertz (GHz).

[3] The 2012 act allows FirstNet to establish agreements that allow access to the public safety network through entities involved in the construction, management, or operation of the network, on a secondary basis for services other than public safety, such as individual commercial customers using the network much as they currently use existing commercial networks. Pub. L. No. 112–96, § 6208(a)(2)(B), 126 Stat. 156, 216, 208.

[4] We did not review FirstNet's progress against every responsibility established for it in the 2012 act, because it is not possible for FirstNet to have made progress on some responsibilities.

[5] GAO, *Standards for Internal Control in the Federal Government*, GAO/AIMD–00–21.3.1 (Washington, D.C.: Nov. 1999). The most recent version of these standards was issued in September 2014. GAO, *Standards for Internal Control in the Federal Government*, GAO–14–704G (Washington, D.C.: Sept. 10, 2014). These new standards become effective October 1, 2015, but an entity's management may elect early adoption. According to FirstNet officials, as the Department of Commerce proceeds with the rollout of these revisions, NTIA and FirstNet will also adopt these new standards. Although these new standards are not yet effective and FirstNet is not required to abide by them, given that they will be effective soon and that FirstNet is still in the process of developing its internal control system, doing so according to these new standards would prevent FirstNet from having to re-design any elements of its system later this year.

[6] We identified these cost estimates through interviews with agency officials and subject matter experts. We did not perform a full data reliability assessment of the numbers in these estimates because the purpose of the estimates within the scope of our review was to provide illustrative examples.

[7] See, for example, GAO, *Tax Administration: IRS Needs to Strengthen Its Approach for Evaluating the SRFMI Data-Sharing Pilot Program*, GAO–09–45 (Washington, D.C.: Nov. 7, 2008). GAO–09–45 identified key features of an evaluation plan through the consultation of social science and evaluation literature, along with published GAO guidance.

stakeholder views, we surveyed all 50 states, the District of Columbia, and 5 U.S. territories (hereafter, states) and received 55 responses, for a 98 percent response rate.[8] We interviewed FirstNet and NTIA officials and a variety of other stakeholders, such as officials from state and local public safety entities, commercial wireless carriers, subject matter experts, public safety associations, Federal agencies including FCC and the Department of Homeland Security, and government officials in Sweden responsible for establishing a public-safety communications network in their country.[9] We also interviewed officials from the five current early builder projects (Los Angeles, CA; Adams County, CO; New Jersey; New Mexico; and Harris County, TX) and three projects that were canceled (Charlotte, NC; Mississippi; and San Francisco, CA).

Our ongoing review is being conducted in accordance with generally accepted government auditing standards. We discussed the information in this statement with FirstNet officials to obtain their views. As our work is ongoing, we are not making recommendations for FirstNet at this time; we plan to further analyze information related to these issues and provide this Committee with a final report later this year. At this Committee's request, we also plan to review FirstNet's efforts to satisfy key technical requirements of the network in the future.

Background

The 2012 act established numerous responsibilities for FirstNet, most of which relate directly to developing the public safety network. For example, in establishing the network, FirstNet must

- issue open, transparent, and competitive Requests for Proposals (RFP) to private sector entities for the purpose of building, operating, and maintaining the network;
- enter into agreements to use, to the maximum extent economically desirable, existing commercial, federal, state, local, and tribal infrastructure;
- promote competition in the public-safety equipment marketplace by requiring that equipment for the network be built to open, non-proprietary standards; and
- develop the technical and operational requirements for the network, as well as the practices and procedures for managing and operating it.

In establishing the infrastructure for the public safety network, the 2012 act requires FirstNet to include the network components depicted in figure 1.[10]

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[8] We e-mailed the survey to the FirstNet Single Point of Contact in each state. We administered the survey from October 2014 through November 2014. We did not receive a response from Puerto Rico.

[9] We selected stakeholders by considering their involvement in the early builder project jurisdictions, experience with operating and using wireless communications systems and public-safety communications systems and devices in particular, familiarity with FirstNet and its mission, and—to obtain a cross-section of public safety disciplines—their public safety role.

[10] Pub. L. No. 112–96, § 6202(b), 126 Stat, 156, 206.

Figure 1: Key Elements of First Responder Network Authority's Public Safety Network
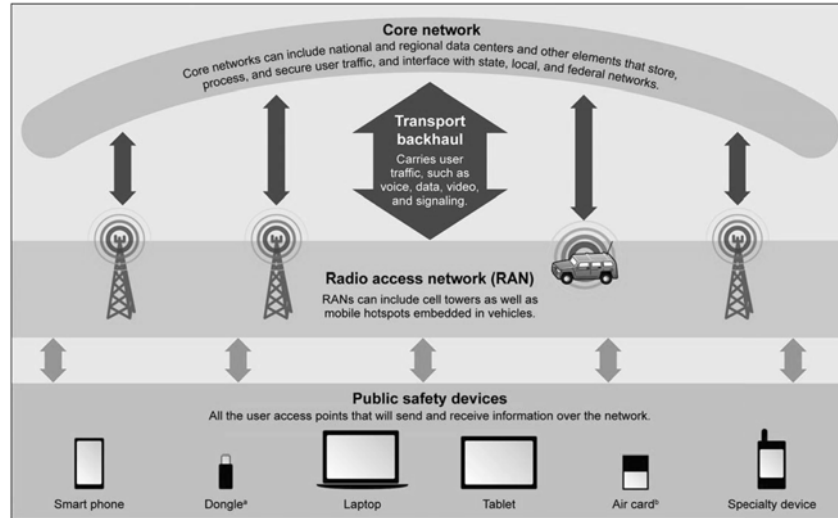
Source: GAO. | GAO-15-380T

[a] Generally, "dongles" are small devices that plug into computers and serve as an adapter or as a security measure to enable the use of certain software.

[b] Generally, "air cards" are wireless adapters for sending and receiving data in a cellular network.

In developing the public safety network, FirstNet must work with a variety of stakeholders. The 2012 act required FirstNet to be headed by a 15-member board with 3 permanent members and 12 individuals appointed by the Secretary of Commerce.[11] The 2012 act also required FirstNet to establish a standing public safety advisory committee to assist it in carrying out FirstNet's responsibilities and consult with federal, regional, state, local, and tribal jurisdictions on developing the network.[12] For state, local, and tribal planning consultations, FirstNet is required to work with the Single Points of Contact (SPOC) who have been designated by each state.[13] Specifically, SPOCs are the individuals responsible for working with FirstNet in their states, and FirstNet will work through these individuals to gather requirements from key stakeholders in each state. The 2012 act requires FirstNet to notify the states when it has completed its RFPs for building, operating, and maintaining the public safety network.[14] Once a state receives the details of FirstNet's plans, it has 90 days either to agree to allow FirstNet to construct a Radio Access Network (RAN) in that state or notify FirstNet, NTIA, and FCC of its intent to deploy its own RAN.[15] The 2012 act required FCC, the entity responsible for managing and licensing commercial and non-federal spectrum use—including spectrum allocated to public safety—to grant FirstNet the license to the public safety spectrum that the act set aside for the network.[16] FCC has also conducted spec-

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[11] The 3 permanent members are the Secretary of Homeland Security, the Attorney General, and the Director of the Office of Management and Budget. The appointed members are required to have public safety experience or technical, network, or financial expertise. Pub. L. No. 112–96, §6204(b)(2)(B), 126 Stat. 156, 209.

[12] Pub. L. No. 112–96, §6205, 126 Stat. 156, 211.

[13] Pub. L. No. 112–96, §6206(c)(2)(B), 126 Stat. 156, 214.

[14] Pub. L. No. 112–96, §6302(e)(1), 126 Stat. 156, 219.

[15] A state that "opts out" of FirstNet's network has an additional 180 days to send FCC an alternative plan for constructing, operating, and maintaining its RAN. The plan must demonstrate that the state's proposed RAN would comply with certain minimum technical requirements and be interoperable with FirstNet's network. FCC shall either approve or disapprove the plan. In addition, a state that opts out is required to apply to NTIA for an agreement to use FirstNet's spectrum.

[16] Specifically, the 2012 act required FCC to reallocate the "D Block," a previously commercial spectrum block located in the upper 700 megahertz (MHz) band, to public safety and to grant a license to FirstNet for the use of both the existing public-safety broadband spectrum in the

trum auctions, as required by the 2012 act, so that auction proceeds could be used to fund FirstNet. The 2012 act provides $7 billion from these proceeds to FirstNet for buildout of the network, and requires FirstNet to become self-funding beyond this initial $7 billion by generating revenue through user fees and other sources.[17]

Efforts to establish local and regional public-safety networks are also ongoing, and predate the 2012 act. From 2009 to 2011, FCC granted waivers from its public-safety spectrum rules to 22 jurisdictions to allow early deployment of local and regional public-safety broadband networks.[18] Of those 22 jurisdictions, 8 projects received Federal funding to deploy their networks.[19] After FCC granted FirstNet its public-safety broadband spectrum license in November 2012, the jurisdictions had to secure a Spectrum Manager Lease Agreement with FirstNet to continue deploying their networks. By August 2014, FirstNet secured these agreements with five original waiver jurisdictions, all of which had received Federal funding to deploy their networks: Los Angeles, CA; Adams County, CO; New Jersey; New Mexico; and Harris County, TX; in this statement, we refer to these jurisdictions as early builder projects. Three other original waiver jurisdictions that received Federal funds were unable to reach an agreement with FirstNet for various reasons and, thus, were canceled: Charlotte, NC; Mississippi; and San Francisco, CA. FirstNet has not yet determined if or how the early builder project networks will be incorporated into its nationwide network, and has noted that various factors could affect this determination.

FirstNet Is Making Progress Meeting Responsibilities but Lacks Certain Elements of Effective Internal Controls

FirstNet Is Making Progress Carrying Out Statutory Responsibilities

Our ongoing work indicates that FirstNet has made progress carrying out its statutory responsibilities in three areas—(1) establishing its organizational structure, (2) planning the public safety network, and (3) consulting with stakeholders—but could face challenges in each of these areas.

Establishing its Organizational Structure

As a newly created entity within the Federal Government, FirstNet has taken a number of steps to establish its organizational structure and hire staff. As required by the 2012 act, the Secretary of Commerce appointed FirstNet's inaugural Board Members in August 2012 and, in February 2013, established the Public Safety Advisory Committee (PSAC).[20] In April 2013, the FirstNet Board selected an Executive Director to lead its day-to-day operations.[21] Since then, FirstNet has hired, and continues to hire, other senior management personnel to lead its organizational units (such as a Chief Counsel and Chief Administrative, Financial, and Information Officers), Directors and organizational chiefs to further lead and perform its work, and other general staff. As of February 2015, FirstNet had over 120 employees.

Stakeholders we spoke with and surveyed for our ongoing work expressed concern that organizational issues have slowed FirstNet's progress, and could continue to do so. In particular, in response to our survey, numerous SPOCs either noted that FirstNet's placement within NTIA could create "bureaucratic" obstacles or that FirstNet should be more independent from NTIA. However, FirstNet officials told

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upper 700 MHz band and the D Block. Pub. L. No. 112–96, §§ 6101 and 6201, 126 Stat. 156, 205 and 206.

[17] The $7 billion is reduced by the amount needed to establish FirstNet, as well as the amount provided to states to help them prepare for the network and, if they choose to opt out of FirstNet's network, to construct their own RANs. NTIA was allowed to borrow $2 billion from the U.S. Treasury to support FirstNet's work prior to the deposit of auction proceeds into the newly created Public Safety Trust Fund, and must reimburse the Treasury from funds deposited into the Public Safety Trust Fund once the spectrum auctions are complete. Pub. L. No. 112–96, §§ 6207 and 6208, 126 Stat. 156, 215.

[18] *Requests for Waiver of Various Petitioners to Allow the Establishment of 700 MHz Interoperable Public Safety Wireless Broadband Networks,* Order, 25 FCC Rcd 5145, (2010); *Requests for Waiver of Various Petitioners to Allow the Establishment of 700 MHz Interoperable Public Safety Wireless Broadband Networks,* Order, 25 FCC Rcd 6783, (2011).

[19] Seven projects received funding through the Broadband Technology Opportunities Program (BTOP), which is a Federal grant program to promote the expansion of broadband infrastructure. NTIA was authorized to award BTOP grants through the American Recovery and Reinvestment Act of 2009, Pub. L. No. 111–5, 123 Stat. 115 (2009). One project, located in Harris County, TX, obtained a grant for its project from the Federal Emergency Management Agency.

[20] Pub. L. No. 112–96, §§ 6204(b) and 6205(a)(1), 126 Stat. 156, 209 and 211.

[21] FirstNet originally called this position "General Manager" but has since changed the position to "Executive Director." FirstNet's first Executive Director resigned in April 2014. As of February 2015, the position was still vacant and FirstNet's Deputy Executive Director is serving as Acting Executive Director.

us that while FirstNet has leveraged its relationship with NTIA in administrative and legal matters, it exercises strong independence in decisions that are directly program-related. Numerous stakeholders we surveyed and interviewed were also concerned about the pace of FirstNet's hiring, noting that the Federal hiring process is too slow, has not allowed FirstNet to hire staff quickly enough, and has delayed FirstNet's progress. For example, FirstNet hired State and Local, Tribal, and Federal Outreach Leads in June and August 2014, almost 2 years after FirstNet's Board Members were appointed, and is still in the process of hiring staff for key positions. According to FirstNet officials, FirstNet faces challenges hiring as quickly as it would like to due to government hiring procedures, but is seeking direct hire authority from the Office of Personnel Management.

Planning the Public Safety Network

To plan the public safety network and help ensure that its approach is open and transparent and meets the 2012 act's requirements, FirstNet intends to follow the Federal Acquisition Regulation (FAR) process for its comprehensive network services procurement.[22] This process will culminate in one or multiple RFPs for "network solution(s)"—that is, proposals for the building, deployment, operation, and maintenance of the public safety network. To help it draft the RFP(s), FirstNet has sought comments through an October 2012 Notice of Inquiry, 13 RFIs issued between April 2013 and September 2014, and a September 2014 Public Notice.[23] Through these items, FirstNet has sought comment on various technical aspects of the network, devices and applications for public safety, and its interpretations of the 2012 act's requirements. FirstNet received almost 600 comments to these Notices and RFIs. FirstNet confirmed in February 2015 that it expects to issue a draft RFP and a second Public Notice by the end of March 2015. FirstNet has also received technical input from a variety of stakeholders, such as FCC, the PSAC, the National Public Safety Telecommunications Council (NPSTC), and the Public Safety Communications Research (PSCR) program.[24]

While many stakeholders we surveyed and interviewed for our ongoing work noted that FirstNet's progress has been too slow, some also noted that they were satisfied with FirstNet's progress given the complex nature of FirstNet's tasks and that it is a government entity subject to Federal rules and regulations. Some also said that FirstNet's progress has improved recently, especially as FirstNet has hired more staff. However, numerous stakeholders we interviewed cited upcoming difficulties. For example, they noted that deciding the level of network coverage and security, working out agreements for use of existing infrastructure, and navigating state regulations will be difficult issues to address moving forward.

Consulting Stakeholders

FirstNet has initiated a process to consult with the SPOC in each state and FirstNet officials have conducted outreach to other stakeholders. FirstNet began its formal state consultation process in April 2014; as part of this process, FirstNet plans to hold an initial consultation meeting in each state. Initial state consultation meetings began in July 2014—when FirstNet conducted its first consultation with Maryland—and FirstNet expects these initial meetings to continue through 2015, with additional rounds to follow. As of February 25, 2015, FirstNet has conducted initial consultation meetings with 14 states and Puerto Rico. Additionally, from October 2013 to February 2015, FirstNet officials visited 39 states and territories while participating in 187 events, such as public safety, industry, and government (including federal, state, local, and tribal) conferences. FirstNet also launched a public website in March 2014, where it regularly posts updates, presentations, board meeting minutes, a list of upcoming speaking engagements, and other information.

The majority of stakeholders we surveyed for our ongoing work were generally satisfied with the level of FirstNet's consultation and outreach, but others were dissatisfied and said that they would like more new information. Specifically, in response to our survey, 54 percent of SPOCs said they were either "moderately" or "very" satisfied with FirstNet's overall level of consultation, coordination, and communication with their state, including the level of input FirstNet has sought from their state, and 22 percent said they were either "moderately" or "very" dissatis-

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[22] The FAR is a substantial and complex set of rules governing the process by which Executive Branch agencies purchase goods and services. Its purpose is to ensure purchasing procedures are standard and consistent, and conducted in a fair and impartial manner.

[23] 79 Fed. Reg. 57058 (Sept. 24, 2014).

[24] NPSTC is a federation of organizations whose mission is to improve public safety communications and interoperability through collaborative leadership. PSCR is a joint National Institute of Standards and Technology and NTIA effort.

fied.[25] Numerous stakeholders we surveyed and interviewed said that they would like more new and detailed information and that they would like FirstNet to focus more on certain aspects of the public safety network during outreach. However, in response to our survey, many SPOCs also acknowledged that the level of new and detailed information exchanged will likely increase once they hold their initial state consultation meeting with FirstNet.

FirstNet Has Not Assessed Risk or Established a Complete Control Environment

Internal controls are the plans, methods, policies, and procedures that an entity uses to fulfill its mission, strategic plan, goals and objectives. An effective internal control system increases the likelihood that an entity will achieve its objectives. For our ongoing review, we assessed FirstNet's policies and practices against two components of an effective Federal internal control system: Risk Assessment and Control Environment.[26] For those two components, we found that FirstNet lacks certain elements that contribute to the proper implementation of effective internal control systems. While FirstNet has stated that it is relying on the Department of Commerce and NTIA's internal controls where it has not developed its own, it is important for FirstNet to implement its own controls, as the Commerce Office of Inspector General (OIG) noted as early as February 2014 in a memo on the management challenges facing FirstNet.

Risk Assessment

According to Federal internal control standards, management should assess risks facing the entity as it seeks to achieve its objectives. Specifically, entities should first clearly define their objectives then identify and analyze risks from both internal and external sources. Analyzing risks generally includes estimating the risk's significance, assessing the likelihood of its occurrence, and deciding how to respond to it. Risk assessments inform an entity's policies, planning, and priorities, and help entities develop responses to the risks they face, so that they can achieve their objectives.

Our preliminary results indicate that, although FirstNet has set objectives and taken some steps to assess risks it has not yet fully assessed risks it may face in accomplishing its objectives. Specifically, FirstNet has set three key objectives and has further delineated how it will accomplish these objectives in a "roadmap" that identifies additional long-term and short-term objectives and milestones.[27] To support its development of this roadmap, FirstNet created a "risk register" that identifies some risks related to its financial sustainability as well as possible countermeasures.[28] However, FirstNet officials told us in November 2014 that they had not yet fully assessed risks because they were in the process of defining risk factors and, again in December 2014, because they were in the process of conducting a legal compliance risk assessment of certain key risk areas. In December 2014, FirstNet officials also said that they intend to perform periodic risk assessments in various areas to manage risks on an iterative basis. However, as of February 2015, FirstNet has not yet completed these risk assessment activities; therefore, we were unable to evaluate them and it remains unclear how effective FirstNet's efforts will be in helping it to identify and respond to obstacles to fulfilling its responsibilities.

As FirstNet performs these assessments, we believe that it will be important for FirstNet to incorporate all of the elements of risk assessment detailed in the Federal internal control standards. An internal control system that is not based on complete risk assessments (that is, assessments that incorporate these elements) could lead to FirstNet responding to risks in a reactive manner and could hinder FirstNet's ability to achieve its objectives while maximizing use of its available resources. We are concerned that the complexity of FirstNet's objectives, makeup of its board, and challenges it will face becoming self-funding illustrate the multitude of potential risks FirstNet faces. For example, as we point out later in this statement, various factors could hinder whether public safety entities adopt the public safety network—and thus how much user fee revenue FirstNet can collect—which could pose risks to FirstNet's ability to become self-funding.

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[25] Twenty-two percent were "neither satisfied nor dissatisfied." These percentages do not equal 100 due to rounding and because one SPOC responded "do not know."

[26] We chose these two components because risk assessment provides the basis for developing appropriate risk responses and control activities, and the control environment is the foundation for an internal control system.

[27] Due to the sensitive information about FirstNet's procurement activities contained in this roadmap, FirstNet has not publicly released the full version. The executive summary is available on FirstNet's website at *http://www.firstnet.gov/content/march-board-directors-meeting.*

[28] Due to the sensitive information about FirstNet's procurement and cost estimating activities contained in this risk register, FirstNet has not publicly released it.

Control Environment

The control environment is the foundation for an internal control system and provides the basic structure that helps an entity achieve its objectives. To help set this environment, according to Federal internal control standards, an entity should, among other things, demonstrate a commitment to integrity and ethical values, such as by setting a positive "tone at the top," providing and evaluating adherence to ethical and behavioral guidance, and removing temptations for unethical behavior.

Our preliminary results indicate that, although FirstNet has taken a number of steps to establish an effective control environment, it has not yet finished doing so. FirstNet has held ethics briefings, counseling, and training; distributed ethics documents; and instituted a Board Member Vendor Interaction Policy to establish processes for interacting with vendors with a potential interest in FirstNet's procurement. However, as of February 2015, FirstNet had not yet developed Standards of Conduct, which is an important form of ethical and behavioral guidance. According to FirstNet officials, FirstNet intends to develop Standards of Conduct but has not yet done so because, as a "startup" entity, building up the organization while making progress meeting statutory responsibilities is a balancing act affected by FirstNet's priorities and resources.

Nonetheless, absent Standards of Conduct, we are concerned that FirstNet may not be able to address deviations in conduct and performance and take corrective actions in a timely manner. Indeed, FirstNet itself established a special committee in May 2013 to review ethical concerns raised by one of its Board Members. Similarly, in a December 2014 report, the Department of Commerce OIG identified concerns with FirstNet's financial disclosure reporting and contracting practices, among other things.[29] The report highlighted that the FirstNet Board, out of necessity, includes members with significant ties to the telecommunications industry that make strategic decisions regarding FirstNet's operations and, thus, are at increased risk of encountering conflicts of interests. We believe that establishing and evaluating adherence to Standards of Conduct may help FirstNet ensure that all its personnel are held accountable for their actions and that stakeholders maintain trust in its ability to be a good steward of public funds.

FirstNet Faces Difficult Decisions in Determining How to Pay for a Nationwide Public Safety Network Estimated to Cost Billions

Cost of a Public Safety Network Estimated to Be at Least $12 Billion over the First 10 Years

Various entities have estimated the cost to construct and operate a nationwide network for public safety from a low of $12 billion to a high of between $34 and $47 billion, over the first 10 years. As shown in table 1, a variety of entities have developed cost estimates for a public-safety broadband network, although they have used different assumptions about the network's scope. Key assumptions influencing these estimates include whether the network is constructed, operated, or financed in partnership with commercial entities, and the number of sites needed to provide the network's coverage. Our ongoing work has found that differences among these estimates are difficult to identify since some of the estimates do not explicitly state all of their assumptions.

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[29] Commerce OIG, *First Responder Network Authority: FirstNet Must Strengthen Management of Financial Disclosures and Monitoring of Contracts,* Final Report No. OIG–15–013–A (Washington, D.C.: Dec. 5, 2014).

| | | | Coverage | | | Up-Front Deployment | Total Costs, |
Source	Year of Estimate[a]	Commercial Partnership	(Percent of Population)	Sites	Cost per Site (thousands)	Costs (Billions)[b]	First 10 Years (Billions)[c]
Cyren Call Communications Corporation	2007	Yes	99	37,000	No estimate	$18[d]	*No estimate*
Eisenach	2007	Yes	99	33,700	$600,000	No estimate	*$20*
Federal Communications	2010	Yes	99	44,800	$140,625[e]	$7	*$12–16*
Commission		No	99	44,800	$350,446[e]	$16	*$34–47*
Hallahan and Peh[a]	2010	Yes	99	19,400	$500,000	$10	*$18*
		No	99	22,200	$500,000	$11	*$20*
Congressional Budget Office	2011	Yes	95	45,000	No estimate	No estimate	*$12*

Table 1.—Selected Cost Estimates for Constructing a Public-Safety Broadband Network

Sources: Sachs, Elizabeth, on behalf of Cyren Call Communications Corporation, *In the Matter of Public Safety Network in the 700 MHz Broadband,* Ex Parte Presentation to Federal Communications Commission, June 3, 2007; Eisenach, Jeffrey, *Due Diligence: Risk Factors in the Frontline Proposal,* June 28, 2007; Federal Communications Commission, *A Broadband Network Cost Model: A Basis for Public Funding Essential to Bringing Nationwide Interoperable Communications to America's First Responders,* OBI Technical Working Paper No.2, May 2010; Hallahan, Ryan, and John M. Peha, *Quantifying the Costs of a Nationwide Public Safety Wireless Network,* Telecommunications Policy, 34 (2010); and Congressional Budget Office, *Cost Estimate: S. 911 Public Safety Spectrum and Wireless Innovation Act,* July 2011.

[a] The figures are presented here as they were reported at the time of publication; that is, we did not adjust these figures for inflation.
[b] Estimates vary in scope, with some estimating the total cost and some only considering costs associated with the installation and operation of cell sites and not the costs of the backbone network components, or the costs of network planning and administration.
[c] The total costs include both the up-front deployment costs plus ongoing costs, such as maintenance and operations, over the first 10 years.
[d] This estimate is described as including "cumulative capital expenditures." It is not clear whether this only includes up-front deployments costs or also some (or all) maintenance and operations over the first 10 years.
[e] This is an average cost across all proposed sites. The Federal Communications Commission estimated different costs for sites in urban, suburban, and rural areas.

Various Factors Will Influence Cost of FirstNet's Public Safety Network

Our preliminary analysis indicates that cost estimates notwithstanding, various factors will influence the cost of constructing and operating FirstNet's public safety network, including (1) the business model used, especially the extent of commercial partnerships; (2) use of existing infrastructure; (3) efforts to ensure network reliability; and (4) network coverage.

Extent of Commercial Partnerships

FirstNet's business model, especially the extent to which it partners with commercial carriers or other private enterprises, will influence the cost to construct and operate the public safety network. The 2012 act gives FirstNet the authority to engage in a variety of commercial partnerships.[30] In a partnership, public safety and commercial users could share the network's infrastructure and spectrum, with public safety given priority to all network capacity during emergencies.[31] Some public safety stakeholders we spoke with maintained the need for FirstNet to work with commercial partners in building and operating the network for it to be financially sustainable. One study also calculated that the value of serving both commercial and public safety users is greater than the additional costs to serve commercial users.[32]

Use of Existing Infrastructure

The use of existing infrastructure will influence the cost to construct and operate FirstNet's public safety network. Under agreements to share existing wireless-network infrastructure, FirstNet may be able to make use of, for example, cell towers, antennae, cabling, radio-processing equipment, backup power facilities, and the links between towers and the nearest communications hub, to the extent economically desirable to do so. According to FCC estimates, capital costs would be 2.5 times greater without this form of sharing. However, the use of existing infrastructure can have limitations. For instance, negotiating access to existing infrastructure can be a time-consuming process—especially with government-owned or controlled facilities and where multiple owners must be contracted with—ultimately slowing down net-

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[30] Pub. L. No. 112–96, § 6206(c)(3), 126 Stat. 156, 214.
[31] "Priority" transmission of calls and data is provided through special enhancements embedded in telecommunications networks to identify transmissions made by authorized users as higher priority than those made by other users. These enhancements automatically place the transmission higher in the queue over those made by other users.
[32] Hallahan, Ryan and John M. Peha, *The Business Case of a Network that Serves both Public Safety and Commercial Subscribers,* Telecommunications Policy, 35 (2011).

work deployment. For our ongoing work, we spoke with Swedish officials about the public-safety communications network in their country, and they told us that they sought to use existing infrastructure to save costs when constructing their network, but faced problems in their largest cities convincing tower owners to allow the government to rent the towers.[33] Furthermore, there may be a risk when public safety relies on infrastructure owned by commercial operators, particularly if it has to rely on a single provider in any given location that can then charge high fees.

Efforts to Ensure Network Reliability

FirstNet's approach to ensure the public safety network is safe, secure, and resilient (that is, the overall reliability of the network) will also influence the cost to construct the network. FirstNet is required by the 2012 act to "ensure the safety, security, and resiliency of the network,"[34] and NPSTC has provided guidance to FirstNet as it constructs and implements the network.[35] If FirstNet implements all of NPSTC's best practices, it will significantly add to the cost of building the network. For example, transmission sites, such as cell towers, should have back-up power sources when used for public safety communications, according to NPSTC. Existing commercial sites, however, generally do not have such backup, primarily to reduce costs in extremely competitive markets.

Network Coverage

The public safety network's coverage will also influence the cost to construct and operate it. The 2012 act requires FirstNet to establish a "nationwide" network, but does not define the level of coverage that constitutes "nationwide."[36] Generally speaking, increasing the area covered by the network, as well as the extent to which coverage penetrates buildings, increases the amount of infrastructure needed, and thus the cost of the network. It may be relatively affordable, for example, to cover large segments of the population concentrated in relatively small areas. Providing coverage outside dense metropolitan areas can be particularly expensive. One study has shown that a nationwide public-safety broadband network could generate much more revenue than the network costs in urban areas, but less revenue than costs in rural areas.[37]

FirstNet Faces Difficult Decisions about User Fees and Commercial Partnerships in Determining How to Become Self-Funding

Our preliminary analysis suggests that, although FirstNet has various revenue options that it is authorized to use to become self-funding, it is unclear how FirstNet will use those authorities. As the cost estimates above illustrate, FirstNet's network will likely cost tens of billions of dollars to construct and initially operate. To meet the costs of building and maintaining the network, the 2012 act authorizes FirstNet to generate revenue through user fees and commercial partnerships, the latter of which can involve secondary use of the network for non-public safety services.

User Fees

FirstNet can generate revenue by charging public safety entities a user fee to gain access to the network. According to stakeholders we spoke with and surveyed for our ongoing work, demand for FirstNet's public safety network is significant,[38] but the following factors could hinder adoption of the network and thus FirstNet's ability to collect user fee revenue:

- *Fee size.* If FirstNet's user fee is too high, it could hinder public safety adoption, and if it is too low, it could bring in too little revenue. Numerous stakeholders we spoke with noted that FirstNet's cost would play a role in whether they adopt the public safety network and that user fees must be competitive with existing commercial services. While low user fees would be attractive to public safety entities and therefore may increase adoption, they would also bring in a relatively smaller amount of revenue per user. As a FirstNet Senior Program Manager reported in December 2014, there is a trade-off with low user fees between adoption and the network's financial sustainability. Some stakeholders

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[33] This interoperable network in Sweden is called the "Rakel" network and is primarily used for voice communications.

[34] Pub. L. No. 112–96, § 6206(b)(2)(A), 126 Stat. 156, 212.

[35] NPSTC, *Defining Public Safety Grade Systems and Facilities* (Littleton, CO: May 22, 2014).

[36] FirstNet sought input into this matter in its September 2014 RFI.

[37] Hallahan and Peha, 2011.

[38] More than 75 percent of survey respondents noted that the network would be "very useful" to emergency management, emergency medical services, fire services, and law enforcement public safety entities in their state.

also noted that the cost of equipment and devices needed to access the network could limit adoption, especially since public safety entities are continuing to invest in their LMR networks.

- *User base.* While a large user base can potentially bring in significant user fee revenue, it could be challenging to manage. The 2012 act established that FirstNet's primary customers will be entities that provide "public safety services."[39] How FirstNet interprets "public safety services," as established in the 2012 act, will expand or contract the potential sources of revenue.[40] As one public safety official we spoke with noted, the network has more value to public safety entities when there are more users on it, because entities will all be able to communicate with each other. A large user base, however, can require priority and preemption rules, if certain users are to have privileged access to the network. According to some public safety officials we spoke with, such rules can be difficult to establish among public safety entities.
- *Coverage.* Widespread network coverage can attract more users, and thus user fee revenue, but is expensive to construct and maintain. Some of the public safety entities we spoke with said that the network's coverage would play a role in whether they adopt the public safety network, noting in particular that the coverage should be at least as good as existing commercial services. One public safety entity we spoke with said that existing commercial coverage is inadequate, while two other entities said that commercial service can become unusable during large events because of the number of users on the network. However, as noted above, providing extensive coverage can be very costly. Indeed, a few SPOCs noted in survey responses that providing rural coverage in their states will be challenging, with one commenting that "it is inconceivable that FirstNet will be able to deploy a terrestrial network in the vast areas that are unpopulated or sparsely populated."
- *Reliability.* Although FirstNet is required to construct a resilient network, practices to ensure this can be costly. Some public safety officials we spoke with said that the network's reliability would play a role in whether they adopt the public safety network. A few officials specifically said that if the network did not reliably work when first utilized by public safety, adoption would suffer, since public safety has a low tolerance for unreliable technology. However, as noted above, ensuring reliability requires significant capital expenses.

Commercial Partnerships

Our ongoing work also found that FirstNet can generate revenue through commercial partnerships, but the extent of commercial interest in these partnerships, and thus the value of this authority for FirstNet, is unknown.[41] Under the 2012 act, FirstNet can receive payment for the use of the public safety network's capacity by non-public safety users as well as use of the network's infrastructure.[42] The value of secondary access to the network's capacity depends in part on the availability of the spectrum, which itself will be determined by the capacity available given the network's design. According to one major carrier we spoke with, no business is likely to enter into a partnership with FirstNet because its public-safety user base has not been defined, and thus the network capacity available to secondary (commercial) users is unknown. According to this carrier, the risk would be too high for a commercial entity to enter into an agreement without knowing exactly how the entity will be able to use FirstNet's network. If public safety preempts all commercial traffic, then the commercial entity will struggle to generate income from this venture and may lose favor with its customers. However, another major carrier we spoke with maintained that FirstNet will have to partner with at least one commercial carrier to be financially sustainable and that given the significant investments in Long Term Evolution (LTE) infrastructure made by commercial carriers, FirstNet would do well to utilize some of this infrastructure through commercial partnerships. Although the historic Advanced Wireless Services spectrum auction FCC concluded in late January 2015 could indicate significant demand for spectrum capacity among commercial carriers, the extent of carriers' interest in partnering with

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[39] Pub. L. No. 112–96, § 6001(26),126 Stat. 156, 204.

[40] FirstNet proposed some interpretations of these definitions in its September 2014 Public Notice.

[41] One study showed that, theoretically, the revenue to be derived from secondary use of the spectrum is much greater than fees from users of a public safety network. See Hallahan and Peha, 2011.

[42] Pub. L. No. 112–96, § 6208(a)(1), 126 Stat. 156, 215. FirstNet tentatively concluded in its September 2014 Public Notice that multiple commercial partners could coexist and utilize FirstNet spectrum in a given area.

FirstNet is not fully known. While there may be some benefits in partnering with FirstNet, companies may also prefer to compete directly with FirstNet with their own public safety products.

Although Early Builder Projects Are Providing Lessons, FirstNet Has Not Developed a Plan to Evaluate Them

Early Builder Projects Have Learned Lessons As They Develop Public Safety Networks

As part of our ongoing work, we spoke with officials from the five early builder projects and the three canceled projects to determine what lessons they have learned that may be useful to FirstNet as it develops the nationwide public safety network. Specifically, the officials identified lessons about (1) governance, (2) financing the network, (3) conducting outreach, and (4) planning for network deployment:

Governance

Early builder project officials described governance challenges that FirstNet may face as the governing entity for the nationwide network. For example, officials from one project told us some public safety entities may not have a clear understanding of FirstNet's goals and plans. The officials told us localities are willing to participate in the public safety network, but FirstNet will face difficulty in establishing timely technical decisions and effective policies that keep pace with local enthusiasm to participate. The officials said FirstNet can address this challenge by setting expectations about what the network will provide, including the specific intent, purpose, and planned capabilities.

Financing the Network

Officials from the early builder projects also learned lessons related to financing a new public safety network that could be applicable to FirstNet. For example, officials from one project told us they will face sustainability challenges due to the limited number of users that will be able to utilize their network. According to the officials, their project will not be able to charge their users enough to make the operations sustainable without pricing the users out of the services. The officials told us a possible way to address this challenge would be to expand the service to public safety entities in neighboring metropolitan areas and airport service areas that have established broadband infrastructure.

Conducting Outreach

Early builder project officials cited lessons they learned for conducting outreach while developing their public safety networks. According to officials working with one of the projects, network coverage will be a challenging outreach topic and FirstNet must be prepared to explain the coverage strategy for each state. The officials said most public safety officials in their state are aware that network coverage is typically provided through a myriad of approaches such as permanent infrastructure, mobile "deployables," and satellites.[43] However, the officials noted, until FirstNet sets clear expectations on those approaches, state stakeholders for the public safety network may face difficulties holding constructive conversations about which coverage solutions are the most feasible.

Planning for Network Deployment

Officials from the early builder projects as well as the canceled public safety projects also described lessons they learned about planning their network's deployment that could benefit FirstNet. An official from one of the canceled projects said his team faced several challenges including local zoning conditions that impacted project schedule and cost, a newly-passed city code that required towers to withstand higher wind loads which increased costs, and commercial competitors lowering their subscription rates to compete with the planned public safety network. Officials from an ongoing project told us their project initially identified network build-out sites but learned that environmental assessments would need to be completed for each site, which would threaten the project's planned schedule. To address the challenge, the project narrowed its build-out site pool to exclude marsh lands and other areas with obstructive tree lines and include publicly-owned sites such as police and fire stations. With the publicly-owned sites identified, project officials worked with their state's legislature to pass an exemption to state environmental reviews. The

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[43] Mobile deployables can also be referred to as "deployable networks." A deployable network typically includes "deployable assets" such as "Cells on Wheels" that provide localized wireless network service to areas where coverage is minimal or compromised. These assets typically provide fully functional service via vehicles such as trailers, vans, and trucks.

official from the project told us that an important lesson learned is to thoroughly understand all of the process steps and risks prior to plan execution.

FirstNet Has Processes in Place to Identify Early Builder Project Lessons but Has Not Developed a Written Evaluation Plan

Our preliminary results indicate that FirstNet has taken steps to collect and evaluate information and lessons learned from the early builder projects, but could do more to ensure that the information and lessons are properly evaluated. Specifically, FirstNet has taken steps to identify the data and information it will collect from the early builder projects. As noted above, FirstNet entered into agreements with the projects that permit their use of FirstNet's spectrum. Under these agreements, in exchange for spectrum use, the early builders agree to conduct specific activities on their networks, also known as key learning conditions; develop a Key Learning Conditions Plan with FirstNet;[44] and provide FirstNet with quarterly reporting on their project's use of FirstNet's spectrum, progress achieving project milestones, and in some cases, the experiences of their network users. In October 2014, FirstNet provided the projects with quarterly report templates, instructions, and timing for completing the reports. Additionally, FirstNet intends to gain knowledge from the projects through contractors who have been assigned to each project to collect and log formal and informal lessons, and through weekly meetings FirstNet officials told us they hold. Finally, in April 2014 FirstNet authorized the PSAC to establish an Early Builder Working Group.

Although FirstNet has taken these steps, we are concerned that it lacks a detailed data-analysis plan to track the performance and results of the early builder projects. For the early builder projects, their performance and results are captured in the observations and lessons learned reported to FirstNet and identified by consultants. We have previously found that a well-developed evaluation plan for projects like the early builder projects can help ensure that agencies obtain the information necessary to make effective program and policy decisions.[45] Such a plan should include, among other things, a detailed data-analysis plan to track performance and evaluate the project's final results. Even though FirstNet staff and contractors remain in close contact with the projects, without a plan to track those projects, it is unclear how FirstNet intends to evaluate the projects' observations and lessons and determine whether or how the lessons are addressed. As a result, we believe that FirstNet could miss opportunities to leverage key lessons related to governance, finance, outreach, and network deployment. Given that the early builder projects are doing on a regional and local level what FirstNet must eventually do on a national level, a complete evaluation plan that includes a detailed data-analysis plan could play a key role in FirstNet's strategic planning and program management, providing feedback on both program design and execution. Furthermore, such a plan could provide FirstNet officials the opportunity to make informed midcourse changes as it plans for the public safety network, and facilitate transparency and accountability for FirstNet's decision-making.

Chairman Thune, Ranking Member Nelson, and Members of the Committee, this concludes my prepared remarks. I am happy to respond to any questions that you or other Members may have at this time.

The CHAIRMAN. Thank you, Mr. Goldstein.
Ms. Swenson.

STATEMENT OF SUSAN SWENSON, CHAIRWOMAN, FIRST RESPONDER NETWORK AUTHORITY (FIRSTNET)

Ms. SWENSON. Chairman Thune, Ranking Member Nelson and members of the Committee, thank you for inviting me here to testify on behalf of the First Responder Network Authority. I really welcome the opportunity to brief you on the progress in the development of the interoperable broadband, safety broadband network. It is also a pleasure to appear today with my fellow panel members. And I'd also like to welcome several members of the public

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[44] FirstNet told us the plans identify the key learning condition activities, including roles and responsibilities and the information, lessons, reports, and other deliverables expected under the agreements. Plans have been drafted for the five early builder projects. The plan for the project in Adams County, Colorado is pending completion.

[45] GAO–09–45.

safety community who are with us here today to hear about their network. So I appreciate everybody coming with us today.

As you know, we experienced growing pains in the early days of our existence. With only board members in the FirstNet organization until mid-2013 and an executive team not in place until the latter part of that same calendar year, we were dependent on the support from other agencies, in particular NTIA. We worked very hard to complete shore up the areas of weakness and to take on as much responsibility as we can and I am very confident that today you would find that our processes and procedures in line with expectations.

With an executive team in place toward the end of 2013, we developed and publicly communicated our strategic roadmap in March 2014 and have been on-pace without major milestones ever since. Specifically, we've initiated the formal consultation meetings. We've issued an RFI and the first public notice and comment in September of 2014. On Monday of this week, we released our second public notice and comment. And finally, the Board is on track to address the draft RFP later this month.

From a consultation and stakeholder perspective, we've held outreach meetings and presentations in over 275 engagements since the beginning of Fiscal Year 2014, connecting FirstNet with nearly 45,000 stakeholders. We've held or scheduled 43 initial consultation meetings, we've conducted 15 state consultations, and we've scheduled meetings with an additional 28 states. We've also held a variety of forums beyond the state consultation meetings with single points-of-contacts in you states including weekly e-mails, monthly phone calls, quarterly webinars, and upcoming, on April 14 and 15, we will host an in-person meeting in where we're going to have all 56 state and single point-of-contacts attending if they can make it.

I am, frankly, very proud of the organization and what it has accomplished and, also, where they are in terms of their readiness for what lies ahead. It is an extremely committed and dedicated team working on a project that is unprecedented, complicated, and one that faces headwinds each and every day. What no one really sees is the toll that this takes on the organization and the people in it who are working so hard, and I have to tell you I worry about that a lot.

At FirstNet, we're taking on this historic and monumental task to deploy nationwide network. Nothing of this size and scope has been attempted before and we are constrained by a number of factors that are, frankly, out of our control. Coming from the private sector, I have found the Federal rules and processes extremely challenging at times, this undoubtedly slows our ability to move as expeditiously as we and others would like. I know there are some in the stakeholder community who would have liked to see more progress at this point, I would too, but the fact remains we are a Federal entity subject to Federal rules and regulations. To be sure, we are making great strides towards our mission.

Still, I hope you understand why we may not be moving as quickly as everyone expects. We have discussed with Secretary Pritzker areas where processes and cycle times need to be improved and she has committed the necessary resources within the Department of Commerce to make those improvements. We are very appreciative

of her support as it could make a very big difference to our effectiveness.

The first two areas we are exploring are the hiring process and procurement. To the degree that FirstNet can assume responsibility for functions like hiring and procurement, much like we have for finance, I believe that having people dedicated to these functions whose first priority is FirstNet would enable us to move things along quickly and efficiently while still adhering to the Federal rules and regulations under which we operate.

I also want to mention that we are working hard to build a culture at FirstNet that is appropriate to serve our public safety community. Our first responders are on-duty 24 by seven. So we need to be there to support them. This means working with a laser focus commitment to serve and to have a sense of urgency doing whatever is required to support our public safety community.

In summary, we have accomplished a tremendous amount and are building a reputation of doing what we say we are going to do. We have much more to complete but I believe that we are on the right path with a dedicated team working hard on the mission.

Thank you for allowing me to be here today to talk about FirstNet. I welcome your questions.

[The prepared statement of Ms. Swenson follows:]

PREPARED STATEMENT OF SUSAN SWENSON, CHAIRWOMAN, FIRST RESPONDER NETWORK AUTHORITY (FIRSTNET)

Introduction

Chairman Thune, Ranking Member Nelson and all Members of the Senate Commerce Committee, I would like to thank you for the opportunity to appear before the Committee to discuss FirstNet and the progress we are making toward the deployment of an interoperable nationwide public safety broadband network (network). I also want to thank all of the Members of this Committee who were pivotal in creating FirstNet. We look forward to your continued support and to working with the Committee as FirstNet continues to carry out our vital mission to bring the power of broadband wireless communications to public safety personnel across the country.

Background

The Middle Class Tax Relief and Job Creation Act of 2012 (P.L. 112–96) (Act) established FirstNet as an independent authority within the Department of Commerce's National Telecommunications and Information Administration (NTIA). Under the Act, FirstNet is tasked with ensuring the deployment and operation of a sustainable, interoperable broadband network for public safety entities across the country and within U.S. territories. FirstNet intends to provide cutting-edge prioritized and preemptive wireless broadband communications to millions of first responders at the local, state, tribal, and Federal levels. Using a dedicated nationwide wireless broadband network, FirstNet will provide a ubiquitous solution to decades-long interoperability and communications challenges and help keep our communities and first responders safer with advanced communications services, devices, and applications.

FirstNet's goal of deploying the network to meet the needs of first responders is a matter of critical importance for public safety. While the task ahead will not be easy, FirstNet is developing the necessary leadership, staff, and support from states, tribes, public safety, and other key stakeholders to make this network a reality for first responders and the public who calls on them in its time of need.

Overarching Strategic Goals

To guide us, we are pursuing the following four strategic goals:

- Explore and build strong partnerships with local, state, tribal, and Federal jurisdictions;
- Establish a high-performing organization and a culture of excellence;

- Ensure all resources are used efficiently to accomplish FirstNet's mission and demonstrate leadership towards self-sustainability to all external stakeholders; and

- Ensure the deployment and operation of a reliable, interoperable, and survivable nationwide Long Term Evolution (LTE) broadband network for public safety.

FirstNet is taking on an important and difficult task, but with the support of this Committee, Congress as a whole, the public safety community, the private sector, and local, state, tribal, and Federal leaders, we will succeed in accomplishing our mission. I would like to briefly discuss our recent accomplishments and describe where we are heading in an effort to support our Nation's public safety personnel.

Strategic Roadmap and Foundational Network Planning

FirstNet is focused on what it will take from outreach, technical, and financial perspectives to build and maintain the network long-term. Much of our planning is embodied in FirstNet's Strategic Program Roadmap Executive Summary approved by the FirstNet Board in March 2014[1]. In that document, we outlined the milestones we planned to accomplish over the next year, which included:

- beginning formal in-person state consultations;
- releasing a draft request for comprehensive network proposals (RFP) for comment;
- releasing draft requests for certain network and equipment services proposals for comment; and
- initiating a public notice and comment process on certain program procedures, policies, and statutory interpretations.

FirstNet has made significant progress on these milestones. We:

- Distributed 56 state consultation packages on April 30, 2014. As of February 25, 2015, we have received 47 completed state checklists;
- Launched formal state consultations in July 2014 and have met with 15 states thus far, with an additional 24 scheduled through the summer;
- Published a Request for Information (RFI) with a draft Statement of Objectives for our comprehensive Request for Proposals (RFP) and received 122 comments; and
- Released a public notice seeking comment on several key program policies and statutory interpretations in the fall of 2014 and received 63 responses.

The progress we made in recent months is a tremendous start, but much work remains to be done. We will continue to work directly with the states and territories throughout our formal consultation process. Also, we will work to generate additional feedback from, local, state, and tribal public safety agencies, Federal stakeholders, the Public Safety Advisory Committee (PSAC), and the vendor community to ensure openness and transparency throughout our process.

Consultation and Outreach

Our efforts to interact with the local, state, tribal, and Federal stakeholders are a centerpiece of the FirstNet mission and are an essential requirement of the Act. Our local, state, and tribal planning consultation process, coordinated through the governor-designated state single points of contact (SPOCs), ensures that FirstNet obtains key information from the public safety community and leadership of all 56 states and territories. The objective of this process is to develop detailed state plans that address the unique communications needs of each state's public safety entities. These individual plans will inform and empower each state to choose to either have FirstNet deploy the radio access network (RAN) within its borders or to assume responsibility to build, operate and maintain its own state RAN and integrate it into the remainder of the nationwide network, as prescribed in the Act.

In order to execute on this statutory requirement, FirstNet has built a consultation strategy that focuses on several key objectives, ensuring that the consultation process is:

- iterative, giving states and other stakeholders opportunities to provide feedback and input in multiple ways and on an ongoing basis throughout;

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[1] The FirstNet Strategic Program Roadmap Executive Summary can be accessed at: *http:// firstnet.gov/content/march-board-directors-meeting.*

- collaborative, so that we are working together with the localities, states, tribes, territories, and other stakeholders to collect information and data that will be useful for the deployment of the network;
- focused on critical elements, ensuring that we maximize the states' and taxpayers' investments in FirstNet; and
- informative to the development of FirstNet RFPs, the delivery of the state plans, and the design, construction, and operation of the network.

FirstNet anticipates holding in-person meetings with the 56 states and territories over the remainder of 2015 and beyond, and will continue to work closely with them as FirstNet moves into the phase of delivering wireless broadband service to their public safety personnel.

FirstNet held the first formal consultation meeting in July 2014 with leaders from the state of Maryland, including members from the Governor's office and executive agencies, the Maryland State Police, staff from the Maryland legislature, and other public safety leaders throughout the state. We learned valuable lessons about the state's emergency broadband communications needs, the state's perspective on the planning and deployment of the FirstNet network, and how we can build a strong partnership going forward.

Additionally, over the past year, FirstNet has conducted focused outreach with individual tribes, tribal associations, and Federal tribal government liaisons and worked with the PSAC to establish a Tribal Working Group. These discussions have resulted in positive dialogue and a better understanding of tribal needs. FirstNet hired a tribal outreach lead to assist with focused tribal outreach efforts, as well as a Federal Preservation Officer to address compliance with the National Historic Preservation Act.

While we are pleased with this progress in forging key partnerships through consultation, much more needs to be done. To that end, FirstNet is seeking to hire 10 regional teams to ensure sufficient resources in support of our outreach and state consultation efforts. These FirstNet regions cover the same state, territory, and tribal jurisdictions as the 10 Federal Emergency Management Agency (FEMA) regions. Our teams will span the Nation to participate in state consultation meetings, join various regional and state governing body meetings and association conferences, and meet one-on-one with the SPOCs and public safety agencies representing potential FirstNet network users. FirstNet expects to hire these 10 regional leads in 2015.

Complementing this effort is FirstNet's robust outreach and education strategy, committed to reaching public safety personnel across all levels of government and through national and state associations. In the past year, we have addressed over 20,000 stakeholders at various conferences, meetings, and speaking events.

We are also working closely with Federal agencies to drive collaboration and potential use of the network. In 2014, FirstNet formalized a relationship with the Emergency Communications Preparedness Center (ECPC) to increase outreach with Federal stakeholders. The ECPC is the Federal interagency group focused on emergency communications, and is administered by the U.S. Department of Homeland Security's Office of Emergency Communications. FirstNet participated in many ECPC meetings over the past year to keep members informed of FirstNet activities and to discuss how best to collaborate to ensure Federal input is incorporated into the state plans and overall network deployment. Additionally, FirstNet's Federal outreach team held an initial formal consultation meeting with Federal agencies on January 21, 2015, where FirstNet staff engaged Federal stakeholders in discussions about outreach efforts, Federal coverage needs and objectives, and security requirements for the network. Finally, FirstNet has leveraged its Federal partners' expertise in the area of cybersecurity by utilizing recommendations and resources from the U.S. Department of Homeland Security's Office of Cybersecurity and Communications in our planning efforts.

Additionally, FirstNet's PSAC, chaired by Chief Harlin McEwen, and composed of key public safety stakeholders, will continue to be an important resource as we pursue our mission. Public safety's input via the PSAC is vital at all stages of the network development so that it will be tailored to the needs of the end users—America's first responders and other public safety entities.

The PSAC has to date collaboratively developed and delivered the following documents to FirstNet:

- Human Factors Report (November 2013): Analyzes the long-range impacts of the network on the way law enforcement, fire, and EMS operate and considers the impact the network will have on their duties once it is built and operating.[2]
- Potential Users—National Public Safety Broadband Network (NPSBN) (July 2014): Identifies and categorizes lists of potential network users.
- Use Cases for Interfaces, Applications, and Capabilities for the NPSBN (July 2014): Documents envisioned use cases for interfaces, applications, and capabilities for the network.

Issues that the PSAC is currently working on at FirstNet's request include the development of a proposed priority and preemption framework for the FirstNet network, and an analysis of the technical requirements of a broadband network dedicated to public safety entities.

We plan to continue to leverage the PSAC's experience to help inform key capabilities and functions of the network.

Organization and Leadership

In August 2012, the Secretary of Commerce fulfilled the statutory requirement of appointing the FirstNet Board. As required by law, the members have specialized knowledge, experience, and expertise from a variety of public safety, telecommunications, and financial backgrounds needed to develop the network. I was appointed as a Member of the Board at its inception, and I took over as Chairwoman in May 2014.

In September 2014, five new Board members joined the organization and we formally welcomed them during our September 2014 Board meeting. Those individuals are:

- Chris Burbank, Chief of Police, Salt Lake City Police Department;
- James H. Douglas, former Governor of Vermont;
- Annise Parker, Mayor, City of Houston, Texas;
- Frank Plastina, technology executive, North Carolina; and
- Richard Stanek, Sheriff, Hennepin County, Minnesota.

Along with the Board, FirstNet has hired key executives to guide the organization. TJ Kennedy has been serving as acting Executive Director and is responsible for day-to-day operations of the FirstNet organization. We have also built out our Chief Technology, Chief Financial, Chief Administrative, outreach, and legal teams during the past year, leveraging experience from both the private and public sectors.

Deployment and Operation of the Network

FirstNet also is actively conducting extensive market research to gain insight into the capabilities, opportunities, risks, and innovative business partnerships in the market today to support the construction of the network.

A. Requests for Information (RFI) and Draft Statement of Objectives (SOO)

From April 2013 through April 2014, FirstNet released 12 RFIs that focused on individual components of the network, including network partnering and RAN provisioning, antenna systems, microwave backhaul equipment, deployables, satellite service, enhanced packet core, transmission/transport, data centers, network management centers, network service platforms, devices, and applications. The results of these 12 RFIs, and the findings from numerous market research vendor meetings conducted by FirstNet, were compiled into an initial market research report that ultimately led to the development and release of the 13th RFI in September 2014. This RFI focused on soliciting feedback for a comprehensive network solution as opposed to individual network components and included a full draft SOO.

On September 17, 2014, the FirstNet Board authorized its release. The RFI sought input from industry on some of the key approaches FirstNet is considering before finalizing a draft comprehensive network RFP. The RFI included questions on network build out, deployment, operations, and maintenance; cost considerations and financial sustainability; speed to market; system hardening and resiliency; user priority and preemption; customer care and marketing; and general compliance with the Act.

The draft SOO has helped industry better understand FirstNet's key program objectives to deploy, operate, and maintain the network. FirstNet is taking an objectives-based approach to the procurement, rather than a requirements-driven ap-

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[2] The FirstNet PSAC Human Factors Report, available at: *http://www.firstnet.gov/sites/default/files/PSAC%20Human%20Factors%20Report-FINAL.pdf.*

proach, in order to promote flexibility in achieving our goals while helping us reduce the complexity we face in managing and integrating the diverse set of components needed to meet our mission. FirstNet will use the comments we receive on the RFI and draft SOO to refine the acquisition approach and draft the comprehensive network RFP.

As previously referenced, we received 122 responses to this RFI and were very encouraged with the interest it generated. All responses have been kept confidential to allow the RFI respondents to provide comprehensive and forthright solutions, facilitating FirstNet's ability to thoroughly develop the next step in the procurement phase—the drafting of the RFP. It is important to note that the responses came not only from the vendor community, but also from several state, local, and public safety entities. We take this as another positive sign that the public safety community is highly engaged and supportive of our mission.

FirstNet is statutorily required to engage in an open, transparent, and competitive RFP process, and the publication of this latest RFI is an important step in meeting this obligation. This RFI/draft SOO continues FirstNet's market research efforts and acts as a precursor to the publication of a draft RFP and a final RFP anticipated to be released by early 2016.

B. Public Notice and Comment

In September 2014, FirstNet also received Board approval to seek public comment on its statutory interpretations. As a new entity operating under a unique statutory construct, FirstNet is confronted with many complex legal issues and terms that will have a material impact on our RFPs and our operations going forward. Although FirstNet is exempt from the procedural requirements of the Administrative Procedure Act (APA), we believe it is important to solicit public comments on certain technical, economic, and foundational legal issues to inform our approach to our ongoing operations and to further consult with our stakeholders. Specifically, we sought comments on issues that included the interpretation of the definitions of core and RAN; the definition of public safety entities; secondary users; rural areas; user and other fees; and finally, the minimum technical requirements of the network.

We received more than 60 responses to this public notice and have continued to review and digest the information provided in each response. We received responses from a broad group of stakeholders, including commercial carriers, vendors, state, local, and tribal governments, and various associations that represent public safety interests.

On March 9, 2015, the FirstNet Board approved the release of a second public notice seeking comments on management's additional preliminary interpretations of FirstNet's enabling legislation. The primary topics covered include technical requirements relating to equipment and device use on the network, the nature and application of required network policies, FirstNet's presentation of state plans, and the rights and responsibilities of states choosing to build and operate their own RANs.

We believe public comments on these topics will provide important inputs into a draft comprehensive network RFP and on FirstNet operations, including on issues that will significantly impact the economics of the network. The public notice will also inform our stakeholders of our preliminary thinking on critical decisions relating to the deployment and operation of the network. The responses to this notice will be made part of the public record and be available at *www.regulations.gov* for public review.

C. Additional Technical Development and PSCR Collaboration

In addition to leading the analysis of the industry and public responses to the comprehensive network RFI, which will inform a comprehensive draft RFP, the FirstNet technical team has been focusing on a number of core areas:

- Formal standards development;
- Testing and evaluation; and
- Modeling and simulation.

We have been working very closely with the Department of Commerce's team at the Public Safety Communications Research (PSCR) labs to share ideas and data and to eliminate information silos. Working directly with PSCR has allowed FirstNet to make significant progress with the Third Generation Partnership Project (3GPP), the worldwide standards body for LTE, on ways in which LTE standards

can meet public safety's unique needs.[3] As a result of this collaboration, FirstNet has helped to develop broad coalitions that have pushed for the prioritization of public safety standards development in worldwide LTE standards.

In addition, the FirstNet technical team has assisted in validating certain key assumptions within the FirstNet Strategic Program Roadmap Summary, including the modeling of cell site location nationwide and the amount of excess network capacity that might be available for secondary use.

FirstNet will continue to work with PSCR throughout the development of the network. We have already seen tremendous benefit from our cooperative relationship and we look forward to continuing this productive collaboration.

Early Builder Public Safety Projects

FirstNet has executed five spectrum manager lease agreements (SMLAs), with Adams County in Colorado,[4] the State of New Jersey,[5] the State of New Mexico, the Los Angeles Regional Interoperable Communications System Authority (LA–RICS), and the State of Texas (allowing for public safety broadband network service in Harris County). As a result of these agreements, FirstNet now is working closely with five early builder projects to gather lessons that will help drive efficiencies and better understanding of key factors important to the design and development of the network.[6]

Each of these projects is detailed in depth in the attached FY 2014 Annual Report to Congress, attached to this testimony for your reference.

Culture of Compliance

Over the past year, FirstNet has grown significantly in our organizational structure, and this growth has provided greater resources, rigor, and oversight in the management of our operations. By hiring senior managers and staff during FY 2014, FirstNet has implemented policies and procedures that provide clear direction and structure for the organization. Our FY 2014 Annual Report to Congress goes into detail on the steps that we have taken to strengthen our compliance processes.[7]

FirstNet has also incorporated lessons learned from an Inspector General (OIG) report examining certain processes relating to Board member financial disclosure filings and identification of potential conflicts of interest and procurement oversight practices.[8]

FirstNet has a positive working relationship with the OIG, and we look forward to continuing our open and constructive coordination with this office.

Conclusion

I am grateful to the Committee for the opportunity to update you on FirstNet's progress. As you can see, FirstNet continues its efforts to meet statutory obligations, partner with those who will use and benefit from the network, and develop a business plan that will provide innovative broadband services to public safety personnel on a long-term, self-funded basis.

FirstNet is committed to achieving our objectives, but we can only do so with the support of Congress, public safety, locals, states, tribal jurisdictions, and our other stakeholders. This is a network that is urgently needed to increase the safety and capabilities of all public safety personnel and protect the American people, and we are committed to delivering it.

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[3] The standards body through which we are working is The 3rd Generation Partnership Project (3GPP). According to the 3GPP website, "3GPP unites [six] telecommunications standard development organizations (ARIB, ATIS, CCSA, ETSI, TTA, TTC) and provides a stable environment to produce the Reports and Specifications that define 3GPP technologies." 3GPP website, "About 3GPP." available at: *http://www.3gpp.org/about-3gpp/about-3gpp.*

[4] Adams County Communications Center, Inc.

[5] State of New Jersey Office of Information Technology.

[6] Four of these projects are funded through NTIA's Broadband Technology Opportunities Program (BTOP) grants that were awarded prior to passage of the Act. The Harris County project was funded through a pre-Act Department of Homeland Security grant.

[7] *http://www.firstnet.gov/sites/default/files/Annual%20Report_FY2014_FINAL_3_3_15 .pdf*

[8] On December 5, 2014, the Department of Commerce's OIG released a report entitled "FirstNet Must Strengthen Management of Financial Disclosures and Monitoring of Contracts." Available at: *http://www.oig.doc.gov/Pages/FirstNet-Must-Strengthen-Management-of-Financial-Disclosures-and-Monitoring-of-Contracts.aspx.*

ATTACHMENT

FirstNet, U.S. Department of Commerce, *FY 2014: Annual Report to Congress*
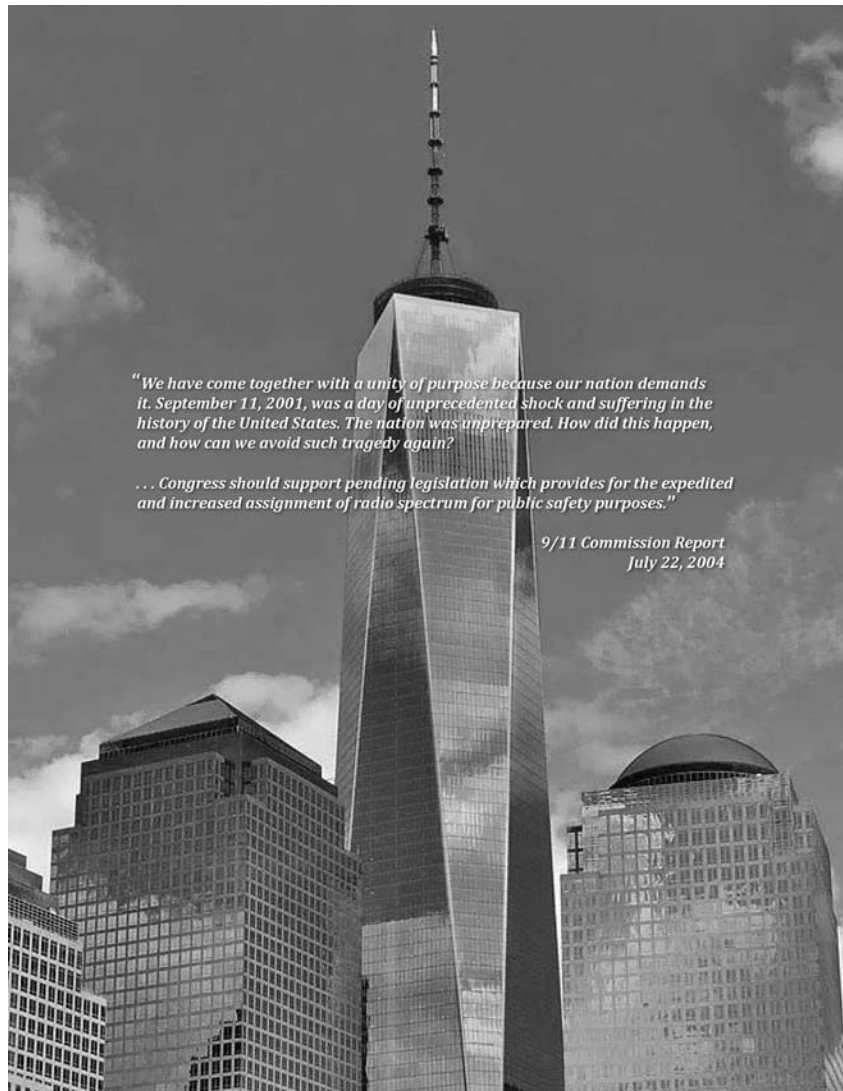
"We have come together with a unity of purpose because our nation demands it. September 11, 2001, was a day of unprecedented shock and suffering in the history of the United States. The nation was unprepared. How did this happen, and how can we avoid such tragedy again?

. . . Congress should support pending legislation which provides for the expedited and increased assignment of radio spectrum for public safety purposes."

9/11 Commission Report
July 22, 2004

This Annual Report to Congress is issued pursuant to section 6210 of the Middle Class Tax Relief and Job Creation Act of 2012 (P.L. 112-96) ("Act") and reflects the **operations, activities, financial condition, and accomplishments** of the First Responder Network Authority ("FirstNet")[1] for fiscal year 2014 ("FY14").[2]

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1   The Middle Class Tax Relief and Job Creation Act of 2012 (P.L. 112-96) established FirstNet as an independent authority within the Department of Commerce's National Telecommunications and Information Administration ("NTIA").

2   Fiscal year 2014 is the period from October 1, 2013, through September 30, 2014.

STATISTICAL HIGHLIGHTS

OCTOBER 1, 2013 – SEPTEMBER 30, 2014

Board	
New Board Members:	5
Public Board Meetings held:	8
Organization	
Employees Hired in FY14:	67
Office Locations Opened:	2
Outreach Activities	
State Consultation Packages Delivered:	56 states and territories
State Technical Assistance Conference Calls:	44
Completed State Consultation Checklists Received:	27
FirstNet In Person Consultations:	4
Outreach Stakeholder Presentations:	Over 150 in all 56 states and territories, 37 public safety associations and non-governmental organization, 10 tribal organizations, and 14 Federal department and agencies.
Public Safety Advisory Committee Reports delivered to FirstNet:	3
Congressional Hearings:	1
Financials	
H-Block Auction Proceeds:	$1.56B
NTIA Borrowing	$1.96B
H-Block Auction Proceeds Deposited in PSTF	$1.22B
NTIA Net Borrowing Outstanding	$0.78B
Net Cost of FirstNet Operations	$0.02B

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A s with many bold public policy initiatives, the creation of FirstNet ensued from disaster and tragedy. Although the idea that all first responders across the United States should share one nationwide network existed prior to September 11, 2001, the events of that terrible day inspired collaborative action from public safety and Congress. As Congress directed, FirstNet is working toward the deployment of a single, interoperable platform for public safety communications that will bring dedicated priority wireless broadband services to millions of public safety personnel at the local, state, tribal, and Federal levels.

Introduction and Background

HISTORY, PURPOSE, AND FIRSTNET MISSION

Authorized by Congress in 2012,[3] FirstNet will fulfill a fundamental need of the public safety community and is the last remaining recommendation to be addressed of the 9/11 Commission.[4] FirstNet's mission is to ensure the deployment, and operation of a nationwide public safety broadband network (network) for public safety entities.

Leveraging Long Term Evolution (LTE)[5] technology standards, up to $7 billion in funding from spectrum auctions, and a nationwide license of 20 MHz of radio frequency spectrum, the FirstNet network is intended to dramatically increase the safety and capabilities of all of those who serve in a public safety capacity, and thereby further protect the American people.

Public safety, and thus the American people, will benefit from the availability of a dedicated wireless broadband network prioritized for first responders, the economies of scale afforded by a national, commercial standards-based network, and the force of innovation in applications which to date has only been enjoyed by consumers.

This is FirstNet's third Annual Report to Congress. Since the last report, FirstNet has made significant strides toward the development of the network.

FISCAL YEAR 2014 OVERVIEW

During FY14, FirstNet began a formal state consultation to understand public safety's unique needs within each state and territory for the nationwide network. In addition, a public notice was published, that sought input on key legal interpretations of the Act. A comprehensive network draft Statement of Objectives (SOO) and Request for Information (RFI) were released and the FirstNet Board (Board) Committee charters for efficient and transparent Board and management operations were also adopted. FirstNet created and formally adopted a Strategic Program Roadmap (Strategic Roadmap), while growing from a fledgling organization to robust startup. FirstNet staff increased from 8 to 75 full-time equivalent (FTE) employees, which included the hiring of key senior management positions throughout the organization.

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3 "The Middle Class Tax Relief and Jobs Creation Act of 2012" P.L. 112-96.

4 The Final Report of the National Commission on Terrorist Attacks Upon the United States, available at: http://www.9-11commission.gov/report/ (last accessed January 12, 2015).

5 The FirstNet enabling statue encourages the use of LTE technology, Section 6203 (c) (2).

Much of FirstNet's planning is embodied in our Strategic Roadmap, which was adopted by the Board in March 2014,[6] and outlined the milestones FirstNet planned to accomplish in the following year:

- Begin formal in-person state consultations;
- Initiate a public notice and comment process on certain program procedures, policies, and statutory interpretations;
- Release a draft comprehensive network request for proposals (RFP) for comment; and
- Release for comment draft requests for certain network and equipment services proposals.

Two of these milestones were completed in FY14, and significant progress continues on the draft comprehensive network RFP. With these foundational efforts underway, FirstNet has narrowed its focus to the consultative, technical, procurement, and financial aspects of the program. FirstNet made tremendous progress in FY14 yet more remains to be accomplished. This report provides a detailed description of the progress to date and lays out the goals and plans that FirstNet has developed for FY15.

VISION, MISSION, AND OBJECTIVES FOR FIRSTNET

FirstNet has a key vision, mission and objectives to accomplish as we plan and develop the deployment of the nationwide network. They are:

VISION
Empower America's First Responders with state of the art communication tools.

MISSION
To ensure the building, deployment, operation, and sustainability of public safety's nationwide, interoperable, wireless broadband network, in accordance with law.

KEY OBJECTIVES
- Provide FirstNet services with features – such as reliability, resiliency, coverage, functionality, interoperability, and network-based applications – that are critical to public safety users and differentiate FirstNet services from commercial broadband services
- Reduce costs for public safety entities by leveraging the value of excess network capacity with partners and enabling pre-emptible demand from other, non-emergency users that place a high value on reliability and other FirstNet features
- Provide mechanisms for public safety entities (directly or indirectly through states) to benefit from the economies of scale created by FirstNet in terms of purchasing, partnering, and information/data.

Each of these points are reflected in our overarching strategic goals.

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6 First Responder Network Authority, Board Resolution 56, available at: http://www.firstnet.gov/sites/default/files/FirstNet%20 Resolution%2056%20re%20FY%2014%20Program%20Roadmap%20Milestones.pdf (last accessed January 15, 2015).

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OVERARCHING STRATEGIC GOALS

The following four strategic goals have been adopted by the FirstNet organization:

1. Explore and build strong partnerships with local, state, tribal, and Federal jurisdictions.
2. Staff and establish a high-performance organization and a culture of excellence.
3. Ensure all resources are used efficiently to accomplish FirstNet's mission and demonstrate leadership towards self-sustainability to all external stakeholders.
4. Ensure the deployment and operation of a reliable, interoperable, and survivable nationwide LTE broadband network for public safety

These goals will guide our actions during the years to come. FirstNet has an important and difficult task ahead, but with the support of the public safety community, the private sector, and local, state, Federal, and tribal leaders, we strive to succeed in accomplishing our mission.

Partnerships with local, State, tribal, and Federal Jurisdictions

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Partnerships with local, State, tribal, and Federal Jurisdictions

Exploring and building strong partnerships with local, state, tribal, and Federal jurisdictions by leveraging outreach opportunities

FirstNet is dedicated to the development of a sustainable outreach and consultation process consistent with our legal requirements. In this regard, FirstNet's goal is to ensure that the public safety community, public safety communications experts, state Chief Information Officer (CIOs), governor-appointed state single points of contact (SPOCs), tribal representatives, and all other relevant stakeholders engage in the consultation process and provide input into the state plans FirstNet will present for build out of the radio access network (RAN) in each state and territory.

STATE CONSULTATION

FY14 saw the formal start of FirstNet's statutorily mandated state consultation process. Per section 6206(c)(2) of the Act, FirstNet is required to consult, via the SPOCs, with "regional, state, tribal, and local jurisdictions" within all 56 states and territories on key areas including: 1) construction of a core network RAN build out, 2) placement of towers, 3) network coverage areas, 4) adequacy of security, reliability, resiliency, and hardening, 5) assignment of priority to local users, 6) assignment of priority and selection of entities seeking access to or use of the network, and 7) training needs of local users.

STATE CONSULTATION CHECKLISTS AND PLANNING ACTIVITIES

Considerable planning occurred before the FirstNet state consultation meetings began. Discussions in September 2013 led to a high-level framework for state consultation, and FirstNet state consultation staff members were hired in late 2013 and early 2014 to begin formally building the program.

Strategic planning for state consultation activities kicked off with a two-day state consultation process workshop conducted by the FirstNet team on January 16-17, 2014. The purpose of the workshop was to focus on the strategy and tactics needed to begin state consultation, including:

- Setting the strategic vision, goals, and objectives of consultation.
- Understanding purpose of outreach and consultation.
- Developing the overarching state consultation strategy.
- Transitioning the strategy into tactics for the initial consultations.

State Consultation with the State of Maryland

Development of the state consultation process continued with FirstNet delivering workshops to states and territories at NTIA conferences in February and March 2014. The purpose of these workshops was to obtain feedback from states and territories on FirstNet's state consultation strategy, timeline, and approach.

FirstNet launched the formal state consultation program on April 30, 2014, by sending all 56 states and territories an "Initial State Consultation Package." This package introduced the consultation process to the states, delivered a "Readiness Checklist" for the states to complete, sought information from the states that will help with FirstNet planning, and provided information on the topics and issues that would be discussed during the Initial State Consultation meetings. FirstNet also provided technical assistance conference calls to answer questions and provide additional clarity on the topics to each state/territory. The Readiness Checklist and technical calls covered a wide variety of discussion points, including:

- Attendees
- Consultation Process
- Eligible Users
- Governance Body
- Major State Events
- Outreach Planning
- Public Safety Stakeholders
- Scheduling
- State Specific Information
- Wireless Contracts

- Barriers
- Coverage
- FirstNet Updates
- Joint Outreach Planning
- Metropolitan/Rural/Tribal POCs
- Public Safety Meetings and Events
- Roles and Responsibilities
- State/Territory Updates
- State's Governance Process
- Next Steps

The top three discussion points across the states and territories were coverage, eligible users, and outreach planning.

Coverage. Coverage was the most frequently discussed topic in the technical assistance conference calls. FirstNet provided a description of coverage objectives and guided the conversation to help states consider their unique coverage needs. In addition, states described state-specific coverage priorities. For example, international borders and waterways present interoperability challenges for FirstNet's final network. FirstNet explained the planning process to gather state input on coverage needs, including any tools that may be used in the process.

Eligible Users. States expressed interest in understanding the potential types of users of the FirstNet network. FirstNet and the states discussed plans to identify potential users for the network within the state, including local, tribal and other potential users.

Outreach Planning. Outreach maturity among the states ranged from fully operational to just getting underway during FY14. FirstNet and the states discussed the importance of aligning the outreach approach to ensure goals are complementary.

By the end of FY14:

- FirstNet completed technical assistance conference calls with 44 states and territories.
- FirstNet received completed and submitted Readiness Checklists from 27 states and territories.

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PILOT STATE CONSULTATIONS

Before engaging in state consultation meetings nationwide, FirstNet piloted the meetings and process with Maryland, Minnesota, Oregon, and Washington. These pilot state consultations served to ensure that the process FirstNet was taking to the states was efficient and effective.

The pilots delivered important insights to FirstNet that we have leveraged as we continue the consultation process. The initial agenda was improved for future state consultations to bring additional information to the state earlier in the meeting and improve dialog around operational data and coverage priorities.

STATE USE-CASES

FirstNet also worked with states to have local public safety officials discuss real-life examples, or use-case scenarios, of how FirstNet could be utilized once the network is built. The use-cases discussed in the consultations provided several different scenarios unique to those states, such as pre-planned events, natural disasters, and planned responses. In each scenario, having the network operational would have likely improved the rapid communication of information on the ground to first responders, which will help them maintain their own safety as well as the safety of those whom they protect and serve.

Maryland Preakness Stakes

This use-case was presented by Chief Walsh of the Baltimore City Fire Department. The Preakness Stakes is the annual horse race that occurs on the third Saturday each May at the Pimlico racetrack in Baltimore, Maryland. The Preakness Stakes draws over 100,000 attendees each year and includes two weeks of events leading up to the main event. First responders that participate include law enforcement, fire, emergency medical services, transportation, special units, and Preakness Stakes/Pimlico resources. Chief Walsh noted several areas where current communications can be improved:

- **More Bandwidth:** A dependable broadband network is key.
- **Network Saturation:** Broadband coverage becomes unreliable with large groups - participants uploading live video feeds and photos, texting, and other data-draining activities congest the commercial networks.
- **Real-time data** (e.g., location, photos with geocoded information) is not available because the public safety entities do not have handheld devices for personnel in the field.

Washington Mudslide

Scott Honaker, Communications Coordinator for the Snohomish County Department of Emergency Management described the mudslide that occurred on March 22, 2014, in Oso, Washington. It was a massive landslide that impacted the Stillaguamish River and
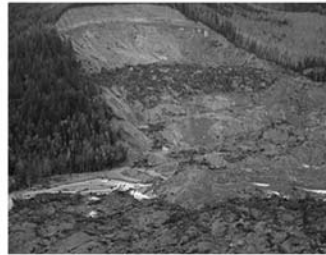
Oso, Washington, Mudslide. March 2014. Credit: Jonathan Godt, USGS.

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flooded adjacent homes. The state highway, SR 530, was impassible and partially destroyed. A fiber line was cut leaving no services for phones, 911, or Internet in areas near the slide.

While the county 800MHz/VHF radio infrastructure worked well, the lone commercial cellular carrier was overloaded, which led to limited communications with the town of Darrington, Washington. The true extent of the disaster was not immediately realized, and initially, just two servicemen arrived at the scene with shovels.

Mr. Honaker described how greater situational awareness could have been developed with aerial photos and videos of the area provided by a public safety broadband network. The mudslide emphasized how public safety entities often must work across multiple platforms and agencies to achieve their mission, with the response including search, rescue, flood assistance, mass casualty/fatality evacuation, infrastructure failure, missing persons, mental health, volunteers, and donations. The disaster stressed the needs of first responders and the importance of reliability, resiliency, and the ability to recover quickly.

Minnesota Bridge Collapse

Chief John Fruetel of Minneapolis Fire described the I-35W bridge collapse that occurred August 1, 2007, in Minneapolis, Minnesota. The 1,907-foot bridge collapsed over the Mississippi River causing 13 fatalities and 145 injuries. There was a massive emergency response that included the Minneapolis Police Department, Minneapolis Fire Department, Hennepin County Sheriff's Office, U.S. Army Corps of Engineers, U.S. Coast Guard, FBI underwater search and evidence response team, U.S. Naval Sea System Command mobile diving and salvage teams, and twelve other public safety agencies from throughout the United States.

Wireless data was inoperable during the critical first hours of this event. Commercial cell coverage was lost immediately because of the high volume of public use, including from a Minnesota Twins baseball game that was in progress when the collapse occurred. When the stadium notified the 35,000 fans that they needed to find alternate routes home, many used their cell phones to call home and cell coverage was lost. This lack of real-time communication between the incident commander and those deciding to evacuate the baseball game forced public safety to compete for commercial bandwidth.

In addition, the incident commander did not have real-time visual data of cars that had been on the bridge and had plunged into the water because they had to wait for hand-carried video portraying the moments before the bridge collapsed to know how many cars to search for in the river. Rescue crews were on each side of the river and had difficulties communicating with each other. Chief Fruetel said that dedicated mobile data would have enhanced response by providing key situational awareness.

I-35W Bridge Collapse in Minnesota. August 2007. Credit: Federal Emergency Management Agency

Oregon Clackamas Mall Shooting

Cheryl Bledsoe from the Clackamas County 9-1-1 office discussed an incident involving an active shooter. This is a scenario that law enforcement, fire, and emergency medical services (EMS) responders prepared for with focused training. On December 11, 2012, an armed gunman entered the largest Clackamas shopping mall. The gunman fired 16 bullets, killed 2 people, and committed suicide. The public safety response included all local first responders and Federal responders. The cellular network was at full capacity, leaving no room for public safety communications since the commercial network providers do not offer priority or pre-emption for public safety specific users. Bledsoe commented that FirstNet could help in this type of event by enhancing support in areas related to 1) situational awareness, 2) interoperability communications, and 3) public information.

FUTURE STATE AND TERRITORY CONSULTATION

FirstNet will continue State Consultation meetings with the states and territories that have submitted completed Readiness Checklists. FirstNet will also continue to work with states and territories that have not yet submitted checklists to provide them information and assistance in order to submit the requested information. FirstNet expects to be able to complete all 56 initial state and territory consultation meetings in 2015.

Additional consultation meetings and engagements will also be scheduled in 2015. These meetings and engagements will be held with states and territories that have collected user and operational data to validate and capture that data for FirstNet planning and design. The number of additional consultation meetings and engagements scheduled is dependent on the states and territories and readiness for user and operational data discussions. We update our consultation meetings online every week. The most current listing and status can be viewed at http://firstnet.gov/consultation/meetings.

State	Meet
MD	7-29-2014
MN	9-24-2014
OR	10-08-2014
WA	10-16-2014
MT	10-29-2014
UT	11-06-2014
IA	11-18-2014
FL	12-12-2014

LEGEND

All	1) Received Initial Consultation Package from FirstNet	27	3) Initial Consultation Checklist returned to FirstNet	6	5) Remaining Initial Consultation meetings scheduled in 2014
44	2) Pre-consultation conference call scheduled or closed	2	4) Initial Consultation meeting held with FirstNet	0	6) Additional Initial Consultation Meeting being scheduled in 2014

Status as of 9/30/14

OUTREACH INFORMATION

FirstNet has been actively engaged in delivering timely information to our stakeholders. In FY14, FirstNet staff provided presentations at over 150 stakeholder engagements reaching all 56 states and territories, 37 public safety associations and non-governmental organizations, 10 tribal organizations, the 14 Federal departments and agencies serving on the Emergency Communications Preparedness Center (ECPC),[7] and 18 trade associations. The presentations addressed questions regarding FirstNet's history and its critical mission as well as updates on the implementation of FirstNet's Strategic Roadmap.

These engagements – webinars, meetings, seminars, and major conferences – helped put FirstNet in front of approximately

20,000
Law Enforcement Personnel, FireFighters, EMS Professionals, Mayors, Governors, and Industry Leaders contacted

10 Tribal Presentations

150
Stakeholder engagements held with FirstNet officials

1,000 Twitter Followers

37 Associations/ NGO Presentations

ALL 56
States and Territories contacted during FY 2014

Outreach Accomplishments in FY14

20,000 law enforcement personnel, fire fighters, EMS professionals, mayors, governors, industry leaders, and many other key stakeholders during FY14. These events offered the opportunity for FirstNet to deliver updates and progress reports to many interested parties. Participation in such a large number of events has helped FirstNet better highlight key items to public safety professionals, elected official, industry members, and press outlets. FirstNet public Board meetings also serve as opportunities for the organization to share information with all interested parties both live and via webcast as the Board discusses matters key to FirstNet's activities, including the state consultation progress, the public notice and comment process, and work toward the development of a comprehensive network RFP.

LOCAL AND STATE OUTREACH AND CONSULTATION THROUGH STATE SINGLE POINTS OF CONTACT (SPOCS)

FirstNet increased its consultation with states and territories in FY14 through implementation of monthly conference calls by region and quarterly webinars with the SPOCs, in addition to supporting state outreach events. In FY14, FirstNet staff participated in 45 state-sponsored forums and two State and Local Implementation Grant Program workshops, conducted seven SPOC webinars, and held 80 monthly SPOC calls. All forums provided participants with direct access to FirstNet staff, the latest information regarding FirstNet progress and planning, and an opportunity for state teams to ask questions and prioritize resource requests. Among other things, FirstNet staff shared information on consultation and outreach efforts spanning multiple state jurisdictions related to tribes, Federal agencies, and public safety associations. Increasingly, the monthly SPOC calls became an interactive forum in which states shared their specific outreach successes and challenges, offered input to one another, and eased the way to share additional

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7 The ECPC is comprised of 14 Federal departments and agencies: U.S. Departments of Agriculture, Commerce, Defense, Energy, Health and Human Services, Homeland Security, the Interior, Justice, Labor, State, Transportation, and the Treasury. The Federal Communications Commission and the General Services Administration are also members of the ECPC.

resources. In addition, weekly email updates to the SPOCs, initiated in June 2014, have increased the volume of information sharing. Lastly, FirstNet released, and regularly updates, a digital Outreach Toolkit available on the FirstNet.gov resources page,[8] which includes fact sheets and presentations states can leverage for their outreach and consultation.

TRIBAL OUTREACH

In June 2013, Board member Kevin McGinnis was appointed to be the Board Liaison for tribal outreach. FirstNet participated in ten events sponsored by tribes on a regional and national level, attended the White House Tribal Nations Summit, and sponsored a multi-agency/tribal workshop and a tribal outreach webinar. FirstNet also conducted several in-person visits, including a June 2014 visit with Alaskan Native public safety providers. Following feedback from tribes and the states in the spring of 2013, and a commitment to assist across traditional state and territorial boundaries, FirstNet sponsored a one-day workshop in November 2013 to seek guidance from tribal representatives and Indian Country professionals on how to approach tribal outreach and education.

Tribal Outreach

Tribal leaders from national and regional associations and public safety departments joined Kevin McGinnis and TJ Kennedy in setting the course for short-term effective outreach and education with federally recognized tribes. The outcomes were a draft plan for messaging priorities, identification of key tribal associations, information on logistics in working with tribal governments, a video training module "Indian Country Overview" to assist FirstNet staff and states in their outreach, increased invitations to tribal events, and an executable plan for the formation of a tribal working group under the auspices of the Public Safety Advisory Committee for continued advice and conversations.

Additionally, FirstNet hired a dedicated full time tribal outreach lead in FY14 and plans to further build this committed team in the coming year.

ENVIRONMENTAL AND HISTORIC PRESERVATION COORDINATION

In January 2014, FirstNet hired its Director of Environmental Compliance and its National Environmental Policy Act ("NEPA") Coordinator, finalized a list of 19 Categorical Exclusions and Agency Implementing Procedures under NEPA, and initiated a series of meetings with the Council on Environmental Quality to discuss the most appropriate and efficient way for FirstNet to meet its NEPA compliance requirements for the network. It was concluded that the development of five programmatic environmental impact statements ("PEISs") would be the best way for FirstNet to satisfy both its strategic goals and its compliance requirements. Coordination continued throughout the year with other Federal agencies including the U.S. Fish and Wildlife Service, the

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8 FirstNet Resources, available at: http://firstnet.gov/resources (last accessed January 15, 2015).

Federal Communications Commission, the Advisory Council on Historic Preservation, and the Department of Interior. Two contracts were awarded in September 2014 for NEPA support services and the development of the five PEISs.

In July 2014, FirstNet hired its Federal Preservation Officer ("FPO") to address compliance with the National Historic Preservation Act ("NHPA"). In addition to employee awareness training in Reston and Boulder on both NEPA and NHPA, the environmental team has briefed the Board on FirstNet's statutory environmental and historic preservation responsibilities associated with the deployment of the network. In September 2014, the FPO began preparing the agency's draft Tribal Consultation Policy, attended the White House's Emerging Lidar Technology Federal Roundtable meeting, and began planning for multiple scoping meetings to be held at six locations throughout the country.

FEDERAL OUTREACH AND CONSULTATION

In late FY13, FirstNet established a formal relationship with the ECPC to serve as the primary body for Federal consultation to FirstNet. The ECPC, administered by the U.S. Department of Homeland Security Office of Emergency Communications, is the Federal interagency focal point for interoperable and operable emergency communications coordination. During FY14, FirstNet participated in ECPC Executive and Steering Committee meetings to provide the latest updates on FirstNet activities.

In February 2014, the ECPC created a FirstNet Consultation Working Group to support FirstNet by coordinating the collection of data related to the needs of Federal users and Federal assets that could be leveraged in building the network. Through three meetings, the group received briefings on detailed plans for state consultation and provided input regarding how FirstNet can best work with the 14 member departments and agencies. Many of the FirstNet Consultation Working Group members have established, or are in the process of establishing, governance bodies to coordinate future data collection efforts that

Federal Outreach

will ultimately inform the 56 plans for the states and territories. Each department and agency has identified a single point of contact to make coordination with FirstNet more effective.

FirstNet now has a dedicated Federal outreach lead and is working to hire additional staff to actively engage each department and agency one-on-one in the coming fiscal year. FirstNet also plans to engage other non-ECPC member agencies in order to further consult with Federal departments and agencies both at headquarters and regional offices and begin data collection activities related to potential users and coverage requirements.

FEDERAL COMMUNICATIONS COMMISSION (FCC) OUTREACH

FirstNet continues to consult with the FCC on a range of issues as it plans for network build out and operation. FirstNet staff meets regularly with the Public Safety and Homeland Security Bureau on issues relating to Band 14 spectrum, working with the Bureau to permit experimental use of spectrum licensed to FirstNet that allows first responders to better understand the value of the network for their missions. Additionally, FirstNet has consulted with the FCC on FirstNet's public notice and comment process and has sought the FCC's expertise on issues relating to public safety users and NG911. FirstNet will be an important enabler for public safety when public safety answering points (PSAP's) migrate to next generation 911 (NG911) as dispatch centers will be able to send and receive data, photos, and videos to and from law enforcement personnel, firefighters, and EMS professionals while leveraging the FirstNet network. The FCC has been extremely helpful in providing insight on technical and network security issues.

Congressional Testimony

CONGRESSIONAL TESTIMONY AND BRIEFINGS

During FY14, FirstNet testified before the U.S. House of Representatives Committee on Energy and Commerce's Subcommittee on Communications and Technology on November 21, 2013. The hearing, entitled "Oversight of FirstNet and the Advancement of Public Safety Wireless Communications," included testimony from FirstNet's former Chair, Samuel Ginn; David Turetsky, then Chief of the Public Safety and Homeland Security Bureau at the FCC; Stu Davis, State Chief Information Officer and Assistant Director, Ohio Department of Administrative Services; Dennis M. Martinez, Chief Technology Officer, RF Communications Division at Harris Corporation; Darryl Ackley, Cabinet Secretary, New Mexico Department of Information Technology; and Dereck Orr, Program Manager, Public Safety Communications Research, Office of Law Enforcement Standards at the National Institute of Standards and Technology (NIST).[9]

Separately, FirstNet staff continued meetings with staff and Members in both Houses of Congress, providing updates on FirstNet's actions throughout the year.

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9   More information including Chair Ginn's testimony can be found at: http://energycommerce.house.gov/hearing/oversight-firstnet-and-advancement-public-safety-wireless-communications (last accessed January 14, 2015).

COMMUNICATIONS AND SOCIAL MEDIA

An important factor in all of FirstNet's outreach is how our message is disseminated. FirstNet is committed to being open and transparent and has increased its level of communications with stakeholders during FY14 through a new website and across several social media platforms. In March 2014, FirstNet launched its own website, establishing an online identity and providing an immediate, accessible outlet for information delivery. The FirstNet website receives approximately 17,000 visitors per month, and provides a one-stop shop for all FirstNet resources and information, such as access to live and archived Board presentations, fact sheets and other outreach material, vendor requests and information, and an active blog site.

FirstNet added to its online presence by launching several social media sites in FY14. In May 2014, FirstNet launched its Twitter account, delivering and highlighting FirstNet and industry news to over 1,000 followers in a real-time format. A Flickr site was also launched with a catalogue of more than 400 photographs – which are all available to stakeholders for use in developing their own presentations. In a similar format, the FirstNet YouTube site, also launched in FY14, offers a series of informative videos aimed at law enforcement, fire, EMS, and SPOCs.

STATE AND LOCAL IMPLEMENTATION GRANT PROGRAM (SLIGP)

SLIGP is a formula-based, matching grant program administered by NTIA, which awarded grants totaling $116.56 million to 54 states and territories (recipients). The program is designed to assist regional, state, local, territorial, and tribal government entities as they plan for the network. SLIGP funding priorities include establishing a governance structure to consult with FirstNet, developing procedures to ensure local and tribal participation in the consultation process, creating a process for education and outreach around the network, identifying potential public safety users of the network, developing staffing plans that include local and tribal representation, and preparing a comprehensive plan describing the public safety needs that they expect FirstNet to address as part of their existing Statewide Communications Interoperability Plans (SCIP). The table below shows the Federal funds awarded to each recipient.

Recipient	Federal Funds Awarded	Recipient	Federal Funds Awarded
Alabama	$2,044,932	Montana	$1,816,415
Alaska	$2,005,869	Nebraska	$1,510,750
American Samoa	$502,930	Nevada	$1,972,666
Arizona	$2,911,147	New Hampshire	$879,887
Arkansas	$1,595,711	New Jersey	$2,711,928
California	$5,676,786	New Mexico	$1,899,423
Colorado	$2,500,989	New York	$4,867,212
Connecticut	$1,406,257	North Carolina	$3,203,088
Delaware	$724,613	North Dakota	$1,167,975
District of Columbia	$636,722	Ohio	$3,638,690
Florida	$4,916,040	Oklahoma	$1,924,814
Georgia	$3,306,657	Oregon	$2,148,448
Guam	$529,300	Pennsylvania	$3,955,098

Recipient	Federal Funds Awarded	Recipient	Federal Funds Awarded
Hawaii	$872,075	Puerto Rico	$1,432,624
Idaho	$1,490,242	Rhode Island	$755,863
Illinois	$4,067,403	South Carolina	$1,853,522
Indiana	$2,354,504	South Dakota	$1,238,103
Iowa	$1,656,258	Tennessee	$2,361,340
Kansas	$1,800,790	Texas	$5,859,404
Kentucky	$1,852,548	U.S. Virgin Islands	$515,628
Louisiana	$1,928,721	Utah	$1,782,235
Maine	$1,045,904	Vermont	$710,941
Maryland	$1,985,361	Virginia	$2,756,850
Massachusetts	$2,162,120	Washington	$2,642,591
Michigan	$3,347,017	West Virginia	$1,121,498
Minnesota	$2,389,660	Wisconsin	$2,294,933
Missouri	$2,477,551	Wyoming	$1,350,593
		Total Awarded	**$116,560,626**

SLIGP Federal Funds Awarded by Recipient

SLIGP PHASE 1 ACTIVITIES

SLIGP Phase 1 provides funding for recipients to develop or enhance their governance, conduct education and outreach to all relevant stakeholders, prepare for consultation with FirstNet, identify potential users of the network, and update their SCIP.

Governance

SLIGP funding priorities for governance activities include establishing a governance structure or expanding existing structures to ensure local and tribal representation, and preparing to consult with FirstNet. Recipients have taken different approaches to governance. Most states and territories elected to use existing governance groups that were set up to support their SCIP or related programs. Others added members, created committees, or created entirely new governance bodies specifically to support public safety broadband. The pie graph to the right shows the percentage of SLIGP recipients that have taken each approach, as of April 2014.

23% New governance body
15% New sub-group to existing governance body
13% New members to existing governance body
49% Existing governance body or work group
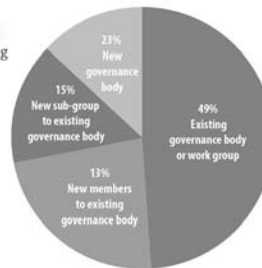
Education and Outreach

SLIGP funding priorities for education and outreach include developing an outreach plan to engage critical stakeholders across recipient states and territories. Outreach activities may also support identifying potential network users. As of September 2014, SLIGP recipients have developed and distributed over 129,150 outreach materials through websites, workshops, conferences, webinars, newsletters, emails, presentations, recipient-specific branding and logos, handouts, and social media sites like Twitter, Facebook, and YouTube.[10]

129,159
Education and outreach
materials distributed since
July 2013

● Conducting education and
  outreach with SLIGP funds
○ Not yet conducting education and
  outreach with SLIGP funds

American Samoa
District of Columbia
Guam
Puerto Rico
U.S. Virgin Islands

SLIGP Outreach Activities

FirstNet Consultation

Preparing for consultation with FirstNet is another key activity under SLIGP Phase 1. Recipients have elected to use SLIGP funds to respond to the FirstNet public notice and comprehensive RFI released in September 2014, reserve meeting space for consultation engagements, cover travel expenses for stakeholders from across the state or territory, and develop meeting materials.

SLIGP MONITORING ACTIVITIES

To best enable recipients and NTIA to be good stewards of Federal funds, the SLIGP program office monitors recipient progress toward SLIGP priorities through quarterly reporting and progress calls, site visits, and in-person engagements. The NTIA program office has an agreement with the NIST Grants Management Division to provide grants management support.

Quarterly Reporting and Progress Calls

Each quarter, SLIGP recipients are required to submit a performance progress report ("PPR") to the program office detailing their progress against program milestones, details regarding their staffing and contractual support, and expenditures. NTIA reviews recipients' PPRs, provide requests for clarification, and assist with any revisions. In conjunction with the PPR review process, NTIA conducts quarterly progress calls with each recipient to follow up on items reported in the PPR, answer any grants management questions, and discuss program successes and challenges that occurred during the quarter.

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10 The state of Mississippi chose to decline its SLIGP grant and is therefore not a beneficiary of the program.

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Site Visits

Through site visits, NTIA meets with recipient staff face-to-face to monitor for grant compliance, address any grants management concerns, and discuss progress relating to program priorities in greater detail than during the quarterly progress calls. NTIA conducted 9 site visits to recipients in FY14 and plan to conduct another 20 in FY15.

In-Person Engagements

In early 2014, NTIA hosted two regional workshops in Atlanta, GA, and Phoenix, AZ, to help states and territories provide input and prepare for FirstNet. The workshops provided a forum for recipients to interact with FirstNet and NTIA in person. Recipients discussed progress toward SLIGP priorities, shared best practices, and received compliance information from NTIA.

ORGANIZATION AND
CULTURE OF EXCELLENCE

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Organization and Culture of Excellence

Establish a culture of excellence and empower employees to attain FirstNet's goal to develop a high-performing organization

FirstNet was established to ensure priority wireless broadband communications services, devices, and applications to millions of public safety personnel at the local, state, tribal, and Federal levels. To best serve public safety, FirstNet must create an efficient, diverse, and effective organization – an organization that is open and transparent and that takes the best management and organizational concepts from the private and public sectors to meet the unique needs of our mission.

In FY14, FirstNet laid the groundwork to build a high performance organization with an entrepreneurial culture of innovation by recruiting, hiring, and retaining highly-skilled and dedicated Federal employees. FirstNet has focused on being a diverse and veteran-friendly organization that employs Federal staff from all three Federal Government services: the Competitive Service, the Excepted Service, and the Senior Executive Service.

As we continue to hire engineers, outreach personnel, and other experts to plan and deploy the network, the time it takes to bring this expertise on board can be improved. The level of skill, and expertise that FirstNet requires, is unique. It must leverage wireless broadband engineering talent and experienced public safety communications professionals, as well as senior management with private and public sector backgrounds. FirstNet, however, has struggled to hire the staff it needs in the timeframes required.

STRUCTURE AND ORGANIZATION

During FY14, FirstNet established its organizational structure, creating and staffing six management offices beneath the General Manager (renamed Executive Director in FY15). These offices and their requisite divisions structure FirstNet to allow it to take advantage of both private and public sector best practices when creating organizational processes and culture.
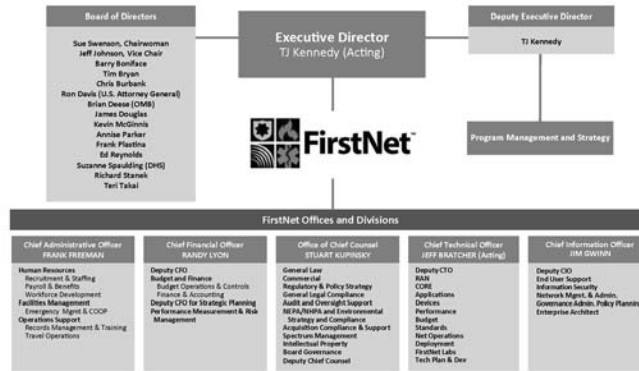
FirstNet Organization as of 2/1/15

BOARD MEMBERSHIP

As Congress directed, FirstNet is comprised of a fifteen-person Board, with the Secretary of Homeland Security, the Attorney General of the United States, and the Director of the Office of Management and Budget serving as permanent members. Congress charged the Secretary of Commerce (Secretary) with appointing twelve non-permanent Board members.[11]

Our first Board Chair, Samuel Ginn, led the organization from its inception until the summer of 2014, when our new Chair, Sue Swenson, was appointed. In September 2014, five new Board members replaced those members whose terms had ended or who had stepped down. The five new Board members are:

- Chris Burbank, Chief of Police, Salt Lake City Police Department
- James H. Douglas, former Governor of Vermont
- Annise Parker, Mayor, City of Houston, Texas
- Frank Plastina, technology executive, North Carolina
- Richard Stanek, Sheriff, Hennepin County, Minnesota

These Board members replaced the following:

- Charles Dowd, Deputy Chief, New York City Police Department
- F. Craig Farrill, Wireless Telecommunications Executive
- Paul Fitzgerald, Sheriff, Story County, Iowa
- Samuel 'Sam' Ginn, Telecommunications Executive
- Wellington Webb, former Mayor, City of Denver, Colorado

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11 By law, the term of all non-permanent Board members is three years. The terms of the inaugural non-permanent Board members are staggered, with four members serving three years, four serving two years, and four members serving one year. Non-permanent Board membership is limited to two consecutive full three-year terms.

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BOARD COMMITTEES AND FUNCTIONS

On December 17, 2013, the FirstNet Board passed Board Resolution 47,[12] which approved the charters of the (a) Finance Committee, (b) Governance and Personnel Committee, (c) Technology Committee, and (d) Outreach Committees of the Board.[13]

FINANCE COMMITTEE

The Finance Committee was established to review, approve, oversee, and recommend actions related to FirstNet's financial, budgetary, and business development activities.[14] It also maintains oversight of FirstNet's compliance program.

Members of the Finance Committee: Tim Bryan, Brian Deese, Jim Douglas, Sue Swenson, Frank Plastina, Ed Reynolds.

GOVERNANCE AND PERSONNEL COMMITTEE

The Governance and Personnel Committee was established to review, approve, oversee, and recommend actions related to FirstNet's governance policies and procedures, employee hiring, and employee performance evaluations.

Members of the Governance and Personnel Committee: Barry Boniface, Tim Bryan, Jeffrey Johnson, Sue Swenson, Teri Takai.

TECHNOLOGY COMMITTEE

The Technology Committee was established to review, oversee and recommend actions related to FirstNet's medium and long-term technology strategies, plans, and research and development.

Members of the Technology Committee: Barry Boniface, Chris Burbank, Kevin McGinnis, Frank Plastina, Ed Reynolds, Suzanne Spaulding.

OUTREACH COMMITTEE

The Outreach Committee was established to review, approve, oversee, and recommend actions related to FirstNet's state, Federal, rural and tribal outreach and consultation and how those users will be provisioned and served.

Members of the Outreach Committee: Ron Davis, Jim Douglas, Jeffrey Johnson, Kevin McGinnis, Annise Parker, Suzanne Spaulding, Rich Stanek, Teri Takai.

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12 First Responder Network Authority, Board Resolution 47, available at: http://www.firstnet.gov/sites/default/files/resolution-47-committee-charters-aug-2013.pdf (last accessed January 9, 2015).

13 Committee charters may be found on the FirstNet website, available at: http://firstnet.gov/board/committees (last accessed January 9, 2015).

14 In September 2014, the full Board approved Board Resolution 62, delegating to the Finance Committee oversight of specific budget expenditures that would be deemed authorized expenditures of the Board.

THE FIRSTNET BOARD

Barry Boniface — Tim Bryan — Chris Burbank — Ron Davis — Brian Deese

Jim Douglas — Jeffrey Johnson — Sue Swenson *Chair* — Kevin McGinnis — Annise Parker

Frank Plastina — Ed Reynolds — Suzanne Spaulding — Rich Stanek — Teri Takai

Barry Boniface[2,3]
Telecommunications
executive and private
equity investor
* Term expires
August 2016

Tim Bryan[1,2]
CEO, National Rural
Telecom Cooperative
* Term expires
August 2015

Chris Burbank[3]
Chief, Salt Lake City
Police Depart.; First
VP, Major Cities Chiefs
Association
* Term expires
August 2017

Ron Davis[4]
Representing the United
States Attorney General
* Permanent Member

Brian Deese[1]
Representing the
Director of the Office
of Management and
Budget
* Permanent Member

Jim Douglas[1,4]
Former Governor of
Vermont from 2003 to
2011
* Term expires
August 2017

**Jeffrey Johnson
(Vice-Chair)**[3,4]
CEO, Western Fire
Chiefs Assoc.; former
Chair, Oregon State
Interoperability Council
* Term expires
August 2016

Sue Swenson (Chair)[1,2]
Telecommunications /
technology executive
* Term expires
August 2016

Kevin McGinnis[3,4]
Chief/Community
Paramedicine, North
East Mobile Health
Services
* Term expires
August 2015

Annise Parker[4]
Current Mayor of
Houston, Texas
* Term expires
August 2015

Frank Plastina[1,3]
Telecommunications/
technology executive
* Term expires
August 2015

Ed Reynolds[1,3]
Telecommunications
executive (retired)
* Term expires
August 2017

Suzanne Spaulding[3,4]
Representing the
Secretary of the
Department of
Homeland Security
* Permanent Member

Rich Stanek[4]
Sheriff of Hennepin
County, MN and National
Sheriffs' Association
Executive Committee
Member
* Term expires
August 2017

Teri Takai[2,4]
Government information
technology expert;
former CIO, States of
Michigan and California
* Term expires
August 2016

1. Finance Committee
2. Governance and Personnel Committee
3. Technology Committee
4. Outreach Committee

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The FirstNet Board held a total of 8 public meetings during FY14 (4 public, in-person Board meetings, 3 public Board telephone conferences, and 1 public telephone conference by the Finance Committee). The Act requires a minimum of one public meeting of the Board per quarter. The dates for the public Board meetings were as follows:

- October 25, 2013 (phone)
- December 16-17, 2013
- March 10-11, 2014
- April 8, 2014 (phone)
- April 25, 2014 (Finance Committee via phone)
- June 2-3, 2014
- August 15, 2014 (phone)
- September 16-17, 2014

SENIOR MANAGEMENT

The executives of the organization focus on the technical, business, and legal requirements essential to making the network a reality. FirstNet senior management is comprised of the following positions and individuals:

- Executive Director, formerly General Manager[15] – TJ Kennedy (Acting)[16]
- Deputy Executive Director – TJ Kennedy[17]
- Chief Counsel – Stuart Kupinsky
- Chief Financial Officer – Randolph Lyon
- Chief Administrative Officer – Frank Freeman
- Chief Technology Officer – Jeffrey Bratcher (Acting)[18]
- Chief Information Officer – Jim Gwinn

At the June 2014 Board meeting, Chair Sue Swenson announced that a search for a permanent Executive Director would be launched. This search is underway and is expected to be completed in fiscal year 2015.

CULTURE OF COMPLIANCE[19]

FY14 was a key turning point in FirstNet's growth as an organization and in its governance and oversight practices. For almost all of FY13, FirstNet's management staff were effectively the appointed members of the Board and all support services had to be provided by NTIA, the Department of Commerce, the Department of Commerce Office of Acquisition Management, and other third parties.

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15 First Responder Network Authority, Revised Bylaws, available at: http://www.firstnet.gov/sites/default/files/bylaws-of-firstnet-revised-december-2014%20%28board-meeting%29.pdf.

16 FirstNet's first General Manager Mr. Bill D'Agostino stepped down from his position in April, 2014. Mr. Kennedy was then appointed in an Acting capacity.

17 *Id.*

18 FirstNet's first Chief Technology Officer, Ali Afrashteh, was selected in April 2014 and served for six months until December 2014 when it was announced that he was stepping down for personal reasons. FirstNet's current Deputy Technology Officer Jeffrey Bratcher, is filling the role of acting Chief Technology Officer while the search for a permanent replacement is underway.

19 On December 5, 2014, the Department of Commerce's Investigator General (IG) released their report entitled "FirstNet Must Strengthen Management of Financial Disclosures and Monitoring of Contracts," available at: http://www.oig.doc.gov/Pages/FirstNet-Must-Strengthen-Management-of-Financial-Disclosures-and-Monitoring-of-Contracts.aspx.

Since that time, however, the significant changes in the FirstNet organizational structure have provided greater resources, rigor, and oversight in the management of FirstNet operations. By hiring senior management leaders and staff during FY14, FirstNet has implemented policies and procedures that provide clear direction and structure for the organization. FirstNet has also incorporated lessons learned from an Inspector General report examining certain Department processes relating to Board member financial disclosure filing practices and identification of potential conflicts of interest and procurement oversight practices.

FirstNet has completed the following key compliance and governance efforts in FY14:

Hired an experienced management team in the areas of management, operations, user advocacy, technology, legal/compliance, finance, human resources, and administration. FirstNet's Chief Counsel was hired in early FY14, which enabled FirstNet to dedicate resources to create a compliance committee and implement key policies and procedures within FirstNet.

Implementation of a Program-Specific Compliance Program. To foster high ethical standards and address compliance-related risks associated with FirstNet, a compliance program was created, which is overseen by a cross-functional committee of senior executives and ultimately by the Finance Committee of the Board. This compliance committee, which includes all of the senior management team and the Deputy Chief Counsel is responsible for the day-to-day oversight and implementation of FirstNet's compliance program which leverages both commercial best practices and existing Department and NTIA requirements.

Developing of a set of core values to help firmly establish FirstNet's culture of compliance. These core values, which have been approved by the FirstNet Compliance Committee, establish a minimum set of principles and expected behaviors from all FirstNet staff and Board members.

Chair Sue Swenson speaking to FirstNet team members

Regular ethics and procurement training and oversight for Board members and FirstNet staff. Ongoing ethics education helps keep Board members and staff informed of their obligations relating to ethics issues and conflicts of interest in particular, while annually required procurement compliance training educates Board members and staff on the intricacies and regulations of the Federal procurement system. In addition to ongoing and annual training for Board members and staff, Board members are counseled on conflicts of interest prior to each Board meeting, reminded of their obligations under applicable ethics laws, including timely filing of financial disclosure reports, and the necessity to recuse themselves from any Board matters that could give rise to conflicts of interest concerns.

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FirstNet Board Meeting

Developing FirstNet-specific policies and procedures to supplement Department of Commerce policies and guidelines. FirstNet continues to develop and implement relevant policies and procedures specific to FirstNet's unique mission. Certain key policies implemented in 2014 include a vendor communications policy that requires pre-clearance by FirstNet legal and/or Department of Commerce personnel prior to communications with parties who have a potential financial interest in FirstNet. FirstNet also has developed a policy to ensure timely submission of required reports, and a policy to ensure accurate timesheets.

Initiating internal risk assessments to help identify the greatest compliance risks FirstNet faces. The results help FirstNet evaluate vulnerabilities, develop mitigation strategies, and supplement current compliance efforts with additional safeguards as necessary.

FACILITIES

Key to any organization's operations and culture are its facilities. At FirstNet's inception, personnel were housed in temporary office space in the Department of Commerce's Herbert C. Hoover Building. Based on projected growth and limited office space, FirstNet could not permanently be housed in the Department of Commerce building, we therefore worked with the General Services Administration (GSA) to locate suitable office space.

FirstNet identified and secured office space in a facility that would make the best use of taxpayer's funds, while also meeting its needs. FirstNet's facility requirements were as follows:

- Available within 60 – 120 days to accommodate rapid on-boarding of staff
- Occupancy cost is competitive within the DC metro market
- Meets Federal Government security requirements
- Easy access to commercial airport
- Easy access to Department of Commerce, Congress, supporting Federal agencies
- Space available for long-term lease (5+ years)

Additionally, FirstNet looked at vacant Federal space before considering commercial market opportunities.

FirstNet's Reston Facilities at the USGS

RESTON, VIRGINIA

GSA conducted a search of available Federal space and proposed vacant space in the U.S. Geological Survey (USGS) building in Reston, Virginia. The USGS building had space that was immediately available for occupation/ move-in and swing space to accommodate staff during renovations to upgrade the facility to meet FirstNet's needs. In June 2014, FirstNet moved into the USGS building where it occupies 21,600 square feet of office space. A renovation construction contract was awarded in September 2014 to improve the office space, with an estimated construction completion date of July 2015.

BOULDER, COLORADO

FirstNet's technical center and the Office of the Chief Technical Officer are located in Boulder, Colorado. The Boulder location enables interactions with the Department of Commerce's Public Safety Communications Research (PSCR) program, which is headquartered at the Department of Commerce laboratories in Boulder as well. The FirstNet Boulder location will also facilitate collaboration with telecommunication companies in the western United States. GSA procured a lease in a commercial building for 28,590 square feet. FirstNet plans to complete minor renovations to accommodate personnel growth in FY15.

FirstNet's Boulder, CO technical offices

RESOURCES, DEPLOYMENT, AND OPERATIONS
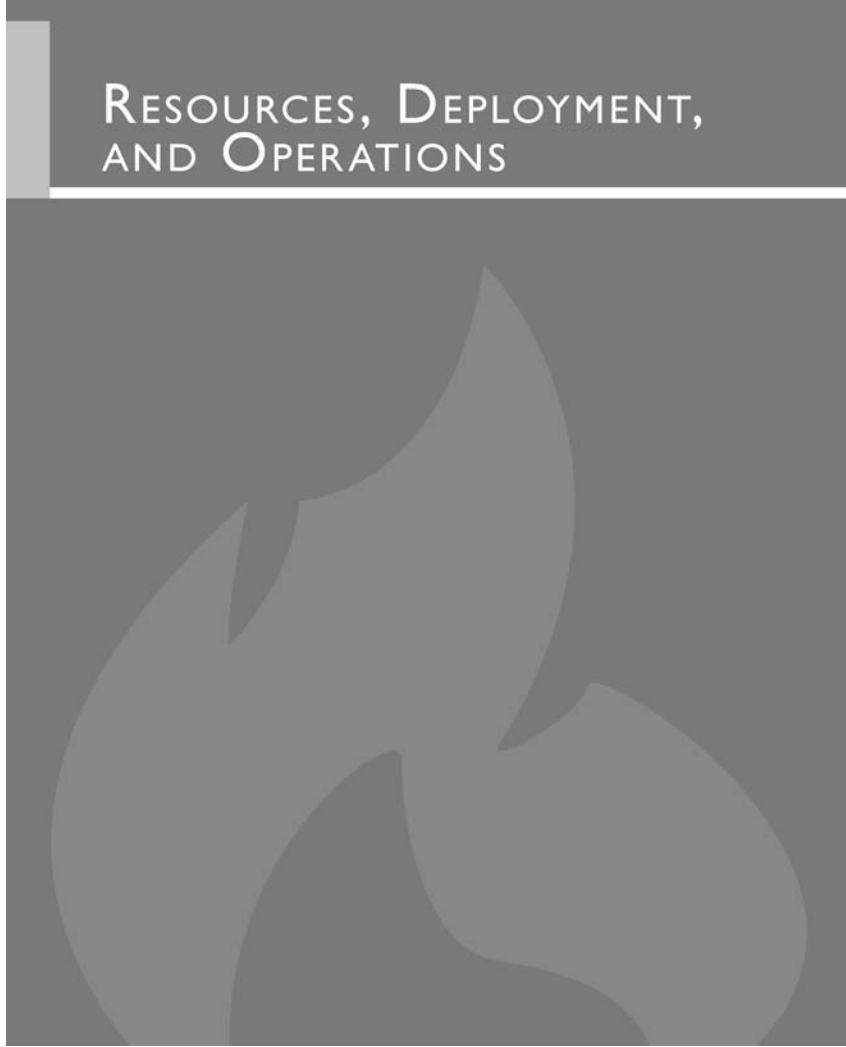
Resources, Deployment, and Operations

Ensuring the building, deployment, and operation of a reliable, interoperable and sustainable nationwide LTE broadband network for public safety

NETWORK AND DEPLOYMENT STRATEGY

COMPREHENSIVE NETWORK SOLUTION RFP

FirstNet's strategic program roadmap led to a procurement strategy focused on the development of a Comprehensive Network Solution RFP. The technical team within FirstNet narrowed its efforts on the completion of market research and the development of a strategy needed for this large-scale acquisition. In April 2014, FirstNet released an Applications RFI, bringing to 12 the number of RFIs issued across FY13 and FY14 that focused on individual components of the network. The results of these 12 RFIs, and the findings from numerous vendor meetings conducted by FirstNet, were studied and assisted in the development and release of the 13th RFI in September 2014 along with a draft Statement of Objectives. This RFI focused on soliciting feedback for a Comprehensive Network Solution as opposed to individual network components. This Comprehensive Network Solution RFI formed the basis for the FirstNet Procurement process that will lead to a final RFP that will identify commercial partner(s).

The FirstNet technical team is leading the analysis of the industry and public responses to the Comprehensive Network RFI, with support across the FirstNet organization. This analysis will result in a final Market Research Report that will inform the development of the Comprehensive Network Solution RFP and the specific acquisition documents that will be required for the RFP.

Communication
- Video
- Voice (non-mission critical)
- Messaging
- SMS/Text
- Data (Internet)

Applications
- CAD, RMS, NLETS
- FirstNet applications i.e. AVL
- Syndicated applications
- Currently used Agency applications

Services
- Records management
- Data storage
- Audio storage
- Database inquiries

Capabilities
- Network monitoring and status
- Integrated solution and services
- Priority
- Hardened and secure
- Provisioning

Figure 1. Key Elements of the FirstNet NPSBN

FirstNet received additional information from the public safety community regarding site hardening, which was outlined in a Public Safety Grade Report[20]. The technical team, in conjunction with FirstNet's Public Safety Advisory Committee, began an analysis of the suggestions listed in the report to determine their applicability to the FirstNet network, their cost, and how they would affect user fees and sustainability.

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20 The National Public Safety Telecommunications Council, "Defining Public Safety Grade Systems and Facilities." May 22, 2014. Available at: http://www.npstc.org/download.jsp?tableId=37&column=217&id=3066&file=Public_Safety_Grade_Report_140522.pdf.

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PUBLIC SAFETY ADVISORY COMMITTEE (PSAC)

The PSAC, a 40-member committee established in February 2013 pursuant to the Act, provided significant recommendations and advice to FirstNet in FY14 on critical issues through approximately 15 engagements, frequent calls with the Outreach Board Committee Chair, numerous meetings and calls with FirstNet management, and independent work by PSAC members outside regular engagements.[21] The PSAC collaboratively developed and delivered the following documents to FirstNet this fiscal year:

- **Human Factors Report** (November 2013): Analyzes the long-range impacts of the network on the way law enforcement, fire, and EMS operate and consider the impact the network will have on their duties once it is built and operating.[22]
- **Potential Users – National Public Safety Broadband Network (NPSBN)** (July 2014): Identifies and categorizes lists of potential network users.
- **Use Cases for Interfaces, Applications, and Capabilities for the NPSBN** (July 2014): Documents envisioned use cases for interfaces, applications, and capability for the network.

In June 2014, the FirstNet Board formally adopted the PSAC charter[23], which outlines the PSAC's management structure, and details how the PSAC will coordinate with FirstNet going forward. As requested by FirstNet, the PSAC is establishing a Tribal Working Group and an Early Builder Working Group. The Tribal Working Group is tasked with providing advice on tribal outreach, education, and inclusive consultation strategies to ensure full participation by tribal entities in the network. The Early Builder Working Group is tasked with providing advice on early builder strategies and lessons learned to assist in planning efforts for the network. Additionally, in the coming year FirstNet has tasked the PSAC with providing critical advice and recommendations on an initial framework for implementing access prioritization, user pre-emption, and prioritized application use.

FirstNet also participated in many PSAC member annual conferences and meetings, taking advantage of a valuable opportunity to reach the public safety community across all disciplines. FirstNet also hosted two public safety association engagements in April and September to provide DC-based association staff with the latest updates on FirstNet. These briefings were well received and will continue in the coming year.

PUBLIC SAFETY COMMUNICATIONS RESEARCH (PSCR) PROGRAM

The PSCR Program resides within the Department of Commerce laboratories in Boulder, Colorado, and is a joint effort between the NIST Communication Technology Lab and the NTIA Institute for Telecommunication Sciences. The PSCR program provides research, development, testing, and evaluation to foster nationwide public safety communications interoperability. PSCR has also taken a lead role in public safety broadband wireless communications standards development, testing, and evaluation. Drawing on critical requirements provided by public safety practitioners, the PSCR program provides leadership to wireline and wireless standards committees developing standards for voice, data, image, and video communications.

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21 A full list of PSAC members and organizations is available at: http://firstnet.gov/about/public-safety-advisory-committee (last accessed January 12, 2015).

22 The FirstNet PSAC Human Factors Report, available at: http://www.firstnet.gov/sites/default/files/PSAC%20Human%20Factors%20 Report-FINAL.pdf

23 First Responder Network Authority Board Resolution 59, available at: http://www.firstnet.gov/sites/default/files/Board%20 Resolution%2059%20on%20PSAC%20Charter_0.pdf (last accessed January 12, 2015).

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The PSCR Program continues to perform technical research and development work on behalf of FirstNet in the following three key areas via funding provided by an inter-agency agreement:

PSCR Program housed in Boulder, Colorado

- Representing FirstNet in international standards development bodies, such as the 3rd Generation Partnership Project ("3GPP") and the Alliance for Telecommunications Industry Solutions ("ATIS") to ensure future FirstNet network requirements will be developed in the appropriate open standards processes (examples include: Push-To-Talk, Proximity Services, and Group Communications);
- Testing and Evaluation of key LTE features that are critical to FirstNet service offerings such as Quality of Service, priority usage, and pre-emption of secondary users in times of network congestion and overload; and
- Simulation and modeling efforts in support of developing approaches for cell site network planning and excess capacity analysis for secondary users.

FirstNet utilization of PSCR for standards development

Working directly with PSCR, FirstNet continues to make significant progress within the worldwide standards body, Third Generation Partnership Project (3GPP), which is creating the technical specifications for LTE technology.[24] According to the 3GPP website, "(t)he 3GPP unites seven telecommunications standards development organizations … known as 'organizational partners' and provides their members with a stable environment to produce the Reports and Specifications that define 3GPP technologies."[25] As a result of this collaboration, FirstNet has helped to develop broad international coalitions to push for the prioritization of public safety standards development within 3GPP for LTE technology.

Testing, evaluation, modeling, and simulation

Through testing, evaluation, modeling, and simulation we have validated certain key elements and features for priority and preemption within the LTE environment. Further refinement is required and underway to fine-tune these elements. In addition, the FirstNet technical team has assisted in validating certain key assumptions within the FirstNet Strategic Roadmap, including the modeling of cell site locations nationwide and the amount of excess spectrum capacity that may be available for secondary use.

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24 In the enabling statute, FirstNet is assigned the responsibility of representing public safety at the formal standards bodies - Section 6206 (c) (7).

25 About 3GPP, available at: http://www.3gpp.org/about-3gpp/about-3gpp (last accessed January 12, 2015).

Next steps for PSCR and PSAC Collaboration

FirstNet will continue to work with PSCR and the PSAC throughout the development of the network. We have already seen tremendous benefit from our cooperative relationship with PSCR and we look forward to achieving additional successes through the Inter-Agency Agreement. We will also be working very closely with the PSAC in order to help define the framework for priority and preemption on the network. Leveraging our public safety experts for this important task is crucial if we are to successfully reach a solution to these challenging undertakings.

Streamlining of Acquisition and Procurement

One major hurdle in the deployment of the network will be acquiring the equipment and services needed. FirstNet has followed the Federal Acquisition Regulation (FAR) to comply with the Act's "open and transparent" requirements.[26] The FAR process for acquiring goods and services, compared to private sector acquisition and procurement, is generally more cumbersome and costly, takes more time, and tends to provide less flexibility to allow for complex negotiations and future modifications of existing awards.

EARLY BUILDER PUBLIC SAFETY PROJECTS

During FY14, FirstNet executed three spectrum manager lease agreements (SMLAs), with Adams County in Colorado,[27] the State of New Jersey,[28] and, the State of Texas (allowing for public safety broadband network service in Harris County). FirstNet reached similar agreements in FY13 with the Los Angeles Regional Interoperable Communications System Authority ("LA-RICS") and the State of New Mexico. As a result, FirstNet now is able to work closely with five early builder projects to gather key learning lessons that will help drive efficiencies and better understanding of key factors important to the design and development of the FirstNet nationwide network. Four of these projects are funded through the NTIA Broadband Technology Opportunities Program (BTOP). The Harris County project was funded through a Department of Homeland security grant.

LA-RICS

The targeted key learning conditions plan for LA-RICS focuses on secondary responder partnerships, quality of service, and priority and preemption techniques to ensure the network properly serves public safety. Specifically, FirstNet seeks to learn from LA-RICS' efforts to establish partnerships with utilities and secondary responders, while ensuring the network mechanisms are in place to alert and manage operations during network congestion events that may impact performance to the end public safety user. As a fully functional network is required to commence testing of the technical aspects of this project, FirstNet has been supporting the project to date with planning, deployment, and implementation guidance. Construction began in November 2014 and is scheduled for completion by July 2015. FirstNet will continue to work with NTIA to monitor deployment progress.

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26 The FAR, codified in Parts 1 through 53 of Title 48 of the Code of Federal Regulations, generally governs acquisitions of goods and services by executive branch agencies, and implements numerous acquisition statuses.

27 Adams County Communications Center, Inc.

28 Through the State of New Jersey Office of Information Technology.

New Mexico

The New Mexico Early Builder network is being built to support several key goals that will also likely to be challenges for FirstNet. New Mexico is building sites adjacent to the Mexican border to understand the impacts of shared international spectrum use. Specifically, Mexico's choice of the Asia-Pacific Telecommunity band plan could pose significant interference on the border with the United States. Addressing these cross-border interference challenges will be a key learning opportunity for FirstNet. New Mexico is also developing key learning opportunities on Federal partner use of the network and integration of the radio access network to a remote core. FirstNet anticipates that within FY15, New Mexico will launch its LTE network, meeting the BTOP award funding and deadlines as coordinated with NTIA.

New Jersey

The State of New Jersey's key learning plan focuses on demonstration and documentation of the use and capabilities of rapidly deployable assets, conducting emergency management exercises and training activities with these deployable assets, and documenting best practice Network Operations Center notification approaches, including trouble ticketing, prioritization, reporting, and close-out. Given that deployable assets will likely be a key element of the network, FirstNet has worked actively and collaboratively with the state and NTIA to support planning and implementation of these capabilities. In FY15, we expect the New Jersey network to be deployed, integrated, and tested – commencing initial operations in three areas of the state. We also plan to continue implementation of the defined key learning objectives in concert with the state.

Texas

The SMLA with the State of Texas was executed in August 2014. Thirteen LTE sites, built under a FEMA Port Security grant awarded in 2011, cover a large area within Harris County, Texas, and already support some police and fire capabilities. Harris County is focusing on several operational key learning lesson opportunities, including operational training, operations during special events (when commercial networks sometimes reach capacity limits), analytics on user and network usage, and evaluating extended LTE coverage for rural areas. Further, the state will work with FirstNet to transition its local core network to the nationwide network. In combination, these key learning opportunities are expected to provide FirstNet with significant understanding of how to operate the network in the unique public safety environment.

Colorado

Adams County, Colorado's BTOP-funded network has 15 of 16 LTE sites on air and is beginning to gain public safety user interest. Adams County is focused on three key learning opportunities: user device testing, demonstrations of public safety functionality, and network performance testing. With close proximity to the FirstNet Boulder office, Adams County is well positioned to provide real-world learning opportunities critical to the development of initial network capabilities and ongoing evolution of devices and services.

In addition to the focus on the key learning opportunities defined in the key learning plans, FirstNet is also using these projects to gather informal key lessons learned that will also benefit the development of the nationwide network. These informal key learning opportunities continue to directly benefit our consultation and outreach teams, our RFP development teams, as well as other FirstNet offices.

FINANCIAL CONDITION

Developing cost containment measures to ensure all resources are used effectively to meet FirstNet's mission and demonstrate leadership towards self-sustainability to all external stakeholders

FINANCIAL CONDITION

Until FirstNet deploys a network and has reached critical mass of subscription paying users, the organization will continue to operate as a startup. During this phase, FirstNet's only sources of funding are NTIA's authority to borrow up to $2 billion in initial capital from the Treasury and any proceeds from FCC auctions in excess of the amounts NTIA borrows up to an additional $5 billion. To date, no operating revenues have been realized and spending from the borrowing has been focused on building the organization and implementing the Strategic Roadmap. Key spending priorities included putting in place the staffing - both federal and contracted experts - necessary to support the various consultation and outreach efforts that took place across the country, performing the market research, technical drafting of acquisition documents, reviewing RFI responses, and creating the internal capability required to support the FirstNet mission.

In FY13, NTIA borrowed $37 million of the $2 billion made available by the Act from the Treasury. In FY14, NTIA borrowed an additional $1.96 billion. Cumulatively through FY14, NTIA has transferred $43.3 million of these funds to FirstNet to support operations. Additional sums will be made available in future years as FirstNet continues to prepare for, and deploy the network.

In addition to the NTIA borrowing in FY14, the FCC completed its auction of the H block, raising $1.56 billion. As required by the Act, $1.22 billion (the auction proceeds, net of a deduction for funding FCC auction costs) reimbursed Treasury for that amount of the NTIA borrowing. At the end of FY14, NTIA and FirstNet had available approximately $1.94 billion to support future activity. The AWS-3 auction has since had positive results and FirstNet is confident that the remaining authorized funding will be forthcoming.

FirstNet's operating results are highlighted in the table below, which contains summary financial data from FirstNet's audited FY13 Financial Report and unaudited FY14 financial results. While FirstNet believes that the financial data presented are accurate, FirstNet's FY14 financial results will be audited by an independent auditor procured by the Secretary of Commerce. Upon completion of the auditor's work, the results of the audit will be provided to Congress, the President, and the FirstNet Board and also will be made available to FirstNet stakeholders and the public on the FirstNet.gov website.

Selected Financial and Operating Data ($ in Thousands)			
At September 30 and for the year ended - unaudited:	FY 2014	FY 2013	Percent Change FY 2013 vs FY2012
Financial Data			
Operating Revenues	-	-	n/a
Operating Expenses	24,388	17,002	43%
Other Income	71	-	n/a
Operating Deficit	24,317	17,002	43%
Net Deficit	22,662	17,002	33%
Contributions Received from NTIA to Fund Operations	23,129	18,023	28%
Total Assets	9,951	5,191	92%
Net Position	3,635	1,021	256%
Operating Data			
Number of Employees (Excluding Board Members)	75	8	838%

OPERATING RESULTS

FirstNet continued to operate pre-revenue in FY14. Operations were financed by an NTIA cash contribution of $23.1 million and a receivable of $2.2 million due from the funds NTIA borrowed from the Treasury. Before depreciation, total operating expenses during the year were $24.3 million and FirstNet paid $0.9 million to acquire capitalized assets. The operating expenses were a 43 percent increase over the prior year, primarily reflecting the increase in personnel and activities to execute the Strategic Roadmap. Contractor support costs also increased as FirstNet expanded its outside experts to include program management and communications specialists to support the Comprehensive Network Solution RFP development process and outreach and consultation activities, including establishing the FirstNet website.

SIGNIFICANT ACCOUNTING POLICIES AND SUMMARY FINANCIAL REPORT

Spectrum License Valuation

On November 15, 2012, the FCC granted FirstNet a license for use of the public safety broadband spectrum (763-768/793-798 MHz) and the adjacent D Block (758-763/788-793 MHz), a commercial spectrum block that the Act required the FCC to reallocate for public safety use, under the call sign WQQE234. In accordance with the Act, the license was granted to FirstNet at no cost. Further, under current law the license is not tradable or exchangeable in any market, and any valuation based upon potential cash flow would be speculative and unreliable as any usage of the license would be dependent on a future procurement by FirstNet to allow covered leasing agreements. Therefore, FirstNet does not present a value for the license in its financial statements at this time.

Presentation of Net Position and NTIA Borrowing

Under the Act, borrowing authority resides solely with NTIA and borrowed funds are maintained as a fund balance with Treasury in the Public Safety Trust Fund (PSTF), an NTIA Treasury account.[29] As such, when FirstNet incurs cash expenses (or purchases assets), NTIA pays these amounts on FirstNet's behalf without requirement for reimbursement. FirstNet reports these payments as contributed capital in the balance sheet and as a capital receivable to offset current liabilities.

Limitation on Administrative Expenses

In establishing FirstNet, Congress limited the amount FirstNet can spend on administrative expenses to $100 million during the first 10 years of operation. Constraining administrative costs to this total (less than 1.5 percent of the $7 billion of funding made available from auction receipts) may limit FirstNet's flexibility to grow and adapt as needed and may introduce risks to the program. After significant financial modeling, this cap has been identified as a future barrier for FirstNet progress because it is projected to limit administrative costs to impractical levels. Management estimates that to operate within the limitation, FirstNet and the public will have to accept risks to FirstNet operations necessitated by the requirement to limit FirstNet's internal capacity to manage human resource, budget and finance, procurement, information technology, board activities, and legal services that support the FirstNet program. As of September 30, 2014, FirstNet has paid $8.5 million in administrative expenses subject to the limitation.

Summary of Administrative Expenses Paid Subject to Limitation ($ in Thousands)		
10-Year Administrative Expenses Limitation		100,000
FY 2013 Administrative Expenses Paid	2,319	
FY 2014 Administrative Expenses Paid	6,152	
Cumulative Administrative Expenses Paid		8,471
Administrative Expenses Available for Payment in Future Periods		91,529

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29 Net Position is the excess of assets over liabilities.

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Summary Financial Report ($ in Thousands)			
FY 2014 Results Unaudited	FY 2014	FY 2013	Percent Change FY 2013 vs FY2012
Summary Balance Sheet			
Receivables	6,388	4,170	53%
Property, Plant and Equipment	2,404	-	n/a
Other Assets	1,159	1,021	14%
Total Assets	**9,951**	**5,191**	**92%**
Accounts Payable	5,216	3,931	33%
Other Liabilities	1,100	239	360%
Total Liabilities	**6,316**	**4,170**	**51%**
Net Position	**3,635**	**1,021**	**256%**
Total Liabilities and Net Position	**9,951**	**5,191**	**92%**
Summary Statement of Operations			
Operating Results			
Operating Expenses	24,388	17,002	43%
Less: Other Income	71	-	n/a
Net Cost of Operations	24,317	17,002	43%
Less: Gain on Donated Property Received	1,655	-	n/a
Net Deficit	**22,662**	**17,002**	**33%**
Summary Statement of Cash Flows			
Net Cash Used to Finance Operations and Asset Purchases	23,129	13,853	67%
Less: Capital Contributions - Received	23,129	13,853	67%
Cash Balance at Year End	**-**	**-**	**n/a**

CONCLUSION

FirstNet is a unique and complex organization with a purpose that comprises the essence of public service: to serve our states, cities, and communities by helping to make those whom they protect, safer each day. FirstNet's mission to ensure the building, deployment, and operation of the nationwide public safety broadband network has the potential to revolutionize public safety communications and fulfill the 9/11 Commission's recommendation. This network will increase the capabilities of public safety and protect the American people for years to come.

FirstNet made significant progress in FY14 towards realizing its mission. As evidenced in this report, FirstNet has used four strategic long-term goals to guide its actions during the past year and will continue to do so. During FY14, FirstNet laid the foundation for a high-performing organization that will be able to meet the needs of the public safety community by hiring its executive leadership and continuing to appoint thought leaders from public safety and the private and public sectors to the Board. FirstNet pursued its goal to build strong partnerships with local, state, tribal, and Federal public safety agencies by formally launching our statutorily required state consultation process, and by coordinated outreach efforts that reached over 20,000 police officers, fire fighters, emergency medical technicians, mayors, governors, industry leaders, and other key stakeholders.

FirstNet ensured resources are being used efficiently to accomplish our mission by establishing the FirstNet Finance Committee of the Board, establishing FirstNet-specific ethics and compliance policies, hiring a Chief Financial Officer, and by being highly efficient with its budget. Finally, FirstNet took key steps in FY14 towards the deployment and operation of a reliable, interoperable, and survivable network by issuing a public notice for comment regarding key legal interpretations of the Act, releasing a comprehensive network RFI – our thirteenth RFI thus far, releasing a draft Statement of Objectives for the acquisition of the nationwide network, and continuing progress towards the release of a draft RFP scheduled for spring 2015.

FirstNet looks toward the future with confidence that it has been given the necessary tools to ensure the construction of a network that will finally bring next generation priority wireless broadband communications to millions of first responders at the local, state, tribal, and Federal levels. FirstNet has a difficult task ahead, but with the support of the public safety community, the private sector, and local, state, Federal, and tribal leaders, we anticipate success in accomplishing our mission.

Additional Information:

Please visit our website for additional resources, Board presentations, and vendor communication contact forms at: www.firstnet.gov

For further information or questions, please contact FirstNet Office of Government Affairs at: governmentaffairs@firstnet.gov

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FirstNet™

U.S. DEPARTMENT OF COMMERCE

The CHAIRMAN. Thank you, Ms. Swenson.

Mr. Zinser.

STATEMENT OF HON. TODD J. ZINSER, INSPECTOR GENERAL, U.S. DEPARTMENT OF COMMERCE

Mr. ZINSER. Chairman Thune, Ranking Member Nelson, members of the Committee, we appreciate the opportunity to testify today as the Committee examines FirstNet's progress and challenges in establishing the national public safety broadband network called for under the Middle Class Tax Relief and Job Creation Act of 2012. Unlike the Nationwide Telecommunication Network's currently available, which have been built by the private sector, the act authorizes FirstNet to use a substantial amount of public money, $7 billion, to build the public safety network; making internal controls in compliance with those internal controls all the more important.

There is no question that it is critically important for our first responders nationwide to have state-of-the-art communications and data capabilities at all times. Getting there will be very challenging. Oversight at FirstNet is also very challenging. At an April 23, 2013 FirstNet Board meeting, a former Board member presented a resolution raising various concerns about Board operations in decisionmaking, including issues related to ethics and procurement.

In September 2013, a Special Review Committee, established by the Board, issued a report that addressed issues of openness and transparency, Board member's access to information, and network planning. The report did not substantiate the concerns of the former Board member.

In October 2013, the previous Board Chairman, with concurrence with the Board, asked my office to take over the inquiry into ethics and procurement. We issued our report in December 2014. FirstNet did not wait for our report to begin making important changes. For example, among other things, FirstNet hired a Chief Council, established a compliance program within the Office of Chief Council, and coordinated with our office in developing a training program for its Board members and staff.

Nonetheless, the results of our audit disclosed serious problems. In the area of ethics, we found confidential and public financial disclosure monitoring procedures were inadequate, some Board members did not file timely disclosure reports, and monitoring of potential conflicts of interest needed improvement. For example, we found that one, now former Board member did not file a required public financial disclosure report and, when eventually doing so, did not disclose a significant interest or position in a conflicting company. Another, now former Board member submitted a required public financial disclosure report 5 months late.

We consider the issue of financial disclosure reporting an especially important internal control because the FirstNet mission and membership of the Board necessarily include close ties to the telecommunications industry creating a greater risk of potential conflicts.

In the area of procurement, we found that FirstNet's contracting practices lack transparent award, competition, sufficient hiring and

adequate monitoring of contracts. For example, we found that the justification for a non-competitive $8.4 million sole source contract was not adequate and that a former Board member had inappropriately directed the contractor, in advance of the contract award, to hire specific individuals. This created the appearance that the contractor was required to hire these individuals in order to be awarded the contract.

Unduly close personal relationships with contractor personnel can create the appearance of favoritism and may call into question the integrity of the procurement process. We made nine recommendations to address our findings. Some recommendations have already been implemented and we continue to work with the Department and FirstNet on implementation of the remaining recommendations.

In our opinion, our findings were taken very seriously and progress has been made since these issues were first raised nearly 2 years ago. However, significant challenges remain. Moving forward, the areas that we have identified as watch items, which are well-known to FirstNet, include the following: ensuring the adequacy of funding for a nationwide network; determining the sufficiency of assets contributed to the network by states, local governments and commercial entities; incorporating lessons learned from the Broadband Technology Opportunities Program; continuing to address identified internal control weaknesses; and effectively executing the consultation process. We are continuing our oversight of FirstNet and we'll keep the Committee informed of FirstNet's progress with respect to these challenges and any others we identify through our audits and investigations.

Finally, I do wish to inform the Committee that the act did not specifically authorize FirstNet funding to be dedicated to OIG Oversight. As a result, for the past two years, we have been working with the Department on funding our oversight. The Fiscal Year 2016 budget requests an appropriation for OIG's oversight work; however, the Committee may want to consider whether it is more appropriate to authorize funding for OIG's oversight from FirstNet's mandatory funds.

Mr. Chairman, this concludes my testimony. I'd be pleased to answer any questions.

[The prepared statement of Mr. Zinser follows:]

PREPARED STATEMENT OF HON. TODD J. ZINSER, INSPECTOR GENERAL, U.S. DEPARTMENT OF COMMERCE

Chairman Thune, Ranking Member Nelson, and Members of the Committee:

We appreciate the opportunity to testify about the current status of and challenges encountered by the First Responder Network Authority (FirstNet). Effective oversight of FirstNet is critical. Our last three *Top Management Challenges (TMC)* reports, for Fiscal Years (FY) 2013 through 2015, included addressing First Net's implementation of a nationwide wireless broadband network for public safety users among the most significant management and performance challenges facing the Department of Commerce.

Our testimony today, about 3 years after the passage of the Middle Class Tax Relief and Job Creation Act of 2012[1] that established FirstNet, will focus on (I) FirstNet's work to date; (II) the Office of Inspector General's (OIG's) completed oversight efforts; (III) OIG's ongoing oversight of FirstNet; and (IV) the continuing chal-

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[1] Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112–96.

lenges the Department and FirstNet face in their efforts to ensure implementation of a nationwide, interoperable, wireless broadband network for the public safety community.

I. Introduction to FirstNet

Establishment and purpose

Signed into law on February 22, 2012, the Middle Class Tax Relief and Job Creation Act of 2012 (the Act) established FirstNet as an independent authority within the Department of Commerce's National Telecommunications and Information Administration (NTIA). The Act authorized and allocated up to $7 billion in funding to NTIA for the establishment of an interoperable Nationwide Public Safety Broadband Network (NPSBN). This network is being built to address failures that occurred in the United States on September 11, 2001, during the terrorist attacks, in which first responders could not effectively communicate.

FirstNet is governed by a 15-member Board consisting of the Attorney General of the United States, the Secretary of Homeland Security, the Director of the Office of Management and Budget, and 12 nonpermanent members, including representatives from state and local governments the public safety community, and technical fields. After a public recruitment process, NTIA recommended candidates to the Acting Secretary of Commerce, who announced the appointments in August 2012. The Board's first meeting was held in September 2012. The Act calls for the termination of FirstNet 15 years after its enactment, in 2027.[2] However, no later than 10 years after the Act's enactment, in 2022, the Comptroller General of the United States must submit to Congress a report on what action Congress should take regarding this 2027 sunset provision.[3]

Organization and initial implementation

For roughly the first year and a half of its existence, certain FirstNet Board members functioned in management roles. The Board eventually assembled a management team which assumed all operational responsibilities (see section IV for further details). As of December 2014, FirstNet is organized with multiple program offices reporting to a Deputy Executive Director along with divisions covering areas such as procurement, user advocacy, financial operations, legal counsel, information technology and administration.

So far, implementation of the NPSBN has occurred in the following areas:

- *Establishing an organizational structure.* FirstNet hired key leadership and support staff for its day-to-day operations; developed internal controls; established its headquarters in Reston, Virginia, and its technical headquarters in Boulder, Colorado; awarded contracts to obtain project management and planning support, professional and subject matter support, and network and business plan development; and signed interagency agreements with other Federal entities to provide key services.

- *Conducting initial consultation and outreach.* FirstNet launched a website, conducted conference calls and webinars with state single points of contact, coordinated with NTIA's State and Local Implementation Grant Program (SLIGP) team, and established its Public Safety Advisory Committee (PSAC).[4] In July 2014, FirstNet began to hold a series of state consultation meetings. As of March 2, 2015, 15 of these state consultations had been held.

- *Finalizing a network design approach.* In FY 2013, FirstNet issued 12 requests for information (RFIs) seeking input from vendors and other stakeholders; in FY 2014, it issued another RFI—for assistance in developing a comprehensive network acquisition strategy—and issued a public notice and request for comments seeking input regarding preliminary interpretations of FirstNet's enabling legislation. It also established spectrum lease agreements with four public-safety projects funded by NTIA's Broadband Technology Opportunities Program (BTOP) grant awards program.

FirstNet's current focus is on the consultation and the acquisition/request for proposal (RFP) processes.

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[2] Id. § 6206(f).

[3] Id. § 6206(g).

[4] The Middle Class Tax Relief and Job Creation Act of 2012 required FirstNet to establish the PSAC. It was created in February 2013 and consists of 40 members representing all disciplines of public safety as well as state, territorial, tribal, and local governments. See "Public Safety Advisory Committee" *www.firstnet.gov/about/public-safety-advisory-committee.*

Funding and expenditures

The Act authorizes up to $7 billion in funding to FirstNet for deployment of the NPSBN. Initial funding of FirstNet will come from Federal Communications Commission (FCC) spectrum auction proceeds. The FCC spectrum auction, completed in January 2015, raised about $45 billion, enough to cover the $7 billion targeted for FirstNet under the Act. FirstNet holds the single Public Safety Wireless Network License for use of the 700 MHz D block spectrum and a pre-existing block of public safety broadband spectrum.

Over the long term, FirstNet must be self-sustaining, through user fees and revenue generated from agreements with third parties that will leverage the value of the network capacity.

FirstNet's expenditures are expected to increase as it moves toward building the NPSBN. FirstNet reported that it spent less than $250,000 in FY 2012. In FY 2013, it spent about $17 million, and in FY 2014, it spent an estimated $26 million.[5] In September 2014, FirstNet's Board approved a budget of $120 million for FY 2015. Its FY 2016 budget proposal is for approximately $160 million. This will provide funding for approximately 150 full-time-equivalent positions, as well as additional contracting and administrative support. FirstNet has entered into various inter-agency agreements, hired support contractors and, in September 2013, issued a $67.2 million blanket purchase agreement (BPA) with three contractors for technical and subject matter expert support tasks, to be issued over a 2-year period.

II. OIG's FirstNet Oversight to Date

FirstNet's authorizing legislation did not contain a direct provision for permanent, ongoing oversight. The law provides for two required reviews: (1) an annual independent audit of FirstNet's financial operations and condition and (2) a Government Accountability Office (GAO) report, not later than 10 years after enactment of the Act, or in the year 2022, on what action Congress should take regarding FirstNet's 15-year sunset provision. Nonetheless, since FirstNet is part of the Department of Commerce, and given the importance of this program and substantial commitment of public funds, our office is exercising oversight.

We have established a dedicated audit and evaluations team to oversee the Department's and FirstNet's effort. In addition, we operate a fraud, waste, and abuse hotline for the Department of Commerce through which we have received complaints related to FirstNet and we conduct follow-up on those complaints.

Building on OIG's experience with broadband and public safety programs (*e.g.,* the Public Safety Interoperable Communications grant program and BTOP), the team's initial audit and evaluation activities have included:

- Tracking the progress of FirstNet by observing Board proceedings, meeting with NTIA and FirstNet officials, monitoring FirstNet and NTIA for key actions taken to implement the network, and reviewing key program documents (*e.g., Federal Register* notices and webinar slide decks)

- Developing an initial risk assessment in FY 2013 and reassessing risk as part of annual Department-wide assessments

- Identifying FirstNet as a management challenge in our FYs 2013–2015 *Top Management Challenges* reports

- Providing an information memorandum for FirstNet in February 2014 to identify FirstNet's initial management challenges (including establishing an effective organization, fostering cooperation among various state and local public safety agencies, integrating existing grants to enhance public communications capabilities into FirstNet, and creating a nationwide long-term evolution network)

In addition, we issued a December 2014 audit report on ethics-and procurement-related issues raised by a FirstNet Board member in 2013.[6] At an April 23, 2013, FirstNet Board of Directors meeting, a Board member presented a resolution raising various concerns, including: (1) openness and transparency in decision making by the FirstNet Board, (2) Board members access to records, (3) the development of a plan for FirstNet's NPSBN, and (4) issues related to ethics and procurement. In ad-

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[5] Outlays, not expenses, were provided for FY 2012. FirstNet began financial reporting in FY 2013. The FY 2014 results have not been audited yet.

[6] U.S. Department of Commerce Office of Inspector General, December 5, 2014. *FirstNet Must Strengthen Management of Financial Disclosures and Monitoring of Contracts,* OIG–15–013–A. Washington, D.C.: DOC OIG. See this report for additional detail.

dition, the Board member met with the Inspector General in July 2013 to discuss his concerns.

In May 2013, the FirstNet Board established a Special Review Committee to examine these issues. In the public version of its report,[7] the Committee concluded that (1) the FirstNet Board had engaged in open and transparent decision making, (2) FirstNet did not withhold information from Board members, and (3) FirstNet was still developing its network plan with full consultation and outreach. In October 2013, the Board Chairman, based on conversations with the Inspector General, asked the OIG to take over the inquiry into ethics and procurement.

Our audit work, which covered 2012 and 2013, found:

A. *Confidential and public disclosure monitoring procedures were inadequate, some Board members did not file timely disclosure reports, and monitoring of potential conflicts of interest needs improvement.* Because of their status as special government employees and their level of compensation, FirstNet Board members are required to file confidential or public financial disclosure reports. The Department's Office of General Counsel (OGC) provided guidance to FirstNet Board members, each of whom was required to submit the confidential financial disclosure form; OGC also informed us that it initially provided ethics briefings for Board members, with counselling for those whose employment or financial interests could have created a conflict of interest.

The Department did not consider that some FirstNet Board members would devote enough time to their Board duties to trigger the requirement for the public financial disclosure form. Eight Board members did trigger the requirement in 2013.

Specifically, we found that OGC was unable to provide a record of all FirstNet confidential and public financial disclosure files, including due dates, as required by Federal regulations. Nor had OGC created a schedule of Board members' start dates of service, due dates of disclosures, or a centralized point of record showing the training and counselling provided. In addition, 6 months after the Board began regular meetings, senior NTIA and OGC officials were still debating how best to routinely monitor potential conflicts of interest.

One Board member initially did not file a required public disclosure and, when eventually doing so, did not disclose an interest in a conflicting company. Another Board member submitted the required public disclosure form 5 months late. Two others submitted inaccurate time-and-attendance records, in one case to avoid filing the required public financial disclosure. Finally, all four of these Board members continued to engage in decision making, even though they were not in compliance with the financial disclosure requirements.

Our report included a Department response stating that—although certain administrative requirements may not have been fulfilled with respect to disclosure—as far as the Department is aware, Board members made the material disclosures necessary to identify and address potential conflicts. The Department also stated that OIG did not identify any violations of conflict of interest laws or circumstances that actually affected decision making. In its February 3, 2015 action plan and March 5, 2015 revision to the plan requested by our office, the Department identified actions taken to address these findings. In this response, the Department asserts that various matters related to financial disclosures have been addressed. FirstNet has developed compliance procedures and now coordinates with the Department on financial disclosures and conflicts of interest.

B. *FirstNet's contracting practices lacked transparent award competition, sufficient oversight of hiring, and adequate monitoring.* NTIA was tasked with helping FirstNet with its start-up efforts, including the procurement of professional staffing services such as project management and planning support, professional and intellectual support, and support to develop network and business plans. Because NTIA does not have a contracting office, it secured contracting assistance from other Departmental bureaus. Between September 2012 and March 2013, the contracting offices at the Census Bureau and the National Institute of Standards and Technology (NIST) entered into three time-and-material (T&M) contracts on behalf of NTIA to meet FirstNet's procurement needs.

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[7] *See* FirstNet Special Review Committee, September 20, 2013. *Report on Openness and Transparency, Access to Information and Network Planning* [online]. *www.ntia.doc.gov/other-publication/2013/firstnet-special-review-committee-report.*

T&M/labor hour contracts are considered high risk because a contractor's profit is tied to the number of hours worked; therefore, the government assumes the risk for cost overruns. Because of this risk, OMB's Office of Federal Procurement Policy (OFPP)[8] requires agencies to provide appropriate government monitoring of contractor performance to give reasonable assurance that efficient methods and effective cost controls are being used.

We found that the three contracts were awarded as T&M contracts, with a total value of approximately $14 million (see table 1, next page). Although contract 1 was properly awarded and administered, contracts 2 and 3 were not, as a result of the following:

- *Sole-source procurement for contract 3 did not meet Federal Acquisition Regulation (FAR) exceptions to full and open competition requirements.* The FAR—with limited exceptions—requires government agencies to procure services by obtaining full and open competition through procedures such as soliciting sealed bids and requesting competitive proposals. There are exceptions to obtaining full and open competition when one of several circumstances exists: for example, when (1) there is an unusual and compelling urgency or (2) the procurement is authorized or required by a statute expressly authorizing or requiring an acquisition from a specified source or through another agency. Our review of the justification for the sole source award of the third contract—which NIST awarded noncompetitively to Workforce Resources, Inc. (WRI) for $8.40 million on March 18, 2013—showed that the justification was inadequate.

  According to NIST, it awarded contract 3 noncompetitively because it was the most expeditious way to meet the Act's requirement to establish FirstNet as operational within certain deadlines. Additionally, the contracting office stated in its Justification for Other Than Full and Open Competition (JOFOC) that the procurement was unusual, urgent, and compelling—and that the interruption in services would be costly, as FirstNet had mission essential milestone dates that had to be executed to meet criteria established under the Act. We determined that the justification was inadequate because (a) we found that neither the Act nor the JOFOC identified specific guidelines FirstNet was required to meet and (b) procurement needs did not meet criteria for unusual and compelling urgency.

- *Undue influence from a FirstNet official, which interfered with the contractor's ability to independently recruit and hire consultants.* On two separate contracts, a FirstNet Board member inappropriately directed WRI hiring actions. First, before contract 2 was awarded, the government inappropriately identified and recruited subject matter experts (SMEs). Specifically, FirstNet directed WRI via NIST's contracting office to include a total of 16 SMEs in its proposal. On November 6, 2012—9 days prior to contract award (*i.e.,* November 15, 2012)—NIST e-mailed WRI a spreadsheet containing the names of 14 SMEs. In addition, NIST also confirmed that 12 of the 16 SMEs included in the proposal were recommended directly by a FirstNet Board member, while the other 4 SMEs were transitioned in from the previous engagement with FunctionalIT (contract 1). The actions taken by the government gave the appearance that, in order to be awarded the contract, WRI was required to hire the SMEs recommended by the government.

  Neither contracts 2 nor 3 were designated as personal services contracts; however, in both cases, FirstNet directed the hiring of preselected SMEs. Control over hiring and firing decisions is one aspect of the traditional employer-employee relationship, and thus the exercise of such control by Federal employees over contractor personnel can create the appearance of a personal service contracts. Federal agencies generally may not enter into such contracts without explicit authority to do so, essentially because they circumvent the civil service system. In response to our report, FirstNet did not assert that it has this authority. Furthermore, NIST and NTIA contracting personnel should have implemented stronger controls to ensure an independent relationship with contractor personnel—by both allowing the contractor to independently conduct SME recruitment and by not allowing FirstNet to direct hiring actions. Unduly close personal relationships with contractor personnel can create the appearance of favoritism and may call into question the integrity of the procurement process.

- *Adequate surveillance not being conducted over contracts 2 and 3, resulting in approximately $11 million in unsupported costs to the government.* Contracts 2

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[8] OFPP memorandum, October 27, 2009. "Increasing Competition and Structuring Contracts for the Best Results."

and 3, which were T&M contracts, required a level of monitoring that FirstNet ultimately did not provide. Although the Contracting Officer's Representative (COR) appropriately and consistently rejected incorrect invoices, the COR was also required to review all draft and final work products for "completeness, accuracy, and appropriateness." However, we were unable to verify that this monitoring actually occurred. We also could not conclude that—at the end of both contract periods—FirstNet received the few deliverables that were expressly required by the contracts (*i.e.,* monthly status reports). WRI acknowledged that NIST did not require it to provide monthly status reports of tasks performed, even though such reports were required in contract 3.

Table 1.—Summary of FirstNet's Time-and-Materials (T&M) Contracts in FY 2012 and 2013

Contracting Bureau (and Contract Number)	Date	Contractor	Contract Value (Millions)
Census Bureau (Contract 1)	09/13/2012	FunctionalIT	$1.95
NIST (Contract 2)	11/15/2012	Workforce Resources, Inc.	$3.98
NIST (Contract 3)	03/18/2013	Workforce Resources, Inc.	$8.40
Total			*$14.33*

Source: OIG analysis of FirstNet reports.

Note: Contract 1 was awarded to FunctionalIT for $1.95 million on September 13, 2012, with a performance period ending on March 21, 2014. Contract 2 was awarded to Workforce Resources, Inc. (WRI) for $3.98 million on November 15, 2012, and was terminated on March 17, 2013, after $2.59 million was expended. Contract 3 was also awarded to WRI for $8.4 million on March 18, 2013, with a performance period ending on December 17, 2013.

In its response to our report, the Department stated that it monitored the performance of its early contracts and that it relied on an unusual and compelling urgency exception to full and open competition. The Department also concurred with our recommendations related to the procurement issues noted in our report. In its February 3, 2015, action plan and March 5, 2015, revision to the plan requested by our office, the Department identified actions planned and taken to address these findings, including its plan to provide guidance to contracting staff on correct procedures for (1) selecting contract types, (2) hiring consultants, (3) ensuring receipt of deliverables, and (4) outreach, training, and oversight effort to prevent occurrences of unauthorized commitments. We are currently reviewing the revised plan.

III. Current Audit Work

OIG continues its oversight of FirstNet. In November 2014, OIG initiated an audit of FirstNet's technical development of the NPSBN. We initiated our audit after coordinating with the GAO, which had already started an ongoing review.[9] Our objectives are to evaluate and assess FirstNet's efforts and progress to develop the technical design aspects for the NPSBN against key technical requirements and standards, the requirements of the Act, stakeholder requirements, and established performance metrics and milestones. These activities are central to FirstNet achieving its mission to ensure the creation, deployment, and operation of a single, nationwide network design of the NPSBN. We plan to issue a final report on our audit later in FY 2015.

We are currently reviewing interagency agreements used to support FirstNet operations along with its work with entities such as PSAC, NIST, and the FCC to determine whether FirstNet fulfilled consultation requirements of the Act. It is important for FirstNet to consult and collaborate with these entities—which, having expertise regarding interoperable communications networks and knowledge of public safety needs, can provide significant input to how the network can be designed successfully. We are also reviewing expenditures and costs related to technical design efforts to assess spending levels, and information related to initial state consultation meetings to assess progress in incorporating key state concerns into the development of the technical design.

Establishing the NPSBN requires coordination and buy-in from regional, state, tribal, and local jurisdictions. As designated by the Act, FirstNet began consultation with Single Points of Contact (SPOCs) from each state that were established to represent the needs of the different jurisdictions. In April 2014, FirstNet began a proc-

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[9] The GAO review assesses (1) the extent to which FirstNet is carrying out its responsibilities and establishing internal controls for developing the public safety network, (2) how much the public safety network is estimated to cost to construct and operate and how FirstNet plans to become a self-funding entity, and (3) what lessons can be learned from local and regional public safety network early builder projects.

ess to meet with each state to understand their unique communication needs for the network and to allow an exchange of ideas and questions about the NPSBN. As part of this process, the SPOCs invite members of the public safety community to attend the consultation meetings. FirstNet identified that the initial consultation meetings will be an important step to an iterative, ongoing state consultation process. To date, FirstNet has completed some consultations and has scheduled others through the end of FY 2015. However, as of March 2, 2015, FirstNet had not scheduled all initial state consultations.

In February 2015, we attended FirstNet's initial state consultation effort with the state of Delaware—an event attended by the SPOC and other public safety officials throughout the state. The purpose of our visit was to assess FirstNet's approach to meeting its state consultation requirements. We are considering how FirstNet provides updates on its efforts to develop the NPSBN, as well as how it acquires information from public safety attendees and their unique first responder needs. Our review of a sample of FirstNet state consultation meetings with local first responders found that their key concerns were the cost of participation in the NPSBN; the necessity of priority status for first responders and the ability to preempt other users when accessing a network; and FirstNet's ability to facilitate rural coverage. In addition, some meeting participants called attention to issues unique to their states, for example rugged terrain or reoccurring catastrophic weather events such as hurricanes or tornadoes.

IV. Continuing Challenges for the Department and FirstNet

Three years after the passage of the Act, FirstNet faces various short-and long-term challenges. As it proceeds, the Department and FirstNet will require continued oversight from OIG, GAO, and Congress. Among the most significant challenges are:

- Ensuring the adequacy of funding for a nationwide network
- Determining the sufficiency of assets contributed to the network by states, local governments and commercial entities
- Incorporating lessons learned from the Broadband Technology Opportunities Program (BTOP)
- Addressing identified internal control weaknesses
- Addressing staffing and other organizational issues
- Effectively executing the consultation process

Adequacy of funding for a nationwide long-term evolution (LTE) network

The Act provides up to $7 billion to build a nationwide public safety network. FirstNet must build a network that covers most of the 50 states, 5 territories, the District of Columbia, and 566 tribal nations. The 3.8 million square miles to be covered by the network will include areas that are urban, suburban, rural, and wilderness, as well as islands. Although up to $7 billion was initially authorized by the Act, the total costs to establish the network are still unknown.

Sufficiency of assets contributed to the network

Implementing the NPSBN will require that FirstNet leverage existing infrastructure, such as existing government and commercial buildings, towers, fiber or microwave backhaul, and data centers. Assets are expected to be contributed by various parties, including states, local governments, tribal entities, and commercial entities. FirstNet must effectively identify which existing infrastructure assets can be incorporated into the network. Also, FirstNet must take appropriate steps to comply with all applicable environmental and historic preservation laws, regulations, treaties, conventions, agreements, and executive orders as it integrates contributed assets into its design.

Lessons learned

FirstNet will need to build upon lessons learned from public safety projects funded by BTOP grants, an American Recovery and Reinvestment Act of 2009 program administered by NTIA to expand nationwide broadband infrastructure and adoption. Of the approximately 230 BTOP awards, 7 went to establish regional public safety broadband networks. However, the passage of legislation establishing FirstNet overtook these projects, and all 7 BTOP awards were partially suspended. Eventually, FirstNet entered into spectrum lease agreements with 4 of the projects. These included grants made to Adams County Communications Center, Inc., Colorado; the Los Angeles Regional Interoperable Communications System Authority; the New Jersey Department of Treasury; and the New Mexico Department of Information Technology. For these ongoing projects, FirstNet will provide technical support and will share any lessons learned on issues such as quality of service, priority/pre-

emption, and Federal partnerships with the broader public safety community. FirstNet also needs to work closely with the Department of Commerce's Public Safety Communications Research (PSCR) program, which provides support in broadband technologies evaluation and testing, network modeling and simulation, and standards.

Previously identified internal control weaknesses

Initially, FirstNet struggled to establish an organization and necessary internal controls. In July 2014, an independent public accounting firm [10] reported a material weakness related to the financial reporting process in FirstNet's first financial statement audit required under the Act.

Additionally, as mentioned previously in this testimony, our December 2014 report on ethics-and procurement-related issues found that the Department's monitoring procedures for financial disclosure and potential conflicts of interest at FirstNet were inadequate. We also found that FirstNet's contracting practices lacked transparent award competition, sufficient oversight of hiring, and adequate monitoring. As we previously noted, the Department has acknowledged OIG's findings, concurred with our recommendations, and is undertaking corrective actions.

Staffing and other organizational issues

FirstNet has encountered difficulties in hiring and maintaining staff for key technical positions. Nevertheless, FirstNet has made progress in establishing a management structure. For instance, certain Board members no longer play dual roles as Board members and managers. As noted above, for roughly the first year and a half of its existence, certain Board members functioned in roles as both board members and as part of the management team, before FirstNet eventually assembled a separate management team and transferred operational responsibilities to it. Nonetheless, while many senior positions (*e.g.,* chief information officer, chief administrative officer, chief counsel, and chief financial officer) are in place, key leadership positions throughout the organization remain vacant, including the chief user advocacy officer—a leadership position managing consultation and outreach—as well as regional directors and supervisors for consultations. Two FirstNet executives have left their positions, which are now being filled in an acting capacity.

Effective execution of the consultation process

The Act designates at least three Federal agencies—the FCC, NTIA, and NIST—to provide consultation and support to FirstNet. The Act also required the creation of the PSAC to assist FirstNet in meeting its mission.

The Act also directed that FirstNet consult with regional, state, tribal and local jurisdictions regarding the distribution and expenditure of funds required to establish network policies. Cooperation from these jurisdictions is a significant factor in ensuring the successful deployment and sustainability of the NPSBN. Specific consultation topics outlined in the Act include core network construction and Radio Access Network (RAN) build out, placement of towers, and network coverage areas, among others.

FirstNet is to consult with the jurisdictions through a locally designated officer or body, generally referred to as the Single Point of Contact (SPOC) for each jurisdiction. Accordingly, FirstNet has begun initial consultations with SPOCs and must consider the information it collects into the NPSBN's development. FirstNet had set an internal goal to have initial consultations with each jurisdiction completed by the end of November 2014. However, while FirstNet has held some initial consultation meetings and has scheduled others into September 2015, many have yet to be scheduled (see table 2, next page). FirstNet has indicated that the timing of these meetings depends on each state's readiness and how quickly FirstNet can fully staff its outreach team.

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[10] KPMG LLP, July 24, 2014. *Independent Auditor's Report to the Secretary of Commerce and the FirstNet Board of Directors.*

Table 2. Status of First Net's Initial State and Local Consultation Meetings
as of March 2, 2015

Status	Number
Completed	15
Scheduled	26
Not scheduled	15
Total	*56*

Source: OIG, based on FirstNet data.
Note: The target date for completion of meetings was November 30, 2014.

As we continue our oversight of FirstNet, we will keep the Committee informed of FirstNet's progress with respect to the challenges discussed here—and any others we identify through our audits and investigations.

The CHAIRMAN. Thank you, Mr. Zinser, and thanks to the panel for your great comments. And we'll look forward to asking a few questions. We'll try to confine it, to members of the Committee, to five-minute rounds.

I'll start off by asking you a question, Ms. Swenson. The statute authorizing FirstNet specifically states that rural America can't be left behind in deploying FirstNet. My question is: How do you plan to ensure that more states are adequately covered?

Ms. SWENSON. Thank you for the question.

As I think you know, in discussions with your office and with many of the other members, we take the rural coverage very, very seriously. In fact, it's as high a priority as urban. In fact, I think it's important for people to understand it's the urban coverage that differentiates this FirstNet network from a commercial network because commercial, as you know, doesn't cover rural.

We talked a little bit about state consultation and the importance of state consultation. It's in those meetings where we actually review the program with the state. As you know, we work in advance with the single point-of-contact of your particular state and plan those meetings, go over our plans, and then give an opportunity for folks from the state to actually tell us where their priorities are.

It's really important. We don't know that. So that's why we have to go into those consultation meetings, get the information, which then we are going to feed into the RFP process as part of the response mechanism for the vendors who are going to be responding to this about how they're going to do that coverage and at what cost. So it's a critical component of the FirstNet program. And again, I think it's really important to understand. This is what differentiates FirstNet from a commercial network.

The CHAIRMAN. Speaking of the RFP, FirstNet was established in 2012 but stakeholders have been pushing for a long time for an interoperable public safety network. That has been going on for about a decade. Many are concerned that if the RFP doesn't move forward reasonably soon that the vendor community and the public safety community could lose confidence in this endeavor and that could be a tipping point with regard to the future, success and viability of FirstNet.

You mentioned earlier in your testimony that you're going to try to complete the RFP by the end of the month. Is that what I heard you say?

Ms. SWENSON. The draft RFP.

The CHAIRMAN. The draft RFP.

Ms. SWENSON. Yes, let me clarify that.

It is really important, if I could, Senator? I'd like to just talk about the fact that, as I said, we're on track with everything we said we were going to do on our strategic roadmap. As I said, we issued the public notice and comment on Monday. And, by the end of this month, the Board is going to consider the draft RFP for issuance.

The reason it's important to put a draft RFP out in the community is the very thing you said: vendors want to know what we're intending and provides the opportunity for the vendors to give us feedback about how that draft RFP is actually issued. So that we, when we issue the final RFP towards the latter part of the calendar year, we won't experience unintended consequences because we didn't take that into consideration.

So we are on track to issue that. And, like I said, we're on track with all of the milestones that we communicated over a year ago.

The CHAIRMAN. And you think end of the calendar year for the final RFP?

Ms. SWENSON. That's what I believe today.

You know, there are things——

The CHAIRMAN. Are there factors that could delay that? What are they?

Ms. SWENSON. You know, I am not aware of any that could delay that. I mean, internally, we believe that that's the case. And, depending on the comments we get back from the vendor community and others about that draft RFP, it may extend it a little bit but I think it'll be well with the time so that when we actually issue the RFP it's done right and it's done effectively so that we get the kind of answers.

As you indicated, the RFP is the pivotal part of this program. The draft RFP is not only about deploying the network but it's about monetizing the excess capacity in the spectrum. I mean it's a very complicated process. So this has to be done right, and I think it's pivotal for the program.

The CHAIRMAN. Thank you.

Mr. Goldstein, I understand that FirstNet hasn't determined yet how the Early Builder projects, in those jurisdictions that are moving ahead with FirstNet-Ready LTE networks, will be incorporated in the FirstNet network and that various factors could effect that determination. If you could, please, elaborate on those factors and perhaps recommend what steps that FirstNet could and should take to address those.

Mr. GOLDSTEIN. Thank you, Mr. Chairman.

Regarding the Early Builder project lessons that they need to learn about and they have been collecting some information. They include governance, financing the network, conducting outreach, and planning for deployment. All four of those areas, the Early Builder projects have been doing their work and trying to develop options for, as they proceed on their own. They have looked,

FirstNet has looked at some of those projects, but they have not done so in a way that we think is sufficiently effective.

They haven't done a full-blown evaluation, they haven't integrated information into a data assessment plan that would allow them to use that information down the road as these various projects hit certain milestones, and then use that information to make changes themselves in FirstNet's own development as time goes forward. So we think that they can do a better job in that area and maybe that it's trying to do everything at once has been difficult for them. I think we recognize that, but that's one area where, if they are going to achieve success, it's absolutely critical for them to obtain as much information from existing projects on the ground as they can.

The CHAIRMAN. And very quickly, Mr. Zinser, you identified FirstNet as an area of concern in the Department in the upcoming year. As you mentioned, in December 2014, your office released a report raising various concerns. What are your biggest concerns about it going forward?

Mr. ZINSER. Thank you, Chairman.

I think the concerns going forward pretty much mirrored some of the issues you've raised in your statement, but there are many unknowns about the network and how they're going to proceed. But I think what we focused on so far is building the organization itself with its personnel and its policies, it's procedures, it's adherence to internal controls, is the thing that we focused on the most.

The CHAIRMAN. And are you satisfied that FirstNet sufficiently listened to and implemented some of the recommendations and findings that you came out with in your report?

Mr. ZINSER. Yes, sir. We issued nine recommendations; one to the Secretary, one to the general council of the department, two to the Chairman of FirstNet, and five to the senior procurement official in the department and they are all being implemented.

The CHAIRMAN. OK, thank you.

Senator Nelson.

Senator NELSON. Thank you, Mr. Chairman.

Let's remember the reason for FirstNet: To have all the first responders to be able to talk to each other without the hindrances that we've seen in the past where one side can't be talking to the other side when there is a matter of national security or a national emergency or local emergency in front of us. And I want to thank you all for what you're doing. We knew that this mission was not going to be easy. We've certainly seen in disasters in the past one set of radios can't talk to the others, but the stakes of inaction are way too high.

And so, we tasked you all with creating, right from scratch, the interoperable nationwide network devoted to public safety. And so, you are a unique hybrid. We've asked the Board to think like an entrepreneur with a limited budget to launch a startup enterprise within the confines of the Federal Government. That's pretty huge.

The Board wasn't even set up until August 2012 and then you had no employees. You had to go out and do all of that. And so, launching this, with the urgency that the legislation gave it 3 years ago, you've certainly chronicled the problems along the way.

Now, I want to go down a different tack with my question.

Ms. Swenson, cybersecurity. It's an essential component of FirstNet; it's a mission-critical network, it's got to obviously be a target for the bad guys. And so, it has got to be hardened against these threats. So we required in the legislation that you consider cybersecurity. What steps are you taking in the planning for the nationwide network to prevent against the attacks?

And then, Mr. Andrews, I'm going to ask you. Is the Department reviewing FirstNet's work on cybersecurity protections and what are you going to do about it in the future?

Ms. Swenson.

Ms. SWENSON. Thank you, Senator.

And, as you know, we've discussed that in previous conversations. Cyber is a very challenging area not only for FirstNet but for the Nation and for a lot of large companies around the U.S. But I am happy to tell you that we are collaborating very closely with the Department of Homeland Security on this topic. We are adding resources to the organization so that that is built into our planning, our technical planning and, of course, would be a major part of our request for proposal. So it's a high priority, and I think we're leveraging the resources appropriately within the Federal Government. Always open for suggestions, but it is a high priority for FirstNet.

Senator NELSON. Are you going to have enough money to harden against cyber?

Ms. SWENSON. Well, it's probably too early to answer that question specifically because we are just now looking at the planning process. We believe that the business model that we have is sufficient to build out this network and have incorporated those assumptions into our financial model. So at this point, I don't see any difficulty with that but, like everything we do with FirstNet, everything is new.

You know, there are things that we thought at the beginning, two years ago, that we've actually changed as a result of what we've learned and I imagine that we'll continue to learn as we go along the way. But, again, it's a very high priority and we will keep you posted on how we're doing that, because I know it's a very important topic to you.

Senator NELSON. Mr. Andrews, I think it's essential to harden against cybersecurity because other than your everyday natural disaster, but when it's not a natural disaster, whoever is attacking us is going to be attacking us with cyber simultaneously. What are you going to do?

Mr. ANDREWS. So, Senator, cybersecurity is a high priority for the Department and we recognize this is a very serious issue that needs to be addressed as part of the FirstNet build out. So not only are we working with the FirstNet team in making sure that they have all the support that they need but our CIO is involved, our team is involved and we're working hand-in-hand with FirstNet to make sure that they have the resources not just from the Department but, as Sue mentioned, from across the Federal Government; having the best expertise that's available including our NIST team. I think many of you are familiar with the NIST cybersecurity framework, but we have a number of experts at NIST who have also been involved in working with the FirstNet team as well.

Senator NELSON. Well, I've met with NIST and you're going to need to work with them. You're going to need to work with some of our intelligence agencies because the technology is so rapidly changing in these areas of the kind of sophisticated attacks that can occur. And, if we're talking about a terrorist attack, you all are going to have to be able to communicate on your network. And, of course, that's going to be one of the first things that the bad guys are going to try to deny; is our ability to communicate and command.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Nelson.

Senator Ayotte.

STATEMENT OF HON. KELLY AYOTTE, U.S. SENATOR FROM NEW HAMPSHIRE

Senator AYOTTE. I want to thank the Chairman and Ranking Member, and all of you. I appreciate why we need this. We've all had incidences in our states. A number of years ago, we had an incident in New Hampshire that prompted an early discussion in our state about this where we had a horrible, horrible mad man who murdered a judge, murdered troopers that were trying to subdue him, murdered a local newspaper person, and the radios didn't talk to each other. And that created that, was to the advantage of the perpetrator in allowing to use that situation to cause more deaths. So this is a real issue.

As I think about our state, I know that the consultation in New Hampshire is going to be June 9. And you have said, Ms. Swenson, that you're going to get the feedback from the states and particularly, as I think about Chairman Thune's question, two-thirds of my state is really rural areas where we have challenges on how we build a network so people can talk to each other. In that process, where you take New Hampshire's feedback and every other state's feedback, and then you put together the RFP for the end of the year, will the states have a feedback loop? In other words, you sit down with them on June 9, they tell you what they think, and then you're putting together an RFP. Is there another opportunity after for them to see the RFP or to see what you're working on to make sure that their views are reflected on it?

Ms. SWENSON. Well, thank you for the question because I really want to emphasize that consultation is a broad and ongoing process. It's not a one-time event.

We talk a lot about the state consultations, and I think it's really important that people understand what we're trying to accomplish there. But our relationship with the states is ongoing.

As I indicated, we have conference calls, we are available by staff, we have e-mails, we have face-to-face meetings. Also, I would tell you that as we go through the process of consultation and the RFP, and then we actually deliver a plan to each Governor for the plan for their state, that will not be a surprise. We want this to be a very iterative, very collaborative, process so that when you get that plan on that day, you've been so involved in it there could be no surprises.

I mean, that's really the mindset we have around the process. So, I mean, it's very important that we all work together. And, as you

know, we've been somewhat limited on staff but we're adding people to make sure that we have the right number of people to be available to you and your team so that we can be effective in the information that we're providing you.

Senator AYOTTE. Good.

And one of the things we're hearing from feedback from people on the ground in New Hampshire is their saying, "What's the benefit of FirstNet?" In other words, the local agencies that have frankly been working on this issue for years, so this isn't a new issue for law enforcement and for first responders like the chief here, and they're saying, "Why should we opt into FirstNet versus using a private distributor?"

And part of this plan, I assume, is how do we use maximized commercial opportunities given the resources we have. So what would you say to that issue? And perhaps, because you're so new, that this worry that we don't know what to expect from the first responder community, you could understand why that would be a real one.

Ms. SWENSON. Sure. Would you like me to answer?

Senator AYOTTE. Yes. I'm curious what you would say to that. I just tried to get some local feedback: What do you think about this? What are you hearing? What's your initial impression?

Ms. SWENSON. Well, I don't think you feedback is different from what we hear, which is why we're trying to be out, as Chief Bryant said, with as many of the constituents as we possibly can. It is not uncommon. I go to my local grocery store and talk to firefighters and law enforcement and I ask them if they know about FirstNet. It is a lot of people out there. I mean, there are hundreds of thousands of people that we need to get that message out to, so I'm not surprised at what you're hearing, but we're working very hard to get the information out.

I would tell you, from a benefit standpoint, you know, what we try to communicate, because it's not unusual that people don't understand why should we do this versus that, one of the things is the rural coverage. I think the rural coverage is really a critical differentiator. This is a dedicated network. This is not a network that is used by all of us. What happens when you have an incident? What is the first thing all of you do? You get on your cellphone.

Senator AYOTTE. I would argue without rural coverage you probably could do this quite easily commercially.

Ms. SWENSON. Well——

Senator AYOTTE. It's the rural areas that really we need the help the most.

Ms. SWENSON. But I think it's more than that because commercial is basically focused on commercial. I mean that is their focus and they have shareholders and earnings releases and things that they have to worry about. We don't.

The money that we get from this we're going to reinvest in the network. So it's dedicated. It also has priority and preemption. So the funding that we're going to get from this—as we said, we have $7 billion from the last auction. We have spectrum that is very valuable. It is beachfront property. I mean it is really, really good spectrum. And so getting the revenue from that will enable us to, along with user fees, to be able to operate this network.

And I think, what's really important for, I think, first responders, and for anybody interested in this, is that we're talking about a re-capitalized business model. If you look at this systems, excuse me, if you look at the systems today, the LMR systems, LAN over radio systems that are in existence today, are old. They're 10, 15 years old. It's very difficult for agencies to get the funding to upgrade that.

The model that we have is talking about upgrading that as technology presents itself. For example, if we start to deploy this network and we move from 4G to 5G, then we will be deploying 5G. So we're going to give first responders the technology that we enjoy as consumers today as that technology evolves.

We also are going to be working to—we're still working on the standards around this, but recognizing the network for particular circumstances in your state, in, you know, all of the member's states. We want to understand what the circumstances are and we're working to define; hardening standards so that we can try to harden the network to withstand those incidents that, you know, from a weather perspective, that would affect the networks.

So we also are going to have applications. I think the development community is going to get very excited about the applications that can be made for public safety. This is an organization dedicated to public safety. It's not secondary, it's primary. And commercial networks, I was one. I know. I know where the priority is. It's about, you know, finding customers, getting revenue, you know, responding to shareholders every quarter. FirstNet is very different.

And I think it's really important for people to know, even if you decide to let us deploy your network in your state instead of building your own radio access network, the public safety agencies are not obligated to sign up. There's not a mandate that they have to.

So think what that says to us in terms of developing this network. We have to create a compelling value proposition that gives them more value than they have today. And so, that is why we are spending so much time with public safety; is to understand their needs so that what we deliver to public safety is what they're going to want to use. So we're very conscience of that issue and we're working very hard to get information out.

We're working, actually, with the associations to try to get more information out to the people who are on the street because it's very, very difficult. In fact, we were at the FOP meeting in San Diego last Saturday, and law enforcement in San Diego was not that familiar with FirstNet. But our staff and I presented at the FOP meeting to educate, you know, 150 people at that session. So we're working very hard to get the message out. If there's more we can do, we're open to suggestions.

Senator AYOTTE. Absolutely. Thank you.

Ms. SWENSON. Thank you.

Senator AYOTTE. We'll certainly want to make sure all of our first responders are informed.

Ms. SWENSON. Right.

Senator AYOTTE. Appreciate it. Thank you.

Ms. SWENSON. Thank you.

The CHAIRMAN. Thank you, Senator Ayotte.

Senator Booker.

STATEMENT OF HON. CORY BOOKER,
U.S. SENATOR FROM NEW JERSEY

Senator BOOKER. Thank you very much, Mr. Chairman.

First of all, I just want to say thank you for the work that you're doing. You've been tasked with doing something that's really unprecedented——

Ms. SWENSON. Right.

Senator BOOKER.—not just in government but really in American history that is extraordinarily and absolutely, urgently needed. As Senator Ayotte said, all of us probably, that are serving in the U.S. Senate, know the urgency for this. I spent 8 years almost, as a mayor, with crisis and crisis and crisis, and I saw, as Chief Bryant could probably attest from his experiences, that communications, whether it's of men going into a burning building with no visibility or how important just a radio is to be able to communicate externally.

For us, Hurricane Sandy, we saw in the most painful way how critical communication was. I even had a situation where we had an earthquake in New Jersey, something people don't think we have. And after surviving the 89 earthquake in California, I didn't think it was too serious until all my communications, police department, fire department, all my officials went down, and fortunately we had a plan to meet but that suddenly made me realize the challenges.

So what you're doing is really a life or death initiative. You are making strides that should be celebrated. My state is ecstatic about the contribution you're making to New Jersey. And I'd like to submit for the record an article about Atlantic City without objection, Mr. Chairman.

[The information referred to follows:]

ATLANTIC CITY TO LEAD WAY WITH BROADBAND NETWORK FOR PUBLIC SAFETY
(FEB 9, 2015)

Credit: AtlanticCity.com—Lynda Cohen

http://www.pressofatlanticcity.com/news/atlantic-city-to-lead-way-with-broadband-network-for-public/article__8f841654-b0a9-11e4-9f47-f3487533808a.html

Atlantic City public safety soon will have its own broadband network that means better communication and more reliable service.

The city is one of three areas in the state to be part of a pilot program by the Office of Homeland Security and Preparedness that eventually will have a nationwide broadband system called FirstNet.

That means public safety will not be using the same network as the public, lessening the chance of overloads and problems like those that stressed connections during last year's free beach concerts and the Miss America Parade.

Mobile centers also will increase the area covered and allows for communication between agencies during larger emergencies.

Fred Scalera, the public safety broadband manager for state Homeland Security, explained that it would prevent problems such as those during 9–11, when the New York and New Jersey sides couldn't communicate.

A retired Nutley fire chief, Scalera experienced that firsthand. Then, as an assemblyman from Essex County, he worked on legislation that helped create the program and get funding, so there is no cost to the towns.

The timing couldn't be better, as Atlantic City is also in the process of upgrading its technology, said Atlantic City police Lt. James Sarkos, who has been the point person for the project.

"This is something that's going to benefit the entire region," Chief Henry White said.

Scalera updated public safety workers Monday at Stockton's Carnegie Center in Atlantic City. The Richard Stockton College of New Jersey's main campus in Galloway Township will act as the command center for Atlantic County.

A System on Wheels, or SOW, will be set up near the Public Safety Building that houses Atlantic City police, and will be able to keep things running even if everything else goes down, Scalera explained. Using satellite, it will correspond to seven mobile stations: five at locations within the city and one each in Pleasantville and Absecon. Leaders asked that location of these so-called Cells on Wheels, or COWs, not be disclosed for security reasons.

Two of the locations were still be worked on Monday.

FirstNet will be able to tie in different systems, including Mutualink, which allows agencies to communicate during emergencies even with incompatible radio or wireless systems.

Eventually, other systems could come in, including utilities. If that happens, it could mean the simple flip of a switch to turn off electric and gas to a home on fire, or to aid in things like SWAT operations, where police may ask to have electricity cut off to make their entry safer.

The system is expected to be functional by June, with it going live by December, after officers have had hands-on training.

Pleasantville Police Capt. Sean Riggin said his department "is eager to participate in this exciting opportunity to improve our policing and communication partnerships with ACPD and the State Police."

"This is another example of our commitment to improving our operations and service to our community through the use of technology and intelligence-led strategies," he added.

Because of Atlantic City's mostly low-lying area, the trial of how far the network could range showed that a 5-foot antenna could get "fringe coverage" almost 10 miles out, Scalera said.

To compare the size of the areas, Scalera pointed to Los Angeles County in California, where there are 200 towers. In New Jersey, it would take 200 to 250 towers to cover the entire state.

Senator BOOKER. About Atlantic City, about the public safety work you're doing there and how we believe, in New Jersey, that the mobile platforms that you're creating that can be rolled out in a crisis——

Ms. SWENSON. Right.

Senator BOOKER.—to key areas really is something for this country. There could be a benefit in a model for the Nation whether it's rural areas or urban areas or suburban areas.

So I just celebrate you, and I also celebrate you in a sense that you're working through bureaucracy that is not used to dealing with this very unique public-private partnership that you have. And so, I really respect the professionals that are sitting with you on the panel who have done the arduous work of oversight.

But I want to afford you a couple opportunities to respond a little bit to some of the challenges that you put forward. And the first is your constructive criticism of having to deal with a lot of the challenges on procurement and others that are undermining your progress to your goal. It's very important, I think to this Committee who likes to remove barriers to get good things done, and this is one of the more righteous things. We may not realize how much we need it, but let a major crisis happen to this country. If you get this done, you will make a difference that could be thousands of lives saved.

So could you just talk for a moment about those obstacles that you're encountering and how maybe we could do something to remove them for you?

Ms. SWENSON. Sure.

I think, you know, the way I'd like to characterize it is we're working with Deputy Secretary Bruce Andrews and his staff and Secretary Pritzker on improving the processes within the Department, within NTIA and with FirstNet. So set aside the Federal regulations for a moment. There is just a lot of people touching a lot of things today and we need to streamline that. And we're really committed to working on that improvement.

I also think it's important that we have the ability to control our destiny and that we have the ability to have people who are dedicated and for FirstNet is their first priority. Because this is no pejorative comment about people that we work with but FirstNet is a secondary item for them. I mean, they have a full-time day job and then we pile on FirstNet on top of that. And so, we probably don't get the, you know, the urgency that we feel about things. So to the degree that we can take accountability and responsibility for those functions, we'll obviously follow all the rules and regulations but I think we would have an opportunity to move more quickly.

So I'd like to see what we can do about improving that and also taking responsibility from Commerce. And obviously, we wouldn't do that until such time that we were prepared. We went through that process with Commerce and NTIA already with our finance organization. Initially, they provided support for us. Today, we actually do a lot of that work ourselves. So I think we've demonstrated that we can bring in the right resources with the right talent and training; put the processes and controls in place that would cause people to feel comfortable that we would fulfill that.

Senator BOOKER. Let me interrupt you just for the last 26 seconds, because I would love for you to submit more of that to the record afterwards. I'd love to hear in detail some of the things that we could be doing to prevent it. But I just want to end by saying one comment, one question, which is—the comment is our first responders we elevate, as Senators, consistently but the people that have the first responder's backs should be elevated too. And I want to just give you a chance to respond to the cost issue. I know you spoke about it a little bit, but really the build design to have a self-funding mechanism——

Ms. SWENSON. Right.

Senator BOOKER.—and do you think that's sufficient, because Mr. Goldstein pointed out that it might not be? Is that sufficient?

Ms. SWENSON. Well, you know, I think what's important to understand in the GAO report is that the information that's in there is built on a lot of assumptions. And, you know, I think even Mr. Goldstein indicated that. That those assumptions that you saw, $12 to $47 billion have a set of assumptions that, you know, that he didn't have visibility to.

We have built a financial model with a set of assumptions as well. And we believe we understand what we need to accomplish in terms of our spectrum value in order to make this self, you know, a self-sustaining network. That's why the RFP is such a critical component to that because that is really the funding mechanism. While $7 billion is a lot of money, I'm not saying "no thank you" to that, but it's not sufficient to continue to operate and upgrade this network over time. So I believe that financial model is

solid, but we won't know the answer to that until we finish the RFP process.

And, of course, the RFP process is critical for us being able to put together a plan for each of the Governors where we can talk about the coverage we're going to provide and what it's going to cost the, you know, the first responders to subscribe to that. We won't know all of that until the RFP is completed. We've made assumptions; we won't know the facts until the RFP is completed.

Senator BOOKER. Thank you very much.

Ms. SWENSON. Thank you.

The CHAIRMAN. Thank you, Senator Booker.

Senator Manchin.

STATEMENT OF HON. JOE MANCHIN, U.S. SENATOR FROM WEST VIRGINIA

Senator MANCHIN. Thank you, Mr. Chairman, and I too want to thank all of you and thanks for what you're doing in this FirstNet it's unbelievably important for all of us.

Let me just say that when Governor of West Virginia, I came into the office in early 2005 and we weren't able to communicate with any natural disasters or mine tragedies that we had, couldn't get the equipment to the right place in time because we couldn't communicate. So it was critically important for us to protect our citizens by being able to communicate. We put an interoperable radio system in, as you recall, with good towers and all that.

We're probably one of the most rural states east of the Mississippi. With that being said, this is so important to us. So what I would say to you is that—and I also want to thank you for the Mackinac Conference that you attended and that was some of my West Virginia first responders. But when will phase two of the grants be available, which is really going to get us in business? Right now, everyone's talking and planning, but we're not seeing any action.

Ms. SWENSON. Right.

I don't know if you want to answer that question?

Mr. ANDREWS. About the state level of planning grants?

Ms. SWENSON. Yes, the grants.

Mr. ANDREWS. Sure.

Ms. SWENSON. Because he manages the grants.

Senator MANCHIN. Oh, yes.

[Laughter.]

Senator MANCHIN. When are you going to let him go?

Mr. ANDREWS. So, there are——

Senator MANCHIN. Turn your microphone on so everybody can hear you.

Mr. ANDREWS. Oh, I'm going to be in trouble after that.

Senator MANCHIN. Again, the question was when you going to let the money go?

[Laughter.]

Mr. ANDREWS. So there are actually two rounds of money. The first round of money, under the state level implementation grants, otherwise known as SLIGP, a great acronym——

Senator MANCHIN. We're ready to go to two.

Mr. ANDREWS. So the round one has gone out. Round two is somewhat dependent on the figuring out what the data needs are for FirstNet. So we're working with them. The first round has gone out for the consultations, for the planning, you know, and to really allow the states to do the work that, to fund that work, to work with FirstNet as part of that first round, and part of the state consultations. The second round, though, is going to go out for accumulating the data that will go into it. And so, we're in the process of figuring out what is it the data——

Senator MANCHIN. Every state is going to be different, and I'm sorry because our time is so limited. Everything is going to be different from state to state as far as the needs are. The State of West Virginia, we undertook a program with stimulus money and basically built out to every school, every post office, every community building. We got Internet into every nook and cranny in West Virginia. But, basically to build off of that has not been profitable for the private sector to take it on because of the customer base. But it would be easy for you to hook off of that for FirstNet into those critical areas of first responders. So some of us could really get up and running much quicker if we had access to this and if you're going to fast-track some of this.

Mr. ANDREWS. We expect within the next couple months to have that second phase of money go out.

Senator MANCHIN. If you want to use us as a trial and error, West Virginia would be delighted to work with you.

Let me go to Mr. Goldstein right now.

Mr. Goldstein, in the past three years you've successfully hired less than 100 people that I'm told. OIG investigation found various issues with the hiring process, response, and it appears to have been more lawyers, more layers of bureaucracy and more red tape. The annual report, which was due February twenty-third, still has not been released because it has to be reviewed, I am told by 10 different Federal agencies, before it can be even shared with the first responders who it is designed to serve. Is all this new to you?

Mr. GOLDSTEIN. Yes, sir. I am not aware of that.

Senator MANCHIN. That you're aware that the February twenty-third has come and gone and the annual report has not been given.

Mr. GOLDSTEIN. I'm not sure of the question that you're asking, sir. To whom is it referred? I'm with the GAO.

Senator MANCHIN. Oh. Well, I mean you all are overseeing it right? The Accountability Office, you would.

Mr. GOLDSTEIN. We have done our first audit of FirstNet which is what I'm here talking about today, sir.

Senator MANCHIN. Well, would it alarm you all that they might not be able to meet the FirstNet needs as far as personnel, that's all they've been able to hire? I mean——

Mr. GOLDSTEIN. We understand that——

Senator MANCHIN. Can someone else—maybe I got the wrong. Can someone else answer this?

Ms. SWENSON. I can certainly respond to that.

First of all, the annual report actually has been issued. There was a bit of a time delay, but you should have access to that at this point. And it does require significant review. You're actually

correct on that, and maybe there's an opportunity, I think, to take a look——

Senator MANCHIN. I mean this is what really upsets people.

Ms. SWENSON. Well, you know what? You're talking to somebody from the private sector. The answer is no.

Senator MANCHIN. OK.

[Laughter.]

Ms. SWENSON. I mean it's just simply, no, it doesn't make sense. But I'm not an expert on government process so I'm not sure of the——

Senator MANCHIN. These are the things you can tell us about because this is a national emergency. If something were, God forbid, happening, can we help each other? A Katrina-type thing? My goodness, it was such a cluster I couldn't even tell you all.

Ms. SWENSON. So could we help each other when we put up the network?

Senator MANCHIN. I mean to get FirstNet up and running, basically the states can.

Ms. SWENSON. Yes, actually that's the beauty of FirstNet.

Senator MANCHIN. Yes. I know that. But I'm saying, to cut through the ten different Federal agencies, tell us what your impediments are.

Ms. SWENSON. As I said, the impediments today are in personnel hiring because it takes us anywhere from nine months to a year to get people on the payroll through all the processes, through job descriptions, through hiring, through security clearances, and all those kinds of things. It can take a significant amount of time to get people on the payroll. Again, that's where we're working with Department of Commerce.

And procurement. I mean, again, I would like to just say that I think it's really important that we have as much control over our destiny as possible to have people who are dedicated to this who feel a sense of urgency for whom it's not a second job. And all the people who work in FirstNet today feel the sense of urgency, want to get things done, but it's difficult.

Senator MANCHIN. OK.

Mr. Chairman, my time is up but if I could maybe work with you and the Ranking Member. If we could look at cutting some of this government regulation in order to get this up and running much quicker, because we're hitting this in every aspect of government. Maybe the Commerce Committee can cut through this stuff.

The CHAIRMAN. I would be more than happy in going to work——

Senator MANCHIN. OK. Well, let's do it.

The CHAIRMAN.—with the Senator from West Virginia because that is crazy. I mean, this stuff is beyond the pale sometimes in terms of what it takes to get anything launched. So let's do that. Thank you, Senator Manchin.

Senator Peters.

STATEMENT OF HON. GARY PETERS, U.S. SENATOR FROM MICHIGAN

Senator PETERS. Thank you, Mr. Chairman.

Thanks to our panelists today for your testimony and all your hard work on this issue and your insight into it. And I want to say

I'm certainly concerned about all of the issues that I've heard from my colleagues in Michigan that I'm privileged to represent, and where there are a great deal of rural areas as well. So I appreciate your efforts in making sure that we have this network up and running in rural areas. We also have urban areas.

But in my question, I want to take another area that's very important to us and that's border areas. We are a state that is on some of the most traversed border crossings in the country. In fact, we just recently have been moving forward on a new international bridge between Detroit and Windsor, which will greatly increase trade between our countries and continue to make Michigan a logistics hub for the whole country; plus we have border crossing in Port Huron and Sault Sainte Marie. And, as a result of that, we have frequent contacts with Canadian officials.

And, as we're dealing with border issues and when it comes to first responders, often have to coordinate with those international entities or, in this case, the Canadian entities. And they have different spectrum issues than we have in the United States.

So to Chairwoman Swenson, if you could comment a little bit about how FirstNet's going to ensure that some of emergency communications along the borders are going to be facilitated and give a sense of what sort of discussions you have had with Canadian officials in terms of making sure there isn't interference in the communication that we may have on our side of the border versus their side of the border and when they have to be connected together as well? So I know it's a complex issue, but maybe if you can flesh that out.

Ms. SWENSON. Actually, it's not a complex issue.

Senator PETERS. Oh, good. Excellent.

Ms. SWENSON. I mean, from a technical perspective, and I would just tell you that one of our BTOP projects is not really focused on Canada but also on the Southern border, because we know that border issues are challenging. So we are actually quite a bit from our BTOP projects, and one of those is border issues. Again, we're focused on Mexico, not Canada, but we have a very good relationship with Canada. They have the same standards that the U.S. does. So we don't anticipate a lot of difficulty, frankly, with Canada. We are anticipating some challenges with Mexico, which is our New Mexico BTOP project is actually focused on that as one of the key learning conditions.

So we've actually, I think, from a key learning condition, and things we've learned from our BTOP projects, we've actually had about 61 things that we've actually learned. And I would just like to mention another one in particular that has been extremely valuable that has been fed into the technical team and the RFP process, and that is our project in Las Angeles. Las Angeles is working to try to get some sites up. And we've learned that the use of existing government infrastructure is quite a bit more challenging than we had originally anticipated; developing memorandum of understanding, leasing excess capacity is very challenging. So it actually has been extremely helpful through that project.

So I would just have you feel a little more comforted; be happy that you're on the Northern border instead of the southern border

because I think we'll be able to traverse those challenges quite easily.

Senator PETERS. Well, I'll say that's very good to hear. The other issue that we face, being a Great Lakes state, is that we have a very large Coast Guard presence as well——

Ms. SWENSON. Yes.

Senator PETERS.—along the shoreline. And so, just if you could let me know a little bit what FirstNet is doing to work with some of the military branches and the Coast Guard. As you know, depending on what the emergency is, sometimes it's the Coast Guard that's the first to respond but they work very closely with fire and police and EMS personnel as well.

Ms. SWENSON. Exactly. You know, I think it's an excellent question.

And just as we have outreach to all of the states that we've been talking about, we actually have a dedicated person on the FirstNet staff to focus with our Federal partners. And there's actually a person inside the Federal Government who is now our single point-of-contact, much like a state has. We actually are working with a group called the ECPC. There's a lot of acronyms in the Federal Government.

Senator PETERS. Yes, there is.

Ms. SWENSON. I think it's called the Emergency Communications something, something. Anyway, I'm sorry. I don't remember the acronym, but it has to do with bringing all the agencies together around emergency communications. And previously, two of our board members, Suzanne Spaulding, Under Secretary for Department of Homeland Security, and Teri Takai, were co-chairs of that committee. So we are very engaged and recently met with the Federal partners to make sure that we can coordinate and make sure that they're part of this process. So we're very engaged with them.

Senator PETERS. Wonderful.

Now I just want to pick up Chief Bryant and a comment you made about when the systems, they are overwhelmed depending on the incident. And I'm just thinking about a horror story within Michigan, if we had a crisis at the University of Michigan football game, which we have an awful lot of folks at the stadium, if communications could be very, very difficult, how do you see FirstNet handling that situation? And to the Chairwoman as well, how can we share that we're going to be able to handle these incredible spikes of why this network is so important to handle these incredible spikes and usage?

Chief?

Mr. BRYANT. Well, Senator, on these large-scale events, obviously, the initial stages of it are somewhat chaotic, and that's when we experience the most difficulty with voice communication. But, as we have to reach outside of our own jurisdiction at those times to gather critical information to help us manage that incident, the data side of this is what's really needed and what's really important. So when we reach out to Federal agencies that could provide us mapping information and other types of information that we would need when law enforcement may need to reach out for intelligence-type information, having the availability through the FirstNet for the data is critical.

Again, depending on the locality's communication system, you know, some are very robust systems out there; some are not so much at this point. So I look at this as somewhat as a safety net in those times that, if your voice does start to fail you a little, voice communications do start to fail or get overwhelmed, you have that backup with FirstNet on the data side to be able to exchange critical data.

Ms. SWENSON. Just a couple of comments. First of all, going back to my comments about a dedicated network. First of all, that's a lot of capacity in 20 megahertz. We have 20 megahertz and that's a lot of capacity, but as you indicated, we sometimes have spikes.

We will, through the RFP process, get someone to actually want to use that access capacity and they will be using the network and obviously we will be getting revenue for that. The beauty of long-term evolution, LTE technology, that has something called priority and preemption. So even if there are people using the network, those folks will come off the network and public safety will be given priority. This is the first time this has ever been done.

Having been in telecommunications for a long time, people talk about priority and preemption but it's all been done manually. This is done automatically. We're doing testing in our PSCR labs in Boulder right now to validate that it's more than just a vaporware. We have vender technology in our labs and we're actually testing it. So the good news is that it works.

I also think it's important to mention, because this is a big change for public safety. You know, public safety is used to working in vertical organizations; fire, you know, law enforcement, EMS. This is creating a very horizontal ability to communicate. As a result of that, we have an advisory group called the Public Safety Advisory Council, and they are actually looking at how this new organization is going to work local operations. Because I think it's going to change the way, frankly, public safety operates. I think it's all good, but it's going to be very different. And I think we are going to enjoy as we see this technology roll out, things that we aren't even thinking about today. Much like you see in technology for consumers.

So I think it's very exciting but it's going to be a big change for public safety. But I think those are the important things about the public safety network that are going make a very, very big difference.

Senator PETERS. All right. Thank you.

The CHAIRMAN. Thank you, Senator Peters.

Senator Fischer.

STATEMENT OF HON. DEB FISCHER,
U.S. SENATOR FROM NEBRASKA

Senator FISCHER. Thank you, Mr. Chairman.

Ms. Swenson, can you give us an idea when this is all going to be fully operational? Do you have a window of time there?

Ms. SWENSON. It's always a great question.

As I said, we have the strategic roadmap that lays out the timeframe of getting through our state consultation, issuing the RFP, getting the response, and then obviously awarding, you know, to

the winner of the process. What we don't know today is what might happen in that process.

So if we were unencumbered by external factors, than we could probably give you a more definitive timeframe. But my expectation, based on what everybody's told me in the Federal Government, is we might see a few bumps along the way. So the goal is to, obviously, is to get that RFP out, get the responses in, put that information together, and deliver plans to each of the Governors of every state.

What happens during that time-frame we're hoping is smooth and I hope you get the sense of the sense of urgency we feel about this and how hard we're working to get that done as quickly as possible.

Senator FISCHER. Do you think you'll reach that 2022 goal that's out there?

Ms. SWENSON. Oh, yes. Yes. If we don't, I mean, we should be shot.

[Laughter.]

Senator FISCHER. Mr. Chairman, I don't even know how to respond.

[Laughter.]

The CHAIRMAN. We'll find a lesser answer for that.

[Laughter.]

Senator FISCHER. I appreciate your honesty on that. When we're looking at the GAO's estimate, that you're going to need $12 to $47 billion over the next 10 years, how do you think—well, first of all, do you agree with those numbers?

Ms. SWENSON. Well, as I said previously, I think the GAO report has looked at some assumptions and some estimates where they have no visibility about the assumptions that were made. I will tell you that very early in the process, the early folks who were with FirstNet along with the Board, looked at a financial model around some assumptions. We're pretty comfortable based on our experience around the cost structure to do this sort of thing. I think the revenue side is a little bit harder but I think we've made some reasonable assumptions. We've incorporated that into the model to say, is this even feasible, can we even do this. And I thought that it was a very important process to go through because why expend Federal funds to go down this path only to find out that at the end of it there is no——

Senator FISCHER. Right. Can we do it?

Ms. SWENSON. Yes, we can.

Senator FISCHER. Can we do it——

Ms. SWENSON. Assuming that the assumptions that we have in our plan are realized, which is why the RFP process is so important. And that's why I think the public noticed—I would just like to highlight that the public notice that we issued on Monday is critical to the RFP process because it starts to answer some of the questions that I think were maybe a little unclear in the legislation that we're trying to clarify before we go out with RFP. We believe that it can happen but it will only be validated through the RFP process.

Senator FISCHER. And, if by chance that's not going to be enough money, what do you see happening? Are the states going to have

to step forward and pick it up? Are we looking at turning FirstNet into a self-sustaining entity? Where do we go from there?

Ms. SWENSON. Well, I think it's an excellent question. We've talked a lot about that inside of FirstNet. And, if we don't realize what we believe the value of the spectrum is—I mean, we could literally fold up our tents and go home, which is not a good outcome, which is why this is such an important process, which is why we're out with state consultation, which is why we're outreaching to people to make sure—I mean, think about this.

We have to provide a compelling value proposition for our first responders. We're in a very different situation than maybe other projects where they're more mandated. We have to actually deliver to our first responders something that they think is worthwhile. And so, I think it changes the dynamic in the way we approach this in terms of how we approach the project. So we're working very hard to make sure that that happens but, if we don't realize the value of that spectrum, it's going to be very challenging to be self-sustaining.

Senator FISCHER. Do you think FirstNet would then put in a claim for more of the money that comes from the sale of spectrum? When you say you don't realize the value of spectrum——

Ms. SWENSON. You know, we're not looking for more money actually. You know, we're not looking for——

Senator FISCHER. You know, that is nice to hear.

[Laughter.]

Ms. SWENSON. You know, I know that's rare, that's rare, but we take that honestly very seriously, which is why you I think you see such a dedicated team at FirstNet and why I think Senator Booker talked about the importance of having people who've done this before; so that you really have a sense of confidence that it can be accomplished and why it's so important that the RFP be very well done.

We believe that there is interest in our spectrum. So, I mean, we have a fundamental belief, and we validated that, frankly, through conversations we've had with folks. I mean, there's never enough spectrum. I mean, it's like gold; right? It really is really valuable. So even with priority and preemption we think, like I said, it's very good spectrum and I think we have people out there who are more than interested in being part of that. So we're confident that that will prove to be the assumption that was correct.

Senator FISCHER. Thank you very much.

Thank you, Mr. Chair.

The CHAIRMAN. Thank you to the Senator from Nebraska and next up is Senator Blumenthal.

STATEMENT OF HON. RICHARD BLUMENTHAL, U.S. SENATOR FROM CONNECTICUT

Senator BLUMENTHAL. Thank you, Mr. Chairman.

I found a remark earlier, Ms. Swenson, that you made somewhat staggering. That it takes nine to 10 months to hire someone. Did I hear correctly?

Ms. SWENSON. Unfortunately, yes, you did.

Senator BLUMENTHAL. So you have the funding you need.

Ms. SWENSON. Correct.

Senator BLUMENTHAL. And the spectrum that's necessary.

Ms. SWENSON. Correct.

Senator BLUMENTHAL. The two essential components that have been commonly identified, but you are in effect, I don't think it's too strong a word to say, handicapped even crippled by procurement procedures including hiring procedures that essentially are ossified and completely inadequate to the urgent task that you face. And you've used the work urgent to describe it. I think all of us would agree.

Ms. SWENSON. Right.

Senator BLUMENTHAL. What can be changed in those procurement policies, which have so handicapped other branches of government as well in similarly urgent tasks, particularly in the hiring area?

Ms. SWENSON. As I said, Senator, we're working with Department of Commerce and the Secretary's staff to see what we can do. I think in addition to just the Federal process, I think we have some things internal to FirstNet, NTIA, and Commerce that I think we can look at. We're looking at the cycle time of that and what is getting in the way. Why is it taking 2 months to write a job description? Why is it taking 2 months to hire a firm to hire people? It shouldn't take that long.

And so, we're looking to see what we can do to compress that, which would significantly enhance our ability to get the job done. So I'm just telling you, we're working very hard and I'd love to report back to you on the progress that we're making on that.

Senator BLUMENTHAL. Well, in each of those steps that you've identified, OPM has to be a partner; correct?

Ms. SWENSON. You know, I'm probably not as——

Senator BLUMENTHAL. Under current procedures.

Ms. SWENSON. I'm not as familiar. I think Deputy Secretary Andrews might be able to answer that question.

Mr. ANDREWS. If I could give a little more context on that, which is one of the things we've done, and actually has moved FirstNet over to the Commerce Alternative Personnel System, which is a more streamlined and frankly more flexible process than the normal OPM process. You know, there are undoubtedly challenges because of the safeguard that are built in the Federal law in terms of hiring within the Federal Government that, as you point out, this is urgent and frankly the needs of FirstNet are incredibly special.

Senator BLUMENTHAL. What about, Ms. Swenson and Mr. Secretary, giving FirstNet direct hire authority?

Ms. SWENSON. Good. You start and I'll finish.

Mr. ANDREWS. I am happy to start that.

We have made that request.

Senator BLUMENTHAL. You have made that request?

Mr. ANDREWS. It has not been granted but within the Federal Government.

Senator BLUMENTHAL. When did you make that request?

Mr. ANDREWS. I would have to pull the exact dates.

Senator BLUMENTHAL. Well, give me, if you can, an approximate date.

Mr. ANDREWS. Probably——

Ms. SWENSON. It was quite a while ago.

Mr. ANDREWS. Yes. Eight or nine months ago. And part of the reason we've gone to the Commerce alternative the cap system like you——

Senator BLUMENTHAL. And what have they said to you?

Mr. ANDREWS. Up until now, it has not been granted based on the nature of the hiring and what they think the hiring to the pools out there.

Senator BLUMENTHAL. Have they responded negatively or have they just not responded?

Mr. ANDREWS. Negatively.

Senator BLUMENTHAL. And what——

Ms. SWENSON. I would just clarify that——

Senator BLUMENTHAL. I'm sorry, Ms. Swenson.

Ms. SWENSON. I would just clarify that just a little bit. They responded negatively to our first request. They have not responded to our second request.

Senator BLUMENTHAL. And when was your second request made?

Mr. ANDREWS. It was August 2014.

Senator BLUMENTHAL. August 2014. So that's quite a while ago.

Ms. SWENSON. Right.

Senator BLUMENTHAL. Let me just suggest that, you know, for the first year and a half, I believe I'm correct in saying, your board essentially functioned. Has the staff? Now, you have 110 employees which seems——

Ms. SWENSON. Low.

Senator BLUMENTHAL.—inadequate. Low is right.

The success of this very, very important national priority depends on having the best and the brightest. There is simply no way you can compete for the limited pool of highly skilled, talented people who are being hired by Google, Apple, you know, there is huge demand for these people.

Ms. SWENSON. Correct.

Senator BLUMENTHAL. And you're telling them, "Sorry, we can't let you know for another 10 months."

And they're going to say, "Thanks, but no thanks."

Right?

Ms. SWENSON. In fact, they have.

Senator BLUMENTHAL. And they have.

Ms. SWENSON. Correct.

Senator BLUMENTHAL. I'm sure that they have in large numbers.

Ms. SWENSON. Correct.

Senator BLUMENTHAL. So, if I may respectfully suggest, the Federal Government is failing you. And unless we expose you to capital punishment——

[Laughter.]

Senator BLUMENTHAL.—I think we have an obligation to compel the relevant agencies, principally OPM and anybody else concerned, to do better and to do more and to do it more quickly so that you can succeed in this task.

Ms. SWENSON. Senator, we'd really appreciate that. Thank you for your comments.

Senator BLUMENTHAL. Thank you.

Thanks, Mr. Chairman.

The CHAIRMAN. Thanks, Senator Blumenthal.

Senator Cantwell, Senator Wicker——

Senator CANTWELL. Thank you.

The CHAIRMAN.—Senator Daines.

STATEMENT OF HON. MARIA CANTWELL, U.S. SENATOR FROM WASHINGTON

Senator CANTWELL. Thank you, Mr. Chairman.

You know, one of the issues that strikes me in this discussion is how fast you can go and whether there's more the private sector can do but I think the key phrase here is interoperability and then, my understanding that some of those pilots were turned down because they really were ensuring interoperability.

I mean, the private sector can get it all done in a second, but I guarantee you it'll be a closed-loop system based on somebody's technology that they just build and build and build and build and build off their technology. So if you want to give somebody the grand prize I guess we could do that, but the issue here is making sure we have interoperability. Is that correct? And is that why some of the pilots were delayed because they weren't really conquering that?

Ms. SWENSON. Well, let me respond to that. And I can respond pretty specifically because, as a board member, I actually, in the very beginning days of FirstNet, negotiated the leases. As you know, those BTOP projects were in existence prior to FirstNet becoming a reality. They were put on hold just to make sure that they were, because they were focused on broadband, and to make sure that they were consistent with what we were trying to do with FirstNet. The good news is we were able to actually move some of those forward.

Some of the difficulties that we experienced, one of the requirements was that that plan that the organization presented had to be self-sustainable. So, in other words, they needed to show financial viability. And, in some of those cases, it didn't turn out to be that. And I will tell you, personally Senator, that I personally worked very hard to try to get those projects completed because we know how important they are.

As I said, we've learned a lot from these projects that we've already incorporated into the technical work that the technical team is doing. It has really helped us in terms of understanding the government assets and how we might utilize those. I think that NTIA has been involved in that activity as well because they have a different role than FirstNet does. But I will tell you that we work very hard to get those projects on board because we are learning a lot from them

Senator CANTWELL. OK.

So I want to ask you about when we will see functionality because it is important. So while I understand the issue of interoperability, in making sure that that actually is implemented throughout the network, I think the state grants are very important. I think we have this horrible incident that we're almost to its 1 year anniversary, which is the Oso mudslide, which literally cut two communities in half and they were without communication and it required 30 different agencies to respond.

And I think everybody now knows exactly what we want and what it's going to take in this particular area because of the topography; you have some communication challenges just in that. But I mean, literally, at one point we were just trying to greenlight basically putting the broadband back up for like a mile connected to the trees. That's what we had to do, because we couldn't have residents of our—we had, I mean, over 40 people lost their lives in this incident. Everybody wanted to respond but we literally didn't even have broadband communication until we greenlighted putting it back up and hanging it along tree limbs, just so first responders and everybody could respond.

So I hope that we will see the urgency that we have to get some of these pilots done. And that we take these state plans and make them sew up the actual needs so that then you can lay your work on top of them in a faster fashion. And we get some of these demonstrations and pilots up and running right away. So when would we have that functionality?

Ms. SWENSON. So let me see if I—I'm trying to listen to all of the comments that you had in there. And I think it's important to understand that the pilots are important for us relative to building out our nationwide network. And that is our first priority.

I know that there are many, many people who would like us to do many more pilots. And I will tell you, it would be a bit of a dilution of our efforts. As we indicated, we are resource constrained at this point now. And so, what we want to do is focus our effort and energy, on the public notice that we just issued, which, by the way, really did a lot to support the rural states issues if you've seen that. I mean, it's a really important issue for the coverage there. Focus our——

Senator CANTWELL. When would we see functionality of one of those?

Ms. SWENSON. The functionality of one of the pilots?

Senator CANTWELL. Yes.

Ms. SWENSON. Well, actually there's a pilot in Colorado called ADCOM that's in the Boulder area that is actually up and functioning. We have another project that is not actually a broadband project but it's in Harris County, Texas and they have an operational system. In fact, I went and visited Harris County probably in January of 2013. So they are actually experiencing and using these with first responders to test some of the functionality and the interoperability. So some of these projects are up and running.

In New Jersey, we have a deployable project. They are in the process of actually getting the deployable so they can test the ability to operationalize those deployable——

Senator CANTWELL. Well, I'm sure our state is very aggressive. So I'll have to get—I know my time is running out here. We'll have to get some details about what our state is doing and when we will see a pilot within the State of Washington.

Ms. SWENSON. We'll be happy to spend time with you.

Senator CANTWELL. Thank you.

Ms. SWENSON. Thank you.

Senator CANTWELL. Thank you.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Cantwell.

Senator Wicker.

STATEMENT OF HON. ROGER F. WICKER,
U.S. SENATOR FROM MISSISSIPPI

Senator WICKER. Thank you.

Mr. Secretary, the Broadband Technology Opportunities Program, BTOP, came about as a result of the Stimulus Act. In 2012, the Tax Relief Act came along and now we have FirstNet. Mississippi was one of the grantees under BTOP and moved forward very aggressively with greater speed than any other recipient. The Department and our delegation have had numerous discussions about our disappointment with how this has turned out.

I understand FirstNet maintains it could not reach a spectrum lease agreement with the State of Mississippi. This was unfortunate because tens of millions of state and Federal tax dollars had been spent, significant fiscal assets deployed and the system weeks away from going live. Mississippi would have provided an early demonstration of the great potential broadband holds for first responders.

I assume you're aware that the entire Mississippi delegation met with Assistant Secretary Strickling in 2013 to impress on him how important restarting the original BTOP project was to all of us. At that point, I personally tried to help FirstNet, NTIA and the State of Mississippi reach an agreement. Assistant Secretary Strickling then agreed to work with us to find a way forward, but this has not come to fruition. NTIA has justified the suspension of Mississippi's grant as saving taxpayers' money by "avoiding investments that might have to be replaced if they are incompatible with the ultimate nationwide architecture of the new public safety broadband network."

However, one of the fundamental conditions imposed on all 700-megahertz public safety broadband waivers is the commitment of the waiver recipients to design, develop, and deploy a network that is fully interoperable. So that argument does not seem to hold water.

Furthermore, Mississippi's contract with its vendors required complete compliance with "all rules, specifications, and functionalities."

That may change per the FCC or NTIA during the build out of the nationwide network. Understandably, we in Mississippi are disappointed. Given these assurances by the State of Mississippi and the vendors, how exactly is NTIA saving taxpayer money, especially when in fact the agency is now telling Mississippi to spend money to dismantle the LTE equipment already deployed?

Mr. ANDREWS. Well, Senator, so as you know, there were seven pilot projects looked at. Four of them were approved. Three of them are not approved, including the $70 million Mississippi grant. And, you know, we were deeply disappointed as well because we wanted to try to make this work. But, at the end of the day, the state and NTIA couldn't agree on terms because the state's plan didn't provide the necessary level of detail we needed to meet the statutory requirements of the act. And, as you know, under the BTOP program, there were specific statutory requirements that this had to

meet, and the Mississippi plan that came forward wasn't a viable alternative that met the statutory requirements.

One of the things that NTIA is committed to doing is helping——

Senator WICKER. Statutory requirements from 2012 or from the 2010 Economic Stimulus Act?

Mr. ANDREWS. I believe from the Economic—for the original BTOP program. And one of the things, it's my understanding is that Mississippi program didn't provide broadband coverage. And so, that was one of the challenges of this.

But, look, we wanted to try to make this work. The FirstNet team worked very hard and long hours with Mississippi trying to find a way to make it work. Three of the projects were not, in the end though, able to go forward because they, for one reason or another, including this one.

NTIA is working with the State of Mississippi to dispose of the equipment. Mississippi, the medical communications equipment held by the hospitals and the ambulances will be retained in Mississippi. So we're trying to keep as much of that value, but NTIA is committed to helping to dispose of the excess equipment, frankly, to avoid a loss to the taxpayers.

Senator WICKER. Mr. Secretary, we were weeks away from deployment. Mississippi was a leader in deploying a network for first responders. Based on the statute that was enacted in 2010. Then the Federal Government made the decision to dismantle the original BTOP project, forcing the state to start over. Mississippi has already accomplished the goal of NTIA's implementation program, which is why the state turned down the offered SLIGP grant. Mississippi today has a mature governance structure for the network that was created in 2005. The state was only weeks away from turning on its broadband network when the BTOP grant was suspended by NTIA.

I hope that your offer to continue working with the state comes to fruition.

Ms. Swenson was invited over a year ago to come to Mississippi. For whatever reason, that meeting has not taken place yet. But I can tell you that we in Mississippi, our entire delegation Democrat and Republican, are very concerned about this, very disappointed at the wasting of Federal money from the economic stimulus program. And we are particularly disappointed that MED-COM is not able to go forward; a project that has received essential equipment and would allow first responders to transmit lifesaving data to provide hospitals, which support vital medical services to proceed on.

My time has expired but I hope this hearing will result in some purposeful action on the part of the department and FirstNet to make things work in Mississippi.

The CHAIRMAN. Thank you, Senator Wicker.

Senator Daines.

STATEMENT OF HON. STEVE DAINES,
U.S. SENATOR FROM MONTANA

Senator DAINES. Thank you.

I come from Montana. And, in a state like Montana, we have almost a tale of two types of environments, very rural environments across most of our state. At the same time, because of technology,

it has removed geography as a constraint. We are able to build now world-class companies in Montana because we can attract and retain great talent because of our rural nature of the quality of life. We have fly fishing streams and mountains and so forth.

It also helps us improve our first responder services, the technology. And encouraged, in terms of what FirstNet could do to improve public safety, by coordinating these communication capabilities. When we have incidents or 50 to 100 miles away in terms of maybe a medical emergency, where we could bring electronically the doctor to the location of an incident, is the difference between life and death. In a state like Montana, we have some very important national assets. We have a third of the nation's ICBMs are located in Montana, 150 warheads. We share a boarder with three Canadian provinces.

So without perhaps as background, I am concerned about the definition of rural. FirstNet plans to deploy on top of the existing private infrastructure first and that makes complete logic, makes perfect logic and sense to me, except for the fact that states like Montana have very limited 4G LTE coverage. And, in fact, in tribal lands it's virtually non-existent. What sort of contingency plans do we have for these types of areas like, for example, the Northern Cheyenne Reservation that doesn't even have 3G service let alone 4G LTE?

And perhaps Secretary, maybe you could take the first shot at that?

Mr. ANDREWS. With your permission, Senator, I'd actually like to allow Sue take this because I think she can answer that question.

Senator DAINES. All right. She's smiling. She thinks she's ready to go. Yes.

Ms. SWENSON. I'm happy to answer that.

First of all, I think it's important, Senator, that you know that the public notice that we issued on Monday takes a really bold step about rural and making sure that rural is taken care of in this total plan. So we know how important that is for states like yourself. And so we are spending a lot of time on that particular topic. And we also, in our first public notice, Senator, asked for public comment on what rural meant. Because, in the legislation, it could have different interpretations and we want to make sure that we have some consistency on those.

We've gotten a lot of good feedback on that and we'll incorporate that. And I'm assuming that your state probably gave us some feedback on that particular topic. If not, we're happy to take that.

In terms of tribal, I think it's important that you understand that we take the tribal consultation very seriously. As you know, there are 566 recognized tribes in the U.S. All the different states have a variety of tribes that we need to consider. Tribal organization should be part of state consultation. So when that occurs, the single point-of-contact, it's important that we make sure that that representation is actually part of the state consultation.

We, as an organization, actually hired and have a person dedicated to the tribal organization so that they're fully represented. We also, as part of the Public Safety Advisory Council, have a tribal working group. One of our board members, Kevin McGinnis, has actually been traveling the U.S. meeting with all the different orga-

nizations. So I just wanted you to know that rural is important, tribal is important, and I believe that we're taking steps to make sure that those areas are consistent——

Senator DAINES. What is the preliminary thinking where the infrastructure doesn't exist today on 4G LTE around what FirstNet will do? Will it be, will they wait until the infrastructure is there or will they circumvent that and move ahead and put the infrastructure in?

Ms. SWENSON. Actually, that's going to be part of our RFP process. And we'd like to get feedback from the partners and the vendors who will be responding, is how we can not only cover urban but cover rural. Because the idea is is that we would make that as high a priority as our urban coverage. I think there was some comments about leveraging existing infrastructure. But part of the RFP needs to address the rural coverage. And the folks responding to the RFP need to respond on how they plan to do that.

Senator DAINES. Yes, and of course the paradox here is that some of those areas are in the greatest need right now of telecommunications.

Ms. SWENSON. We understand which is why we're making it priority.

Senator DAINES. Great.

As I understand also, maybe for Ms. Swenson, the Governor of each state would have the option to accept or opt out of the FirstNet plan. And I am not hearing that Montana is planning to opt out, but I know there was curiosity around, if a Governor did opt out of a plan, they're responsible for coordinating an effort and submitting that plan to the FCC. Any sense of what the cost associated with opting out versus accepting the plan for some of the states might be?

Ms. SWENSON. I mean, it's a great question and I think a lot of people are really trying to figure that out. I think it's important to understand that you're not really opting out of the nationwide network. You're really assuming responsibility for building your own radio access network. All states, whether they use FirstNet radio access network or build their own, will connect to our national core. That's what creates the interoperability across the Nation.

Now, in terms of the cost, that will be something for your team to, you know, in Montana to determine. We're going to give the Governor a plan that will actually lay out the coverage we have planned based on the consultation we do with your state in terms of the priorities, and then we will give you what the cost of that is or the pricing to your end users. You will then have that to make a determination as the state. And the Governor makes that decision as to whether or not you want to take on responsibility for——

Senator DAINES. OK, so you'll have a cost and everything——

Ms. SWENSON. It'll be in the——

Senator DAINES.—with a fiduciary responsibility if there was an opt-out?

Ms. SWENSON. We won't determine your cost. You're going to determine that. You're going to issue an RFP and determine that. We will tell you what our plan is. You can than compare it to what you think building your own radio access network would cost.

Senator DAINES. OK. Thanks.

I know I'm out of time, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Daines.

Senator Klobuchar.

STATEMENT OF HON. AMY KLOBUCHAR,
U.S. SENATOR FROM MINNESOTA

Senator KLOBUCHAR. Thank you very much, Mr. Chairman.

Thank you to you and Ranking Member Nelson for holding this important hearing. As a former prosecutor and co-chair along with Senator Burr of the 9–1–1 Caucus in the Senate, I know how important it is to support our first responders. I'm also the state that had that bridge collapse, and while everyone saw on TV the firefighter, the first responder show up and repeatedly dive into that water to look for survivors and all of the work of the emergency responders what people didn't see were the 77 men and women at the Minneapolis Emergency Communications Center who took those calls. And while a number of people died, it could have been so much worse because people were able to get to hospitals. There were dozens more cars in there and people survived because of our first responders.

I've worked hard to strengthen our country's emergency response network in part by sponsoring and working on the legislation that led to the creation of FirstNet. I think it's critical to our communications infrastructure. And Congress intended it to be built on a combination of new and existing infrastructure.

I know that Senator Thune and Senator Daines and others, when I just heard have been talking about the rural issues so I'm not going to focus on that. That's important to me. But, Ms. Swenson, are you committed to making sure that as FirstNet formally launches partnerships, that opportunities will be available to entities of all size? I know that Newcore Wireless based in St. Cloud is currently participating in a pilot project with FirstNet in Oak River and it's a good trial project. But I want to make sure you're going to continue to work with entities of all sizes.

Ms. SWENSON. Yes. In fact, I think it's important to understand that the process is designed to do that. We have a responsibility to make sure that we deploy a nationwide network at the most effective cost structure. So, as we go out and talk to people who have different assets who want to participate in the request for proposal, everyone will have an opportunity to do that.

And we will weigh those options and also look at the complexity of the design and also the speed to market.

Those are the things that we have to consider. But, certainly, we're welcoming one and all because this is going to take a really integrated and joint effort to make this work.

Senator KLOBUCHAR. OK.

The Spectrum Act also included an amendment I worked to include that created a funding mechanism for more than 115 million for Next Generation 9–1–1 research and grants coordinated by NTIA and NHTSA, and I continue to have, as my top priority, making sure that we not only have the nationwide network in place but we integrate the NextGen technologies that are already transforming public safety real-time video text messaging.

Ms. Swenson, what involvement has FirstNet had with public safety answer points and the 9–1–1 community, the NG9–1–1?

Ms. SWENSON. Actually, we're in communication with the 9–1–1 organizations very frequently. In fact, I'm planning to go to the NETA conference probably in the month of June because we know how critical it is to the overall system. So it's an ongoing dialogue.

Senator KLOBUCHAR. Thank you.

Mr. Andrews, what are NTIA and NIST doing to further the NextGen 9–1–1 operations in coordination with FirstNet?

Mr. ANDREWS. So that is a great question. And one of the things that we've done is in a partnership between NTIA and NIST, and actually in Senator Gardner's state near Boulder, we've created the Public Safety Communications Research program, which is our effort to really push forward the, you know, into that next generation of public safety communications. As you know, as well, the NTIA administers the NextGen 9–1–1 program, and that's something that we're working on.

Senator KLOBUCHAR. OK, very good. Well then, we should invite Senator Gardner to join our 9–1–1 Caucus. It's a very exciting group.

[Laughter.]

Senator KLOBUCHAR. We have a lot of emergencies that we respond to.

My last question, Ms. Swenson, is I understand that Minnesota was the second state to have its consultation with FirstNet last September. What are some of the takeaways from that meeting with the stakeholders in Minnesota?

Ms. SWENSON. You know, I think, as indicated earlier, I think it's important that we learn from each of the states their individual circumstances. Every state has a set of circumstances that are very different. Your topography is different; your, you know, where your priorities are are different; and we're learning in each of those consultation what exactly is unique to your state so we can incorporate that into the RFP process.

Senator KLOBUCHAR. OK, very good. Thank you very much.

The CHAIRMAN. Thank you, Senator Klobuchar.

Senator Udall.

STATEMENT OF HON. TOM UDALL, U.S. SENATOR FROM NEW MEXICO

Senator UDALL. Thank you very much, Chairman Thune, and thank you for focusing this hearing on this very, very important topic. And let me first just say that I want FirstNet to succeed ensuring our Nation's first responders have the communication tools they need; should be a top priority of this Committee.

Despite lessons learned from the terrorist attacks of 9/11, our first responders still do not have nationwide interoperable communications network. As many of you know, in an emergency this can be a matter of life or death.

In my home state of New Mexico, I am pleased that the Recovery Act Broadband Grant helped upgrade the state's public safety communications. This hopefully puts my state a step ahead as FirstNet becomes operable.

One concern I have is that Congress sometimes makes good policies but then fails to follow through by adequately funding their implementation. And I think that could well be a case here. Building FirstNet is clearly no easy task and I want Congress to give FirstNet a chance to succeed. It is important first responders have the communications tools they need to protect all of us.

Now, many Senators have already raised the rural issue. I think rural is tremendously important in New Mexico. And so, I want to you to focus on that.

Ms. Swenson, you talked in your written testimony, and I think to a question asked by Senator Daines, about the tribal issues and how tribes are going to be included. I want to applaud you on having a person dedicated to the tribes. I mean, that's usually the way it works best; is somebody that really understands these tribal issues, develops a long-term relationship and works with them.

Could you expand a little more on you testimony, your written testimony, about how you're going to make sure that tribes aren't left out in this moving forward?

Ms. SWENSON. Certainly.

You know, as you know, the act really requires that we engage with tribal. So there was no ambiguity about that. So we're very clear about that. But, setting that aside, FirstNet really understands the important of tribe. We, as you said, we have a person dedicated to that within FirstNet, and I think that's actually unique for an organization like us to actually dedicate a resource to that.

We also have, as part of the Public Safety Advisory Council, a tribal working group and that is focused on tribal issues so that it's represented within the public safety community and the tribal group. That particular group, a small group, had a meeting in Washington, D.C. just 2 weeks ago.

And so, it is a very high priority for us. In fact, when I was in town hall meeting a couple weeks ago, the representative, the tribal representative from our organization was there at the town hall. We had tribal representation at the town hall meeting and he was actually going to get in his car and drive along the cost and meet with as many tribal organizations as possible. So he's out and about.

And, as I mentioned, one of our board members, Kevin McGinnis who is from the EMS community, has actually been taking on that responsibility as a board member to go out and make sure that we're reaching out, making the tribes aware of it, and also making sure that the tribal representation is part of consultation. Because, it's really important they're at those meetings, at the state meetings, so that we can understand their perspective as well. So we're very, very focused on that and consider it a very high priority.

Senator UDALL. And as you said, the consultation part is tremendously important. I mean the tribes really look to the Federal Government to look at and see that they're going to be communicated with and consulted with on these kinds of issues. So we appreciate what you're doing and hope we have your commitment to work and make sure that they're not left out.

Ms. SWENSON. You absolutely do.

Senator UDALL. Thank you.

Ms. SWENSON. Thank you, Senator.
Senator UDALL. Thank you.
The CHAIRMAN. Thank you, Senator Udall.
Senator Gardner.

STATEMENT OF HON. CORY GARDNER,
U.S. SENATOR FROM COLORADO

Senator GARDNER. Thank you, Mr. Chairman, and thank you to
the witnesses for your testimony and time today. I apologize for
coming into the hearing late. I was attending an AUMF hearing
with Secretary Kerry downstairs.

So I just want to thank all you, again, for being here. And want
to thank Ms. Swenson, particularly, for the work you're doing,
given a very difficult yet vitally important task to ensure that we
have a nationwide public safety network. FirstNet, if done right,
can help first responders across the country do their jobs more
quickly and more effectively. And no one knows this better than
Colorado who has endured wildfires and flooding over the past sev-
eral years of great magnitude.

So my questions stem from a place where I want to help ensure
that the state has exactly what it needs to react to disasters such
as these in the future, and I want the network to succeed. And I'm
happy to talk about the 9–1–1 Caucus too but I think she's left so
we'll have to figure that one out later.

Ms. Swenson, one of the concerns that I have had from the state,
and I've heard from the state, is that the current path forward for
FirstNet does not include the use of public assets that are already
and willing to be utilized by the public safety network. My under-
standing is that you first need to know who the commercial part-
ners are before you move forward with utilizing, excuse me, uti-
lizing public assets. Isn't there an argument to be made that we
shouldn't be using this and we should be using these public assets?

Ms. SWENSON. Well, I think it's a very good question. And you
weren't here earlier, but let me just state what I stated earlier.
And that is, in the early days of FirstNet we actually thought that
getting that information about government assets would be very,
very important for building out the network. What we've learned,
through our BTOP projects, and LA in particular, is that this is
more difficult than we anticipated in terms of the unique cir-
cumstances in every state about coming to a memorandum of un-
derstanding about those assets, the leasing of excess capacity on
those assets. Whatever the circumstances are, they turned out to
be much more complex than we had anticipated.

So what we would like to do is obviously know about those as-
sets, but take that into consideration after we determine who the
partner is and then determine what additional perhaps coverage or
capability those assets can add to the existing plan. And so, we just
think from a sequencing standpoint and from a complexity stand-
point, as I said earlier, we want to make sure that we're dedicating
our resources now on getting the national network built.

And so, it has been a change from what we had originally antici-
pated but we're very comfortable with this approach. Additionally,
if there are assets that an organization in the state would like to
be considered as part of the nationwide network, again, I think it's

important that we look at speed to deployment, complexity, and cost. Because we have a responsibility to make sure that this is done in the most effective and efficient way possible.

Senator GARDNER. And some of the follow up questions I have on the sequencing, the complexity and then the speed with which we're getting this done. You mentioned, I believe, it was told to me by my staff at the beginning, you said that Adams County is functioning.

Ms. SWENSON. Yes.

Senator GARDNER. And so, thank you for that.

But, if they've met all of the international standards and if interoperability is not an issue there, then, you know, we're looking at 3 years, 4 years maybe, down the road. People in Colorado need to get this done now. Does Adams County have to wait until they receive a state plan to proceed? Can Colorado move forward, and build it out and still be a part of FirstNet?

I'm concerned that we have places in Colorado, significant metropolitan populations with rural areas in forested terrain that need to move forward and yet this is taking time and we could build out. How do you respond to that?

Ms. SWENSON. Well, you know, again, this is a very complex issue, as you know. And we're very excited about what Adams County is doing and it has become a good project for people to come and see how this new technology is actually working. I think it's really important for people to understand our focus is getting on the nationwide network. And we have limited resources at FirstNet in order to spend time on these individual projects. And so, it would dilute our ability to work on the nationwide plan.

And so, it's a tradeoff for us, very frankly, Senator. And it's a difficult one because I'd love to have all the resources in the world to, you know, to do a lot more in a lot of different areas. But we have an obligation to move this as quickly as possible, so we've had to make some tradeoffs.

Senator GARDNER. And perhaps we can follow up a little bit on that, but I wanted to shift to the rural conversation that sounds like so many people brought up. In previous experience that we've had with some funding from the Federal Government that was intended and designed to go to unserved or underserved areas, money was spent in areas where it could easily be spent and those areas where money would be spent in difficult areas to reach for networks and others. That money was not spent and then, by the time they got to those areas, which were difficult in Colorado to reach, the money was gone. And, they had to look elsewhere for opportunity.

Are there areas or parts of the country, parts of Colorado, where FirstNet will not be building out into because it doesn't make sense or it's not responsible?

Ms. SWENSON. Well, I think that's an excellent question.

First of all, I think it's important for you to know that the funding in the second notice ensures rural build out. I think if you look at the public notice that we just issued on Monday, there is assurance for rural build out.

The consultation that we do with every state is really talking about the priorities. Not that we would never build, but we want

to understand where your priorities are because obviously a network of this magnitude, we can't just snap our finger and turn it on 1 day. I mean it's going to have to go in phases, but we have rural build out milestones that we need to accomplish to make sure that we actually do that.

The response to the RFP is going to be critical and the folks who respond to the RFP are going to have to address those issues. That's why we're taking the information from your state consultation and interactions that we're having with your state and putting that into the RFP so whoever is responding knows that that's a priority for you.

Senator GARDNER. From your point of view, there's no place in the country that has been sort of labeled as taken off the table; so to speak?

Ms. SWENSON. No. Not at all.

I'm telling, I mean, we talk more about rural than we do urban. I mean that's how important it is to us; is that we are constantly thinking about and making sure. And I would commend you, you know, if you haven't seen it, and for anybody who's listening, the second notice really assures that. And we took great pains and spent quite a bit of time to make sure that the very description, or situation that you described, won't happen here.

Senator GARDNER. Thank you.

Ms. SWENSON. Thank you.

Senator GARDNER. Mr. Chairman, thank you.

The CHAIRMAN. Thank you, Senator Gardner. And I appreciate the continued emphasis on the rural issues.

Ms. Swenson, I'm sure you got that loudly and clearly today. There's a lot of interest on this Committee.

Ms. SWENSON. Do you know what? I feel exactly the same way.

The CHAIRMAN. Good.

This has been a great, great panel. Thank you. I thought this shed a lot of light on a subject that has needed to be discussed, which is why it was important to have this oversight hearing to raise some of these issues and ask some of these questions. We appreciate the panel's willingness to appear today and to respond to those questions. And we'll continue to provide that oversight.

This is an important investment; something that has a lot of ramifications for our first responders and our public safety community in making sure that we're able to respond in an effective and timely way when things happen. So I want to make sure we get it right and this Committee will do everything we can to stay on top of it.

So thank you all for being here today. The hearing record—oh. All right.

OK. All right.

The Senator from Massachusetts is here.

STATEMENT OF HON. EDWARD MARKEY,
U.S. SENATOR FROM MASSACHUSETTS

Senator MARKEY. I apologize, Mr. Chairman, and I want to thank you for convening today's hearing. We understand very well how important it is to have a strong, reliable first responder network. From the over 100 inches of snow this winter to Hurricane

Sandy to the marathon bombing, we know how critical it is that our emergency responders have dependable communication tools that allow them to work and to talk to each other safely. And that's why I have always supported FirstNet, because it fulfills one of the most important recommendations of the 9/11 Commission: the creation of a nationwide interoperable public safety network. It ensures that our first responders have the tools which they need.

So Ms. Swenson, we must ensure that FirstNet is reliable across the entire country. However, each part of the country faces its own set of difficulties that will challenge the network's resiliency, whether it's blizzards, hurricanes, tornados, earthquakes, the list is endless. We have to makes sure that the network has the capacity as it actually responds to each one of these different challenges.

So my first question is it's supposed to establish the advanced network for the twenty-first century public safety needs, given that the states and the municipalities already have existing public safety networks, how will FirstNet work with and utilize these resources in building out and deploying the national public safety broadband network?

Ms. SWENSON. Senator, thank you for the question.

We are interested, as you are, in making this a reliable network. And we were just talking to Senator Gardner about a similar question, but I'll be happy to repeat it.

The issue with the current assets within the state, when we started FirstNet, we thought that that would be the way to go is to do an inventory of those assets and then build upon those. It turns out that one of our projects in Las Angeles, the BTOP program in Las Angeles, has informed us and been very useful in helping us understand the challenges with actually using existing assets because of the difficulty of developing memorandums of understanding, leasing excess capacity. And it has been extremely useful in helping us understand that it was probably a little harder than we thought to do.

Now, that doesn't mean that we wouldn't utilize those in some fashion, but we would go through the RFP process, award partners to actually deploy the network, and then determine how those assets could be utilized. And also, those assets, depending on who owns them, they could be part of responding to the request for proposal. Because, deploying this network, as you indicated, it's important that we do this in an urgent fashion and that's where we're dedicating our resources to do that.

Senator MARKEY. OK.

You know, on Patriots' Day, 2013, right in the middle of downtown Boston with a million people watching the marathon, there really is no other event like this. We then had the marathon bombing attack.

Ms. SWENSON. Right.

Senator MARKEY. And so, on the one hand you have the government response. On the other hand you have a private cellular network that you also want to have working and you have a million people all calling, "What's happening to my family member running?" Or even, in this instance, where people who weren't running were also injured.

So can you talk a little bit about the capacity——

Ms. SWENSON. Yes.

Senator MARKEY.—in emergencies for the private cellular network to be able to also provide the kinds of information which is necessary for people to be able to respond properly?

Ms. SWENSON. Sure.

As you know, the commercial networks today get really burdened when there's an incident whether it's small or large as all of us pick up our phones and make a phone call. And so, it really prohibits the first responders from being able to use the commercial network.

With FirstNet, it'll be a dedicated network. And, even with the leasing of the excess capacity for other use, the technology today, Senator, has something called priority and preemption. And so, unlike the networks today, that technology will enable first responders to get access to the network and to remove those folks who are using the network who are not critical. And so, we believe that that particular capability really differentiates FirstNet from commercial networks today. That is what commercial networks can't do.

Additionally, we are working in the state consultation meetings to look at how to harden those networks. So assuming we have a commercial partner that partners with us along with other folks, we would actually, we're going to be in a different band class and we will harden those networks relative to each particular state.

Senator MARKEY. Excellent.

Ms. SWENSON. OK.

Senator MARKEY. Thank you.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Markey.

And again, thanks very much to the panel. And the hearing record will be open for two weeks.

During that time, Senators are asked to submit any questions they have for the record. Upon receipt, the witnesses are requested to submit their written answers to the Committee as soon as possible.

Again, thank you very much for your participation. This hearing is adjourned.

[Whereupon, at 12:08 p.m., the hearing was adjourned.]

A P P E N D I X

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. JOHN THUNE TO
HON. BRUCE H. ANDREWS

Question. Stakeholders have raised concerns that, while FirstNet is an "independent authority" within NTIA, it is not sufficiently independent in its operations and is saddled with Federal rules that are setting FirstNet up for failure. Do you agree with these concerns? What has the Commerce Department done to eliminate unnecessary red tape for FirstNet?

Answer. In enacting the Middle Class Tax Relief and Job Creation Act of 2012, Congress created the First Responder Network Authority (FirstNet) as an independent authority within NTIA, which is part of the Department of Commerce. Thus, FirstNet is both part of NTIA and independent of it, particularly with respect to program-related decisions not expressly assigned to NTIA under the Act.

The Act's placement of FirstNet within NTIA makes FirstNet a unique Federal entity. It is essentially a start-up organization charged with ensuring the building, deployment, and operation of a nationwide public safety broadband network within the applicable rules and regulations of the Federal Government. I agree that this framework poses challenges in balancing the goal of speedy deployment of this vital network with the need to adhere to Federal Government hiring and procurement requirements.

The Department actively supports FirstNet by providing certain legal, procurement, human resources, and administrative assistance where FirstNet does not otherwise have its own resources or direct authority. In doing so, the Department seeks to streamline and expedite Federal processes. For example, FirstNet is now using the Commerce Alternative Personnel System, which should assist in speeding up the hiring process. Additionally, the Department has supported FirstNet's request to the Office of Personnel Management (OPM) for Direct Hiring Authority, which would give it greater control over its human resources functions.

The Department also worked closely with FirstNet to enable an interagency agreement between FirstNet and the U.S. Department of Interior for assisted acquisition support. This agreement gives FirstNet dedicated acquisition resources to assist in its Request for Proposal (RFP) process for the nationwide public safety broadband network. Additionally, the Department is working on the long-term solution to provide delegated authority to FirstNet to run its own acquisition office.

The Department continues to work closely with FirstNet to ensure that it can execute contracts and hire staff as expeditiously as possible. While the Federal Government may not be able to move as quickly as a private company, we are pleased with the progress FirstNet has made to date.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. ROGER F. WICKER TO
HON. BRUCE H. ANDREWS

Question 1. In your testimony to the Committee, you indicated that the State of Mississippi and NTIA couldn't agree on terms because the State's plan "didn't provide the necessary level of detail we needed to meet the statutory requirements of the Act." Further, you maintained, "The Mississippi plan that came forward wasn't a viable alternative that met the statutory requirements."

In fact, if Mississippi had not met the requirements of the Broadband Technology Opportunities Program (BTOP) grant program and had not been able to demonstrate sustainability, the State would never have received a BTOP grant award. As you know, the Federal laws governing access to the broadband spectrum needed to operate the Mississippi system were changed in February 2012. As such, NTIA chose to suspend portions of the State's grant citing interoperability concerns. The State had already deployed a significant portion of its broadband network and was ready to go live within weeks of the NTIA suspension. The State has honored the terms of the BTOP grant award and has not deviated from these commitments.

My understanding is that during the build-out of the LTE network, there was never a moment where the State was out of compliance with any grant rules or regulations. The project was on schedule and on budget. Considering Mississippi's original BTOP grant proposal was approved by NTIA, please tell me exactly what details were missing and which statutory requirements were not met?

Answer. When Congress enacted the Middle Class Tax Relief and Job Creation Act of 2012 (Act), it dramatically changed the landscape for public safety broadband. NTIA approved the State of Mississippi's (Mississippi) project in 2010, prior to the Act, when the concept of public safety broadband was a "network-of-networks" model, in which individual communities, states or regions would build networks that would interoperate with each other. The Act mandated a new approach to build, operate, and maintain a nationwide public safety broadband network based on a single, national network architecture. With this new vision in mind, the Act required the Federal Communications Commission (FCC) to grant to FirstNet the 700 MHz spectrum that was being used by the seven public safety Broadband Technology Opportunities Program (BTOP) grant recipients, including Mississippi, as well as additional reallocated spectrum.

NTIA partially suspended the LTE-specific portions of the seven public safety BTOP awards in May 2012, because of uncertainty created by the new legislation and reallocation of spectrum to FirstNet. At the time NTIA partially suspended Mississippi's project, the state had drawn down $22.2 million of the $70 million in Federal funds. Mississippi BTOP reported that all of the LTE equipment ordered was delivered for the project; Mississippi BTOP had installed approximately 40 antennas, the Evolved Packet Core (EPC), and a few of the 143 eNodeBs. This limited deployment provided coverage far short of what was needed to operate the network. Additionally, the project plan Mississippi provided to NTIA during an April 2012 site visit indicated that it planned to install the remaining antennas during the summer and fall of 2012. When NTIA partially suspended the project, the state had not released the request for proposal (RFP) needed to procure the end user devices and MEDCOM equipment—the devices and equipment necessary to use the LTE broadband system. Mississippi's grant documents showed that the LTE system would not have been deployed and running by mid-May 2012, as many of the elements were not in place to have a viable network. Mississippi's project schedule showed that its LTE system would not be fully deployed until at least June 2013.

In September 2012, Mississippi's lease to operate in the 700 MHz spectrum expired. Without access to the spectrum, Mississippi was out of compliance with its BTOP award and did not have authority to operate its BTOP-funded LTE system. In order to get the LTE project back on track, Mississippi needed to enter into an agreement, consistent with FirstNet's mission, to gain access to FirstNet's spectrum so it could operate its network. Unfortunately, Mississippi could not agree on lease terms with FirstNet. Mississippi sought assurances that either FirstNet or NTIA would cover its ongoing operating costs while it built out its network given a state budget shortfall that reduced the available funds that the Mississippi Wireless Commission had allocated to operate the network. FirstNet was unable to commit to taking on this financial responsibility in advance of the state opt-in decision, and BTOP programmatic requirements precluded NTIA from allowing BTOP funds to pay for operating expenses. In the absence of a lease agreement with FirstNet, the LTE portion of the project was not able to move forward.

After it was determined that no agreement could be reached between FirstNet and Mississippi, NTIA worked closely with Mississippi to determine if there were any other options to reprogram the funding for other public safety broadband infrastructure purposes. NTIA and Mississippi committed considerable time to evaluating several alternative plans that the state created to keep the funding to benefit the first responders in Mississippi. Unfortunately, the final plan submitted by Mississippi on December 16, 2013, did not meet the minimum requirements of the BTOP Middle Mile Infrastructure program and was missing the level of detail that was necessary for NTIA to approve it. For example, the state's final plan focused on the new telemedicine equipment that would be purchased (*e.g.,* vehicular modems, routers, handheld devices, computers, tablets, GPS tracking capability) and outlined some new broadband research initiatives and outreach efforts. Some of the items in the final plan, however, such as non-construction related vehicles, were unallowable costs within the BTOP program. In addition, the final plan did not address how this equipment would be connected to broadband infrastructure. The final plan requested additional time to work with FirstNet to achieve a successful business model. But, after 18 months, the state had been unable to reach agreement with FirstNet, and there was no indication that an agreement could have been reached if given additional time. Also the state was unable to identify a viable commercial partner that was willing to participate with the state and the grant program

to expand broadband infrastructure within Mississippi. Given the uncertainty regarding the broadband infrastructure and how the equipment would be connected to a broadband system, NTIA could not approve the final plan. As such, Mississippi's grant expired and is now in close out.

Question 2. Also in your testimony, you indicated that that "the Mississippi program didn't provide broadband coverage." Isn't it a fact that Mississippi's network provided broadband coverage to over 70 percent of the state? Are you aware that MED–COM released a Request for Proposal for an application that required broadband speeds for telemedicine and the statewide BTOP broadband network was to be utilized?

Answer. In its original BTOP application, the State of Mississippi outlined a compelling case that the State ranked last in the Nation in broadband connectivity and noted that "commercial providers face significant economic challenges in serving the rural areas of the State." In its application, Mississippi proposed a 134-site system "geographically covering 97 percent of the state and touching all 82 counties. . ." Unfortunately, the LTE system did not meet the proposed coverage outlined in the application.

The system was designed using Mississippi's existing Land Mobile Radio (LMR) infrastructure, which provides about 70 percent statewide coverage with very spotty wireless service for public safety personnel. Mississippi recognized the coverage issue and, in June 2012, the state began discussions with NTIA regarding the need to expand the project by an additional 130 sites to cover approximately 90 percent of the state. Unfortunately, Mississippi was unable to fund an expanded project.

NTIA was aware of the MED–COM Request for Proposal (RFP) to purchase and deploy the telemedicine equipment in 342 ambulances and 90 hospitals across Mississippi. This portion of the BTOP project was contingent on a functioning LTE broadband system to transmit the data. As Mississippi acknowledged in its application and during negotiations with FirstNet, the state did not have viable, wireless commercial options for public safety in rural areas. Without the LTE infrastructure, MED–COM had no viable option to connect its ambulances and hospital equipment to broadband. NTIA understands the importance of the telemedicine equipment and is allowing Mississippi to keep the radios it already purchased that are connected to the existing Land Mobile Radio system.

Question 3. Did NTIA block FirstNet from finalizing an agreement with Mississippi? Is it accurate to say that NTIA's counsel objected to an emerging agreement between FirstNet and Mississippi because NTIA maintained that, despite what FirstNet agreed to in discussions with Mississippi, FirstNet did not have the authority to inject short terms funds to help Mississippi offset operational costs until the nationwide system reached Mississippi?

Answer. NTIA did not block FirstNet from finalizing an agreement with Mississippi. Both FirstNet and Mississippi acknowledge that they were unable to reach an agreement on an acceptable spectrum lease agreement. Under the Middle Class Tax Relief and Job Creation Act of 2012, FirstNet does not have the authority to inject short term funds to states in advance of FirstNet's compliance with the Act's requirements relating to the state opt-in/opt-out decision-making process. During negotiations for a spectrum agreement, Mississippi revealed that it had an operating funding shortfall of $6.6 million in the first two years of operation. Mississippi expressed to the Federal Government that it wanted NTIA or FirstNet to cover these operating expenses. However, neither the grant program nor FirstNet are allowed to cover such expenses. Under the rules of the BTOP grant program, BTOP funds are limited to network construction, and therefore cannot be used for operating expenses.

Question 4. NTIA justified the original suspension of Mississippi's grant in 2010 as saving taxpayer money by avoiding "investments that might have to be replaced if they are incompatible with the ultimate nationwide architecture of the new public safety broadband network." However, one of the fundamental conditions imposed on all 700 MHz public safety broadband waivers is the commitment of the waiver recipients to design, develop, and deploy a network that is fully interoperable with the ultimate nationwide deployment standards. Furthermore, Mississippi's contract with its vendors required complete compliance with "all rules, specifications and functionalities" that may change per the FCC or NTIA during the build-out of the nationwide network.

Given these assurances by the State and the vendors, how exactly is NTIA saving taxpayer money, especially when in fact the Agency is now telling Mississippi to spend $1 million to tear down its LTE equipment already deployed?

Answer. As described above, when Congress passed the Middle Class Tax Relief and Job Creation Act in 2012, it dramatically changed the landscape for public safe-

ty communications by adopting a nationwide network approach. As a result, NTIA suspended its seven 700 MHz BTOP public safety projects to give FirstNet the opportunity to negotiate spectrum lease agreements with each recipient. Unfortunately, Mississippi was unable to reach agreement with FirstNet. Without a lease agreement or a plan to responsibly utilize remaining grant funds consistent with statutory and programmatic requirements, NTIA could not justify expenditure of additional taxpayer dollars. As described above, Mississippi's final proposal included operating expenses, which BTOP cannot fund, and would not have been used to deploy broadband infrastructure. Further, the LTE equipment deployed cannot be utilized in the future by FirstNet without substantial upgrades at significant additional cost.

Mississippi purchased the equipment almost three and a half years ago. At the time, the equipment was 4G LTE Release 8/9 and programmed for use on 5x5 MHz spectrum bandwidth. When FirstNet deploys the nationwide network, it will be leveraging spectrum frequencies for use on 10x10 MHz bandwidth and a higher LTE Release, with critical FirstNet features not defined in Release 8/9, such as priority and preemption and quality of service. This will make the current equipment obsolete.

Mississippi provided NTIA with the estimate from its vendor that it would cost approximately $1 million to remove the equipment from the tower sites and dispose of it properly. All recipients of BTOP funds, including Mississippi, are obligated under Federal regulations to decommission and dispose of federally funded grant property in compliance with its award terms and conditions. The costs associated with decommissioning and disposing of federally funded assets is an allowable grant expense.

Question 5. I understand NTIA is pushing for the deployed LTE BTOP project equipment to be removed at taxpayer expense, and then sold to developing countries for use in their own broadband networks.

Can you confirm this information and is there an estimate of the cost for the removal of this equipment as well as the estimated revenue from the sale of this equipment? Wouldn't taxpayer money been better spent on preserving this deployed equipment for the benefit of public safety, the people of Mississippi, and the people of the United States?

Answer. Please see the response to question 4 above. As described above, the LTE equipment deployed by Mississippi cannot be used by FirstNet without substantial and costly upgrades. NTIA will work with BTOP recipients, including Mississippi, to explore options for disposing of federally funded assets consistent with Department of Commerce regulations. NTIA is not requiring Mississippi to sell the LTE equipment to developing countries for use in their own broadband networks.

Question 6. In his May 2012 letter to Governor's office suspending the BTOP grant, Assistant Secretary Strickling stated that NTIA would, "want to keep the grant money in the communities that received the grants." Yet here we are in 2015 and NTIA has yet to make any final determinations with regard to the existing MED–COM project that received essential equipment under the BTOP grant to support emergency medical response agencies, hospitals, and first responders throughout Mississippi. This equipment allows first responders to transmit life-saving data to provider hospitals which support vital medical services in rural Mississippi and greatly enhance the quality of health care for Mississippi citizens.

In addition, NTIA has yet to make a final determination in regard to the upgrade of the State's microwave backbone network to a greater bandwidth to accommodate the broadband network in addition to the State's existing two-way radio system. The upgrade to the microwave backbone network is complete and is currently in use by over 20,000 first responders across the State. These first responders rely on the microwave backbone network for day-to-day radio operations and additional emergency communication needs including dispatch services, global positioning services, and automatic vehicle location. If any of these assets are removed from the State, it would cause a significant impact on emergency response operations and send a ripple effect across Mississippi.

When will NTIA provide written assurances to the State that it can retain the MED–COM equipment and microwave backbone equipment purchased with BTOP funds as approved by NTIA?

Answer. NTIA has had numerous communications with Mississippi regarding the microwave backbone equipment and MED–COM radios that were previously installed under the BTOP grant funds. This equipment was the non-LTE portion of the BTOP project and was not part of the partial suspension. NTIA has informed Mississippi that the microwave and radio equipment can remain in use by the project, provided that Mississippi continues to use such equipment for the original

purposes outlined in the grant, as required by Federal grants regulations. NTIA will work to provide whatever additional written assurances and instructions Mississippi requires regarding the equipment that needs to be disposed of (LTE-specific equipment) and the equipment that Mississippi can retain.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. BILL NELSON TO HON. BRUCE H. ANDREWS

Question. I understand in 2010, NTIA awarded 7 grants for wireless public safety projects. Following passage of the Public Safety Spectrum Act, NTIA suspended the grants to ensure they were compatible with FirstNet. Ultimately, two projects were unable to reach agreement with FirstNet on terms that would allow them to move forward. Could you please explain for the Committee the circumstances that resulted in some projects moving forward while others could not?

Answer. As part of the $4 billion Broadband Technology Opportunities Program (BTOP), NTIA awarded seven grants in September 2010 for communities to deploy 700 MHz wireless broadband networks to improve communications for fire, police, and other public safety entities. The initial grants were to the States of New Jersey, Mississippi, and New Mexico; Adams County, Colorado (ADCOM); Charlotte, North Carolina; the Los Angeles Regional Interoperable Communications System Authority (LARICS); and Motorola (in coordination with the San Francisco Bay Area Regional Interoperability Communications System Authority (BayRICS)).

When Congress passed the Middle Class Tax Relief and Job Creation Act in February 2012 (Act), the landscape for public safety broadband changed dramatically. NTIA approved these projects when the concept of public safety broadband was a "network-of-networks" model. The Act adopted the vision of a nationwide public safety broadband network based on a single, national network architecture, which called into question the assumptions on which NTIA awarded the grants in 2010. The Act also required the Federal Communications Commission (FCC) to reallocate and grant to the First Responder Network Authority (FirstNet) spectrum within the 700 MHz frequency band, which was the same spectrum that the BTOP public safety grantees had proposed using to operate their wireless networks. In light of the uncertainty over whether they could retain access to the spectrum needed to operate their systems, NTIA partially suspended these grants in May 2012. Suspending performance of these grants also gave FirstNet the chance to evaluate the extent to which deployment of the networks could inform and contribute to its mission, including wireless infrastructure that could be incorporated into the nationwide network established by Congress.

While several BTOP public safety grantees had made progress in implementing their projects at the time NTIA partially suspended their awards, each had significant work left to complete fully operable broadband networks. For example, while the State of Mississippi had ordered and received all LTE equipment for the 144 sites it planned to deploy when NTIA partially suspended its award, it had installed less than half of that equipment. This limited deployment provided coverage far short of what was needed to operate the network.

Following the suspension, FirstNet engaged in extensive discussions with each of the BTOP public safety jurisdictions to enter into spectrum lease agreements to use the spectrum that the Act had allocated to FirstNet. After approximately nine months of negotiations, FirstNet granted spectrum leases to four BTOP grantees—ADCOM, LARICS, the State of New Jersey, and the State of New Mexico. Once the agreements were signed, NTIA lifted the partial suspensions, allowing these projects to move forward. NTIA also granted extensions for completion of the projects to September 30, 2015, the statutory deadline for BTOP grantees to draw down money.

FirstNet offered the same spectrum lease agreements to each of the seven BTOP public safety recipients. Three recipients, however—City of Charlotte, Motorola, and the State of Mississippi—did not agree on lease terms with FirstNet and, as a result, did not sign spectrum lease agreements to enable them to complete their public safety projects as originally conceived.

Each of these three projects presented unique and complex circumstances and the lease agreements needed to make sense not only for the grantees but also for FirstNet's design and deployment of the nationwide public safety broadband network. In the case of Motorola, FirstNet had concerns regarding the proposed use of proprietary functions in the network equipment, which was inconsistent with the Act. All three grantees had concerns as to the entity responsible for covering the operational costs of their networks until the FirstNet network became operational. The State of Mississippi, for example, wanted assurances that either FirstNet or NTIA would cover its ongoing operating costs while it built out its network given

a state budget shortfall that reduced the available funds that the Mississippi Wireless Commission had allocated to operate the network. FirstNet could not take on this financial responsibility in advance of the state opt-in decision, and BTOP programmatic requirements precluded NTIA from allowing BTOP funds to pay for operating expenses.

Motorola chose to terminate its award for convenience. Near the end of its award period, the State of Mississippi submitted a revised project plan for NTIA's consideration. This revised plan, however, did not meet the statutory purposes of BTOP, which requires the deployment of a network capable of providing broadband service. It also did not provide sufficient assurances that Mississippi could complete the project within the time remaining in its grant award period. Consequently, the State of Mississippi's award expired in December 2013, and the State did not complete the build-out. The City of Charlotte, however, developed a revised project plan, enabling it to move forward with an alternative approach to advance public safety broadband without the use of FirstNet spectrum.

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RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. JOHN THUNE TO
MARK L. GOLDSTEIN

Question. I understand that the early builder projects have agreed to provide FirstNet with project deliverables and that FirstNet keeps in close contact with the early builder projects. However, you remain concerned that FirstNet lacks a detailed data-analysis plan to track the performance and results of these projects. Would you please elaborate on your concern and why GAO considers it important for FirstNet to address this?

Answer. Early builder projects have learned important lessons related to governance, finance, outreach, and network deployment that could be useful to FirstNet as it develops its plans to establish a nationwide network. However, we are concerned that FirstNet lacks a detailed data-analysis plan to track the projects' observations and lessons learned. Tracking the early builder projects' observations and lessons against FirstNet technical documentation is necessary to ensure that the lessons have been addressed and also facilitates transparency and accountability for FirstNet's decision-making. Even though FirstNet staff and contractors remain in close contact with the early builder projects, without a data-analysis plan to track those projects it is unclear how FirstNet intends to evaluate the projects' observations and lessons and determine whether or how the lessons are addressed. As a result, we believe that FirstNet could miss opportunities to leverage key lessons related to governance, finance, outreach, and network deployment. Given that the early builder projects are doing, in part, on a regional and local level what FirstNet must eventually do on a national level, a complete evaluation plan that includes a detailed data-analysis plan could play a key role in FirstNet's strategic planning and program management, providing feedback on both program design and execution. Furthermore, such a plan could provide FirstNet officials the opportunity to make informed midcourse changes as they plan for the public safety network, and help ensure that lessons from these projects are evaluated in ways that generate reliable information to inform future program-development decisions.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. JOHN THUNE TO
SUSAN SWENSON

Question 1. Stakeholders have raised concerns that FirstNet has developed a business plan to use income from secondary spectrum users to develop, enhance, and upgrade the network, but that FirstNet has not engaged with the states in the business plan's development, nor do the states know details about what the plan contains. What is the status of FirstNet's business plan, and does FirstNet intend to consult with the states soon?

Answer. FirstNet has engaged in significant outreach and consultation to help educate public safety stakeholders about the FirstNet program and to obtain critical information about stakeholder requirements in preparation of FirstNet's comprehensive network request for proposal (RFP) and final business planning. FirstNet has reached out to more than 13,000 public safety and private sector stakeholders through its outreach efforts in 2015 alone. Throughout 2014 and 2015, FirstNet has participated in more than 300 outreach events and held initial consultation meetings with more than 1,300 public safety representatives in 30 states and territories, with additional consultations scheduled through December 2015.

The development of a business plan will go through various iterations as FirstNet noted in its March 2014 public strategic roadmap. Steps that FirstNet is working

on to develop a final approach to a business plan include, but are not limited to: the release of public notices that inform FirstNet's interpretation of its enabling statute;[1] the release of requests for information (RFIs); state, tribal, and territory consultations; the release of a special notice with draft RFP documents; the subsequent final RFP; and the review, validation, and negotiation of potential offerors' proposals. Completion of the business plan is contingent upon, in large part, the completion of these phases. Yet, we are well on our way, having developed a proposed operating model and proposed operational architecture that were the subject of the special notice and draft RFP documents released on April 27, subject to comment from FirstNet's various stakeholders and market participants.

FirstNet has released three Public Notices requesting input from the public, including states, on its initial interpretations of its enabling statute. FirstNet also released 13 RFIs covering a variety of technical issues, including both core and radio access network (RAN) development. Through these public notices and RFIs, FirstNet provided states with an opportunity to provide input that would inform its business plan. The information gathered at these consultation meetings will inform FirstNet's final business plan. The responses that are received from states and other key stakeholders and market participants to the special notice and draft request for proposal (RFP) documents will assist FirstNet in the development of a comprehensive network solution RFP, which in turn will lead to the development of individual state plans and ultimately a business plan for the nationwide network.

FirstNet also has adopted a variety of tools to consult with the states. FirstNet sends weekly outreach documents and updates to all 56 State Single Points of Contact (SPOC), and it holds monthly regional calls with the ten FirstNet regions and quarterly webinars with all SPOCs to ensure that the states have the most current information about FirstNet. In April, FirstNet invited all SPOCs to attend an outreach meeting to discuss topics including the public notices, data collection and preparation, state plan development, network hardening, the FirstNet financial sustainability model, tribal engagement, priority and preemption, governance, and the National Telecommunication and Information Administration's (NTIA) State and Local Implementation Grant Program (SLIGP). Feedback from the participants was overwhelmingly positive and we anticipate holding additional events involving the state point of contacts. In this context, it is clear that FirstNet has, in fact, extensively engaged with states in the development of the business plan and that will continue going forward.

We have made much progress toward the development of a FirstNet business plan. FirstNet has implemented a vigorous state consultation process and will continue to consult so that individual state plans may be developed once FirstNet has selected a partner or partners through the RFP process.

Question 2. The size of the network's user base will have an impact on the economics of making the network sustainable. But, as you know, some are concerned about expanding the definition of "public safety users." How will FirstNet balance its need to establish a sizeable user base with expectations that the network will be utilized by, and prioritized for, public safety professionals?

Answer. FirstNet intends to offer a robust and compelling service that will fulfill public safety requirements while ensuring that the network is available to the public safety professionals who need it through, among other things, locally and centrally administered priority and preemption capabilities. Priority and preemption would provide that, when there is a need, the network will prioritize public safety users over all commercial traffic, and that critical first responders and other key public safety personnel would be prioritized over other eligible public safety users of the network. This ability to prioritize and preempt is a fundamental aspect of the network that differentiates FirstNet from commercial carriers. Priority and preemption allow us to get value out of the excess capacity without having to give up any public safety priority use of the network. FirstNet also has continued refining its definition of the term public safety users. FirstNet recently released a third public notice seeking additional comment on the meaning of the term "public safety entity" as used in the Act. Comments to this third public notice are due by June 4.

Question 3. The National Public Safety Telecommunications Council (NPSTC) has provided guidance to FirstNet on constructing a network that is safe, secure, and resilient. In GAO's testimony, it noted that implementing all of NPSTC's best practices will add significantly to the cost of building the network. What are your plans for implementing these recommendations?

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[1] The Middle Class Tax Relief and Job Creation Act of 2012 (Pub.L. 112–96, H.R. 3630, 126 Stat. 156, enacted February 22, 2012)(Act).

Answer. Identifying the differences between a commercial network and a public safety-grade network is important as FirstNet develops its comprehensive RFP (that it anticipates releasing by the end of this year or early 2016). The NPSTC report conveys the key principle that the network be available to the public safety community at all times. FirstNet fully agrees with this principle. However, as GAO correctly observed, implementing all of the NPSTC recommendations would add significantly to the cost of building the network. FirstNet intends to balance the need and benefits of hardening the network with the funds available. Also, we are working with our Public Safety Advisory Committee (PSAC) to strike the right balance and identify unique system hardening and resiliency needs and priorities to ensure that the public safety community receives a robust and secure network.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. ROGER F. WICKER TO SUSAN SWENSON

Question 1. In your testimony to the Committee, you indicated that one of the requirements for the pilot programs was that "the plan that the organization presented had to be self-sustainable. So in other words, they needed to show financial viability. In some of those cases, it didn't turn out to be that."

In a complete reversal from the conditions in the original BTOP grant from NTIA, did FirstNet tell Mississippi it could not derive any revenue from public-private partnerships to help offset state costs for operations and maintenance?

Answer. The passage of the Middle Class Tax Relief and Job Creation Act of 2012 (Act), which is the statute that created FirstNet, changed the assumptions on which NTIA awarded the original Broadband Technology Opportunities Program (BTOP) public safety grant to Mississippi in 2010. This new congressional mandate for public safety broadband instructed FirstNet to build and operate a nationwide public safety broadband network (NPSBN) with a single nationwide architecture, instead of using a "network-of-networks" approach in which individual states, regions or communities would build stand-alone networks that would interoperate with each other.

The Act required the Federal Communications Commission (FCC) to reallocate and grant to FirstNet the same spectrum that Mississippi planned to use to operate its public safety broadband network. In light of the uncertainty over whether Mississippi could retain access to the spectrum needed to operate its system, NTIA partially suspended the grant in May 2012. This also gave FirstNet the opportunity to evaluate Mississippi's project to determine if it could provide value to FirstNet's deployment of the NPSBN under the new conditions of the Act.

According to information sent to FirstNet from NTIA, in 2012 the state was in discussions with NTIA to expand its original 134 site system due to coverage gaps appearing in the original design. In December 2012, Mississippi acknowledged to FirstNet that it did not have the funding to expand its project without adopting a public private partnership (PPP) and guaranteeing the long-term use of FirstNet's spectrum to a third party. FirstNet could not agree to a PPP between the state and a third party as part of the negotiations for the spectrum management lease agreement (SMLA) before FirstNet had the opportunity to fulfill its statutory obligations to establish an organization, conduct state consultations, develop a business strategy, and complete other mandatory activities. Further, granting the guaranteed long-term use of FirstNet's spectrum by a third-party could have put at risk FirstNet's ability to deploy a nationwide system as mandated by Congress.

Question 2. Why shouldn't Mississippi or any state be allowed to strike public-private partnerships to help offset the significant cost of public safety networks? Wouldn't such a partnership allow FirstNet additional resources to deploy a more robust system with truly nationwide coverage?

Answer. As discussed in the response to the previous question, FirstNet was not in a position to enter into a spectrum lease agreement that would have negatively impacted its ability to deploy a NPSBN or interfere with its other responsibilities under the Act.

Question 3. Did FirstNet expect the State of Mississippi to pick up all costs from its general revenue fund—or via new user fees—for an undefined period of time until FirstNet deployed its network in Mississippi?

Answer. The BTOP grant application process required prospective grant recipients to demonstrate that their proposed project would be sustainable beyond the grant period of performance.[2] In its BTOP application to NTIA, the State of Mississippi

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[2] *http://www2.ntia.doc.gov/files/btop_grant_guidelines_v1_0_july_10.pdf.*

proposed to charge a user fee to satisfy at least part of the sustainability requirement. FirstNet, as part of the SMLA negotiations for all projects, did not advocate for additional or new user fees above those already contemplated by Mississippi. Rather, the demonstration of sustainability was required by FirstNet and NTIA for all projects seeking to negotiate an SMLA with FirstNet and was intended to ensure that BTOP grantees could continue to operate within the original parameters of their BTOP awards without requiring the use of additional FirstNet resources.

Question 4. During the negotiations, would FirstNet commit to taking control of 100 percent of the already deployed broadband network as part of the nationwide network?

Answer. Throughout spectrum lease negotiations with each of the BTOP public safety recipients, FirstNet reiterated that it could not give any guarantee that any of the systems that were being deployed using BTOP funds would be incorporated into the NPSBN. First, the Act mandates that FirstNet conduct an RFP process to select partner(s) to assist in the deployment of the NPSBN. Second, FirstNet could face numerous challenges with technology compatibility, potential partner network configurations and integration costs, and the potential costs associated with recapitalizing potentially outdated equipment if FirstNet committed to taking control of preexisting infrastructure. The Act mandates that any assets incorporated into the NSPBN must pass an "economically desirable test." Due to these challenges, FirstNet could not guarantee that the already deployed broadband system would pass such a test.

Question 5. Mississippi will be entering its fourth Hurricane season on June 1, since the May 12, 2012, NTIA grant suspension without access to this lifesaving technology due to the fact that NTIA and FirstNet have yet to develop a plan for deployment and sustainability of a nationwide public safety broadband network. Mississippi was willing to continue with its original business plan, as agreed to by NTIA, but was not afforded the opportunity.

When will FirstNet be deployed in Mississippi? As NTIA has prevented Mississippi from completing its BTOP broadband public safety network, which I remind you, was originally funded under President Obama's stimulus program at considerable taxpayer expense, couldn't one conclude that the Federal government has jeopardized the safety of Mississippi's first responders and citizens?

Answer. It is FirstNet's goal to deploy the NPSBN in Mississippi and throughout the Nation as quickly as possible. Consultation with states is well underway and FirstNet has held initial consultation meetings with over half of the states and territories. FirstNet made further progress on the acquisition process by recently issuing a special notice and draft RFP documents, which will ultimately lead to a final RFP and an award(s) being made for the deployment of the network. FirstNet anticipates releasing a final RFP by the end of this year or early 2016. These are the steps that, by law, FirstNet must take before the NPSBN can be deployed.

FirstNet will continue to work with appropriate personnel in Mississippi to ensure that they have the information they need to assist the Governor in making the decision regarding whether the State will decide to deploy its own RAN or choose to make a FirstNet-deployed RAN available to its public safety entities.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. CORY GARDNER TO SUSAN SWENSON

Question 1. FirstNet is currently not operationally capable. How long will it be before FirstNet is available for use across the country?

Answer. There are a variety of factors that will influence when the NPSBN will be available for use by public safety. Some of these factors are within FirstNet's control, while others are not. FirstNet's enabling statute mandates that the organization conduct a request for proposal (RFP) or proposals in the development of the NPSBN. FirstNet is also mandated to conduct state consultation with all 56 states and territories in the development of these RFPs and develop individual state plans for governor consideration before deployment can take place. FirstNet has begun the formal process of state consultation and has released a special notice with draft RFP documents, which will be followed by industry days throughout the summer and fall. These two parallel and cross-cutting efforts are FirstNet's prime focus during the next year as it moves towards deploying the network on a nationwide scale as quickly as possible.

Question 2. Adams County, Colorado was a recipient of a BTOP grant from the American Recovery and Reinvestment Act—sometimes referred to as the stimulus.

It has created a network that is up and live and has met the standards set forth by the grant. My questions are as follows:

- If interoperability is not an issue—because Adams has met all the international standards that are required and will commit to integrating their network into the future nationwide network—why is it that the state cannot build outside of Adams County to expand its network?
- What specific part of the law prevents FirstNet from allowing Adams County to do this?
- Are you asking Adams County to wait until they receive a state plan?
- If so, when will that be?

Answer. The Act that created FirstNet changed the vision for public safety broadband from a "network-of-networks" approach to a nationwide public safety broadband network. It is important that mistakes of the past, where states and jurisdictions built their own systems in isolation, are not repeated. Breaking the nationwide network into individual, independent systems would continue the lack of interoperability among first responders, contrary to the Act, and would introduce additional integration and equipment recapitalization costs, which may be prohibitive to the deployment of a nationwide network.

FirstNet negotiated SMLAs with each of the BTOP public safety recipients in recognition of Congress' vision of a single, nationwide network. Throughout these negotiations, FirstNet stated that it could not give any guarantee that any of the systems being deployed using BTOP funds would be incorporated into the NPSBN.

First, the Act mandates that FirstNet conduct an RFP process to select partner(s) to assist in the deployment of the NPSBN. Second, FirstNet would face numerous challenges with technology compatibility, potential partner network configurations and integration costs, and the potential costs associated with recapitalizing potentially outdated equipment if FirstNet committed to taking control of preexisting infrastructure. The Act mandates that any assets incorporated into the NSPBN must pass an "economically desirable test." Due to these challenges, FirstNet could not guarantee that the already deployed broadband system would pass such a test.

FirstNet also has limited resources, both in terms of funding and personnel. FirstNet does not have the ability to allocate resources to expand individual projects while it attempts to deploy a nationwide network. Such project expansion could significantly increase costs and put a nationwide deployment at risk, because there is no guarantee that the assets can be incorporated easily and cost-effectively into the NPSBN.

To FirstNet's knowledge, ADCOM does not have the funding to expand its project to more areas of the state without adopting a public private partnership (PPP) and guaranteeing the long-term use of FirstNet's spectrum to a third party. FirstNet cannot agree to a PPP between the state and a third party before it conducts the mandatory activities outlined in the Act, including state consultation, issuing competitive RFPs, and developing state plans for governor consideration. Granting guaranteed long-term use of FirstNet's spectrum to a third party would negatively impact FirstNet's ability to deploy a nationwide system, as mandated by Congress. FirstNet is not in a position to approve a PPP process outside of the nationwide model, due to the technical and practical challenges that would arise as a result.

The Act spells out the process through which a state plan is developed and provided to a Governor so that he/she has a choice whether to participate in the network deployment for the state as proposed by FirstNet or seek to undertake the responsibility to deploy the radio access network (RAN) in that state. The state plan has not been developed at this stage. After consultation with the state and the completion of the comprehensive RFP, the necessary information will be available to develop a state plan. Due to these contingences, FirstNet cannot give a specific date on when a state plan will be ready. Once the RFP process is complete, the state and FirstNet will work together to help ensure that the priorities of the state are addressed in the state plan.

Question 3. Do you think all states must complete the consultation process before any specific states can move forward with implementation?

Answer. No. Once FirstNet has completed the RFP process and a state plan has been developed with the necessary information from the consultation meetings and the RFP, the plan will be presented to the governor. This will be done as each state plan is completed and will not be held up until all state plans have been developed. Once presented to a governor, the governor will decide whether FirstNet will build the RAN in the state or whether the state itself will seek to undertake to build and operate the RAN through the process specified in the Act. If a state determines to

build and operate its own RAN, it will need to take additional steps before that plan is approved and implementation can commence.

Question 4. Please provide me with specific dates for the following major milestones:

- Core network deployment
- State plans completed
- Network implementation
- Significant rural coverage

Answer. As discussed in the answer to question 1, FirstNet is working toward the release of a comprehensive RFP by the end of the calendar year or early 2016, assuming FirstNet has received the necessary input from industry and the states/territories. On April 27, FirstNet released a special notice with draft RFP documents that contained a timeline for network deployment with the following milestones for these topics. Appendix C–8 IOC/FOC Target Timeline is a document in the draft RFP documents that provides details pertaining to the target Initial Operating Conditions Final Operating Condition (IOC/FOC) timeline for the FirstNet features and functionalities. This timeline correlates with the 3GPP standard body release timeline. The phases listed in this document are the planned deployment phases of the NPSBN deployment referenced throughout the draft RFP documents. At this time, given that state consultation informs the RFP and the RFP informs state plans, FirstNet cannot give specific dates on these topics until the RFP process is complete.

Question 5. With regard to rural coverage, can you explain to me how you plan to reach the most remote areas of our state? I don't believe that the statute requires all areas to be covered in the same way; it just requires "substantial rural coverage."

- What does this mean?
- Will the speeds be the same in urban areas and rural areas?
- Will you commit to covering all areas of Colorado?

Answer. In September 2014, FirstNet released an initial Public Notice and a request for information (RFI) with a statement of objectives (SOO) attached. The Public Notice requested responses from the public on FirstNet's initial interpretation on the definition of "rural." A significant number of the 63 responses to this initial notice concerned the proposed definition of "rural." FirstNet needs to define "rural" so it can understand what "substantial rural coverage milestones" are because the Act mandates that these milestones be included as "part of each phase of deployment of the network." [3]

As part of consultation and state plan development, each state will be given the opportunity to identify priorities and provide input regarding its preferences to a phased state-wide build-out. Consistent with the Act, state plans will include "deployment phases" into which the state will have significant input, subject to the capabilities of the contractor(s) selected and the funding available for deployment. States and territories will inform FirstNet of their priorities in terms of coverage, capacity, speed in rural areas, and users. As a practical matter FirstNet will not be able to build out to every part of the country. The geographical scope of deployment will be heavily dependent on resources, state priorities, and contractor capabilities.

Question 6. What happens to states that opt out of FirstNet? Will they be charged any fees? Can you foresee an instance where you do not accept an opt-out proposal?

Answer. States will be given the choice to either accept the FirstNet state plan or assume responsibility to deploy and operate their own Radio Access Network (RAN) provided that the state's alternative plan meets the criteria established by the Act for approval by the FCC and NTIA. If a state chooses to assume responsibility for its own RAN, it will be financially responsible for the capital, operational, and maintenance expenses, including the cost of integration with the national core, and all future upgrade expenses, for the RAN within its state. This is stipulated in the statute and discussed in the second Public Notice published in March 2015. Under Section 6302(f) of the Act, any state that chooses to assume responsibility for its own RAN shall pay user fees associated with use of the core network.

The Act also outlines the significant roles that the FCC and NTIA have in the review and approval of the opt-in/opt-out process. Under the Act, if a state decides to assume responsibility for its own RAN, there are interoperability demonstrations

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[3] P.L. 112–96, Section 6206(b)(3).

that must be made in the state alternative plan and approved by the FCC before a state may proceed with its RAN build and operation. Additionally, should the FCC approve a state plan, a state must apply to NTIA to negotiate a lease for the use of spectrum capacity from FirstNet, and may apply to NTIA for grant funds for RAN buildout. To be approved for either, NTIA must determine that the state's alternative plan demonstrates that it has the technical capabilities to operate, and the funding to support, the state RAN, the ability to maintain ongoing interoperability with the nationwide network, and the ability to complete the RAN build within specified comparable timelines specific to the state. NTIA also will review the cost-effectiveness of the state plan and whether it maintains comparable security, coverage, and quality of service to that of the nationwide network.

Question 7. How has consultation gone with Colorado? Where do the problems and concerns lie in your mind? Did you provide Colorado with timelines? Were you able to answer their questions and if not, did you follow up?

Answer. FirstNet held the initial consultation meeting with Colorado on January 14, 2015. FirstNet shared information about its planning and strategies and received constructive feedback from the Colorado participants. Colorado representatives shared information about their current usage of broadband, discussed the need for FirstNet for their public safety agencies, and shared information about users and coverage priorities in Colorado. Many questions were asked and answered from both FirstNet and Colorado. It was a fruitful and successful dialogue. FirstNet provided a high-level sequence of events surrounding consultation and the ultimate release of a RFP. This initial consultation meeting served as a formal kickoff for consultation activities with Colorado. FirstNet has requested that all states submit data regarding users, coverage priorities, and capacity needs to FirstNet by September 2015. FirstNet will continue the consultative dialogue with Colorado through this process and will schedule subsequent consultation meetings with Colorado in the future.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BILL NELSON TO SUSAN SWENSON

Question 1. What steps will FirstNet take to ensure that you have access to multiple vendors of public safety grade communications equipment, infrastructure, and maintenance capacity at the core, transport/backhaul, and RAN levels of the National Public Safety Broadband Network (NPBSN) throughout the entire NPBSN build out period?

Question 2. Will FirstNet include specific mandates in the NPBSN acquisition strategy to ensure that any major prime contractor for the NPBSN build out will employ a diverse subcontracting plan that will create continuous competition and ensure no region of the country is dependent on a single vendor for infrastructure, equipment, and maintenance?

Question 3. Does FirstNet plan to pre-qualify multiple vendors to supply equipment, infrastructure, maintenance, professional services, and other necessary categories of goods and services at the core, transport/backhaul, and RAN levels of the network?

Question 4. How will FirstNet use competition throughout the multi-year NPSBN build out process to control costs, reduce risk, encourage multiple companies to invest in bringing innovation in mission critical, public safety grade wireless solutions to the market?

Question 5. What metrics will FirstNet use to measure competition within the NPBSN "industrial base" to ensure a strong supplier network exists throughout the country? Will the FirstNet NPSBN acquisition strategy include specific metrics and goals for ensuring multiple, qualified suppliers are represented in the NPBSN industrial based throughout its build out?

Answer. FirstNet is dedicated to issuing open, transparent, and competitive Requests For Proposals (RFPs), pursuant to Section 6206(b)(1)(B) of the Middle Class Tax Relief and Job Creation Act, and intends to satisfy this requirement by complying with the Federal Acquisition Regulation (FAR).

FirstNet is committed to encouraging widespread and diverse vendor participation in the acquisition process. At this stage in the acquisition process, FirstNet has not made a decision on the use of specific metrics and goals regarding competition, any pre-qualification strategies, or specific diversity requirements for subcontractors. As the acquisition process progresses, FirstNet will take steps to leverage competition among multiple vendors, which will provide a more cost-effective and high-quality deployment model and the greatest value to public safety.

To further encourage industry competition, FirstNet has issued 13 Requests for Information to date, the latest of which generated 122 responses from the stakeholder community, and intends to issue draft Request for Proposal (RFP) documents in the coming weeks. This will be followed by industry days to allow as much participation from as many potential vendors as possible throughout the acquisition process.

Beginning with the draft RFP documents, and continuing throughout the procurement process, FirstNet will engage with the vendor community (as well as other interested stakeholders) to ensure access to well-qualified vendors for each level of the nationwide network, including equipment, maintenance of the network, devices, the core, and states' and territories' radio access network (RAN).

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARIA CANTWELL TO SUSAN SWENSON

Question 1. Tribal communities are consistently underserved by broadband providers, which leads to less effective first response, and hinders emergency efforts. The Middle Class Tax Relief and Job Creation Act of 2012, which created FirstNet, states that ". . . proposals shall include partnerships with existing commercial mobile providers to utilize cost-effective opportunities to speed deployment in rural areas." and that this should be done with consultation with tribal as well as rural governments. There are also National Historic Preservation Act obligations which require consultation with the Tribes.

I'm proud that in Washington we have been coordinating with Tribal authorities in the state consultation process. I am interested in what else has been done by FirstNet or by other states in order to communicate effectively with tribal government and take into account their unique technical and budget needs.

How is FirstNet actively engaging with the tribes to meet both the NHPA and general consultation obligations?

Answer. Engagement with tribes is a vital component of FirstNet's stakeholder outreach planning, as many tribes have an acute need for broadband communications. In 2014, FirstNet board member Kevin McGinnis was appointed to serve as the FirstNet Board tribal liaison and has traveled throughout the Nation engaging tribal nations in discussions regarding FirstNet. FirstNet has also hired a full-time head of Tribal Outreach who has traveled to tribal reservations and villages throughout the country, including meeting with the Quinault Indian Nation and the Tulalip Tribes in the State of Washington in October 2014. Further, as part of state and local planning for the network, FirstNet continues to work with the State Single Points of Contact (SPOCs) to engage and incorporate tribal stakeholders throughout the process.

Additionally, FirstNet's Public Safety Advisory Committee (PSAC) has created the PSAC Tribal Working Group to ensure that unique tribal issues are being discussed and taken into consideration by the public safety community. The PSAC Tribal Working Group held its first meeting this January in close coordination and consultation with the National Conference of American Indians in Washington, D.C.

To meet National Historic Preservation Act (NHPA) requirements, FirstNet has hired a full-time Federal Preservation Officer (FPO) who has started direct consultation by writing to each federally-recognized tribe explaining FirstNet's obligations under the NHPA, as part of the initiation of the Programmatic Environmental Impact Statement (PEIS) required by the National Environmental Policy Act (NEPA). Additionally, the FPO met with tribal leaders at several tribal conferences: the National Congress of American Indians (NCAI) annual meeting in Atlanta this past October; the U.S. Army Corps of Engineers' sponsored "Consulting with Tribal Nations Training" and FEMA's "Emergency Management Overview for Tribal Leaders" in Nashville in January; and the U.S. Forest Service-sponsored "To Bridge a Gap" tribal conference hosted by the Eastern Shawnee Tribe from March 30-April 1, 2015. The FPO will also schedule additional meetings and tribal consultations concerning FirstNet's NHPA obligations over the coming year.

Question 2. Does FirstNet have a plan for serving existing tribal first responders?

Answer. Once the FirstNet network is operational, existing tribal first responders will be able to procure FirstNet services in the same way as non-tribal first responders. Through continued, on-going engagement with the tribes, FirstNet will be in a better position to share information on the network so that they can be in the optimal position to choose whether to ultimately use FirstNet service.

Question 3. Some tribal communities in Washington (Colville, Jamestown-S'Klallam, Couer D'Alene, Nez Perce) have established their own telecom compa-

nies. Is FirstNet able to partner with these companies in order to build a first responder network?

Answer. FirstNet's acquisition process will not exclude any responsible vendor from participating in the process. FirstNet strongly encourages the vendor community, including tribal telecom companies, to comment on FirstNet's public notices, provide input into the upcoming draft RFP documents and attend upcoming industry day events. FirstNet has not made any decisions on vendors for its comprehensive network solution at this point in the process.

Question 4. On March 22 of this past year, my state experienced a major natural disaster: a landslide just east of the town of Oso. The landslide covered a square mile, destroyed almost fifty (50) homes, and killed over forty (40) people.

A report (SR 530 Landslide Commission Report) presented to the Governor of Washington found that there were significant gaps in emergency response, and technical deficiencies that inhibited rescue efforts.

FirstNet is important to my state and to all of us that value the ability of our first responders to move efficiently and with full information during disasters. That is only possible with reliable communications systems that do not fail because of floods, landslides earthquakes, tsunamis, fire, hurricanes etc.

FirstNet was authorized in 2012 to provide the kind of interagency communication and cooperation that was lacking in the response to the Oso Landslide. It's been three years since the agency was founded. I appreciate that my state is one of the early promoters of the FirstNet network, but when can we expect to start seeing functionality in some of these systems and is there anything we can do in Congress to support the process?

Answer. Congress mandated that FirstNet ensure that a nationwide network is built, operated, and maintained in a manner that takes into consideration the unique aspects of every state and territory. To do this, the Act requires FirstNet to consult with all 56 states and territories to understand how public safety's requirements in Washington will differ from public safety's requirements in other states. These consultations are currently taking place, and we intend to complete the initial consultation phase for network planning by the end of 2015. At the same time, FirstNet is moving forward as efficiently as possible with its acquisition process to ensure finding the partner(s) necessary to make this a successful network. FirstNet intends to issue draft RFP documents in the coming weeks, which will be followed by industry days throughout the summer and fall, leading up to a final RFP by the end of the calendar year or early 2016 if we have received the necessary input from industry and the states/territories. These two parallel and cross-cutting efforts are FirstNet's prime focus during the next year as its moves as quickly as possible to start deploying the network on a nationwide scale. Congress' continued support of FirstNet's mission and dedication to public safety is a necessity over the coming year as it continues to work towards the first dedicated network for public safety.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. CORY BOOKER TO SUSAN SWENSON

Question 1. New Jersey is using FirstNet spectrum for a public safety broadband project that explores the deployment of mobile systems during emergencies. I expect this project to greatly contribute to the manner in which our emergency response networks deal with communications system failures. In addition, because the units are mobile, they can be transported to nearby states during times of crisis. What has FirstNet learned from the New Jersey project? How does FirstNet envision the use of deployable assets in a future network?

Answer. FirstNet and the State of New Jersey, a Broadband Technology Opportunities Program (BTOP) grant recipient, entered into a Spectrum Manager Lease Agreement (SMLA) under the condition that lessons learned in this federally-funded project be reported to FirstNet in a way that assists in shaping FirstNet's plan, implementation, and overall perspective of the nationwide public safety broadband network (NPSBN). In addition to New Jersey, FirstNet has entered into SMLAs with three other public safety BTOP projects, and a non-BTOP project in Harris County, Texas that is funded through another Federal grant program. The SMLAs for each of these projects, similar to New Jersey, include Key Learning Conditions (KLCs) that provide FirstNet a unique perspective and important lessons on how to better implement the network. Accordingly, members of the FirstNet technical offices are working with each of the projects to gather information and to assist in the successful completion of these systems.

New Jersey plans to implement deployable networks utilizing Cells on Wheels (COWs) and Systems on Wheels (SOWs). The deployable networks will be capable of delivering data either to boost existing communications or provide communications where existing nodes have been compromised. The State will include three "Proof of Concept" implementations: the Route 21 Corridor, Camden in southern New Jersey, and Atlantic City on the Jersey Shore. New Jersey also will keep 10 deployable systems positioned throughout the State in ready standby mode to provide service in the event of emergencies or special events in the State or surrounding region (NY, PA).

The three KLCs are: (1) Demonstration and documentation of the use and capabilities of rapidly deployable assets; (2) Conduct emergency management exercise and training activities utilizing assets and provide detailed lessons learned to FirstNet; and (3) Document best practices Network Operations Center (NOC) notification approach including trouble ticketing, prioritization, reporting and close-out.

The vendors have been selected, and the design/development meetings are in progress with State agencies. FirstNet will continue to work with New Jersey to learn lessons that it can apply to planning the nationwide network. It is too early in FirstNet's acquisition process to paint a full picture of how such solutions will be used in the future network.

Question 2. It is my understanding that the State and Local Implementation Grant Program (SLIGP) was setup to establish funds for states to utilize during the consultation and planning process with FirstNet. Initially, those funds would be used for the capture of data on state and local infrastructure for planning purposes, but FirstNet and NTIA have decided against that. Has this indeed changed and why? How do you envision states using their infrastructure in the future?

Answer. The success of FirstNet and the Nationwide Public Safety Broadband Network (NPBSN) will depend on our ability to deliver the most robust service to as many public safety users as possible at an affordable cost, all while ensuring that the NPSBN can be self-sustaining. FirstNet's approach to network design and deployment aims to take advantage of economies of scale in the marketplace.

FirstNet believes that leveraging existing investments in commercial infrastructure (as mandated by the Middle Class Tax Relief and Job Creation Act (Act) to the extent economically desirable)—such as towers currently supporting LTE deployments—may enable FirstNet to drive down costs and, as a result, keep service fees lower for public safety subscribers and speed deployment of the network.

Through outreach and consultation with federal, state, local, and tribal entities, FirstNet recognizes that publicly-owned assets could potentially support both network deployment and long-term operations. FirstNet has identified, however, a number of challenges with leveraging public assets that could negatively impact the objectives to minimize costs and speed the deployment of the network, through input from our consultation efforts, market research, and lessons learned from the five early builder projects.

These findings suggest that leveraging publicly-owned assets as a foundation to building out a nationwide network is not a feasible or practical approach. For example, entering into memoranda of understanding (MOUs) with individual agencies throughout a State for the use of assets can be complex, time consuming, and costly to negotiate. Additionally, leveraging public infrastructure and leasing excess capacity for Band 14 to commercial entities, which is critical to FirstNet sustainability, may compound the challenges with using public assets. For instance, certain limitations or restrictions on public-private partnerships exist in some States—a topic currently being studied by the Association of Public-Safety Communication Officials (APCO). In regard to competitive procurement issues, if FirstNet were to provide compensation for the use of any public asset, the procurement must be done using an open and competitive process, which would further delay the network deployment schedule.

At this time, based on these observations and our desire to speed deployment and keep costs down, FirstNet does not consider the collection of statewide asset data to be the best approach nor an efficient use of limited State resources and SLIGP funds.

Instead, FirstNet is focusing states' data collection activities on maximizing the collection of stakeholder input into the planning process, such as coverage and capacity needs and user information. These inputs will help shape the FirstNet NPSBN acquisition and ultimately the State Plans that are delivered to each and every Governor.

FirstNet's acquisition approach does not prevent federal, state, tribal, or local assets from being considered. Rather, FirstNet would rely on the market to determine the most cost effective, efficient and ready to deploy solutions.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. MARIA CANTWELL TO
HON. TODD J. ZINSER

Question. On March 22 of this past year, my state experienced a major natural disaster: a landslide just east of the town of Oso. The landslide covered a square mile, destroyed almost fifty (50) homes, and killed over forty (40) people.

A report (SR 530 Landslide Commission Report) presented to the Governor of Washington found that there were significant gaps in emergency response, and technical deficiencies that inhibited rescue efforts.

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FirstNet was authorized in 2012 to provide the kind of interagency communication and cooperation that was lacking in the response to the Oso Landslide. It's been three years since the agency was founded. I appreciate that my state is one of the early promotors of the FirstNet network, but when can we expect to start seeing functionality in some of these systems and is there anything we can do in Congress to support the process?

Answer. We believe this question is best answered by FirstNet since it involves implementing the network and system verses our role of oversight.

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