

NEBRASKA'S STAKEHOLDERS REPORT &  
FIRSTNET DATA COLLECTION SUBMITTAL OVERVIEW  
NOVEMBER 2015

As FirstNet prepares for the RFP process to identify a vendor(s) to move forward with the design and build out of the network they turned to the states with a data collection request that to provide them with information from and about public safety agencies that FirstNet will use to build and advise the RFP process. This report to our stakeholders is an effort to keep you informed about the data collection process and the information Nebraska has provided to FirstNet.

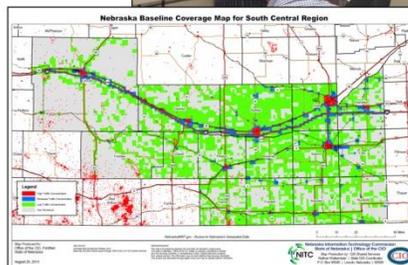
After receiving the request from FirstNet Nebraska created a plan to provide FirstNet with the information they wanted. The plan was presented to and approved by our Nebraska Public Safety Wireless Broadband Working Group which is Nebraska's governance body overseeing Nebraska's FirstNet activities.

The Office of Nebraska's Chief Information Officer, created an on-line survey to gather a large portion of the information being sought. To date, the on-line survey has had responses from 344 entities consisting of paid and volunteer fire departments, law enforcement, standalone EMS squads and fire departments with EMS units, emergency management, tribal agencies, hospitals, natural resource districts, public power districts, public works and roads departments and others.

Additional information not suited for gathering through a survey was captured through eight regional stakeholder workshops held across Nebraska. Local, county and regional public safety officials and other representatives were invited to the regional workshops. These meetings were attended by 107 representatives.

## Local and Regional Input

- **107 Participants**
- **8 NEMA PET Regions**
  - Beatrice
  - McCook
  - Wayne
  - Holdrege
  - Columbus
  - Taylor
  - Bellevue
  - Alliance

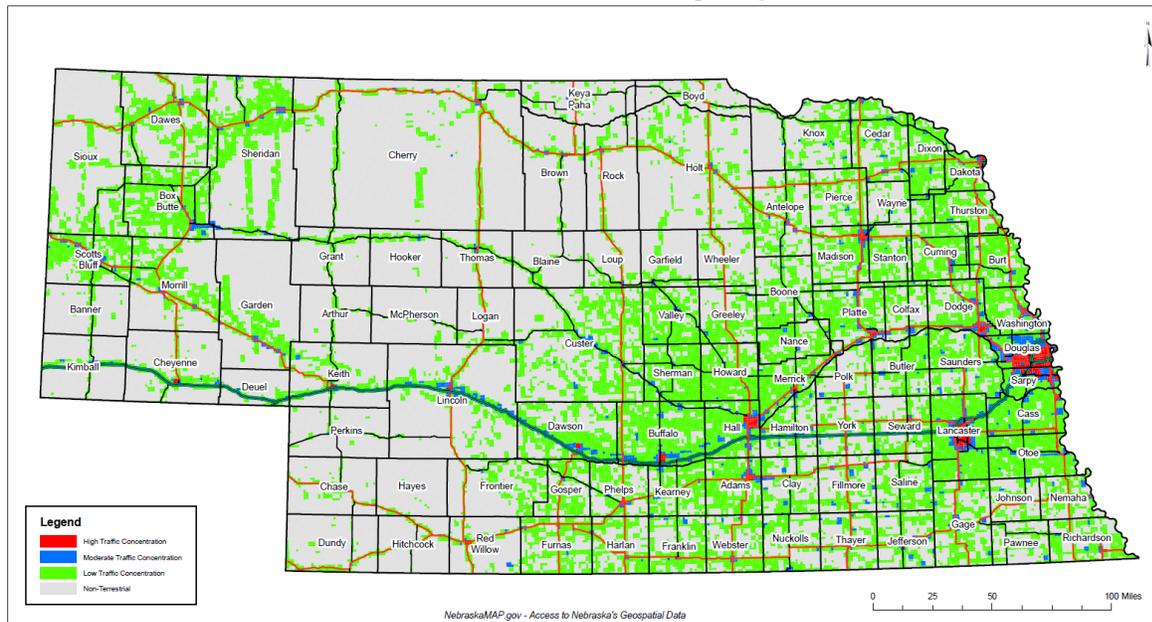


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The purpose of the regional meetings was to:

1. Gather local input regarding FirstNet's initial Coverage Objective map (below) and provide information about public safety activities and identify critical infrastructure that would enhance the need for coverage in a particular area and modify the initial Coverage Objective map based on this local input.
2. Obtain from the local public safety and county representatives what they believed the five stages of deployment for FirstNet should be in Nebraska

**Nebraska Baseline Coverage Map**



It is important to realize that the above map does not reflect radio frequency coverage but rather the probability of request for services from a public safety agency.

The information FirstNet used to create the above Coverage Objective Map is listed below.

1. **Public Safety User Population** (Source: HSIP, OEC provided)
  - a. **Public Safety User Density** based on jurisdiction (OEC data to start)
  - b. **Common response areas (CAD data)**—as it's made available with State collection
2. **Public Safety High Risk / Areas of Interest** (Source: HSIP)
  - a. **Key facilities**—PS agencies, corrections, airports, EOCs, hospitals, PSAPs, schools, etc.
  - b. **Critical infrastructure**—manufacturing , energy, dams, etc.

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- c. **Large Public Venues** –stadiums, theme parks, malls
- d. **Other major event locations** –if provided with initial consultation submission
- e. **\*Area for feedback** –tourist/recreational destinations (parks, hiking, waterways)

**3. US Population (Source: 2012 US Census)**

- a. **Population density**

**4. Developed Areas / Buildings (Source: 2006 National Land Cover Database)**

- b. **Dense / Medium / Light / Open / None**

**5. Roadways(Source: Federal Highway Administration)**

- c. **National Highway System**

- d. **Average Daily Traffic Counts** to identify significant secondary roadways

The following chart represents the recommendations for the 5 phases of deployment that we received from those attending the regional workshops.

Recommendations for Five Phases of Deployment for FirstNet across Nebraska

9.24.2015

**Statewide Priorities**

Priority	Southeast	South Central	Southwest	Panhandle	North Central Sandhills	Northeast	East Central	Tri-County
1	High population areas	Critical infrastructure (i.e. hospitals, power transmission and distribution lines, correctional facilities)	State and federal highways with 5 mile corridor	Critical infrastructure (utilities, rail, pipelines, water supplies).	Paved highways	State and Federal Highways	Paved highways with coverage 5 miles on either side.	Schools (K-12), Colleges, Universities, and Hospitals
2	Federal and State Highways	State-wide public safety/First Responder coverage.	State and federal recreation areas	Paved major roadways (State and Federal).	Agricultural production and manufacturing areas	FirstNet coverage where cellular coverage does not exist based on risk analysis	Lakes, waterways and canals	Large public venues (ie., College World Series, Concerts, Festivals)
3	Federal and State Recreation areas	County seals/critical government administrative and communications facilities.	Railroad corridors	Critical Agricultural facilities (chemical manufacture and storage, grain and sugar beet facilities & feedlots).	Recreational area (Lakes and Rivers)	Public common use areas (parks, lakes, etc.)	Railroad Corridors	Interstate 80
4	Railroad corridors	Rurally located consolidated school districts.	High risk agricultural facilities (ie, ethanol, fertilizer, chemical, multiple employees)	State and Federal Recreational areas.	The most rural public safety districts that are furthest away from their critical support infrastructures (travel time)	High risk commercial and Ag production facilities	Pipelines	Emergency Communications Response Unit (ie, mobile)
5	10 miles on either side of Federal and State Highway.	Airports and landing strips.	Mission critical public safety communication and infrastructure	Secondary paved and unpaved roads.	Railroad corridors	FirstNet coverage in areas where cellular coverage does not exist.	Areas where current cellular and public safety radio communications reception is insufficient.	Recreational areas (ie., parks, lakes, rivers)

**Regional Priorities**

Priority	Southeast	South Central	Southwest	Panhandle	North Central Sandhills	Northeast	East Central	Tri-County
1	Federal and State Highways & five miles on either side.	Two miles each side of Federal, State and County paved roadways and railroad corridors	State and federal highways with 10 mile corridor	Critical infrastructure (utilities, rail, pipelines, water supplies).	Locations without current Land Mobile radio and cellular coverage	State, Federal and County paved roadways and railroad corridors	Paved state, county and federal highways with coverage 5 miles on either side.	Full coverage, no dead spots.
2	Inhabited State Parks (with camping or living facilities)	Coverage where current Public Safety radio and cellular coverage do not exist.	Recreational areas with camping	Paved major roadways (State and Federal).	State, federal and county paved roadways	Commercial and agricultural industrial production areas	Waterways and lakes with camping and residential housing with a mile radius coverage for each.	In building coverage
3	Railroad corridors	Recreational areas with camping or housing areas.	Agricultural facilities	Critical Agricultural facilities (chemical manufacture and storage, grain and sugar beet facilities & feedlots).	Recreational areas (state, federal and commercially owned)	City and state recreational areas	Schools	Robust system for redundancy and prevent failovers
4	Lincoln area	Major waterways	Paved and non paved county roads	State and Federal Recreational areas.	Major agricultural infrastructure (Chemical, ethanol, feedlots, livestock, etc.)	Waterway recreational areas (rivers and lakes)	Railroad corridors	Paved federal, state, county highways and city streets
5	Missouri River valley	Manufacturing and agricultural production areas.	5 to 10 mile radius of villages, towns and cities	Secondary paved and unpaved roads.	Utility corridors (Pipeline and electrical)	Pipelines and pipeline pumping stations	Pipelines	Core infrastructure areas consisting of utilities and energy, and airport (ie, OPPD, MUD, Epply Airport, SAC, and Ft. Calhoun Nuclear)

The Nebraska Public Safety Wireless Broadband Working Group had identified a subcommittee to review the input from the regional workshops and report back to the Working Group with the subcommittee's recommendations. The subcommittee consisted of five individuals representing our state through the Nebraska Sheriff's Association (Buffalo County Sheriff Neil Miller), the Nebraska State Patrol (Major Russ Stanczyk), the Nebraska State Volunteer Firefighters Association (Bill Lundy), the

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Nebraska Association of Emergency Managers (Lynn Marshall) and a representative from the Nebraska Public Service Commission (Cullen Robbins).

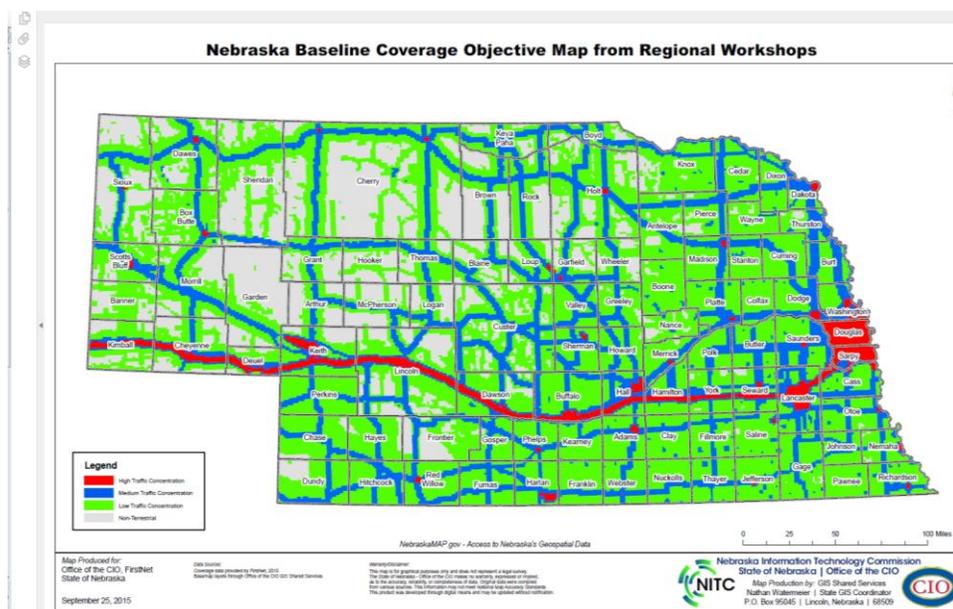
The subcommittee met and reviewed the information received during the regional workshops and provided the following recommendations for the five phases of deployment for the FirstNet Network across Nebraska:

1. Interstate and Federal Highways – with a 5 mile coverage radius from the center line.
2. State Highways – with a 2 mile coverage radius from the center line.
3. Increase coverage and capacity within population areas.
4. Locations without current land mobile radio or cellular coverage.
5. Major Critical Infrastructure, county seats, government administrative and communications facilities. Give review and consideration to areas not provided coverage in previous priorities in Phases 1-4.

The Working Group met on September 29<sup>th</sup>, 2015 at which time they approved the above recommendations of the subcommittee.

During this process it was recognized that the unknowns and details FirstNet could not provide Nebraska regarding their plan or vision about how it would look, operate or unfold had added difficulty to Nebraska's effort to provide FirstNet the information they requested. Having said that, Nebraska is pleased with the opportunity to provide input to FirstNet and with the interaction and exchange we had with our stakeholders during this process.

The map below was submitted to FirstNet and represents enhancements based on Nebraska's stakeholder input into the initial Coverage Objective map from FirstNet (page 2) and the recommended phases of deployment.



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The following is a summary of percentage breakdowns of applications and data use barriers by frequency for key jurisdictions including city, county, state, federal, private sector, and all others reporting from the survey.

**Use of Data Applications**

Nebraska Public Safety Broadband Network Planning Project Survey Responses.

	Daily	Weekly	Infrequently	Not Used	Not Used but Desired	Unknown
<b>City</b>						
Communications	74.6%	7.9%	4.4%	7.9%	0.0%	5.3%
Over the Top Voice	5.3%	0.0%	4.4%	79.8%	1.8%	8.8%
Automatic Vehicle Locations	15.8%	0.0%	0.0%	65.8%	14.0%	4.4%
Location Services	23.7%	1.8%	2.6%	51.8%	14.0%	6.1%
Computer Aided Dispatch	28.1%	2.6%	1.8%	50.9%	10.5%	6.1%
Database Inquiries	28.1%	2.6%	4.4%	48.2%	5.3%	11.4%
Field Based Reporting	28.1%	6.1%	1.8%	46.5%	8.8%	8.8%
General Connectivity	50.0%	8.8%	5.3%	25.4%	1.8%	8.8%
Internet Access/Mobile VPN	28.1%	4.4%	2.6%	43.9%	9.6%	11.4%
Video	14.9%	1.8%	7.0%	59.6%	10.5%	6.1%
Telemetry	7.0%	3.5%	0.9%	69.3%	7.9%	11.4%
All Other	0.9%	0.0%	0.0%	60.5%	0.9%	37.7%

<b>County</b>						
Communications	69.3%	11.3%	4.7%	6.7%	5.3%	2.7%
Over the Top Voice	2.0%	2.0%	12.7%	70.7%	8.7%	4.0%
Automatic Vehicle Locations	14.0%	0.0%	1.3%	65.3%	16.7%	2.7%
Location Services	26.0%	8.0%	6.7%	42.7%	14.0%	2.7%
Computer Aided Dispatch	24.7%	1.3%	2.0%	53.3%	12.7%	6.0%
Database Inquiries	29.3%	4.7%	6.7%	42.0%	7.3%	10.0%
Field Based Reporting	14.0%	4.0%	6.0%	57.3%	12.7%	6.0%
General Connectivity	60.7%	6.7%	10.0%	16.0%	2.0%	4.7%
Internet Access/Mobile VPN	26.0%	6.7%	4.0%	46.0%	9.3%	8.0%
Video	12.0%	5.3%	3.3%	64.0%	11.3%	4.0%
Telemetry	7.3%	2.0%	0.7%	76.0%	6.0%	8.0%
All Other	1.3%	0.0%	0.0%	56.7%	2.0%	40.0%

<b>State</b>						
Communications	68.8%	12.5%	6.3%	6.3%	6.3%	0.0%

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Over the Top Voice	6.3%	0.0%	25.0%	43.8%	12.5%	12.5%
Automatic Vehicle Locations	37.5%	0.0%	0.0%	37.5%	18.8%	6.3%
Location Services	43.8%	6.3%	0.0%	6.3%	37.5%	6.3%
Computer Aided Dispatch	6.3%	0.0%	6.3%	50.0%	31.3%	6.3%
Database Inquiries	50.0%	6.3%	0.0%	18.8%	12.5%	12.5%
Field Based Reporting	31.3%	6.3%	6.3%	18.8%	25.0%	12.5%
General Connectivity	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Internet Access/Mobile VPN	81.3%	0.0%	6.3%	0.0%	6.3%	6.3%
Video	31.3%	12.5%	6.3%	18.8%	12.5%	18.8%
Telemetry	31.3%	0.0%	0.0%	62.5%	6.3%	0.0%
All Other	0.0%	0.0%	0.0%	43.8%	0.0%	56.3%

<b>Federal</b>						
Communications	50.0%	0.0%	0.0%	0.0%	50.0%	0.0%
Over the Top Voice	0.0%	50.0%	0.0%	50.0%	0.0%	0.0%
Automatic Vehicle Locations	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
Location Services	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
Computer Aided Dispatch	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
Database Inquiries	50.0%	0.0%	0.0%	0.0%	50.0%	0.0%
Field Based Reporting	50.0%	0.0%	0.0%	0.0%	50.0%	0.0%
General Connectivity	50.0%	0.0%	0.0%	0.0%	50.0%	0.0%
Internet Access/Mobile VPN	0.0%	50.0%	0.0%	0.0%	50.0%	0.0%
Video	0.0%	0.0%	50.0%	0.0%	50.0%	0.0%
Telemetry	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
All Other	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%

<b>Private Sector</b>						
Communications	57.1%	19.0%	14.3%	9.5%	0.0%	0.0%
Over the Top Voice	0.0%	0.0%	33.3%	52.4%	4.8%	9.5%
Automatic Vehicle Locations	9.5%	0.0%	0.0%	71.4%	9.5%	9.5%
Location Services	23.8%	0.0%	9.5%	47.6%	4.8%	14.3%
Computer Aided Dispatch	23.8%	0.0%	0.0%	57.1%	4.8%	14.3%
Database Inquiries	28.6%	0.0%	4.8%	47.6%	4.8%	14.3%
Field Based Reporting	9.5%	4.8%	9.5%	57.1%	9.5%	9.5%
General Connectivity	71.4%	0.0%	23.8%	4.8%	0.0%	0.0%
Internet Access/Mobile VPN	57.1%	0.0%	0.0%	28.6%	0.0%	14.3%
Video	23.8%	9.5%	19.0%	38.1%	0.0%	9.5%
Telemetry	28.6%	14.3%	9.5%	38.1%	0.0%	9.5%
All Other	0.0%	0.0%	0.0%	47.6%	0.0%	52.4%

<b>Other</b>						
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Communications	67.5%	20.0%	2.5%	7.5%	0.0%	2.5%
Over the Top Voice	0.0%	2.5%	7.5%	77.5%	10.0%	2.5%
Automatic Vehicle Locations	7.5%	0.0%	5.0%	67.5%	20.0%	0.0%
Location Services	12.5%	5.0%	5.0%	50.0%	25.0%	2.5%
Computer Aided Dispatch	17.5%	0.0%	5.0%	52.5%	25.0%	0.0%
Database Inquiries	20.0%	2.5%	0.0%	62.5%	7.5%	7.5%
Field Based Reporting	12.5%	0.0%	10.0%	42.5%	25.0%	10.0%
General Connectivity	57.5%	5.0%	12.5%	17.5%	7.5%	0.0%
Internet Access/Mobile VPN	20.0%	0.0%	12.5%	45.0%	12.5%	10.0%
Video	5.0%	2.5%	2.5%	75.0%	7.5%	7.5%
Telemetry	10.0%	5.0%	0.0%	52.5%	17.5%	15.0%
All Other	2.5%	0.0%	0.0%	42.5%	0.0%	55.0%

<b>Total</b>						
Communications	70.0%	11.7%	5.0%	7.3%	2.9%	3.2%
Over the Top Voice	2.9%	1.5%	11.1%	72.0%	6.4%	6.1%
Automatic Vehicle Locations	14.6%	0.0%	1.2%	64.4%	16.3%	3.5%
Location Services	24.2%	5.0%	5.0%	44.9%	16.3%	4.7%
Computer Aided Dispatch	23.9%	1.5%	2.3%	52.2%	14.3%	5.8%
Database Inquiries	28.9%	3.5%	4.7%	45.5%	7.0%	10.5%
Field Based Reporting	19.2%	4.4%	5.2%	49.9%	13.4%	7.9%
General Connectivity	59.2%	6.4%	9.0%	17.8%	2.6%	5.0%
Internet Access/Mobile VPN	30.3%	4.7%	4.4%	41.7%	9.3%	9.6%
Video	13.7%	4.4%	5.8%	59.8%	10.2%	6.1%
Telemetry	9.9%	3.5%	1.2%	68.2%	7.6%	9.6%
All Other	1.2%	0.0%	0.0%	54.8%	1.2%	42.9%

### Barriers on Data Usage

Nebraska Public Safety Broadband Network Planning Project Survey Responses  
September 30, 2015

	No, it's not a barrier	Yes, it's a barrier	Unknown
<b>City</b>			
Cost	31.6%	46.5%	21.9%
Network Reliability	43.9%	30.7%	25.4%
Security	50.9%	17.5%	31.6%
Coverage	43.9%	36.0%	20.2%
Expertise	48.2%	27.2%	24.6%
<b>County</b>			
Cost	42.0%	40.0%	18.0%

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Network Reliability	37.3%	44.0%	18.7%
Security	47.3%	27.3%	25.3%
Coverage	30.0%	54.7%	15.3%
Expertise	50.0%	31.3%	18.7%
<b>State</b>			
Cost	43.8%	43.8%	12.5%
Network Reliability	31.3%	56.3%	12.5%
Security	37.5%	37.5%	25.0%
Coverage	6.3%	93.8%	0.0%
Expertise	75.0%	18.8%	6.3%
<b>Federal</b>			
Cost	50.0%	50.0%	0.0%
Network Reliability	50.0%	0.0%	50.0%
Security	0.0%	100.0%	0.0%
Coverage	0.0%	50.0%	50.0%
Expertise	50.0%	50.0%	0.0%
<b>Private Sector</b>			
Cost	66.7%	14.3%	19.0%
Network Reliability	71.4%	14.3%	14.3%
Security	81.0%	0.0%	19.0%
Coverage	38.1%	42.9%	19.0%
Expertise	81.0%	4.8%	14.3%
<b>Other</b>			
Cost	27.5%	55.0%	17.5%
Network Reliability	27.5%	52.5%	20.0%
Security	50.0%	20.0%	30.0%
Coverage	27.5%	57.5%	15.0%
Expertise	57.5%	22.5%	20.0%
<b>All Responses</b>			
Cost	38.5%	42.6%	19.0%
Network Reliability	40.2%	39.1%	20.7%
Security	50.1%	22.4%	27.4%
Coverage	33.5%	49.9%	16.6%
Expertise	53.4%	26.8%	19.8%

The on-line survey responses and the modified Coverage Objective map along with the recommended five stages of deployment for the Network were submitted to FirstNet on September 30, 2015. If you have questions please contact Bob Wilhelm @ [Bob.Wilhelm@Nebraska.gov](mailto:Bob.Wilhelm@Nebraska.gov) .

That concludes this report.